CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2, I	RDT&E Budget Item Justification						DATE:	
	-						Februar	ry 2004
	V/BUDGET ACTIVITY				R-1 ITEM NOMEN	CLATURE		
RESEARCH D	EVELOPMENT TEST & EVALUATION	DN, NAVY / BA-7			0305207N Manne	ed 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).

R-1 SHOPPING LIST - Item No.

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

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE:	
							Februa	ry 2004
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEM	ENT NUMBER AND	NAME		PROJECT NUMBE	ER AND NAME		
RDT&E, N / BA-7	E2673 F/A-18E/F	Tactical Reconnaiss	sance (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:

(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 Reconnaisance System (ATARS). This development is fully funded with this Congressional Add.

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

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Pr	oject Justification				DATE:	
						February 2004
PPROPRIATION/BUDGET ACT	VITY	PROGRAM ELEMENT NUI	MBER AND NAME	PROJECT NUMBER AND	NAME	
DT&E, N / BA-7		0305207N Manned Recor	naissance Systems	E2673 F/A-18E/F Tactica	l Reconnaissance (SHAI	RP)
I) D. A	.l. D					
J) B. Accomplishments/Planne	a Program					
			FY 03	FY 04	FY 05	
Accomplishments/Effort/Subt	otal Cost		0.231	0.240		
RDT&E Articles Quantity						
Cartinus and annual and an annual		alamanant autivitiaa alvuina tha F	IMD whose of the was area			
Continue program managem	ent to coordinate dev	elopment activities during the E	EMD phase of the program	1.		
			FY 03	FY 04	FY 05	
Accomplishments/Effort/Subt	otal Cost			2.000		
RDT&E Articles Quantity						
Communicated Add for divital						
Congressional Add for digital	snutter development.					
			FY 03	FY 04	FY 05	
Accomplishments/Effort/Subto	otal Cost		2.235			
RDT&E Articles Quantity						
Continue testing and integrat	on of SHARP into the	F/A-18F/F SCS.				

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EXHIBIT R-2a, RDT&E Project Justifica	tion		DATE:	
			February 2004	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	JAME	
RDT&E, N / BA-7	0305207N Manned Reconnaissance Systems	E2673 F/A-18E/F Tactical	Reconnaissance (SHARP)	
(II) B. Assessa listance to (Discuss d Business				
(U) B. Accomplishments/Planned Program				
	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost		0.993		
RDT&E Articles Quantity				
Coffee development				
Software development.				
	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost		0.151		
RDT&E Articles Quantity				
Complete ancillary hardware development/EM	D ungrades			1
Complete anchiary hardware development/Livi	D upgrades.			
				J
A	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	11.543			
RDT&E Articles Quantity				
Develop and intergrate solid state recorder in	ATARC			1
Develop and intergrate solid state recorder in	ATARS.			
				j

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EXHIBIT R-2a, RDT&E Project Justification	n		DATE:	
			February 2004	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	NAME	
RDT&E, N / BA-7	0305207N Manned Reconnaissance Systems	E2673 F/A-18E/F Tactical	Reconnaissance (SHARP)	
(U) B. Accomplishments/Planned Program				
O) B. Accomplishments/Flanned Frogram				
	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	0.400	0.400		
RDT&E Articles Quantity				
Perform Operational Testing.				
one eperational rectang.				
	5)/00			
Accomplishments/Effort/Subtotal Cost	FY 03	FY 04	FY 05	
RDT&E Articles Quantity				
THE THE THRONG QUARMAY				
	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost				
RDT&E Articles Quantity				

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification				DATE:
				February 2004
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER	AND NAME	PROJECT NUMBER AND NA	AME
RDT&E, N / BA-7	0305207N Manned Reconnaissa	ince Systems	E2673 F/A-18E/F Tactical R	econnaissance (SHARP)
(U) C. PROGRAM CHANGE SUMMARY:				
(U) Funding: Previous President's Budget: Current BES/President's Budget Total Adjustments	FY 2003 14.414 14.409 -0.005	FY 2004 1.827 3.784 1.957		
Summary of Adjustments Congressional program reductions Congressional undistributed reductions Congressional rescissions SBIR/STTR Transfer Economic Assumptions	s	-0.043		
Reprogrammings Reprioritization Congressional increases	-0.005	2.000		
Subtotal	-0.005	1.957		
(U) Schedule: SHARP: OT-IIC OPEVAL has moved to third a ATARS DSS: Development completion was de				
(U) Technical: Not Applicable.				
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EXHIBIT R-2a, RDT&E Project Justification			DATE:
			February 2004
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NA	AME
RDT&E, N / BA-7	0305207N Manned Reconnaissance Systems	E2673 F/A-18E/F Tactical R	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 <u>Complete</u>	Total <u>Cost</u>
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.

CLASSIFICATION:

									DATE:				
Exhibit R-3 Cost Analysis (pag	e 1)										February	2004	
APPROPRIATION/BUDGET ACTIV	ITY		OGRAM E				PROJECT NU						
RDT&E, N / BA-7			5207N M	lanned Reconn	aissance Syste		E2673 F/A-1		Reconnaiss				
Cost Categories	Method	Performing Activity & Location			FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to	Total Cost	Target Value of Contract
Primary HW Dev POD Prototype		Raytheon, Indiana	nolie IN	14.373		Date	0031	Date	0031	Bate	Complete	14.373	
Ancillary HW Dev Sensor Prototype		VARIOUS	polis, liv	2.507								2.507	
Ancillary HW Dev RMS Prototype	C/Plus	Space Dyn Lab, L	ogan , UT	3.500								3.500	
Ancillary HW Dev Prototype	WX	NRL, Washington, D		4.050			2.000	04/04				6.050	
Primary HW Dev POD EMD	SS/FP-LOE	Raytheon, Indianapo	olis, IN	39.718								39.718	39.718
Ancillary HW Dev Sensor EMD	FFP/CPIF	Recon Optical, Barri	ington, IL	17.841								17.841	17.841
Ancillary HW Dev Datalink EMD	PD	SPAWAR, San Dieg	jo, 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	<u> </u>				94.418	
Remarks:													
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CLASSIFICATION:

										DATE:				
Exhibit R-3 Cost Analysis (p	age 1)											February	2004	
APPROPRIATION/BUDGET ACT	TIVITY		PROGRAM I	ELEMENT				PROJECT N	UMBER AND	NAME				
RDT&E, N / BA-7			0305207N	Manned Reco	nnaissan	nce Syste	ems	E2673 F/A-	18E/F Tactical	Reconnaiss	ance (SHARP)			
Cost Categories	Contract Method & Type	Performing Activity & Location		Total PY s Cost	FY 03 Cost	3	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
Development Support	WX	VARIOUS		1.6	60	0.200	11/02	0.20	11/03				2.06	0
Software Development Prototype	WX	NRL, Washingt	on, DC	8.5	09								8.50	9
Software Development /RMS	WX	NAWCWD, Ch	ina Lake, CA	16.7	56	2.235	11/02	0.99	3 11/03				19.98	4
Software Development /OFP	WX	NAWCWD, Ch	ina Lake, CA	8.8	31								8.83	1
Integrated Logistics Support	WX	NAWCAD, Lak	ehurst, NJ	2.4	74								2.47	4
Development Support(ATARS)	WX	VARIOUS				2.043	06/03						2.04	3
														+
														+
		1												_
Subtotal Support				38.2	30	4.478	8	1.19	3				43.90	1
Remarks:														

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	ο)							DATE:				
Exhibit R-3 Cost Analysis (page 1997)	ge 2)	Innoon				IDDO IDOT NII	MARCE AND			February 2	2004	
APPROPRIATION/BUDGET ACTIV	/IIY	PROGRAM I				PROJECT NU						
RDT&E, N / BA-7	10		ment (PE) No. a	ind Name	EV 00	0305207N M		naissance Sy				1
Cost Categories	Contract	Performing	Total	EV 00	FY 03	EV 04	FY 04	EV 05	FY 05	0	Tatal	Tanant Malus
	Method & Type	Activity & Location	PY s Cost	FY 03 Cost	Award Date	FY 04 Cost	Award Date	FY 05 Cost	Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation		VARIOUS	17.355		Date	COST	Date	COSI	Date	Complete	17.355	
Operational Test & Evaluation	WR	OPTEVFOR, Norfolk VA			44/00	0.400	02/04					
Operational Test & Evaluation	WR	OPTEVFOR, NOMOIK VA	0.033	0.400	11/02	0.400	02/04				0.833	3
	+											
	1											
	1											
Cultivated TOE			47.000	0.400		0.400					18.188	
Subtotal T&E		<u> </u>	17.388	0.400	']	0.400	<u> </u>		<u> </u>		10.100	<u> </u>
Program Management Support	VARIOUS	VARIOUS	1.829								1.829	9
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	7
Remarks:												

CLASSIFICATION:

EXHIBIT R4, Schedule	EXHIBIT R4, Schedule Profile APPROPRIATION/BUDGET ACTIVITY																								DATE	≣:	F	ebrua	ary 20	004		
		/ITY												R AND											ID NAN				_			
RDT&E, N / BA-7	7				ı				03052	:07N	Manne	ed Rec	onnais	sance	Syster	ns					E2673	8 F/A-	-18E/F	Tacti	cal Red	connai	ssance	(SHA	RP)			
Fiscal Year		20	002			20	03		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	1	2	3	4
SHARP Acquisition Milestones							oc L				М	\$ III _				ioc																
SHARP System Development						FCA	Pc	A																								
SHARP Prototype & EMD Delivery			Er	MD Po	d Deli	eries	A																									
Software 1XXSW Delivery 2XXSW Delivery				BRR	#1 E	RR #2																										
Test & Evaluation Milestones		DT-IIA			DT-I	В																										
Development Test											ᆸ.	ECHE	VAL																			
Operational Test							ORA						OT-II	C OPE	VAL																	
Production Milestones	LR	RIP 1 (p	od)																													
LRIP I FY 02					LRIF	2 (sys	tem)																									
LRIPII FY 03												FRP	Start																			
FRP FY 04																																
Deliveries					LI		eliveri	es	L	RIP 2	Delive 8	ries					FRP 6	Delive syster														

^{*} Not required for Budget Activities 1, 2, 3, and 6

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:						
	February 2004											
APPROPRIATION/BUDGET ACTIVITY		PROJECT NUMBER AND NAME										
RDT&E, N / BA-7	0305207N M	anned Reconn	aissance Syste	E2673 F/A-1	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							

CLASSIFICATION:

EXHIBIT R4, Schedule	Profile																								DATE	:		ob vii i	20	0.4		
APPROPRIATION/BUDGE	T ACTIVI	TV							PROC	2DAM	ELEME	ENIT N	LIMBE	D ANI	NAM	E					PROJ	IECT N	II IMBE	D ANI	D NAM	1 ⊏	<u>_</u>	ebrua	iry Zu	104		
RDT&E, N /	BA-7										Manne																ssance	(SHAI	RP)			
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	1	2	3	. 4
ATARS Solid State Recorder Contract Award									/																							
ntegration/Development																																
Fest & Evaluation																																
Development Test													DT																			

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:	DATE:					
	February 2004											
APPROPRIATION/BUDGET ACTIVITY	PROGRAM E	LEMENT			PROJECT NU	UMBER AND NAME						
RDT&E, N /BA-7	0305207N M	anned Reconn	aissance Syste	E2673 F/A-18E/F Tactical Reconnaissance (SHARP)								
Schedule Profile for ATARS	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009				
Development Phase			2Q-4Q	1Q-2Q								
Developmental Testing (DT)			4Q	1Q								
Contract Award			2Q									
					1							