

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2, RDT&E Budget Item Justification							DATE: February 2006	
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-7					R-1 ITEM NOMENCLATURE 0305205N Endurance Unmanned Aerial Vehicles			
COST (\$ in Millions)		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost		64.045	0.000	26.357	118.964	251.780	240.494	124.989
3061 Global Hawk Maritime Demonstration		24.700						
4020 BAMS UAV		39.345	0.000	26.357	118.964	251.780	240.494	124.989
A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:								
<p>This program element provides for the development of High Altitude Endurance (HAE) Unmanned Aerial Vehicle (UAV) Systems for DoD that provide warfighters with the dedicated capability for Broad Area Maritime Surveillance (BAMS) as standoff persistent, Intelligence, Surveillance and Reconnaissance (ISR) asset. This program includes:</p> <p>Broad Area Maritime Surveillance (BAMS) UAV. Along with the Multi-mission Maritime Aircraft (MMA), the BAMS UAV is integral in recapitalizing the Navy's airborne ISR force. BAMS UAV will provide a persistent maritime ISR capability that will play a significant role in the Sea Shield and FORCEnet pillars of Sea Power 21. In its Sea Shield role, BAMS UAV's on-station persistence enables unmatched awareness of the maritime battlespace by sustaining the maritime common operational picture for Surface Warfare (SUW) and Global War On Terrorism (GWOT). The system will serve as a Fleet Response Plan enabler while acting as a trip wire for surge forces.</p> <p>BAMS UAV will be an endurance-class UAV that will operate from land-based sites around the world. Because BAMS UAV and the MMA/P-3 have related, complementary missions, it is intended that BAMS UAV be an adjunct to the P-3 community to enhance manpower, training and maintenance efficiencies. Systems of up to 5-6 air vehicles at each operating location provide persistence by being airborne 24 hours a day, 7 days a week out to on-station ranges of 2,000 nautical miles. Worldwide access will be achieved by providing coverage over nearly all the world's high-density sea-lanes, littorals, and areas of national interest from its operating locations.</p> <p>BAMS UAV sensor capabilities will include active imaging radar, passive optical imaging, and limited signals collection. Additionally it will have a communications relay capability linking dispersed forces in the theater of operation and serving as a communications node in the Navy's FORCEnet strategy. The BAMS UAV will contribute to providing the Fleet Commander a common operational tactical picture of the battlespace day and night. It will queue other Navy assets for further situational investigation and/or attack, and after attack, will provide battle damage assessment. Data analysis will occur in real-time at shore installations via satellite reach back. Further exploitation can be conducted at shore-based exploitation sites or aboard CVNs / LHDs.</p> <p>Global Hawk Maritime Demonstration (GHMD) Program. As part of a transformational initiative begun in the fall of 2001, the Navy is procuring two Global Hawk UAVs from the Air Force to support Naval ISR concepts of operation and tactics, training and techniques development; Fleet exercises and familiarization; and cultural acclimation. The program, known as the GHMD Program, participated in the TRIDENT WARRIOR 05 Fleet exercise in December 05.</p> <p>Capitalizing on an existing production line, the Navy, in February 2003, contracted through the Air Force Global Hawk Program Office for the purchase of two Global Hawk air vehicles, one mission control element (MCE), two launch and recovery elements (LREs), and related support equipment from Northrop Grumman. Baseline sensors include electro-optical, infrared, and synthetic aperture radar. The Navy Global Hawks are identical to the Air Force's except for the inclusion of radar software modifications with inverse synthetic aperture radar (ISAR) and maritime moving target indicator (MMTI) modes that provide limited capabilities in a maritime environment, and LR-100 hardware modules that provide direction-sensing capability of radar emitting targets. GHMD assets will be based at Patuxent River, MD.</p> <p>Note: \$14.5M in FY 2005 BAMS UAV funds will be used to forward finance FY2006 efforts.</p>								

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Exhibit R-2, RD TEN Budget Item Justification
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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7	PROGRAM ELEMENT NUMBER AND NAME 0305205N Endurance Unmanned Aerial Vehicles				PROJECT NUMBER AND NAME 3061 Global Hawk Maritime Demonstration			
COST (\$ in Millions)	FY2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	
3061 Global Hawk Maritime Demonstration	24.700	0.000	0.000	0.000	0.000	0.000	0.000	
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Global Hawk Maritime Demonstration (GHMD) Program. As part of a transformational initiative begun in the fall of 2001, the Navy is procuring two Global Hawk UAVs from the Air Force to support Naval ISR concepts of operation and tactics, training and techniques development; Fleet exercises and familiarization; and cultural acclimation. The program, known as the GHMD Program, participated in the TRIDENT WARRIOR 05 Fleet exercise in December 05.

Capitalizing on an existing production line, the Navy, in February 2003, contracted through the Air Force Global Hawk Program Office for the purchase of two Global Hawk air vehicles, one mission control element (MCE), two launch and recovery elements (LREs), and related support equipment from Northrop Grumman. Baseline sensors include electro-optical, infrared, and synthetic aperture radar. The Navy Global Hawks are identical to the Air Force's except for the inclusion of radar software modifications with inverse synthetic aperture radar (ISAR) and maritime moving target indicator (MMTI) modes that provide limited capabilities in a maritime environment, and LR-100 hardware modules that provide direction-sensing capability of radar emitting targets. GHMD assets will be based at Patuxent River, MD.

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B. Accomplishments/Planned Program																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 10%;"></th><th style="width: 15%;">FY 05</th><th style="width: 15%;">FY 06</th><th style="width: 15%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td></td><td style="text-align: center;">24.700</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>							FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost		24.700	0.000	0.000	RDT&E Articles Quantity				
		FY 05	FY 06	FY 07															
Accomplishments/Effort/Subtotal Cost		24.700	0.000	0.000															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">Spares buy for Global Hawk Maritime Demonstration (GHMD) program.</div>																			

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C. PROGRAM CHANGE SUMMARY:			
Funding:	FY 05	FY 06	FY 07
Previous President's Budget	0.000	0.000	0.000
Current President's Budget	24.700	0.000	0.000
Total Adjustments	24.700	0.000	0.000
Summary of Adjustments			
Congressional Reductions			
Congressional Rescissions			
Congressional Undistributed Reductions			
Congressional Increases			
Economic Assumptions			
Miscellaneous			
Subtotal	24.700	0.000	0.000
Schedule:			
Not Applicable			
Technical:			
Not Applicable			

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7		PROGRAM ELEMENT NUMBER AND NAME 0305205N Endurance Unmanned Aerial Vehicles		PROJECT NUMBER AND NAME 3061 Global Hawk Maritime Demonstration					
D. OTHER PROGRAM FUNDING SUMMARY:									
<u>Line Item No. & Name</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>To Complete</u>	<u>Total Cost</u>
Not Applicable									
 E. ACQUISITION STRATEGY:									
Not Applicable									

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							February 2006	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7		PROGRAM ELEMENT NUMBER AND NAME 0305205N Endurance Unmanned Aerial Vehicles			PROJECT NUMBER AND NAME 4020 BAMS UAV			
COST (\$ in Millions)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	
4020 BAMS UAV	39.345	0.000	26.357	118.964	251.780	240.494	124.989	
RDT&E Articles Qty								
A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:								
<p>Broad Area Maritime Surveillance (BAMS) UAV. Along with the Multi-mission Maritime Aircraft (MMA), the BAMS UAV is integral in recapitalizing the Navy's airborne intelligence, surveillance, and reconnaissance (ISR) force. BAMS UAV will provide a persistent maritime ISR capability that will play a significant role in the Sea Shield and FORCEnet pillars of Sea Power 21. In its Sea Shield role, BAMS UAV's on-station persistence enables unmatched awareness of the maritime battlespace by sustaining the maritime common operational tactical picture for Surface Warfare (SUW) and Global War On Terrorism (GWOT). The system will serve as a Fleet Response Plan enabler while acting as a trip wire for surge forces.</p> <p>BAMS UAV will be an endurance-class UAV that will operate from land-based sites around the world. Because BAMS UAV and the MMA/P-3 have related, complementary missions, it is intended that BAMS UAV be an adjunct to the P-3 community to enhance manpower, training and maintenance efficiencies. Systems of up to 5-6 air vehicles at each operating location provide persistence by being airborne 24 hours a day, 7 days a week out to on-station ranges of 2,000 nautical miles. Worldwide access will be achieved by providing coverage over nearly all the world's high-density sea-lanes, littorals, and areas of national interest from its operating locations.</p> <p>BAMS UAV sensor capabilities will include active imaging radar, passive optical imaging, and limited signals collection. Additionally it will have a communications relay capability linking dispersed forces in the theater of operation and serving as a communications node in the Navy's FORCEnet strategy. The BAMS UAV will contribute to providing the Fleet Commander a common operational tactical picture of the battlespace day and night. It will queue other Navy assets for further situational investigation and/or attack, and after attack, will provide battle damage assessment. Data analysis will occur in real-time at shore installations via satellite reach back. Further exploitation can be conducted at shore-based exploitation sites or aboard CVNs / LHDs.</p> <p>The program is in a pre-Milestone B phase over FY05-07 that will address technical risk reduction. Milestone B is planned for late FY07 and, based on a competitive system integrator selection process, the System Development and Demonstration (SDD) phase will begin in FY08. Low rate initial production is planned for FY11, with deliveries supporting an initial operational capability (IOC) in FY13.</p> <p>The BAMS UAV ORD was signed by the CNO 17 May 2004. The BAMS requirements are being updated through the Joint Capabilities Integration and Development System (JCIDS) process. Two mission needs statement (MNS) support the requirement; 1) BAMS and Littoral Armed ISR MNS, and 2) Long Endurance, Reconnaissance, Surveillance and Target Acquisition (RSTA) Capability MNS.</p> <p>The BAMS UAV will be an evolutionary based acquisition and will use a competitive acquisition strategy. The program will be conducting pre-systems acquisition activities prior to MS B. These activities will consist of documentation development, demonstrations, and study contracts. FY 2005 funding is being used to forward finance FY 2006 requirements.</p>								

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7	PROGRAM ELEMENT NUMBER AND NAME 0305205N Endurance Unmanned Aerial Vehicles	PROJECT NUMBER AND NAME 4020 BAMS UAV																	
B. Accomplishments/Planned Program																			
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		FY 05	FY 06	FY 07															
Accomplishments/Effort/Subtotal Cost		12.019		7.018															
RDT&E Articles Quantity																			
Industry contracts are being used to obtain UAV air vehicle and sensor performance data. Contracts will be used to support the demonstrations and risk reductions.																			
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		FY 05	FY 06	FY 07															
Accomplishments/Effort/Subtotal Cost		9.776		5.503															
RDT&E Articles Quantity																			
Contractor Support Services, Program Management Support and Travel.																			
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		FY 05	FY 06	FY 07															
Accomplishments/Effort/Subtotal Cost		17.550		13.836															
RDT&E Articles Quantity																			
Activities include requirement flow-down and development of functional and detailed systems specifications (including air vehicle and ground station avionics, software and logistics); conduct systems trade studies; solicitation activities; development of milestone and acquisition-related documentation; capability refinement and open systems architecture development; metric development and tracking; affordability assessments and cost analyses; test and evaluation planning, demonstrations using surrogate and UAV platforms; logistics supportability analyses and environmental planning; development of manpower and basing assessments; risk reduction and risk management; system integration and interoperability planning; systems engineering and technology maturity reviews; program protection planning, corrosion prevention planning, anti-tamper provisioning planning, and Joint and International Cooperation.																			

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C. PROGRAM CHANGE SUMMARY:

	FY 05	FY 06	FY 07
Funding:			
Previous President's Budget	85.799	0.000	29.339
Current President's Budget	39.345	0.000	26.357
Total Adjustments	-46.454	0.000	-2.982
Summary of Adjustments			
Congressional Reductions			
Congressional Rescissions	-31.700		
Congressional Undistributed Reductions	-0.073		
Congressional Increases			
Economic Assumptions			0.148
Miscellaneous	-14.681		-3.130
Subtotal	-46.454	0.000	-2.982

Schedule:

Minor schedule updates from PB06. Due to program restructuring, procurement of engineering development models will not be initiated in FY08.

Technical:

Not Applicable

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D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Complete	Total Cost
APN 044200 BAMS UAV							304.236		
APN Initial Spares: 060510 BAMS UAV							6.654		

E. ACQUISITION STRATEGY:

The BAMS UAV Program will develop and field a persistent maritime ISR capability. Commercial of-the-shelf (COTS) technology will be utilized to the greatest extent possible for all segments of the BAMS UAV system (i.e., air vehicle, ground segment and payloads).

The BAMS UAV will be an evolutionary based acquisition. The program is in a pre-Milestone B phase over FY05-07 that will address technical risk reduction. Milestone B is planned for late FY07 and, based on a competitive system integrator selection process, the System Development and Demonstration (SDD) phase will begin in FY08. Low rate initial production is planned for FY11, with deliveries supporting an initial operational capability (IOC) in FY13.

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Exhibit R-3 Cost Analysis (page 1)								DATE: February 2006				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-7			0305205N Endurance Unmanned Aerial Vehicles			4020 BAMS UAV						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development											0.000	
Ancillary Hardware Development											0.000	
Aircraft Integration											0.000	
Ship Integration											0.000	
Ship Suitability											0.000	
Systems Engineering											0.000	
Studies & Analysis	Various	Various		12.019	08/05			7.018	11/06	0.000	19.037	
Licenses											0.000	
Tooling											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal Product Development			0.000	12.019		0.000		7.018		0.000	19.037	
Remarks:												
Development Support/Demo's	Various	Various		3.191	02/05			2.268	11/06		5.459	
Software Development											0.000	
Integrated Logistics Support	Various	Various	2.196	1.739	12/04			1.245	11/06	Continuing	Continuing	
Configuration Management											0.000	
Technical Data											0.000	
Studies & Analyses	Various	Various		3.424	02/05			3.655	11/06	Continuing	Continuing	
GFE											0.000	
Award Fees											0.000	
Subtotal Support			2.196	8.354		0.000		7.168		Continuing	Continuing	
Remarks:.												

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Exhibit R-3 Cost Analysis (page 2)									DATE: February 2006			
APPROPRIATION/BUDGET ACTIVITY RDTE&E, N / BA-7			PROGRAM ELEMENT 0305205N Endurance Unmanned Aerial Vehicles			PROJECT NUMBER AND NAME 4020 BAMS UAV						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation										Continuing	Continuing	
Operational Test & Evaluation										Continuing	Continuing	
Live Fire Test & Evaluation											0.000	
Test Assets											0.000	
Tooling											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal T&E			0.000	0.000		0.000		0.000		Continuing	Continuing	
Remarks:												
Contractor Engineering Support	Various	Various	0.512	0.822	12/04			0.972	11/06	Continuing	Continuing	
Government Engineering Support	WX	Various	12.523	9.196	12/04			6.668	11/06	Continuing	Continuing	
Program Management Support	Various	Various	4.500	8.804	02/05			4.456	11/06	Continuing	Continuing	
Travel	TO	NAVAIR-HQ, Pax River, MD	0.075	0.150	10/04			0.075	10/06	Continuing	Continuing	
Transportation											0.000	
SBIR Assessment											0.000	
Subtotal Management			17.610	18.972		0.000		12.171		Continuing	Continuing	
Remarks:												
Total Cost			19.806	39.345		0.000		26.357		Continuing	Continuing	
Remarks:												

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