

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2, RDT&E Budget Item Justification							DATE:		
							February 2004		
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE				
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-7					0305207N Manned Reconnaissance Systems				
COST (\$ in Millions)			FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost			22.505	16.521	20.203	23.162	23.445	23.944	24.432
Z0117*	REEF POINT		8.096	11.748	20.203	23.162	23.445	23.944	24.432
E2673	F/A-18E/F TACTICAL RECONNAISSANCE (SHARP)		14.409	3.784					
H9439**	ADVANCED AIRCRAFT COLLECTION SYSTEM			0.989					
A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:									
(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: Provides funds for the development of a dual-spectral-band reconnaissance pod camera system capable of being deployed on tactical aircraft. The camera will have simultaneous visible and infrared imaging capability and provide digital images in national standard formats. The system will be capable of collecting imagery, recording on-board, and transmitting simultaneously to a ground receiving station. Cameras operating in multiple spectral bands will be introduced as the technology evolves. The target aircraft is the F/A-18E/F. A prototype system was flight demonstrated in June 2001. Provision will be made to accommodate transmission of Synthetic Aperture Radar (SAR) data. The system will operate semi-autonomously from the aircraft maximizing standard interfaces. Emphasis will be placed on using commercially available subsystems and components in an open architecture so that evolutionary designs in cameras, processors, transmitters, and recorders can be introduced seamlessly via competitive procurement procedures. An aggressive development schedule will be embraced driving toward an operational capability by Feb 2003. The purpose of the aggressive development schedule is to have an operational capability ready to replace the F-14 Tactical Air Reconnaissance Pod System (TARPS) due to retire beginning in 2003.									
(U) Details for project Z0117 are held at a higher classification.									
*Executed at a higher level of classification (no project R-2 exhibits). Project unit changed from R0117 to Z0117.									
**Executed at a higher level of classification (no project R-2 exhibits).									

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 Exhibit R-2, RDTEN Budget Item Justification  
 (Exhibit R-2, page 1 of 14)

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EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2004</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-7</b>		PROGRAM ELEMENT NUMBER AND NAME 0305207N Manned Reconnaissance Systems			PROJECT NUMBER AND NAME E2673 F/A-18E/F Tactical Reconnaissance (SHARP)			
COST (\$ in Millions)		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost		** 14.409	3.784					

### A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

\*\*The FY 2003 budget reflects an \$11.9 million dollar Congressional add for F/A-18D Tactical Reconnaissance Aircraft Solid State Recorder Upgrades.

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Shared Reconnaissance Pod (SHARP) provides funds for the development of a dual-spectral-band reconnaissance pod camera system capable of being deployed on tactical aircraft. The camera will have simultaneous visible and infrared imaging capability and provide digital images in national standard formats. The system will be capable of collecting imagery, recording on-board, and transmitting simultaneously to a ground receiving station. Cameras operating in multiple spectral bands will be introduced as the technology evolves. The target aircraft is the F/A-18E/F. A prototype system was flight demonstrated in June 2001. Provision will be made to accommodate transmission of Synthetic Aperture Radar (SAR) data. The system will operate semi-autonomously from the aircraft maximizing standard interfaces. Emphasis will be placed on using commercially available subsystems and components in an open architecture so that evolutionary designs in cameras, processors, transmitters, and recorders can be introduced seamlessly via competitive procurement procedures. An aggressive development schedule will be embraced driving toward an operational capability by Feb 2003.

In the FY2003 President's budget, Congress added \$11.9M for development and integration of a solid state recorder in Advance Tactical Airbone Reconnaissance System (ATARS). This develeopment is fully funded with this Congressional Add.

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<b>(U) B. Accomplishments/Planned Program</b>																			
<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 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td></td><td style="text-align: center;">0.231</td><td style="text-align: center;">0.240</td><td></td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>							FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost		0.231	0.240		RDT&E Articles Quantity				
		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost		0.231	0.240																
RDT&E Articles Quantity																			
Continue program management to coordinate development activities during the EMD phase of the program.																			
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		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost			2.000																
RDT&E Articles Quantity																			
Congressional Add for digital shutter development.																			
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		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost		2.235																	
RDT&E Articles Quantity																			
Continue testing and integration of SHARP into the F/A-18E/F SCS.																			

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		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost			0.993																
RDT&E Articles Quantity																			
Software development.																			
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		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost			0.151																
RDT&E Articles Quantity																			
Complete ancillary hardware development/EMD upgrades.																			
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		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost		11.543																	
RDT&E Articles Quantity																			
Develop and intergrate solid state recorder in ATARS.																			

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		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost		0.400	0.400																
RDT&E Articles Quantity																			
Perform Operational Testing.																			
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EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2004</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDTE&amp;E, N / BA-7</b>	PROGRAM ELEMENT NUMBER AND NAME 0305207N Manned Reconnaissance Systems	PROJECT NUMBER AND NAME E2673 F/A-18E/F Tactical Reconnaissance (SHARP)

**(U) C. PROGRAM CHANGE SUMMARY:**

	FY 2003	FY 2004
(U) Funding:		
Previous President's Budget:	14.414	1.827
Current BES/President's Budget	14.409	3.784
Total Adjustments	-0.005	1.957
Summary of Adjustments		
Congressional program reductions		
Congressional undistributed reductions		-0.043
Congressional rescissions		
SBIR/STTR Transfer		
Economic Assumptions		
Reprogrammings	-0.005	
Reprioritization		
Congressional increases		2.000
Subtotal	-0.005	1.957

(U) Schedule:

SHARP: OT-IIC OPEVAL has moved to third and fourth quarter in FY2004 to allow completion of high altitude sensor development.

ATARS DSS: Development completion was delayed because of the challenges in defining the aircraft integration.

(U) Technical:

Not Applicable.

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APPROPRIATION/BUDGET ACTIVITY <b>RDTE&amp;E, N / BA-7</b>			PROGRAM ELEMENT NUMBER AND NAME 0305207N Manned Reconnaissance Systems			PROJECT NUMBER AND NAME E2673 F/A-18E/F Tactical Reconnaissance (SHARP)			

**(U) D. OTHER PROGRAM FUNDING SUMMARY:**

Line Item No. & Name	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost
P-1 LINE ITEM 3-F/A-18E/F (FIGHTER) HORNET (MYP)									
APN-1/ BLI 014500 Weapons System Cost	65.299	69.300	0.000	0.000	0.000	0.000	0.000	0.000	134.599

**(U) E. ACQUISITION STRATEGY:**

1. The pod was procured with an order on a Cost Plus Fixed-Fee (CPFF)/IDIQ contract to Raytheon, Indianapolis.
2. The contract for the sensor, a Firm Fixed Price (FFP) option, and the engineering ILS support, a Cost Plus Incentive Fee (CPIF) option, are/will be procured competitively.
3. Integration of the "off-the-shelf" solid state recorder onto USMC F/A-18Ds will be accomplished within this project through a sole source contract to BAE. Due to the value of the equipment , no OPEVAL will be required and the change will be incorporated prior to retrofit procurement.

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Exhibit R-3 Cost Analysis (page 1)									DATE: February 2004			
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-7			0305207N Manned Reconnaissance Systems			E2673 F/A-18E/F Tactical Reconnaissance (SHARP)						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary HW Dev POD Prototype	SS/FP-LOE	Raytheon, Indianapolis, IN	14.373								14.373	14.373
Ancillary HW Dev Sensor Prototype	C/FFP	VARIOUS	2.507								2.507	2.507
Ancillary HW Dev RMS Prototype	C/Plus	Space Dyn Lab, Logan , UT	3.500								3.500	3.500
Ancillary HW Dev Prototype	WX	NRL, Washington, DC	4.050			2.000	04/04				6.050	
Primary HW Dev POD EMD	SS/FP-LOE	Raytheon, Indianapolis, IN	39.718								39.718	39.718
Ancillary HW Dev Sensor EMD	FFP/CPIF	Recon Optical, Barrington, IL	17.841								17.841	17.841
Ancillary HW Dev Datalink EMD	PD	SPAWAR, San Diego, CA	0.778								0.778	
Ancillary HW Dev / EMD Upgrades	WX	VARIOUS				0.151	11/03				0.151	
Primary HW Dev ATARS	SS/CPFF	BAE, NY		9.500	01/04						9.500	9.500
Subtotal Product Development			82.767	9.500		2.151					94.418	
Remarks:												



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Remarks:

Remarks:

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Exhibit R-3 Cost Analysis (page 2)								DATE: February 2004				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-7			Program Element (PE) No. and Name			0305207N Manned Reconnaissance Systems						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	VARIOUS	VARIOUS	17.355								17.355	
Operational Test & Evaluation	WR	OPTEVFOR, Norfolk VA	0.033	0.400	11/02	0.400	02/04				0.833	
Subtotal T&E			17.388	0.400		0.400					18.188	
Remarks:												
Program Management Support	VARIOUS	VARIOUS	1.829								1.829	
Travel				0.031	10/02	0.040	10/03				0.071	
Subtotal Management			1.829	0.031		0.040					1.900	
Remarks:												
Total Cost			140.214	14.409		3.784					158.407	
Remarks:												

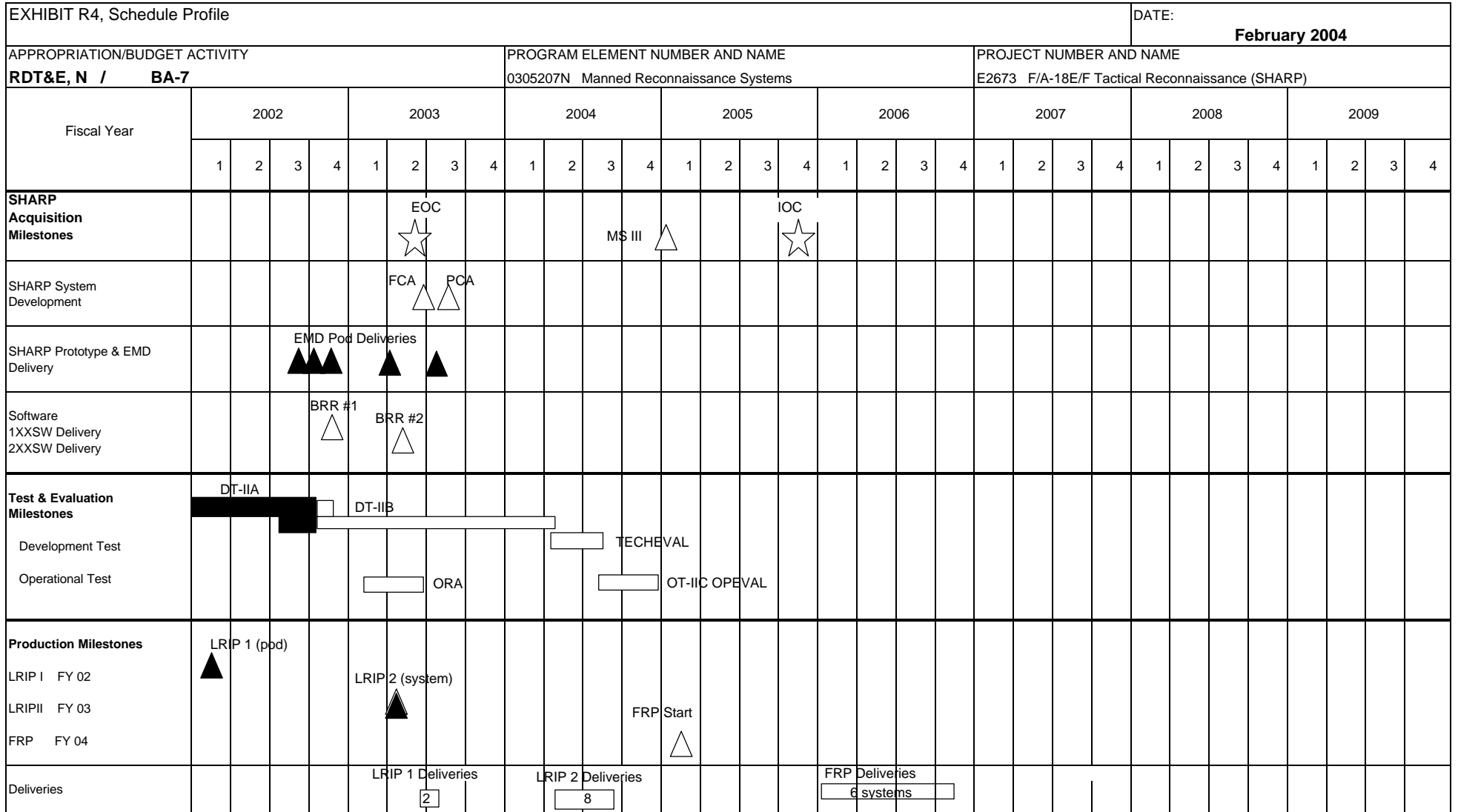
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Exhibit R-3, Project Cost Analysis  
(Exhibit R-3, page 10 of 14)

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\* Not required for Budget Activities 1, 2, 3, and 6

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Exhibit R-4, Schedule Profile  
(Exhibit R-4, page 11 of 14)

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Exhibit R-4a, Schedule Detail						DATE: <b>February 2004</b>			
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NUMBER AND NAME			
<b>RDT&amp;E, N / BA-7</b>		0305207N Manned Reconnaissance Systems				E2673 F/A-18E/F Tactical Reconnaissance (SHARP)			
Schedule Profile for SHARP		FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Developmental Testing (DT-IIA)		1Q-4Q							
Software Delivery 1XXSW		4Q							
EMD Pod Deliveries		3Q-4Q	2Q-3Q						
Low-Rate Initial Production I (LRIP I) Decision		1Q							
Software Delivery 2XXSW			2Q						
Developmental Testing (DT-IIB)		3Q-4Q	1Q-4Q	1Q-2Q					
Low-Rate Initial Production II Decision			2Q						
Operational Readiness Assessment (ORA)			1Q-2Q						
Functional Configuration Audit (FCA)			2Q						
Low-Rate Initial Production I Delivery			2Q-3Q						
Technical Evaluation (TECHEVAL)				2Q-3Q					
Physical Configuration Audit			3Q						
Operational Evaluation (OT-IIC) (OPEVAL)				3Q-4Q					
Low-Rate Initail Production II Delivery				2Q-3Q					
EOC			2Q						
IOC					4Q				
Milestone III/FRP					1Q				
Full Rate Contract Award					1Q				
Full Rate Production Deliveries						1Q-4Q			

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Exhibit R-4a, Schedule Detail  
(Exhibit R-4a, page 12 of 14)

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EXHIBIT R4, Schedule Profile																								DATE:				February 2004				
APPROPRIATION/BUDGET ACTIVITY										PROGRAM ELEMENT NUMBER AND NAME										PROJECT NUMBER AND NAME												
RDT&E, N / BA-7										0305207N Manned Reconnaissance Systems										E2673 F/A-18E/F Tactical Reconnaissance (SHARP)												
Fiscal Year	2002				2003				2004				2005				2006				2007				2008				2009			
	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				
ATARS Solid State Recorder Contract Award																																
Integration/Development																																
Test & Evaluation Milestones																																
Development Test																																

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**Exhibit R-4a, Schedule Detail**  
(Exhibit R-4a, page 14 of 14)