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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Office of the Secretary Of Defense	Date: February 2015
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Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>					PE 0607310D8Z I <i>CWMD Systems: Operational Systems Development</i>							
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	0.000	1.872	2.948	1.901	-	1.901	5.926	6.695	6.877	6.971	Continuing	Continuing
P242: <i>Operational System Development</i>	0.000	1.872	2.948	1.901	-	1.901	5.926	6.695	6.877	6.971	Continuing	Continuing

Note

The FY 2016 funding request was reduced by \$2.030 million to account for prior year execution balances.

A. Mission Description and Budget Item Justification

The Countering Weapons of Mass Destruction (CWMD) Systems program is researching, developing, integrating, testing, deploying, operating, and maintaining a CWMD situational awareness system. This system will enable a comprehensive, global capability for situational awareness of threats from WMD as well as global efforts to counter those threats. This system will foster a shared understanding of the CWMD operating environment and support decision making for operations and activities by the U.S. government and its partners. The CWMD mission space is characterized by immense amounts of information, such as the characteristics and location of WMD-related facilities and materials, personnel and expertise, and dual-use technologies. The CWMD Systems program comprises next-generation advanced information technologies, coupled with small fusion cells, to locate, gather, access, share, and visualize this WMD-relevant information to facilitate collaboration and decision-making. These solutions will revolutionize CWMD knowledge management, providing decision makers and operational personnel a dynamic, holistic view of the global CWMD operating environment.

The diversity and complexity of the CWMD mission requires an integrated approach toward capability development, based on a systems perspective that links strategic objectives with interrelated tasks and associated capabilities. The CWMD mission is intertwined with counter-terrorism and homeland defense and hence system development must leverage and integrate complementary technologies developed to support other mission areas. The CWMD Systems program also will enable international collaboration in countering WMD by breaking down unnecessary data stove-pipes and by enabling the U.S. Government and its partners to access and share knowledge.

This program also responds to the strategic needs outlined in the 2014 Quadrennial Defense Review, the Department of Defense (DoD) Strategy for Countering WMD, the FY2016-2020 Defense Planning Guidance, and capability requirements approved by the Joint Requirements Oversight Council. The CWMD Systems program will develop and field a global CWMD situational awareness capability to meet the needs of Combatant Commands, the Office of the Secretary of Defense, the Joint Staff, the Services, and Defense Agencies. Other U.S. Government Departments and Agencies will be able to utilize this capability to support their mission needs and collaborate with the Department of Defense. This program is designed to leverage existing DoD resources and proven approaches to achieve its goals and rapidly deliver an operational capability.

The CWMD Systems portfolio is supported by two RDT&E program elements (0303310D8Z for research, development, testing and evaluation of advanced materiel and non-materiel solutions, and 0607310D8Z for upgrades or improvements to fielded systems), as well as an Operations and Maintenance (O&M) line (ORC 2531) for program sustainment and administrative costs associated with analyses, oversight, and portfolio management.

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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0607310D8Z I <i>CWMD Systems: Operational Systems Development</i>
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This Program Element can fund travel to support the requirements of this program.

This appropriation will finance work, including manpower, performed by a government agency or by private individuals or organizations under a contractual or grant arrangement with the government who conduct research (systematic study directed toward fuller scientific knowledge or understanding of the subject studied), development (systematic use of the knowledge and understanding gained from research, for the production of useful materials, devices, systems, or methods, including the design and development of prototypes and processes) and test and evaluation efforts.

B. Program Change Summary (\$ in Millions)	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016 Base</u>	<u>FY 2016 OCO</u>	<u>FY 2016 Total</u>
Previous President's Budget	1.944	2.953	3.951	-	3.951
Current President's Budget	1.872	2.948	1.901	-	1.901
Total Adjustments	-0.072	-0.005	-2.050	-	-2.050
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.072	-			
• Baseline Adjustment	-	-	-0.015	-	-0.015
• FFRDC Sec 8104	-	-0.005	-	-	-
• Adjust baseline to align with delayed contract awards in FY14/15	-	-	-2.035	-	-2.035

Change Summary Explanation

FY16/17/18 program adjusted to align with contract awards delayed in FY14/15.

The FY 2016 funding request was reduced by \$2.030 million to account for prior year execution balances.

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Office of the Secretary Of Defense										Date: February 2015		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0607310D8Z / CWMD Systems: Operational Systems Development				Project (Number/Name) P242 / Operational System Development			
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
P242: Operational System Development	-	1.872	2.948	1.901	-	1.901	5.926	6.695	6.877	6.971	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Countering Weapons of Mass Destruction (CWMD) Systems program is researching, developing, integrating, testing, deploying, operating, and maintaining a CWMD situational awareness system. This system will enable a comprehensive, global capability for situational awareness of threats from WMD as well as global efforts to counter those threats. This system will foster a shared understanding of the CWMD operating environment and support decision making for operations and activities by the U.S. government and its partners. The CWMD mission space is characterized by immense amounts of information, such as the characteristics and location of WMD-related facilities and materials, personnel and expertise, and dual-use technologies. The CWMD Systems program comprises next-generation advanced information technologies, coupled with small fusion cells, to locate, gather, access, share, and visualize this WMD-relevant information to facilitate collaboration and decision-making. These solutions will revolutionize CWMD knowledge management, providing decision makers and operational personnel a dynamic, holistic view of the global CWMD operating environment.

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This program also responds to the strategic needs outlined in the 2014 Quadrennial Defense Review, the Department of Defense (DoD) Strategy for Countering WMD, the FY2016-2020 Defense Planning Guidance, and capability requirements approved by the Joint Requirements Oversight Council. The CWMD Systems program will develop and field a global CWMD situational awareness capability to meet the needs of Combatant Commands, the Office of the Secretary of Defense, the Joint Staff, the Services, and Defense Agencies. Other U.S. Government Departments and Agencies will be able to utilize this capability to support their mission needs and collaborate with the Department of Defense. This program is designed to leverage existing DoD resources and proven approaches to achieve its goals and rapidly deliver an operational capability.

The CWMD Systems portfolio is supported by two RDT&E program elements (0303310D8Z for research, development, testing and evaluation of advanced materiel and non-materiel solutions, and 0607310D8Z for upgrades or improvements to fielded systems), as well as an Operations and Maintenance (O&M) line (ORC 2531) for program sustainment and administrative costs associated with analyses, oversight, and portfolio management.

This Program Element can fund travel to support the requirements of this program.

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Office of the Secretary Of Defense		Date: February 2015		
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607310D8Z / CWMD Systems: Operational Systems Development	Project (Number/Name) P242 / Operational System Development		
This appropriation will finance work, including manpower, performed by a government agency or by private individuals or organizations under a contractual or grant arrangement with the government who conduct research (systematic study directed toward fuller scientific knowledge or understanding of the subject studied), development (systematic use of the knowledge and understanding gained from research, for the production of useful materials, devices, systems, or methods, including the design and development of prototypes and processes) and test and evaluation efforts.				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2014	FY 2015	FY 2016
Title: Operational Systems Upgrade and Improvement		1.872	2.948	1.901
Description: • Upgrade and improve fielded systems to locate, gather, fuse, share, and visualize WMD and CWMD information, and facilitate collaboration and well-integrated decision making. • Address the prioritized capabilities required of existing platforms to augment, upgrade and enhance core CWMD capabilities. • Provide upgrades and enhancements to previous capability package deliveries providing continuity and compatibility across the systems.				
FY 2014 Accomplishments: • Enhanced capabilities demonstrated in pre-prototype system and demonstrated capability prototype integrating materiel and non-materiel components. • Made Constellation system architecture compatible with the Joint Information Environment (JIE) and Intelligence Community Information Technology Enterprise (IC-ITE) frameworks. • Engineered Constellation platform to function at all levels of classification with ability to share information among and between classification domains. • Increased range of data types that can be accessed through Constellation, via data sharing and cooperative agreements with partners across the U.S. Government.				
FY 2015 Plans: • Upgrade and enhanced capability packages of operational prototype. • Achieve and demonstrated initial operational capability of integrated materiel and non-materiel CWMD situational awareness solutions. • Support semi-annual collection, validation, and prioritization of capability requirements for updated and new system capabilities. • Update and integrated infrastructure and systems required for personnel in units that operate Constellation, that provide reachback support, and support ongoing development of data and applications capabilities. • Continue to build/upgrade/modify the required infrastructure, including hardware and software for computational and processing capabilities, training, and organizational support. • Scale hardware to support additional users; integrated and tested analytical engine updates.				
FY 2016 Plans: • Continue to upgrade and enhance capability packages.				

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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607310D8Z / CWMD Systems: Operational Systems Development	Project (Number/Name) P242 / Operational System Development	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2014	FY 2015
• Support semi-annual collection, validation, and prioritization of capability requirements for updated and new system capabilities. • Support comprehensive review of infrastructure and systems required for personnel in units that operate Constellation that provide reachback support, and supply feedback to support ongoing development of data and applications capabilities. • Build/upgrade/modify the infrastructure, including hardware and software for computational and processing capabilities, training, and organizational support. • Scale hardware to support additional users. • Integrate and test analytical engine updates.			
Accomplishments/Planned Programs Subtotals		1.872	2.948
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
Utilize a knowledge based approach to achieve an operational capability with packages that provided upgraded CWMD situational awareness capabilities, with deliveries every six months, utilizing agile software development processes.			
E. Performance Metrics			
Success in this area is measured by compliance with various statutes and DoD directives that govern the conduct of the affairs within the Office of ASD/NCB. Maintain cost, schedule, and performance reporting, review, and adjudication. Maintain requirements traceability matrix.			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Office of the Secretary Of Defense												Date: February 2015			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 0607310D8Z / CWMD Systems: Operational Systems Development				Project (Number/Name) P242 / Operational System Development					
Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development	TBD	VAR - Various : TBD	0.000	1.872		2.948		0.950		-		0.950	Continuing	Continuing	-
Test and Evaluation	Various	Support Cells : DTRA and DIA	-	-		-		0.651		-		0.651	Continuing	Continuing	-
Management Services	FFRDC	MITRE : MA & VA	-	-		-		0.300		-		0.300	Continuing	Continuing	-
Subtotal			0.000	1.872		2.948		1.901		-		1.901	-	-	-
			Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	1.872		2.948		1.901		-		1.901	-	-	-
Remarks															
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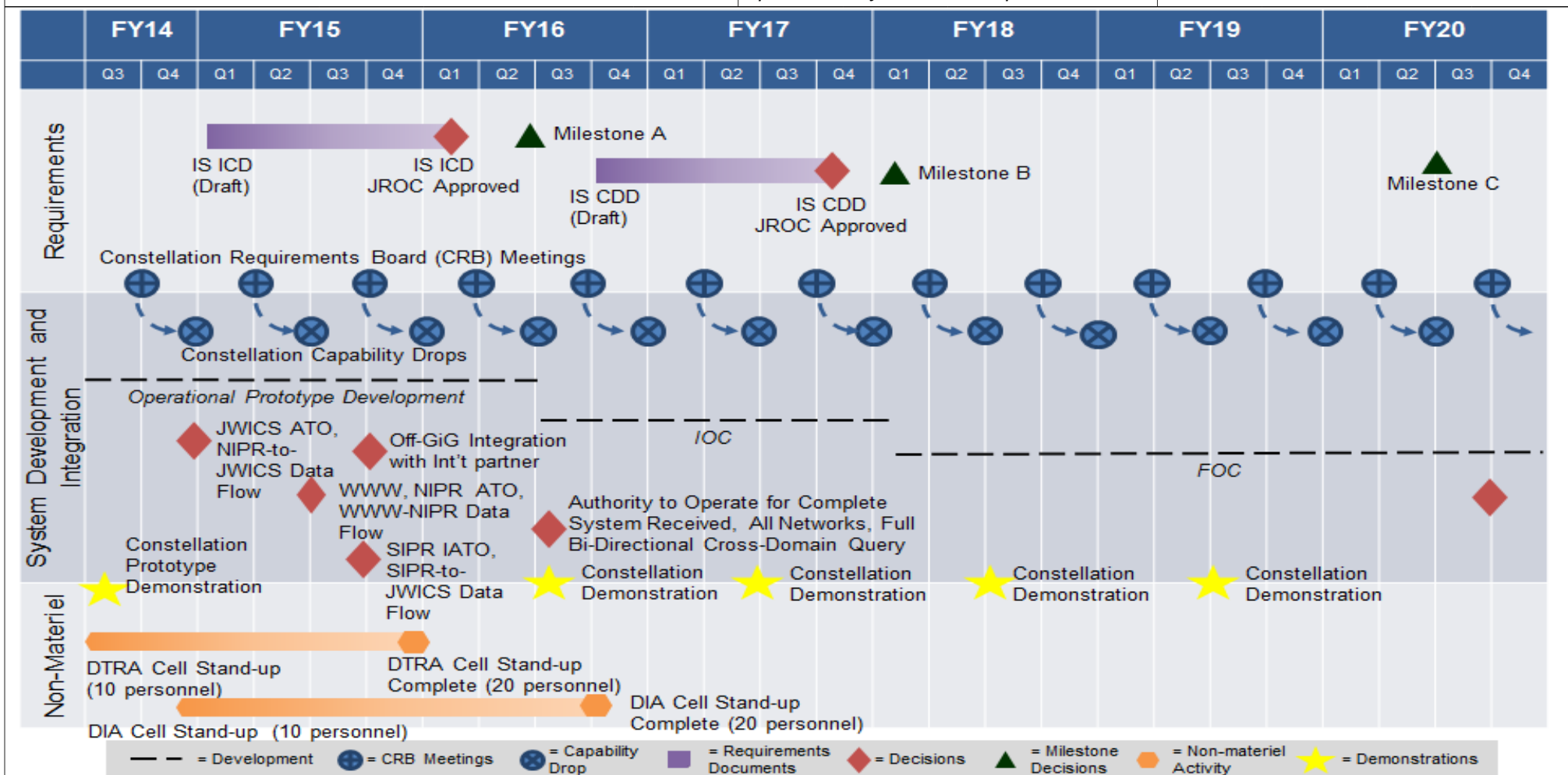
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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Office of the Secretary Of Defense Date: February 2015

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 0607310D8Z / CWMD Systems:
Operational Systems Development

Project (Number/Name)
P242 / Operational System Development



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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Office of the Secretary Of Defense			Date: February 2015
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607310D8Z / CWMD Systems: <i>Operational Systems Development</i>	Project (Number/Name) P242 / <i>Operational System Development</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Milestones				
Milestone A	3	2015	3	2015
Milestone B	1	2018	1	2018
Milestone C	2	2020	2	2020
Transition to Service or Agency	3	2020	3	2020
Requirements				
Develop Information System (IS) Initial Capabilities Document (IS ICD)	1	2015	2	2015
Requirements Definition Package (RDP) #1	2	2015	4	2015
RDP #2	3	2015	3	2016
RDP #3	3	2016	3	2017
Constellation Capability Drops				
Constellation Requirements Board (CRB) 1	2	2015	3	2015
CRB 2	4	2015	1	2016
CRB 3	2	2016	3	2016
CRB 4	4	2016	1	2017
CRB 5	2	2017	3	2017
CRB 6	4	2017	1	2018
CRB 7	2	2018	3	2018
CRD 8	4	2018	1	2019
CRB 9	2	2019	3	2019
CRB 10	4	2019	1	2020
CRB 11	2	2020	3	2020

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Office of the Secretary Of Defense **Date:** February 2015

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607310D8Z / CWMD Systems: Operational Systems Development	Project (Number/Name) P242 / Operational System Development
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
System Development & Integration				
Operational Prototype Development	1	2014	2	2017
Initial Operational Capability (IOC)	2	2017	4	2018
Full Operational Capability (FOC)	1	2019	4	2020
JWICS Authority To Operate (ATO), NIPR-to-JWICS Data Flow	4	2014	4	2014
WWW, NIPR ATO, WWW-to-NIPR Data Flow	3	2015	3	2015
Off-Global Information Grid (GIG) Integration with international partner	4	2015	4	2015
SIPR Interim ATO (IATO), SIPR-to-JWICS Data Flow	3	2015	3	2015
ATO for complete system, All networks, Full bi-directional cross-domain query	3	2016	3	2016
Demonstrations				
Constellation Prototype Demonstration	3	2014	3	2014
Constellation Demonstration (1)	3	2016	3	2016
Constellation Demonstration (2) (updated with spirals)	2	2017	2	2017
Constellation Demonstration (3) (updated with spirals)	3	2018	3	2018
Constellation Demonstration (4) (updated with spirals)	3	2019	3	2019
Non-Materiel				
DTRA cell stand-up	1	2014	4	2015
DTRA cell complete (20 personnel)	4	2015	4	2015
DIA cell stand-up	4	2014	4	2016
DIA cell complete (20 personnel)	4	2016	4	2016