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Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305233N: <i>RQ-7 UAV</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	25.229	0.872	0.863	7.600	8.463	0.874	0.876	0.891	0.906	Continuing	Continuing
9156: <i>Wide Focal Plane Array Camera (WFPAC)</i>	6.900	-	-	-	-	-	-	-	-	0.000	6.900
9C84: <i>MCTUAS</i>	18.329	0.872	0.863	7.600	8.463	0.874	0.876	0.891	0.906	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element supports additional capability development for the RQ-7 Shadow non-lethal joint tactical Unmanned Aerial Vehicle system for Department of Defense to provide the warfighter with the capability for day/night aerial Reconnaissance, Surveillance and Target Acquisition, intelligence, battle damage assessment, and force protection.

FY11 request includes \$6.9M in Overseas Contingency Operation funds for Wide Focal Plane Array Camera in support of Operation Enduring Freedom - Afghanistan.

B. Program Change Summary (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	0.934	0.872	0.871	-	0.871
Current President's Budget	25.229	0.872	0.863	7.600	8.463
Total Adjustments	24.295	-	-0.008	7.600	7.592
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	17.400	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	6.900	-	-0.008	7.600	7.592
• Congressional General Reductions	-0.005	-	-	-	-
Adjustments					

Change Summary Explanation

Schedule: Not applicable.

Technical: Not applicable.

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy									DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0305233N: RQ-7 UAV				PROJECT 9156: Wide Focal Plane Array Camera (WFPAC)			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
9156: Wide Focal Plane Array Camera (WFPAC)	6.900	-	-	-	-	-	-	-	-	0.000	6.900
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note
 FY11 request included \$6.9M in Overseas Contingency Operation funds for Wide Focal Plane Array Camera (WFPAC) in support of Operation Enduring Freedom (OEF) - Afghanistan.

A. Mission Description and Budget Item Justification
 Program completed development, testing, integration and initial procurement of a WFPAC sensor for the RQ-7 Shadow Unmanned Aircraft System (UAS) in support of OEF - Afghanistan. The Office of Naval Research is leading the development and funding the low rate initial procurement. These funds support the test and integration efforts for the Marine Corps Shadow systems.

The WFPAC sensor enhancement addresses the Marine Expeditionary Brigade's near-term organic persistent Intelligence, Surveillance and Reconnaissance requirement in Afghanistan as well as providing an enduring capability in a reduced form factor tactical UAS sensor.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Engineering, Integration, and Testing Articles: Description: Integration and testing of the WFPAC sensor on the RQ-7 Shadow UAS to include engineering support for the planned deployment in support of a Field User Evaluation by Marine Corps units deployed in OEF. FY 2011 Accomplishments: Supported integration and testing of the WFPAC Sensor on the RQ-7 Shadow UAS.	6.900 0	-	-	-	-
Accomplishments/Planned Programs Subtotals	6.900	-	-	-	-

C. Other Program Funding Summary (\$ in Millions)
 N/A

UNCLASSIFIED

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D. Acquisition Strategy

The program office leveraged Army contracting by UAS Program Manager to integrate WFPAC onto the RQ-7 Unmanned Aerial Vehicle.

E. Performance Metrics

Wide Focal Plane Array Camera successfully integrated onto RQ-7 Unmanned Aerial Vehicle.

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APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0305233N: RQ-7 UAV				PROJECT 9C84: MCTUAS			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
9C84: MCTUAS	18.329	0.872	0.863	7.600	8.463	0.874	0.876	0.891	0.906	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This Marine Corps Tactical Unmanned Aircraft System (MCTUAS) project supports the fielded RQ-7B Shadow Unmanned Aerial Vehicle (UAV) system by conducting research, development, test, and evaluation for improvement of the RQ-7 UAV capabilities in Reconnaissance, Surveillance and Target Acquisition, Intelligence, Battle Damage Assessment, Laser Designation and Force Protection. The RQ-7B Shadow UAV system provides critical battlefield intelligence and targeting information in the rapid cycle time required for success at the tactical level.

RQ-7B Shadow UAV systems are acquired through the Army's Unmanned Aerial System (UAS) Program Office to fulfill Marine Corps UAS requirements. In order to optimize interoperability, maintenance, and capability with minimal cost, the Marine Corps and Army plan to develop additional capabilities for the common RQ-7 system. These funds represent the Marine Corps share of the combined development cost and the RQ-7 specific efforts of the NAVAIR 5.1 UAV Test Squadron.

Funds will provide for the integration of an in-production weapon on the RQ-7B Shadow UAV in response to an Urgent Universal Needs Statement that was initiated by operational units in the Operation Enduring Freedom - Afghanistan theater of operations. This covers all analysis and integration of the weapon to include the development of/modification to a Stores Management System and its integration onto the RQ-7B Shadow UAV. The integration/development effort is anticipated to be between 12 and 18 months in length leading to a Field User Assessment.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: MCTUAS Development Support	0.929	0.872	0.863	-	0.863
Articles:	0	0	0		0
Description: Joint development efforts with US Army RQ-7 Shadow Program, associated government engineering support for common RQ-7 block upgrades, and test and evaluation support required for continued improvement and interoperability.					
FY 2011 Accomplishments: The RQ-7 MCTUAS program benefitted and shared in cost for the following common Shadow developmental efforts: heavy fuel engine, airframe modifications to support all-weather payload requirements, integration of Synthetic Aperture Radar, Signal Intelligence, and High Definition video payloads, and system engineering/reliability solutions (including avionics reliability solutions to meet emerging national airspace requirements).					

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APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0305233N: RQ-7 UAV	PROJECT 9C84: MCTUAS				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
FY11 funded the Marine Corps share of the combined development cost and was also used for government engineering support. FY 2012 Plans: Continue with Marine Corps share of the costs of common RQ-7 development efforts and government engineering support for control systems, power plant, Intelligence Surveillance Reconnaissance (ISR) systems and weapons capabilities initiatives and continues support for efforts begun in FY11. FY 2013 Base Plans: Funding continues development of and government engineering support for ongoing initiatives and will initiate development efforts for improvements to ISR systems, external payloads, and communications systems. Funding will be used to continue RQ-7 Shadow test and evaluation efforts of the Navy Unmanned Aerial Vehicle Test Squadron.						
Title: RQ-7 Weaponization <div>Articles:</div> Description: Integration of an in-production weapon on the RQ-7B Shadow Unmanned Aerial System in response to an Urgent Universal Needs Statement that was initiated by operational units in the Operation Enduring Freedom (OEF) - Afghanistan theater of operation. FY 2011 Accomplishments: FY11 funding was utilized for the initiation of non-recurring engineering associated with the development and integration of a weapons capability into 2 USMC RQ-7 Shadow systems. Weaponization of the RQ-7B Shadow system satisfies the Marine Corps Requirements Oversight Council approved requirements and provides a required strike capability for the RQ-7B USMC Shadow Squadrons conducting operations in OEF. FY 2013 Base Plans: N/A FY 2013 OCO Plans: FY13 OCO Plans: FY13 funding will complete the development and integration of a weapons capability into 2 USMC RQ-7 Shadow systems. Funding will provide for required test and evaluation of those systems to include a Field User Evaluation in theater.		17.400 0	-	- 0	7.600 0	7.600 0
Accomplishments/Planned Programs Subtotals		18.329	0.872	0.863	7.600	8.463

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

<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• APN/058900: <i>RQ-7 UAV</i>	26.017	0.000	11.524	37.800	49.324	11.735	0.000	0.000	0.000	0.000	87.076

D. Acquisition Strategy

Sole source engineering development services contract with Aircraft Armament Incorporated through Army Program Management Unmanned Aerial Systems.

The program office is leveraging Army contracting by Unmanned Aerial System Program Manager to integrate weapons onto the RQ-7 Unmanned Aerial Vehicle (UAV). Government engineering support provided by Program Management Unmanned Aerial Systems (PM UAS), Naval Air Warfare Center-Weapons Division (NAWCWD), and Naval Air Warfare Center - Aircraft Division.

E. Performance Metrics

Attainment of targeted development effort upgrades improving operational capability of the RQ-7 UAV (Marine Corps Tactical Unmanned Aircraft System).

Weapon successfully integrated onto RQ-7 UAV.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy											DATE: February 2012			
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
Hardware/Software Development	WR	NAWCWD:China Lake, CA	1.250	-		-		-		-	Continuing	Continuing	Continuing
Weapon Integration	MIPR	PM UAS:Huntsville, AL	13.400	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			14.650	-		-		-		-			

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
Software Engineering Support	WR	NAWCWD:China Lake, CA	-	-		-		1.700	Nov 2012	1.700	Continuing	Continuing	Continuing
Engineering Support	WR	NAWCAD:Pax River, MD	0.715	-		-		0.715	Nov 2012	0.715	Continuing	Continuing	Continuing
Joint Development Efforts	Various	Various:Various	1.916	0.872	Jan 2012	0.863	Jan 2013	-		0.863	Continuing	Continuing	Continuing
Subtotal			2.631	0.872		0.863		2.415		3.278			

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
Flight Test Support	WR	NAWCWD:China Lake, CA	-	-		-		1.000	Nov 2012	1.000	Continuing	Continuing	Continuing
Weapon Testing	MIPR	PM UAS:Huntsville, AL	2.035	-		-		4.185	Jun 2013	4.185	Continuing	Continuing	Continuing
Subtotal			2.035	-		-		5.185		5.185			

			Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			19.316	0.872		0.863		7.600		8.463			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305233N: <i>RQ-7 UAV</i>	PROJECT 9C84: <i>MCTUAS</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
RQ-7				
Product Development: Joint Development Efforts	1	2011	4	2017
Product Development: Weapon Integration	2	2012	1	2013
Test and Evaluation: Weapon Testing	3	2012	3	2013