CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2, RD	T&E Budget Item Justification							DATE:	
								Februar	y 2003
APPROPRIATION/B						R-1 ITEM NOMEN	CLATURE		
RESEARCH DEV	ELOPMENT TEST & EVALUAT	ON, NAVY /	BA-7			0305207N Manne	d Reconnaissance	Systems	
	COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost		36.912	22.510	13.717	11.809	12.256	13.527	18.252	18.589
* Z0117	REEF POINT	6.938	8.096	11.890	11.809	12.256	13.527	18.252	18.589
**	F/A-18E/F TACTICAL								
E2673	RECONNAISSANCE (SHARP)	26.020	14.414	1.827					
	ADVANCED MULTIBAND								
W9117	SURVEILLANCE SYSTEMS	3.954							
* Executed at a hig	her level of classification - no project	R2, project unit c	hanged from R01	117 to Z0117.					
** The FY 2002 but	dget reflects an \$6 million Congressi	onal add for SHAI	RP POD developr	ment and procure	ment executed ur	nder E2808.			

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 May 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.

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Exhibit R-2, RDTEN Budget Item Justification (Exhibit R-2, page 1 of 15)

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE:			
	APPROPRIATION/BUDGET ACTIVITY PROGRAM ELEMENT NUMBER AND NAME PROJECT NUMBER AND NAME									
APPROPRIATION/BUDGET ACTIVITY										
RDT&E, N / BA-7	0305207N Manned	Reconnaissance S	Systems		E2673 F/A-18E/F Tactical Reconnaissance (SHARP)					
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009		
Project Cost	* 26.020	** 14.414	1.827							

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

- * The FY 2002 budget refelcts a \$6 million Congressional add for SHARP pod development and procurement.
- **The FY 2003 budget reflect a \$11.9 million 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 May 2003.

In FY03 budget Congress appropriated \$11.9M for development and integration of solid state records in Advance Tactical Airbone Reconnaisance System (ATARS).

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CLASSIFICATION:

	plishments/Planned Program FY 02 shments/Effort/Subtotal Cost program management to coordinate development activities during the shments/Effort/Subtotal Cost Tricles Quantity Program management to coordinate development activities during the shments/Effort/Subtotal Cost Tricles Quantity Program management to coordinate development activities during the shments/Effort/Subtotal Cost Tricles Quantity Program management to coordinate development activities during the shments/Effort/Subtotal Cost Tricles Quantity Tricles Quantity Program management to coordinate development activities during the shments/Effort/Subtotal Cost Tricles Quantity Tric				DATE: February 2003		
PROPRIATION/BUDGET ACT	TIVITY	PROGRAM ELEMENT NUM	IBER AND NAME	PROJECT NUMBER AND N		ual y 2003	
		0305207N Manned Reconn		E2673 F/A-18E/F Tactical			
-	ed Program		•				
-		FV 02	FY 03	FY 04	FY 05	٦	
Accomplishments/Effort/Sub	total Cost	_	0.231	0.240	1103	+	
RDT&E Articles Quantity	iotai Oost	0.104	0.201	0.240		+	
			,				
		FY 02	FY 03	FY 04	FY 05	٦	
Accomplishments/Effort/Sub	total Cost		FY 03	FY 04	FY 05	7	
Accomplishments/Effort/Subi RDT&E Articles Quantity		0.280				stems	
RDT&E Articles Quantity Complete systems engineering	ing efforts to devel	0.280 op EMD pods, design/develop the ((software/hardware) inte	face to the F/A-18 E/F aircraft. C		stems	
RDT&E Articles Quantity Complete systems engineering	ing efforts to devel Radar) to ensure	0.280 op EMD pods, design/develop the (system compatibility. Coordinate v	(software/hardware) inte	face to the F/A-18 E/F aircraft. Cies to ensure compatibility.	Coordinate with other subsys	stems	

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justifi	cation			DATE:	002
PROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NU	MRER AND NAME	PROJECT NUMBER AND N	February 20	003
DT&E, N / BA-7	0305207N Manned Recor		E2673 F/A-18E/F Tactical		
TOL, IN / DA /	030320714 Warned Recor	miaissance Gystems	E2073 T/A TOE/T Tactical	reconnaissance (or izere)	
B. Accomplishments/Planned Program					
	FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	10.801				
RDT&E Articles Quantity	1				
					,
Procure an EMD pod.					
	FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	0.470	1100	1101	1135	
RDT&E Articles Quantity					
			·		
Complete integration and test of the SHAF	⟨P's subsystems.				
	FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	6.103				
RDT&E Articles Quantity					
Complete coding for RMS to support integ	ration of the EMD phase. Continued I	BIT software developmen	t and testing, and begin integratio	n to the F/A-18E/F SCS.	
					I

CLASSIFICATION:

PROGRAM ELEMENT NUM 0305207N Manned Recon		PROJECT NUMBER AND N E2673 F/A-18E/F Tactical		2003
0305207N Manned Recon				
	maiodanos Gyotemo	EZOTO TITL TOLIT TUOLOGI	recommuscance (or with)	
F)/ 00				
EV 00				
FY 02 FY 03		FY 04	FY 05	
4.982				
Ju. Continue performing in	illai E3 lesting, Carrier 3	unability testing, and milial Opera	ion resting to support Low Rate in	liai Fioudciion.
FY 02	FY 03	FY 04	FY 05	
	2.240			
A-10E/F 3C3.				
FY 02	FY 03	FY 04	FY 05	
	0.400			
	FY 02 A-18E/F SCS.	FY 02 FY 03 2.240 A-18E/F SCS. FY 02 FY 03	Prince of the second of the se	Dod. Continue performing initial E3 testing, Carrier Suitability testing, and Initial Operation Testing to support Low Rate Initial E7 testing initial E3 testing, Carrier Suitability testing, and Initial Operation Testing to support Low Rate Initial E7 to Support Low Rate Initia

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project J	lustification		DATE:		
				February 2003	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMB	ER AND NAME	PROJECT NUMBER AND N		
RDT&E, N / BA-7	0305207N Manned Reconna	issance Systems	E2673 F/A-18E/F Tactical F	Reconnaissance (SHARP)	
U) B. Accomplishments/Planned Progr	ram				
b) B. Accomplishments/Flanned Frogi	alli				
	FY 02	FY 03	FY 05		
Accomplishments/Effort/Subtotal Cos	st		1.436		
RDT&E Articles Quantity					
Software development.					
	FY 02	FY 03	EV 04	FV 05	
Accomplishments/Effort/Subtotal Cos		F Y U3	FY 04 0.151	FY 05	
RDT&E Articles Quantity	St .		0.151		
NOTAL Articles Quartity	I				
Complete ancillary hardware developed	ment/EMD upgrades.				
	FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cos	st	11.543			
RDT&E Articles Quantity					
Develop and intergrate solid state st	ate recorder in ATARS.				

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CLASSIFICATION:

EXHIBIT R-2a, F	RDT&E Project Justificat	tion					DATE:	
								February 2003
APPROPRIATION/	BUDGET ACTIVITY	PROGRAM	ELEMENT NUMBER	AND NAME		PROJECT NUMBER ANI	D NAME	
RDT&E, N /	BA-7	0305207N	Manned Reconnaissa	nce Systems		E2673 F/A-18E/F Taction	al Reconnaissance	(SHARP)
(U) C. PROG	RAM CHANGE SUMMARY:							
(U) Fund			FY 2002	FY 2003	FY 2004			
	President's Budget:		27.180	2.871	1.882			
	BES/President's Budget		26.020	14.414	1.827			
l otal Ad	ustments		-1.160	11.543	-0.055			
Su	mmary of Adjustments Congressional program r Congressional undistribu			-0.086				
	Congressional rescission SBIR/STTR Transfer		-0.047					
	Economic Assumptions		-0.075	-0.271	-0.055			
	Reprogrammings		-1.038					
	Other Navy/OSD Adjustmen	nts						
	Congressional increases			11.900				
	Subtotal		-1.160	11.543	-0.055			
(U) Sche	dule:							
Not A	pplicable.							
(U) Tech	nical:							
Not App	blicable.							
			D 1 $QH \cap DD$	NO LICT IA	ana Nia 20	7		

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE:
		February 2003
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)

(U) D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Complete	Cost
F/A-18E/FG (FIGHTER) HORNET (MYP) P1 Line Item 2	20.1	66.91	67.3	66.8						221.11

(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 ATARS system was procured sole source through BAE.

CLASSIFICATION:

								DATE:				
Exhibit R-3 Cost Analysis (paga APPROPRIATION/BUDGET ACTIVI)	e 1)									February :	2003	
	TY	PROGRAM E				PROJECT NU						
RDT&E, N / BA-7				aissance Syste		E2673 F/A-1		Reconnaissar				
Cost Categories		Performing	Total		FY 03	FY 04	FY 04 Award	FY 05	FY 05	0	Total	Target Value
	Method & Type	Activity & Location	PY s Cost	Cost	Award Date	Cost	Date	Cost	Award Date	Cost to Complete	Cost	of Contract
Primary HW Dev POD Prototype		Raytheon, Indianapolis, IN	14.373		Date	Cool	Date	0001	Dato	Complete	14.373	
Ancillary HW Dev Sensor Prototype		VARIOUS	2.507								2.507	
Ancillary HW Dev RMS Prototype	C/Plus	Space Dyn Lab, Logan , UT	3.500								3.500	
Ancillary HW Dev Prototype	WX	NRL, Washington, DC	4.050								4.050	
Primary HW Dev POD EMD	SS/FP-LC	Raytheon, Indianapolis, IN	39.718								39.718	39.718
Ancillary HW Dev Sensor EMD		Recon Optical, Barrington, IL	17.841								17.841	
Ancillary HW Dev Datalink EMD	PD	SPAWAR, San Diego, CA	0.800								0.800	
Ancillary HW Dev / EMD Upgrades	WX	VARIOUS				0.151	11/03				0.151	
Primary HW Dev ATARS	SS/CPFF	BAE, NY		9.500	06/03							
Subtotal Product Development			82.789	9.500		0.151					92.440	
Remarks:												
				DINIO LIOT								

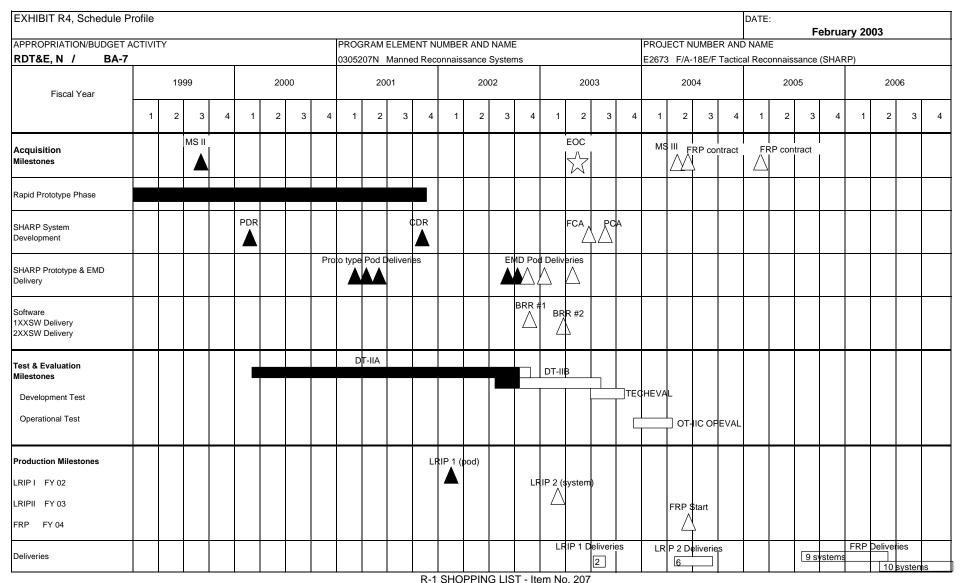
CLASSIFICATION:

								DATE:				
Exhibit R-3 Cost Analysis (pa	ge 1)									February 2	003	
APPROPRIATION/BUDGET ACTIV	VITY	PROGRAM E	LEMENT			PROJECT NU	IMBER AND N	NAME				
RDT&E, N / BA-7			lanned Reconn	aissance Syste		E2673 F/A-1		Reconnaissar				
Cost Categories	Contract		Total		FY 03		FY 04		FY 05			
	Method	Activity &	PY s	FY 03	Award	FY 04	Award	FY 05	Award	Cost to	Total	Target Value
	& Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	of Contract
Development Support	WX	VARIOUS	1.660		11/02	0.200	11/03				2.060	
Software Development Prototype	WX	NRL, Washington, DC	8.509								8.509	
Software Development /RMS	WX	NAWCWD, China Lake, CA	16.756		11/02	1.436	11/03				20.432	
Software Development /OFP	WX	NAWCWD, China Lake, CA	8.831	1							8.831	
Integrated Logistics Support	WX	NAWCAD, Lakehurst, NJ	2.474								2.474	
Development Support(ATARS)	WX	VARIOUS		2.043	06/03							
Subtotal Support			38.230	4.483		1.636					44.349)
Gubtotal Gupport		!	30.230	4.400	<u> </u>	1.000		_!	ļ	<u> </u>	44.040	<u>'I</u>
Remarks:												
remarks.												

CLASSIFICATION:

								DATE				
Fubilit D. 2 Coot Analysis (se	0\							DATE:		Fab	2002	
Exhibit R-3 Cost Analysis (paga APPROPRIATION/BUDGET ACTIV	ge z)	PROGRAM I	EL EMENT			PROJECT N	IMPED AND I	LAME.		February 2	2003	
RDT&E, N / BA-7	/11 Y			and Manage								
Cost Categories	Contract		ment (PE) No. a	ina ivame	FY 03	0305207N N	Manned Recon	naissance Sy	FY 05			1
Cost Categories	Contract Method	Performing Activity &	PY s	FY 03	Award	FY 04	Award	FY 05	Award	Cost to	Total	Target Value
	& Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	of Contract
Developmental Test & Evaluation		VARIOUS	17.355		2 4.10	000.		0001		Complete	17.355	
Operational Test & Evaluation	WR	OPTEVFOR, Norfolk VA	0.033		11/02						0.433	
Subtotal T&E			17.388	0.400							17.788	3
Program Management Support	VARIOUS	VARIOUS	1.829	9							1.829	
Travel				0.031	10/02	0.040	0 10/03				0.071	
Subtotal Management			1.829	0.031		0.040	ס				1.900)
Remarks:												
Total Cost			140.236	14.414		1.827	7				156.477	,
Remarks:												

CLASSIFICATION:



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

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:					
						F	ebruary 20	03			
APPROPRIATION/BUDGET ACTIVITY	PROPRIATION/BUDGET ACTIVITY PROGRAM ELEMENT PROJECT										
RDT&E, N / BA-7	0305207N M	anned Reconn	E2673 FVA-1	18E/F Tactical Reconnaissance (SHARP)							
Schedule Profile	FY 1999	FY 2000	FY 2001	FY 2002	FY 26-3	FY 2004	FY 2005	FY 2006			
Prototype Phase	1Q-4Q	1Q-4Q	1Q-4Q								
Milestone II (MSII)	3Q										
Preliminary Design Review (PDR)		1Q									
System Development	1Q-4Q	1Q-4Q	1Q-4Q								
Critical Design Review (CDR)			4Q								
Developmental Testing (DT-IIA)		1Q-4Q	1Q-4Q	1Q-4Q							
Eng Dev Model (EDM) SHARP Delivery			1Q-2Q								
Software Build Readiness Review (BRR)				4Q							
Software Delivery 1XXSW				4Q							
EDM SHARP Delivery				3Q-4Q	1Q-2Q						
Milestone III						2Q					
Low-Rate Initial Production I (LRIP I) Decision				1Q							
Software Delivery 2XXSW					1Q						
Developmental Testing (DT-IIB)				3Q-4Q	1Q-3Q						
Low-Rate Initial Production II Decision					1Q						
Operational Testing (OT-IIB)					4Q	1Q-2Q					
Functional Configuration Audit (FCA)					2Q						
Low-Rate Initial Production I Delivery					2Q						
Technical Evaluation (TECHEVAL)					3Q-4Q						
Physical Configuration Audit					3Q						
Operational Evaluation (OT-IIC) (OPEVAL)					4Q	1Q-2Q					
Low-Rate Initail Production II Delivery						2Q-3Q					
EOC					3Q						
IOC							3Q				
Full Rate Production (FRP) Decision						2Q					
Full Rate Production Start						2Q					
First Deployment					3Q						

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CLASSIFICATION:

EXHIBIT R4, Schedu	le Profile																								DATE	:	F	ehrus	ary 20	03		
APPROPRIATION/BUDG	ET ACTIV	ITY							PRO	GRAM	ELEM	ENT N	IUMBE	R AND	NAM C	E					PROJ	ECT N	IUMBE	R AN	D NAM	1E		coi ac	y (
RDT&E, N /	BA-7	7							03052	207N	Manne	ed Rec	onnais	sance	Syste	ms									cal Red		sance	(SHA	RP)			
Fiscal Year		20	02			20	03			20	004			20	05			20	06			200	07			20	08			20	09	
	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	
ATARS																																T
Contract Award							Δ																									
Development																																L
																																T
Fest & Evaluation Milestones												DT																				
Development Test																																
Operational Test											(Т																				

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:	DATE:						
APPROPRIATION/BUDGET ACTIVITY	PROGRAM E	LEMENT	February 2003 JMBER 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		Q3-Q4	Q1-Q2										
Developmental Testing (DT)			Q3-Q4										
Operational Test (OT)			Q3-Q4										