

EXHIBIT R-2, RDT&E Budget Item Justification						DATE:	
APPROPRIATION/BUDGET ACTIVITY						February 2008	
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA 5						R-1 ITEM NOMENCLATURE	
						0604216N, MULTI-MISSION HELICOPTER UPGRADE	
COST (\$ in Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	28.881	76.482	70.329	45.649	32.004	4.615	.673
1707 MMH UPGRADE DEV RDT&E	28.881	76.482	70.329	45.649	32.004	4.615	.673

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

The MH-60R primary mission areas include Anti-Submarine Warfare (ASW) and Surface Warfare (SUW). Secondary mission areas include Search and Rescue (SAR), Vertical Replenishment (VERTREP), Naval Surface Fire Support (NSFS), logistics support, personnel transport and Medical Evacuation (MEDEVAC). The MH-60R provides direct support to the Carrier Strike Group and provides Link Communications Relay (COMREL) via VHF/UHF Link-16 and Common Data Link (CDL) with the incorporation of Interface Design Specification (IDS) (SAU-07-000) full data exchange via CDL. Ku-Band will be provided to DDG-1000, CVX and LCS platforms. Aircraft Ship Integrated Secure and Traverse (ASIST) reduces manning/maintenance and operational requirements aboard DDG-1000 ships by eliminating need for hauldown capability and providing automatic movements and aircraft on deck. The MH-60R is Post-Milestone III and executing Pre-Planned Product Improvements (P3I) to Air Vehicle and Mission systems. P3I includes upgrades to communication, navigation, Identification Friend or Foe (IFF), Multi-Spectral Targeting System (MTS)/Forward Looking Infrared Radar (FLIR) to include Automatic Radar Periscope Detection and Discrimination (ARPDD), weapons, data link, safety, maintenance, airframe and mission planning systems. ARPDD funding prior to FY2008 is in PE 0604261N/4017.

B. PROGRAM CHANGE SUMMARY

Funding:	FY 2007	FY 2008	FY 2009
FY 2008 President's Budget:	19.186	78.151	58.062
FY 2009 President's Budget:	28.881	76.482	70.329
Total Adjustments	9.695	-1.669	12.267

Summary of Adjustments

Congressional Reductions			
Congressional Rescissions			
Congressional Undistributed Reductions	-0.256	-1.669	
Congressional Increases			
Economic Assumptions			-0.339
Miscellaneous Adjustments	9.951	0.000	12.606
Subtotal	9.695	-1.669	12.267

Schedule: 1707

- Schedule added: Multi Year Award (Lots V-IX) moved from 3Q/07 to 4Q/07.
- Schedule added: Common Data Link (CDL) Deployment 4Q/11.
- Schedule added: Automatic Radar Periscope Detection and Discrimination (ARPDD) IOC 4Q/12.
- Schedule added: Common Data Link (CDL) Integrated Test 3Q/08-3Q/09.
- Schedule added: Automatic Radar Periscope Detection and Discrimination (ARPDD) Integrated Test 3Q/10-2Q/12.

Technical:

Not Applicable

EXHIBIT R-2a, RDT&E Project Justification						DATE: February 2008		
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604216N, MULTI-MISSION HELICOPTER UPGRADE			PROJECT NUMBER AND NAME 1707, MMH UPGRADE DEV RDT&E			
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
1707 MMH UPGRADE DEV RDT&E		28.881	76.482	70.329	45.649	32.004	4.615	.673
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The MH-60R primary mission areas include Anti-Submarine Warfare (ASW) and Surface Warfare (SUW). Secondary mission areas include Search and Rescue (SAR), Vertical Replenishment (VERTREP), Naval Surface Fire Support (NSFS), logistics support, personnel transport and Medical Evacuation (MEDEVAC). The MH-60R provides direct support to the Carrier Strike Group and provides Link communications Relay (COMREL) via VHF/UHF Link-16 and Common Data Link (CDL) with the incorporation of Interface Design Specification (IDS) (SAU-07-000) full data exchange via CDL Ku-Band will be provided to DDG-1000, CVX and LCS platforms. Aircraft Ship Integrated Secure and Traverse (ASIST) reduces manning/maintenance and operational requirements aboard DDG-1000 ships by eliminating need for hauldown capability and providing automatic movements and aircraft on deck. The MH-60R is Post-Milestone III and executing Pre-Planned Product Improvements (P3I) to Air Vehicle and Mission systems. P3I includes upgrades to communication, navigation, Identification Friend or Foe (IFF), Multi-Spectral Targeting System (MTS)/Forward Looking Infrared Radar (FLIR), Radar to include Automatic Radar Periscope Detection and Discrimination (ARPDD), weapons, data link, safety, maintenance, airframe and mission planning systems. ARPDD funding prior to FY08 is in PE 0604261N/4017.

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

Avionics H/W and S/W Development	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	5.157	43.274	45.035
RDT&E Articles Qty			

Supports aircraft integration, problem investigation and resolution, lab management and upgrades, hardware investigations, and repairs in support of the test program. Provides for ILS support and Program Management Board Support and subvendor support. Avionics hardware and software development and integration to include: P3I/Link-16 Radar (ARPDD), Communications, GPS, Acoustics and post processing. Mission planning, MTS/FLIR, Weapons, Stores and self defense, Data fusion, and Logistics products including Integrated Electronic Technical Manuals (IETMS). ARPDD Project provides a fully automated periscope detection, classification, and tracking capability to reliably detect periscopes and masts, and reliably discriminate periscopes from clutter and confusion targets. This capability is suitable for air and surface platforms.

Engineering, Integration, and Testing	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	1.602	1.000	1.800
RDT&E Articles Qty			

Common Data Link	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	11.818	8.240	5.000
RDT&E Articles Qty			

Avionics P3I Upgrade for the Common Data Link (CDL) and reversability between C-Band and KuBand Software design interface (SAU-07-000) provides connectivity and full data exchange with DDG-1000, LCS and CVX

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RDT&E,N / BA-5	0604216N, MULTI-MISSION HELICOPTER UPGRADE	1707, MMH UPGRADE DEV RDT&E

Engineering and Logistics	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	1.694	9.179	8.429
RDT&E Articles Qty			

Engineering specialists, integrated logistics support, Government Furnished Equipment (GFE), Systems Engineering, Program Management, Contractor Support Services, Travel as required to support the MH-60R development program and test activities.

Avionics Testing and Evaluation	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	8.610	14.789	10.065
RDT&E Articles Qty			

MH-60R Mission Avionics testing, Avionics Mission P3I testing and Evaluation efforts.

C. OTHER PROGRAM FUNDING SUMMARY:	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Complete	Total Cost
APN-1 BLI: 018200	912.972	990.819	1,185.763	1,048.228	1,140.010	992.204	1,010.631	1,323.996	8,604.623
APN-6 BLI: 060510	4.247	1.354	4.268	2.349	1.453				112.179
APN-5 OSIPs 001-06, 004-11, & 009-09	4.694	24.442	25.413	34.987	44.811	45.181	50.031	287.500	517.059

Related RDT&E
 0604507N Enhanced Modular Signal Processor
 0604212N Other Helo Development
 0604261N Acoustics Search Sensors

D. ACQUISITION STRATEGY:

Initial Operating Capability (IOC) was achieved in Dec 05 and the MSIII, Full Rate Production (FRP) decision occurred in March 2006. As the SH-60B and SH-60F reach the end of their service life, the MH-60R serves as the replacement weapon system. The MH-60R weapon system began fielding in FY2006. The mission systems include Common Cockpit, ALFS, sonobuoy launcher, COTS AP, ESM, MTS/FLIR system, MMR, ARPDD, CDL Hawklink, ISD and weapons capability.

Pre-Planned Product Improvement (P3I) upgrades will be integrated, tested, and fielded to ensure increased capabilities are provided to the Fleet User.

UNCLASSIFIED

Exhibit R-3 Cost Analysis (page 1)										DATE: February 2008		
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NUMBER AND NAME						
RDT&E,N / BA-5		0604216N, MULTI-MISSION HELICOPTER UPGRADE				1707, MMH UPGRADE DEV RDT&E						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s 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
PRODUCT DEVELOPMENT												
GFE	VARIOUS	VARIOUS	4.688								4.688	
Primary Hdw Dev, Airframe (SAC)	SS-CPAF	SIKORSKY A/C CORP, STRATFORD, CT	76.975	1.602	Feb 2007	1.000	Feb 2008	1.800	Feb 2009	.200	81.577	81.577
Primary Hdw Dev, Avionics (LMSI)	SS-CPAF	LOCKHEED MARTIN CORP, OWEGO, NY	679.438	5.157	Feb 2007	43.274	Mar 2008	45.035	Feb 2009	48.900	821.804	821.804
Primary Hdw Dev, Avionics CDL	SS-CPAF	HARRIS CORPORATION, MELBOURNE, FL		11.818	Dec 2006	8.240	Nov 2007	2.000	Nov 2008		22.058	22.058
Primary Hdw Dev, Avionics CDL	SS-CPIF	LOCKHEED MARTIN CORP, OWEGO, NY						3.000	Feb 2009	2.850	5.850	5.850
All Product Dev't Cost from FY93-FY06			172.497								172.497	
SUBTOTAL PRODUCT DEVELOPMENT			933.598	18.577		52.514		51.835		51.950	1,108.474	

Remarks:

SUPPORT												
Government Eng Technical Services	WX	NAWCAD, PATUXENT RIVER MD	.332			2.500	Nov 2007	4.100	Nov 2008	1.500	8.432	
Government Eng Technical Services	WX	NAWCWD, CHINA LAKE CA				4.900	Nov 2007	2.200	Nov 2008	4.361	11.461	
Government Eng Technical Services	WX	VARIOUS	.839					.300	Nov 2008	2.000	3.139	
All Support Cost from FY93-FY06			123.294								123.294	
SUBTOTAL SUPPORT			124.465			7.400		6.600		7.861	146.326	

Remarks:

TEST & EVALUATION												
Dev Test & Eval	WX	NAWCAD, PATUXENT RIVER MD	92.865	8.229	Nov 2006	13.025	Nov 2007	8.565	Nov 2008	21.130	143.813	
Oper Test & Eval	WX	COMOPTEVFOR	7.377	.381	Jan 2007	1.764	Nov 2007	1.500	Nov 2008	2.000	13.022	
All T&E Cost from FY93-FY06			11.687								11.687	
SUBTOTAL TEST & EVALUATION			111.929	8.610		14.789		10.065		23.130	168.522	

Remarks: Dollars may not add due to rounding.

MANAGEMENT												
Contractor Engr Sup - ETS (NON-FFRDC)		VARIOUS	21.696	.879	Dec 2006	.879	Nov 2007	.879	Nov 2008		24.333	
Travel	WX	NAWCAD, PATUXENT RIVER MD	1.841	.815	Oct 2006	.900	Oct 2007	.950	Oct 2008		4.506	
All Management Cost from FY93-FY06			9.667								9.667	
SUBTOTAL MANAGEMENT			33.204	1.694		1.779		1.829			38.506	

Remarks:

Total Cost			1,203.196	28.881		76.482		70.329		82.941	1,461.828	
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Remarks: Total cost may not add due to rounding.

CLASSIFICATION:

Exhibit R-4a, Schedule Detail				DATE: February 2008			
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-5	PROGRAM ELEMENT 0604216N, MULTI-MISSION HELICOPTER UPGRADE			PROJECT NUMBER AND NAME 1707, MMH UPGRADE DEV RDT&E			
Schedule Profile	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Full Rate Production (Lot IV) (SAC)	1Q						
Multi-Year Award (Lots V - IX) (Lockheed/SA)	4Q	1Q	1Q	1Q	1Q		
P3I Integrated Test (IT-III)	2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q		
CDL Integrated Test		3Q - 4Q	1Q - 3Q				
ARPDD Integrated Test				3Q-4Q	1Q - 4Q	1Q-2Q	
CDL Deployment					4Q		
ARPDD IOC						4Q	