

EXHIBIT R-2, RDT&E Budget Item Justification						DATE: February 2008	
APPROPRIATION / BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-4					R-1 ITEM NOMENCLATURE 0603261N, TACTICAL AIRBORNE RECONNAISSANCE		
COST (\$ in Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	3.944	4.037	4.298	4.311	4.360	4.452	4.545
2467 UAV CONOPS	3.944	4.037	4.298	4.311	4.360	4.452	4.545

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The Naval Unmanned Aircraft Systems (UAS) Strategy employs a family of UASs to perform tactical, persistent and penetrating Intelligence, Surveillance, and Reconnaissance (ISR) 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 UASs into the Chief of Naval Operations (CNO)/Navy Vision of Sea Power 21 (Sea Shield, Sea Strike, Sea Basing, and FORCEnet). By providing fleet input based on current operations with UASs in a simulated combat environment, this CONOPS development investment is the foundation of how the Carrier Strike Group (CSG) will operate a combined Manned and Unmanned Naval Air Force. Specifically:

- Develops, demonstrates, and evaluates CONOPS, and assesses manning requirements of ship-based tactical UASs.
- Leverages and assesses joint utility of Global Hawk Maritime Demonstration (GHMD) System.
- Demonstrates UAS integration into USN battlespace dominance operations and network centric warfare.
- Demonstrates UAS integration into USN sensor-to-shooter and Sea Strike.
- Develops Intelligence, Surveillance, and Reconnaissance (ISR) CONOPS in support of strike, Military Operations Other Than War (MOOTW), Anti-Air Warfare (AAW), and Combat Search and Rescue (CSAR).
- Demonstrates UAS cross-cueing capability with theater and strategic intelligence sources.
- Develops Tactics, Techniques, and Procedures for multi-dissimilar UAS control, operations, and data dissemination utilizing NATO STANAG 4586.
- Conducts studies for UAS task, data management, airspace integration, Sense & Avoid, and Focused Flying efforts.
- Conducts CONOPS studies, demonstrations, and exercises for data relay, comm relay, time sensitive targets, and weapons employment.
- Utilize a UAS CONOPS demonstration system for CONOPS development, test and evaluation, and expediting technology transition. The demonstration system consists of a ground control station, launch and recovery equipment, air vehicles, spares and associated equipment.

B. PROGRAM CHANGE SUMMARY

Funding:	FY 2007	FY 2008	FY 2009	
Previous President's Budget:	3.944	4.063	4.308	
Current President's Budget:	<u>3.944</u>	<u>4.037</u>	<u>4.298</u>	
Total Adjustments	0.000	-0.026	-0.010	

Summary of Adjustments

Congressional Reductions				
Congressional Rescissions				
Congressional Undistributed Reductions		-0.026		
Congressional Increases				
Economic Assumptions			-0.009	
Miscellaneous Adjustments			<u>-0.001</u>	
Subtotal	0.000	-0.026	-0.010	

Schedule:
Not applicable

Technical:
Not applicable

EXHIBIT R-2a, RDT&E Project Justification						DATE:																																																																	
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<p>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</p> <p>In support of the Navy's overall UAS strategy, the UAV CONOPS program develops Concept of Operations (CONOPS) that integrate UASs into the Chief of Naval Operations (CNO)/Navy Vision of Sea Power 21 (Sea Shield, Sea Strike, Sea Basing, and FORCEnet). By providing fleet input based on current operations with UASs in a simulated combat environment, this CONOPS development investment is the foundation of how the Carrier Strike Group (CSG) will operate a combined Manned and Unmanned Naval Air Force. Specifically:</p> <ul style="list-style-type: none"> - Develops, demonstrates, and evaluates CONOPS, and assesses manning requirements of ship-based tactical UASs. - Leverages and assesses joint utility of Global Hawk Maritime Demonstration (GHMD) System. - Demonstrates UAS integration into USN battlespace dominance operations and network centric warfare. - Demonstrates UAS integration into USN sensor-to-shooter and Sea Strike. - Develops Intelligence, Surveillance, and Reconnaissance (ISR) CONOPS in support of strike, Military Operations Other Than War (MOOTW), Anti-Air Warfare (AAW), and Combat Search and Rescue (CSAR). - Demonstrates UAS cross-cueing capability with theater and strategic intelligence sources. - Develops Tactics, Techniques, and Procedures for multi-dissimilar UAS control, operations, and data dissemination utilizing NATO STANAG 4586. - Conducts studies for UAS task, data management, airspace integration, Sense & Avoid, and Focused Flying efforts. - Conducts CONOPS studies, demonstrations, and exercises for data relay, comm relay, time sensitive targets, and weapons employment. - Utilize a UAS CONOPS demonstration system for CONOPS development, test and evaluation, and expediting technology transition. The demonstration system consists of a ground control station, launch and recovery equipment, air vehicles, spares and associated equipment. <p>B. ACCOMPLISHMENTS / PLANNED PROGRAM</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">STUDIES AND DEMONSTRATIONS</th> <th>FY 2007</th> <th>FY 2008</th> <th>FY 2009</th> </tr> </thead> <tbody> <tr> <td>Accomplishments / Effort / Sub-total Cost</td> <td>.700</td> <td>.962</td> <td>1.800</td> </tr> <tr> <td>RDT&E Articles Qty</td> <td></td> <td>1</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Studies and Demonstrations to develop CONOPS for manned-unmanned integration of UAS and aircraft systems. Purchase a UAS CONOPS demonstration system for CONOPS development, test and evaluation, and technology transition.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">SHIPBOARD CONOPS</th> <th>FY 2007</th> <th>FY 2008</th> <th>FY 2009</th> </tr> </thead> <tbody> <tr> <td>Accomplishments / Effort / Sub-total Cost</td> <td>1.425</td> <td>1.241</td> <td>1.281</td> </tr> <tr> <td>RDT&E Articles Qty</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Shipboard CONOPS - Conduct CONOPS studies, demonstrations, and exercises for data relay, comm relay, time sensitive targets, and weapons employment. Assess manning requirements of ship-based tactical UAS to identify manpower reduction opportunities.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">ENGINEERING AND PROGRAM SUPPORT</th> <th>FY 2007</th> <th>FY 2008</th> <th>FY2009</th> </tr> </thead> <tbody> <tr> <td>Accomplishments / Effort / Sub-total Cost</td> <td>.884</td> <td>.884</td> <td>1.002</td> </tr> <tr> <td>RDT&E Articles Qty</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Government engineering support, program office travel and contract support services.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">NATO STANAG 4586 AND INTEROPERABILITY</th> <th>FY 2007</th> <th>FY 2008</th> <th>FY 2009</th> </tr> </thead> <tbody> <tr> <td>Accomplishments / Effort / Sub-total Cost</td> <td>.935</td> <td>.950</td> <td>0.215</td> </tr> <tr> <td>RDT&E Articles Qty</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Develop standards-based NATO STANAG 4586 tool and validation capability to certify interoperability compliance. Conduct CONOPS studies for multiple, dissimilar UAS interoperability. Conduct studies for UAS task, data management and Focused Flying efforts.</p>								STUDIES AND DEMONSTRATIONS	FY 2007	FY 2008	FY 2009	Accomplishments / Effort / Sub-total Cost	.700	.962	1.800	RDT&E Articles Qty		1						SHIPBOARD CONOPS	FY 2007	FY 2008	FY 2009	Accomplishments / Effort / Sub-total Cost	1.425	1.241	1.281	RDT&E Articles Qty								ENGINEERING AND PROGRAM SUPPORT	FY 2007	FY 2008	FY2009	Accomplishments / Effort / Sub-total Cost	.884	.884	1.002	RDT&E Articles Qty								NATO STANAG 4586 AND INTEROPERABILITY	FY 2007	FY 2008	FY 2009	Accomplishments / Effort / Sub-total Cost	.935	.950	0.215	RDT&E Articles Qty							
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Exhibit R-3 Cost Analysis (page 1)									DATE: February 2008			
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NUMBER AND NAME						
RDT&E,N / BA-4		0603261N, TACTICAL AIRBORNE RECONNAISSANCE				2467, UAV CONOPS						
	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Cost Categories												
PRODUCT DEVELOPMENT												
Ship Integration	VARIOUS	VARIOUS	1.841	.845	11/06	1.000	11/07	1.000	11/08	Continuing	Continuing	
Systems Engineering Test Tool	WX	NAWCAD, PATUXENT RIVER MD	.664	.580	11/06	.241	11/07	.281	11/08	Continuing	Continuing	
SUBTOTAL PRODUCT DEVELOPMENT			2.505	1.425		1.241		1.281		Continuing	Continuing	

Remarks:

SUPPORT												
Development/ Demo Support	WX	VARIOUS	11.371	.400	12/06	.300	12/07	.700	12/08	Continuing	Continuing	
Software Development	C/CPFF	RAYTHEON COMPANY, FALLS CHURCH VA	2.250								2.250	2.250
Studies , Demo & Analysis	WX	NAWCAD, PATUXENT RIVER MD		.289	12/06	.275	12/07	.500	12/08	Continuing	Continuing	
Studies, Demo & Analysis	WX	NAWCWD, CHINA LAKE CA	.150	.855	12/06	.387	12/07	.600	12/08	Continuing	Continuing	
SUBTOTAL SUPPORT			13.771	1.544		.962		1.800		Continuing	Continuing	

Remarks:

TEST & EVALUATION												
Interoperability Testing	WX	VARIOUS	.650	.150	12/06	.950	12/07	.215	12/08	Continuing	Continuing	
SUBTOTAL TEST & EVALUATION			.650	.150		.950		.215		Continuing	Continuing	

Remarks:

MANAGEMENT												
Government Eng Sup	VARIOUS	VARIOUS	1.934	.300	12/06	.477	12/07	.611	12/08	Continuing	Continuing	
Program Management Support	VARIOUS	VARIOUS	.588	.484	12/06	.307	12/07	.300	12/08	Continuing	Continuing	
Travel	TO	NAVAIR, PAXTUXENT RIVER MD	.188	.041	10/06	.100	10/07	.091	10/08	Continuing	Continuing	
SUBTOTAL MANAGEMENT			2.710	.825		.884		1.002		Continuing	Continuing	

Remarks:

Total Cost			19.636	3.944		4.037		4.298		Continuing	Continuing	
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Remarks:

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EXHIBIT R4, Schedule Profile																				DATE:												
APPROPRIATION/BUDGET ACTIVITY					PROGRAM ELEMENT NUMBER AND NAME												PROJECT NUMBER AND NAME															
RDT&E, N / BA-4					0603261N Tactical Airborne Reconnaissance												2467, UAV CONOPS															
Fiscal Year	2007				2008				2009				2010				2011				2012				2013							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Tactics Development and Evaluation		Comm Relay																														
					Time Sensitive Targets / Target Update																											
					Communication / Datalink management of multiple, dissimilar UAVs																											
					Task / Data Management / Focused Flying Studies																											
					Standards Based Interoperability																											
					Shipboard CONOPS																											
Test & Evaluation Milestones																																
Operational Test																																
Demo System Delivery																																

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