Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Navy

Date: March 2014

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

1319: Research, Development, Test & Evaluation, Navy I BA 4: Advanced

PE 0603261N / Tactical Airborne Reconnaissance

Component Development & Prototypes (ACD&P)

COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO [#]	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	53.932	4.812	5.257	5.275	-	5.275	3.451	3.476	3.489	3.585	Continuing	Continuing
2467: UAV Conops	53.932	4.812	5.257	5.275	-	5.275	3.451	3.476	3.489	3.585	Continuing	Continuing

[#] The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This program element funds efforts to develop Concept of Operations in support of the Navy's overall Unmanned Aircraft Systems (UAS) Strategy integrating UAS into the Chief of Naval Operations Navy Vision of Sea Power 21 (Sea Shield, Sea Strike, Sea Basing and FORCEnet). Also funds Navy's contribution supporting the Joint Technology Center/System Integration Laboratory providing experimentation for Unmanned Aerial Vehicle technology assessment, insertion, demonstration, transfer as well as simulation and exercise support.

This program is funded under ADVANCED COMPONENT DEVELOPMENT AND PROTOTYPES because it includes all efforts necessary to evaluate integrated technologies, representative models or prototype systems in a high fidelity and realistic operating environment.

B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	5.301	5.257	5.743	-	5.743
Current President's Budget	4.812	5.257	5.275	-	5.275
Total Adjustments	-0.489	-	-0.468	-	-0.468
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
Reprogrammings	-	-			
SBIR/STTR Transfer	-	-			
Program Adjustments	-	-	-0.264	=	-0.264
 Rate/Misc Adjustments 	-	-	-0.204	=	-0.204
 Congressional General Reductions Adjustments 	-0.489	-	-	-	-

Change Summary Explanation

Technical: Not applicable.

Schedule: Not applicable.

Navy

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Exhibit R-2A, RDT&E Project Ju	stification:	PB 2015 N	lavy							Date: Marc	ch 2014	
Appropriation/Budget Activity 1319 / 4					_	am Elemen 61N / Tactica ssance	•	•	Project (N 2467 / UA\	umber/Nan / Conops	ne)	
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO [#]	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
2467: UAV Conops	53.932	4.812	5.257	5.275	-	5.275	3.451	3.476	3.489	3.585	Continuing	Continuing
Quantity of RDT&E Articles	0.000	-	-	-	-	-	-	-	-	-		

^{*} The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Naval Unmanned Aircraft Systems (UAS) Strategy employs a family of UAS to perform tactical, persistent and penetrating Intelligence, Surveillance, and Reconnaissance in support of Naval and Joint missions from forward bases/platforms and naval ships.

In support of the Navy's overall UAS strategy, this program develops Concept of Operations (CONOPS) that integrate UAS into the Chief of Naval Operations Navy Vision of Sea Power 21 (Sea Shield, Sea Strike, Sea Basing and FORCEnet). By providing fleet input based on current operations with UAS in a simulated combat environment, this CONOPS development investment is the foundation of how the Carrier Strike Group and the Expeditionary Strike Group will operate a combined Manned and Unmanned Naval Air Force. This program establishes the common architecture, including Command & Control, for all unmanned systems to support and inform CONOPS development. This effort provides for a cross-program view of Naval Unmanned Systems and is the entry point for OSD and other services for commonality and interoperability. Specifically:

- Provides studies and demonstrations in support of the Naval UAS Family of Systems (FoS) CONOPS development.
- Horizontally integrates across the Naval UAS FoS for the Naval Aviation Enterprise through interoperability and common system solutions.
- Develops the Naval UAS FoS Architecture to support integration into the Naval Unmanned Systems Cross Functional Team.
- Provides Naval support for development of Standards across Department of Defense (DoD) UAS and North Atlantic Treaty Organization, emphasizing standardization and interoperability.
- Conducts CONOPS studies, demonstrations, and exercises for Vehicle Control, Targeting, and Weapons, Sensor and Payload Employment.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Studies and Demonstrations	0.749	1.031	1.253
Articles:	-	-	-
Description: Studies and demonstrations to develop CONOPS for manned-unmanned integration of UAS and aircraft systems. Build a UAS simulation environment for Modeling and Simulation of common UAS components in representative battlespace architectures.			
FY 2013 Accomplishments: Continued development of the UAS modeling and simulation of Fleet CONOPS Scenarios. Demonstrated Joint-Service (Army/ Navy) UAS interoperability. This was a lab-based, Hardware-In-The-Loop (HWIL), Payload control demonstration. Developed			

PE 0603261N: Tactical Airborne Reconnaissance

Navy

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy			Date: N	larch 2014	
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603261N / Tactical Airborne Reconnaissance		t (Number/N UAV Conops		
B. Accomplishments/Planned Programs (\$ in Millions, Articl	le Quantities in Each)		FY 2013	FY 2014	FY 2015
an imagery quality lab that has helped to determine how to effect Unmanned Aircraft Systems (UAS).	ctively specify, procure and employ sensors across the portfo	olio of			
FY 2014 Plans: Conduct studies, demonstrations, and testing to validate the Natsupport, program office travel, and contract support services.	val Interoperability profiles. Provide government engineering	ı			
FY 2015 Plans: Continue development of the UAS modeling and simulation of F Unmanned interoperability.	leet Concept of Operations scenarios. Demonstrate Manne	d/			
Title: Shipboard Concept of Operations	A.	rticles:	0.487	-	-
Description: Conduct studies, demonstrations, and exercises.		ticles.	-	-	
FY 2013 Accomplishments: Conducted studies, demonstrations, and exercises to validate the	ne Naval Interoperability profiles.				
FY 2014 Plans: N/A					
FY 2015 Plans: N/A					
Title: Engineering and Program Support	A	rticles:	0.872 -		-
Description: Provide government engineering support, program Systems Cross Functional Team, Office of Secretary of Defense					
FY 2013 Accomplishments: Provided government engineering support, program office travel Cross Functional Team.	I, and contract support services for Naval Unmanned System	ns			
FY 2014 Plans: N/A					
FY 2015 Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy			Date: N	larch 2014	
Appropriation/Budget Activity 319 / 4	R-1 Program Element (Number/Name) PE 0603261N I Tactical Airborne Reconnaissance		t (Number/N UAV Conops	,	
3. Accomplishments/Planned Programs (\$ in Millions, Article C	<u>tuantities in Each)</u>		FY 2013	FY 2014	FY 2015
N/A					
Title: North Altantic Treaty Organization (NATO) Standardization A	-	rticles:	0.958	-	- -
Description: Conduct Concept of Operations studies for interopera Systems and NATO emphasizing standardization and interoperabili profiles and Navy implementation conventions for Naval Unmanned	ty. Continue to develop Unmanned System Interoperabi	ility			
FY 2013 Accomplishments: Completed development of standards across Naval Unmanned Sys nteroperability.	tems and NATO emphasizing standardization and				
FY 2014 Plans: N/A					
FY 2015 Plans: N/A					
Title: Architecture Support/Common Ground Station	Ai	rticles:	1.746	2.000	1.82
Description: Develop a Joint Service revision and configuration ma Ground Station Architecture and related government engineering su		nmon			
FY 2013 Accomplishments: Supported the revision and configuration management of Unmanne Common Ground Station Architecture and related government engi		int			
FY 2014 Plans: Continue to develop a Joint Service revision and configuration mana Ground Station Architecture and related government engineering su	• • • • • • • • • • • • • • • • • • • •	non			
FY 2015 Plans: Continue to develop a Joint Service revision and configuration mana Ground Station Architecture and related government engineering su		non			
Title: Naval Interoperability & Standardization			-	2.226	2.19
	Ai	rticles:	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy		Date: March 2014
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603261N / Tactical Airborne Reconnaissance	Project (Number/Name) 2467 / UAV Conops

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Description: Increase Naval Unmanned Systems interoperability emphasizing Naval, Joint Service, and international standardization.			
FY 2013 Accomplishments: N/A			
FY 2014 Plans: Develop Unmanned Systems Interoperability profiles and Navy implementation conventions for Naval UAS Family of Systems (FoS) Architecture. Support Office of Secretary of Defense (OSD) Joint Service and North Atlantic Treaty Organization (NATO) coalition interoperability efforts. Provide government engineering support, program office travel, and contract support services.			
FY 2015 Plans: Continue to develop Unmanned Systems Interoperability profiles and Navy implementation conventions for Naval UAS FoS Architecture. Support OSD Joint Service and NATO coalition interoperability efforts. Provide government engineering support, program office travel, and contract support services.			
Accomplishments/Planned Programs Subtotals	4.812	5.257	5.275

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

N/A

Navy

Remarks

D. Acquisition Strategy

The program office will leverage existing Government facilities (e.g., Joint Technology Center/System Integration Laboratory and Naval Unmanned Aircraft Systems (UAS) Program of Record assets as available) to develop and demonstrate Naval UAS Concept of Operations. Government engineering support will be used for Modeling and Simulation efforts.

E. Performance Metrics

UAS operations and interoperability for systems delivered to the warfighter are continually improved upon increasing the level of integration, standardization and effective employment in maritime battle space dominance.

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Navy Appropriation/Budget Activity 1319 / 4					ļ.												(Number/Name) IAV Conops											
UAV CONOPS	FY 2013			FY 2014 FY			FY 2	2015	;		FY 2	016			FY 2	2017	17 FY			2018 F			FY:	FY 2019				
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Unmanned Aircraft System (UAS) Targeting																												
Weapons and Payload Employment																												
Task and Manning Assessment	:																											
Standards Based Interoperability		<u> </u>	<u>. </u>																									
Naval Interoperability and Standardization	1																											
2015DON - 0603261N - 2467							•	•	•	•	•			•	,	,	•	•	•				•					

PE 0603261N: *Tactical Airborne Reconnaissance* Navy