CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2, RDT&E Budget Item Justification							DATE:	
							Februa	ry 2003
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMEN	CLATURE		
RESEARCH DEVELOPMENT TEST & EVALUATION	ON, NAVY /	BA-7			0305206N Airborn	e Reconnaissance	Systems	
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost	17.272	16.171	13.345	10.313	29.290	18.871	19.226	19.578
H2694 Advanced Digital Sensors	8.099	2.521	13.345	10.313	29.290	18.871	19.226	19.578
R2476 Framing Reconnaissance Camera	** 9.173	2.817						
R2807 Hyperspectral Upgrade to Airborne Cameras		3.416						
R9114 Electro-Optical Framing Reconnaissance Camer	а	4.977						
R9115 NRL Applied Optics Reconnaissance Technolog	y	2.440						

^{*}The FY2002 budget reflects Congressional adds for Mission System Weight Development (\$2.5M) executed under H9129; which has been reduced by \$.022M for Congressional undistributed adjustments. **The FY2002 includes Congressional adds reflecting Hyperspectral Modular Upgrades (\$2.6M) executed under R2746 and Electro-Optical (EO) Framing Technologies (\$6.6M) executed under R2676.

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Provides funds for the development of sensor systems to improve present airborne reconnaissance capabilities. The developments are driven by evolving collection requirements and modern technology advances. The developments allow for the necessary changes required to meet an integrated, objective airborne reconnaissance architecture as defined in the Integrated Airborne Reconnaissance Strategy (IARS) and amplified in the Airborne Reconnaissance Information Technical Architecture (ARITA). The Advanced Sensors Development Program implements successful proof-of-concept efforts accomplished in the Advanced Technology Program, other Service/Agency developments, and Congressionally-funded initiatives leading to producible sensor systems for airborne platforms. Upon successful sensor prototype demonstration, technology sensor developments, are turned over to the Services for procurement and platform integration. This effort focuses on developments, which support sensor system interoperability and standardization of multi-Service and multi-platform applications. The advanced sensor developments will provide the technology transition modules for operational use necessary for the overall migration of the airborne fleet (manned and unmanned) to a Joint Airborne SIGINT Architecture (JASA) (i.e., sensors, ground systems, data links, and platforms), and provide the mechanism required for timely dissemination of intelligence information to operational forces. In addition, funds provide for the development/integration and operational assessment of JASA compliant components for the EP-3E and Special Projects (SP) aircraft. Coordinated and complementary airborne sensor development across the military Services and the Defense and Intelligence Agencies are being established for inclusion into the JASA. The two primary objectives for Advanced Technology funding is to evaluate the utility and maturity of technology for airborne reconnaissance applications and to reduce the risk of employing emerging technologies in system upgrades, n

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Exhibit R-2, RDTEN Budget Item Justification (Exhibit R-2, page 1 of 46)

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification		DATE:
		February 2003
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5	0305206N Airborne Reconna	aissance Systems
There are two primary objectives for the Advanced Technology funding: (1) to evaluate the utility and maturity of technologies merging technologies in system upgrades, new system acquisitions, or Advanced Concept Technologies developmental and operational tests. These technologies help satisfy the requirements of the objective architecture. These technology investments are also identified in the Airborne Reconnaissance Technology Program Plan (ARTF Navy TARPS-CD and SHARP programs has been successful. Congress added funds in FY 2001 to (1) develop and develop and upgrade the Sensor to and 18 inch lens and integrate an existing dual banned sensor into the TARP programs.	gy Demonstrations (ACTDs), be set forth in the Integrated Airl PP), published in November 19 d Advanced Focal Plane Array	by integrating and exercising them in borne Reconnaissance Strategy (IARS). 194. Transition of sensors to AF TARS, and or

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE:	
							Februa	ry 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMI	ENT NUMBER AND	NAME		PROJECT NUMBE	R AND NAME		
RDT&E, N / BA-7	0305206N Airborn	e Reconnaissance	Systems		H2694 Advanced	Digital Sensors		
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	* 8.099	2.521	13.345	10.313	29.290	18.871	19.226	19.578

^{*}The FY2002 budget reflects a (\$2.5M) Congressional add for Mission System Weight Development executed under H9129; which has been reduced by \$.022M for Congressional undistributed adjustments.

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Provides funds for the development of sensor systems to improve present airborne reconnaissance capabilities. The developments are driven by evolving collection requirements and modern technology advances. The developments allow for the necessary changes required to meet an integrated, objective airborne reconnaissance architecture as defined in the Integrated Airborne Reconnaissance Strategy (IARS) and amplified in the Airborne Reconnaissance Information Technical Architecture (ARITA). The advanced sensor program includes technical analyses, systems engineering assessments, planning, and development for advanced airborne sensor systems. This effort focuses on developments which support sensor system interoperability and standardization of multi-Service and multi-platform applications. The EP-3E and Special Projects will undergo a series of incremental modifications via an evolutionary acquisition process beginning in FY 2001. The advanced sensor developments described herein will provide the technology transition modules necessary for the overall migration of the airborne fleet to JASA, (i.e., sensors, ground systems, data links, and platforms), and provide the mechanism required for timely dissemination of intelligence information to operational forces.

R-1 SHOPPING LIST - Item No.

CLASSIFICATION:

PROGRAM ELEMENT NUM			DATE: February	2002
	IBER AND NAME	PROJECT NUMBER AND N		2003
0305206N Airborne Reconn	naissance Systems	H2694 Advanced Digital S		
COCCECNIA AMERICA (COCC	idiodanoe Cyotemo	1 1200 + Navarioca Digital C		
	T			
0.692	0.386	0.811	2.432	
EV 02	EV 03	EV 04	EV 05	
0.020	0.700	0.004	1.047	
FY 02	FY 03	FY 04	FY 05	
FY 02 0.100	FY 03 0.462	FY 04 0.000	FY 05 0.000	
,	FY 02 0.520 for Story Teller upgrades; includir	ement engineering study. Story Classic Collection Upgrace FY 02 FY 03 0.520 0.733 for Story Teller upgrades; including CDL. Story Teller and	0.692 0.386 0.811 ement engineering study. Story Classic Collection Upgrade PDR & CDR. Test and integrate FY 02 FY 03 FY 04 0.520 0.733 3.084	ement engineering study. Story Classic Collection Upgrade PDR & CDR. Test and integrate initial Story Classic Collection into FY 02 FY 03 FY 04 FY 05 0.520 0.733 3.084 1.047 for Story Teller upgrades; including CDL. Story Teller and Common Data Link (CDL) integration into SIL. Imagery developments of the common Data Link (CDL) integration into SIL. Imagery developments of the common Data Link (CDL) integration into SIL. Imagery developments of the common Data Link (CDL) integration into SIL. Imagery developments of the common Data Link (CDL) integration into SIL. Imagery developments of the common Data Link (CDL) integration into SIL. Imagery developments of the common Data Link (CDL) integration into SIL. Imagery developments of the common Data Link (CDL) integration into SIL. Imagery developments of the common Data Link (CDL) integration into SIL. Imagery developments of the common Data Link (CDL) integration into SIL. Imagery developments of the common Data Link (CDL) integration into SIL. Imagery developments of the common Data Link (CDL) integration into SIL.

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Exhibit R-2a, RDTEN Project Justification (Exhibit R-2a, page 4 of 46)

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justificat	ion			DATE:	
PROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBE	ER AND NAME	PROJECT NUMBER AND N	Februa:	y 2003
T&E, N / BA-7	0305206N Airborne Reconnais	ssance Systems	H2694 Advanced Digital S	ensors	
B. Accomplishments/Planned Program					
	FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	0.400	0.000	0.317	0.725	
RDT&E Articles Quantity					
Story Book DT/OT (including OPAL/ONYX). S	tory Book upgrade (including CPC).	Story Book signals ar	alysis and upgrade receivers. De-	velopment of Story Book Analys	is upgrades
	FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	1.306	0.450	1.841	0.427	
RDT&E Articles Quantity					
	FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	2.677	0.000	4.943	3.575	
RDT&E Articles Quantity					
JMOD Imagery engineering investigations. Mis	ssion system weight development. De	evelop and demonstra	ite Special Projects (SP) DF upgra	de for SP Systems Requiremen	ts Review (SRR).
owied imagery engineering investigations. with		overep and demonstra	no opociai i rojecto (oi) Di apgra	ao ioi oi oyotomo rtoquiromoi	io riovion (Ortic).
Special Projects Communications/Infrastructur					
Special Projects Communications/Infrastructur					
Special Projects Communications/Infrastructur					
Special Projects Communications/Infrastructur					
	FY 02	FY 03	FY 04	FY 05	
Special Projects Communications/Infrastructur Accomplishments/Effort/Subtotal Cost		FY 03 0.490	FY 04 2.349	FY 05 2.107	
	FY 02				
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity	FY 02 2.404	0.490	2.349	2.107	set to Story Teller
Accomplishments/Effort/Subtotal Cost	FY 02 2.404	0.490	2.349	2.107	set to Story Teller.
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity	FY 02 2.404	0.490	2.349	2.107	set to Story Teller.
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity	FY 02 2.404	0.490	2.349	2.107	set to Story Tel

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification					DATE:	
•						February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER	AND NAME		PROJECT NUMBER AND	O NAME	
RDT&E, N / BA-7	0305206N Airborne Reconnaissa	nce Systems		H2694 Advanced Digital	al Sensors	
(U) C. PROGRAM CHANGE SUMMARY:						
(U) Funding:	FY 2002	FY 2003	FY 2004	FY 2005		
Previous President's Budget:	8.163	2.582	13.713	21.602		
Current BES/President's Budget	8.099	2.521	13.345	10.313		
Total Adjustments	-0.064	-0.061	-0.368	-11.289		
Summary of Adjustments						
Congressional program reductions						
Congressional undistributed reductions		-0.015				
Congressional rescissions	-0.017					
SBIR/STTR Transfer						
Economic Assumptions	-0.023	-0.046	-0.308	-0.222		
Reprogrammings	-0.024					
Other Navy/OSD Adjustments			-0.060	-11.067		
Reprioritization of requirements						
Congressional increases						
Subtotal	-0.064	-0.061	-0.368	-11.289		

(U) Schedule:

Program Milestones - The FY02 JMOD 1 LRIP milestone was moved to 3Q/02 to reflect the rebaseline of the EP-3E JMOD 1 program, due to addition of Baseline Update. JMOD1 FRP milestone moved from 2Q/06 to 3Q/04 due to Acquisition Strategy Review (ASR) approval. Engineering Milestones - The FY02 PDR moved to 2Q/03 and the CDR to 4Q/03 to reflect the late JMOD contract award due to loss of USAF JASPO funds. T&E Milestones - The FY03 JMOD DTcompletes 4Q/03 and OT completes in 1Q/04. The FY05 Story Maker DT/OT was moved to 4Q/06 to reflect the Sponsor Adjustment. Contract Milestones - The 4Q/02 TKI R&D contract award was moved from 1Q/02 to 4Q/02 to reflect the baseline for the EP-3E program.

(U) Technical:

Not Applicable

CLASSIFICATION:

EXHIBIT R-2a, RDT&	E Project Justification								DATE:	Cobrus	m, 2002
APPROPRIATION/BUDGE	T ACTIVITY		PROGRAM E	LEMENT NUM	BER AND NAM	ИE	PROJECT NU	IMBER AND N	AME	rebrua	ry 2003
RDT&E, N /	BA-7		0305206N Ai	rborne Reconn	aissance Syste	ems	H2694 Adva	nced Digital S	Sensors		
(U) D. OTHER PRO	OGRAM FUNDING SUMMARY	: <u>FY 2002</u>	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To <u>Complete</u>	Total <u>Cost</u>
	APN-5 EP-3E OSIP 11-01 APN-5 Special Projects 19-97	50.652 0.000	57.704 10.866	31.506 49.601	38.821 21.037	55.728 31.834	62.520 24.313	62.47 24.753	63.56 25.159	448.218 0.000	871.179 187.563

(U) E. ACQUISITION STRATEGY:

Leverages/complements Air Force, Naval Research Laboratory, Office of Naval Research RDT&E efforts for technology insertions into EP-3E/SP productions programs.

CLASSIFICATION:

								DATE:				
Exhibit R-3 Cost Analysis (pag	je 1)									February 200	03	
APPROPRIATION/BUDGET ACTIV	ITY	PROGRAM E	LEMENT			PROJECT NU	JMBER AND	NAME				
RDT&E, N / BA-7		0305206N A	irborne Reconn	aissance Syste	ms	H2694 Adva	nced Digital	Sensors				
Cost Categories	Method	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
Ancillary Hdwre Development-S.F.	SS/CPFF	BTG, Vienna, VA	0.898								0.898	0.89
AncillaryHdwre Development-S.F.	SS/CPFF	Raytheon Systems, IN/TX	4.287								4.287	4.28
Ancillary Hdwre Dev - MPEG	SS/CPFF	Lockheed Martin, CO	0.977	0.386	12/02	0.270	12/03	1.300	12/04	0.496	3.429	3.42
Ancillary Hdwre Development-S.T.	SS/CPFF	Raytheon Systems, IN		0.100	12/02	0.300	12/03	1.047	12/04	0.750	2.197	2.19
Ancillary Hdwre Development-S.B.	SS/CPFF	Raytheon Systems, TX		0.400	12/02					2.000	2.400	2.40
Ancillary Hdwre Development-CPC	SS/CPFF	Raytheon Systems, TX	1.447								1.447	1.44
Aircraft Integration	SS/CPFF	Raytheon Systems, TX	2.414								2.414	2.41
Ancillary Hdwre Development-ESM	SS/CPFF	Condor, San Jose, CA	2.868								2.868	2.86
Ancillary Hdwre Development-	SS/CPFF	CTC, Johnstown, PA	4.228								4.228	4.22
Weight Reduction, Congressional												
Ancillary Hdwre Development-S.C.	SS/CPFF	Raytheon Indianapolis, IN				6.301	12/03	2.123	12/04	18.271	26.695	26.69
Ancillary Hdwre Development-J2	SS/CPFF	L3Com,TX				1.148	12/03	0.923	12/04		2.071	2.07
Ancillary Hdwre Development-S.P.	SS/CPFF	Argon, VA				2.500	12/03				2.500	2.50
Ancillary Hdwre Development-S.P.	SS/CPFF	L3Com,TX						2.224	12/04		2.224	2.22
Ancillary Hdwre Development	SS/CPFF	Raytheon Systems, TX						0.000		12.897	12.897	12.89
Subtotal Product Development			17.119	0.886		10.519		7.617		34.414	70.555	5

Remarks:

CLASSIFICATION:

										DATE:				
Exhibit R-3 Cost Analysis (page 1)											February 200)3	
APPROPRIATION/BUDGET AC	TIVITY		PROGRAM E						JMBER AND N					
RDT&E, N / BA-7			0305206N Ai		econna	aissance Syste		H2694 Adva	inced Digital S	Sensors				
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		Total Cost	Target Value of Contract
Develop Support	C/CPFF	GRCI, Vienna,	١/٨		1.994			0.560		0.650		1.300	4.766	
Develop Support	WX	NAWC,WD, C			3.511	0.282		0.835		0.665	12/04	Continuing	Continuing	Continuing
Develop Support	WX	NSWC, Dahlg			0.589		.2,02	0.225		0.235	12/04	Continuing	Continuing	Continuing
		, , ,											<u></u>	
Software Development - Story Make	r SS/CPFF	GD, Sunnyvale,	CA		1.806	0.550	12/02	0.326	12/03	0.276	12/04	4.055	7.013	7.013
Subtotal Support					7.900	1.246	;	1.946	3	1.826		Continuing	Continuing	
Remarks:														

CLASSIFICATION:

									DATE:				
Exhibit R-3 Cost Ar			Innoca				Inno inon :	11.1DED 41:5	1		February 200	03	
APPROPRIATION/BUI		ITY	PROGRAM E					JMBER AND					
RDT&E, N /	BA-7	Contrast		Airborne Reconn	aissance Syste	FY 03	H2694 Adva	nced Digital	Sensors	FY 05	1		1
Cost Categories		Contract Method	Performing Activity &	Total 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
DT/OT & Eval		WX	NAWC,AD Pax River, MD	0.250			0.270	11/03	0.250	11/04	Continuing	Continuing	
DT/OT & Eval		WX	NRL, MD	0.100	0.100	11/02	0.110	11/03	0.120	11/04	Continuing	Continuing	
Subtotal T&E				0.350	0.400		0.380		0.370		Continuin	Continuing	
Remarks:		1		0.350	0.100)	0.380	<u> </u>	0.370)	Continuing	jį Continuing	
Systems Eng Suppt		WX	NAWC,AD Pax River, MD	0.788	0.139	11/02	0.350	11/03	0.350		Continuing	Continuing	
Travel				0.100	0.100		0.100	11/03	0.100				
ILS Suppt				0.050	0.050	11/02	0.050	11/03	0.050	11/04			
Subtotal Management				0.938	0.289		0.500		0.500		Continuing	Continuing	
Remarks:													
Total Cost				26.307	2.521		13.345	5	10.313	3	Continuing	Continuing	
Remarks:													

CLASSIFICATION:

EXHIBIT R4, Schedule	Profile)																							DATE	:						
APPROPRIATION/BUDGE RDT&E, N /	T ACTIV								PROG													ECT N					F	ebrua	iry 20	03		
Fiscal Year		20	002			20	03			20	04			20	05			20	006			20	07			20	08			200)9	
	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
Program Milestones Milestones			LRIP			FRP (MS III)		S	P SRI	R FI	RP																				
						PDR		CDR																								
Engineering Milestones																																
Test & Evaluation Milestones Development Test Operational Test							Æ	٨	mplete		Comple	ete O⊺	Г							Make	r DT/0	рΤ										
Contract Milestones				A	R&D	Dev Co	ntract	Award																								

 $^{^{\}star}$ Not required for Budget Activities 1, 2, 3, and 6

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:		
						l	February 20	03
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	EMENT			PROJECT NU	MBER AND NA	AME	
RDT&E, N / BA-7	0305206N Air	borne Reconn	aissance Syste	ms	H2694 Advar	nced Digital S	ensors	
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
System Requirements Review (SRR)			SP 2Q					
JMOD2 Contract Award	4Q							
Preliminary Design Review (PDR)		2Q						
Critical Design Review (CDR)		4Q						
Developmental Testing		3Q-4Q						
Operational Testing			1Q-2Q					
Start Low-Rate Initial Production I (LRIP I)	JMOD1 3Q							
Full Rate Production (FRP)			3Q					
Story Maker DT/OT					4Q			
								<u> </u>
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R-1 SHOPPING LIST - Item No.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2003	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEM	ENT NUMBER AND	NAME		PROJECT NUMBE	ER AND NAME		
RDT&E, N / BA-7	0305206N Airborn	e Reconnaissance	Systems		R2476 Framing Re	econnaissance Ca	mera	
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	9.218	2.817						
RDT&E Articles Qty								

^{*}The FY2002 includes Congressional adds reflecting Hyperspectral Modular Upgrades (\$2.6 million) which will be executed under R2476 and Electro-Optical (EO) Framing Technologies (\$6.6 million) which will be executed under R2676.

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

There are two primary objectives for the Advanced Technology funding: (1) to evaluate the utility and maturity of technology for airborne reconnaissance applications and (2) to reduce the risk of employing emerging technologies in system upgrades, new system acquisitions, or Advanced Concept Technology Demonstrations (ACTDs), by integrating and exercising them in developmental and operational tests. These technologies help satisfy the requirements of the objective architecture set forth in the Integrated Airborne Reconnaissance Strategy (IARS). These technology investments are also identified in the Airborne Reconnaissance Technology Program Plan (ARTPP), published in November 1994. Transition of sensors to AF TARS, and Navy TARPS-CD and SHARP programs has been successful. Congress added funds in FY 2001 to (1) develop and Advanced Focal Plane Array for smaller electro-optical framing size, (2) develop and upgrade the Sensor to and 18 inch lens and integrate an existing dual banned sensor into the TARP pod, and (3) to upgrade the Airborne Reconnaissance System Hyperspectral Module.

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EXHIBIT R-2a, RDT&E Project Justification	n			DATE:	FEBRUARY 2003
PROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBE	FR AND NAME	PROJECT NUMBER AND N	I NAME	FEBRUART 2003
T&E, N / BA-7	0305206N Airborne Reconnais		R2476 Framing Reconnaiss		
	OCCIONAL AMBONIC NOCCINICIO	odanice Cystems	TREATO Framing Recommende	diloc Gamera	
B. Accomplishments/Planned Program				1	
	FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	0.000	0.500	0.000	0.000	
RDT&E Articles Quantity					
Demonstration of JPEG 2000 Image Decompres	sion Boards.				
	FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	0656	0.500	0.000	0.000	
RDT&E Articles Quantity					
	FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	0.000	0.317	0.000	0.000	
RDT&E Articles Quantity					
	ko. Pool timo data fucion processor				
EO Framing Camera Upgrades for Precision Stri					
	FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost			FY 04 0.000	FY 05 0.000	
	FY 02	FY 03			
Accomplishments/Effort/Subtotal Cost	FY 02	FY 03			

R-1 SHOPPING LIST - Item No.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification					DATE:	
						February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AN	D NAME		PROJECT NUMBER	AND NAME	
RDT&E, N / BA-7	0305206N Airborne Reconnaissance	Systems		R2476 Reconnaissa	nce Camera	
(U) C. PROGRAM CHANGE SUMMARY:						
(U) Funding:	FY 2002	FY 2003	FY 2004	FY 2005		
Previous President's Budget:	9.218	2.887	0.000	0.000		
Current BES/President's Budget	9.218	2.817	0.000	0.000		
Total Adjustments	0.000	-0.070	0.000	0.000		
Summary of Adjustments						
Congressional program reductions Congressional undistributed reductions		-0.054				
Congressional rescissions						
SBIR/STTR Transfer		0.016				
Economic Assumptions Reprogrammings		-0.016				
Other Navy/OSD Adjustments						
Reprioritization of requirements						
Congressional increases						
Subtotal	0.000	-0.070	0.000	0.000		
(U) Schedule:						
Not Applicable.						
(U) Technical:						
Not Applicable						
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CLASSIFICATION:

EXHIBIT R-2a, RDT&E I	Project Justification								DATE:			
										Februa	ry 2003	
APPROPRIATION/BUDGET	ACTIVITY		PROGRAM E	LEMENT NUM	IBER AND NAI	ME	PROJECT NU	IMBER AND N	AME			
RDT&E, N /	BA-5		0305206N Ai	rborne Reconn	aissance Syste	ems	R2476 Framir	g Reconnaissa	ance Camera			
(U) D. OTHER PROG	RAM FUNDING SUMMARY:									То	Total	
Line Item No. & Nam	<u>ne</u>	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Complete	Cost	
PE 0305207N, DA	ARP, Special Project A/C	27.443	29.335	10.649	10.939	11.410	11.589			11.764	113.129	
1												

(U) E. ACQUISITION STRATEGY:

The program is to develop framing reconnaissance camera technology to support improved capabilities for programs such as SHARP.

CLASSIFICATION:

Remarks:

								DATE:				
Exhibit R-3 Cost Analysis (page	1)									February	2003	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM	ELEMENT			PROJECT NU	UMBER ANI	D NAME				
RDT&E. N / BA-7		0305206N		nnaissance A	dvanced Develo			issance Camera	1			
Cost Categories	Contract	Performing	Total	Tinaissance 7	IFY 03	7112-47-011-1011111	FY 04	iissance Gamere	IFY 05			
Oost Oategories	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
IR Array	C/CPFF	Recon Opt., Barrington, IL	1.661		Date	0001	Date	0001	Dato	Complete	1.66	
Dual Band Camera	C/CPFF	Recon Opt., Barrington, IL	12.212								12.21	
Long Range Camera	C/CPFF	Recon Opt., Barrington, IL	2.000								2.00	
Hyperspectral Module	C/CPFF	Recon Opt., Barrington, IL	1.500								1.50	0 1.50
Camera for Hyperspectral	C/CPFF	Recon Opt., Barrington, IL	1.000								1.00	0 1.00
Visible and SWIR Modules	C/CPFF	ITS, Honolulu, HI	3.300)							3.30	0 3.30
Precision Strike System	C/CPFF	Recon Opt., Barrington, IL	1.250)							1.25	0 1.25
Flight Tests	WR	NRL, Wash DC	2.290)							2.29	0 2.29
Compression board development	C/CPFF	Space Dyn. Lab. Logan, UT	3.400								3.40	0 3.40
Precision Strike camera	C/CPFF	Recon Opt., Barrington, IL	1.290								1.29	
100 Megapixel Camera Test	C/CPFF	Recon Opt., Barrington, IL	4.513	3							4.51	
Hyperspectral Modular Upgrades	CPFF	Recon Opt., Barrington, IL	6.500)							6.50	6.50
Development Upgrade Integrate Sensor	CPFF	Recon Opt., Barrington, IL	4.980)							4.98	
Develop advanced focal plane shutter	WR	MIT Lincoln Lab, Bedford MA	0.170								0.17	
Hyperspectral Target Cueing Demo	CPFF	Recon Opt., Barrington, IL	0.656								1.15	
EO Framing Camera Upgrades	CPFF	Recon Opt., Barrington, IL	5.903		7 10/03						6.22	
Decompression Board Development	CPFF	Space Dyn. Lab. Logan, UT	0.800)							0.80	
Real Time Data Fusion Processor	TBD	TBD									0.00	
Flight Test Support	CPFF	Recon Opt., Barrington, IL	0.940								0.94	0.94
Decompression Board Demonstration	CPFF	Space Dyn. Lab. Logan, UT		0.500								
ARIES Upgrades	CPFF	Space Dyn. Lab. Logan, UT	1	1.500	03/03	1	1					
					-	-						
Subtotal Product Development			54.365	5 2.81	7	0.000	0	0.0	200		57.18	2 55.18
Subiotal Product Development		1	54.305	2.81		0.000	υ	0.0	100		57.10	2 33.16

CLASSIFICATION:

									DATE:				
Exhibit R-3 Cost Analysis (p.	age 2)										February 20	03	
APPROPRIATION/BUDGET ACT	IVITY		PROGRAM					NUMBER AN					
RDT&E, BA-7			0305206N	Airborne Rec	onnaissance Ac		p R2476 Fra		issance Came				
Cost Categories	Contract Method	Performing Activity &	•	Total PY s	FY 03	FY 03 Award	FY 04	FY 04 Award	FY 05	FY 05 Award	Cost to	Total	Target Value
Company to at a company	& Type	Location	20	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	of Contract
Camera test support	C/CPFF	NRL, Wash, D)C	0.67	2						0.000	0.672	0.672
								-					
Subtotal T&E				0.67	72						0.00	0.672	
Contractor Engineering Support	C/CPFF	Various		4.23								4.234	
Systems Support	WR	NRL, Wash, DO)	1.11	4							1.114	1.114
	+												
Subtotal Management				5.34	18 0.00	00			0	.000		5.348	3
Remarks:													
Total Cost				60.38	35 2.81	7	0.	.000	0	.000		63.202	2
Remarks: This program has no	support costs				DDING LIGT		000						

CLASSIFICATION:

EXHIBIT R4, Schedul	e Profile)																							DATE		Fe	ebrua	ry 20	03		
APPROPRIATION/BUDGE RDT&E, N /	T ACTIV										ELEM Airborr											ECT N 6 Frar				/IE ance (-			
Fiscal Year		20	02			20	03				004			20				2	006			200				20				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	4
Program Milestones Milestones																																
									Targe	t	Real ⁻	Time																				
Engineering Milestones	JF	PEG 20	000		<u> </u> 	JPEG	2000	Demo	Cueir	g T	Proce	ssor	Aries Upgra	ades																		
Test & Evaluation Milestones																																
Development Test Operational Test																																
Contract Milestones																																

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

R-1 SHOPPING LIST - Item No. 206

Exhibit R-4 Schedule Profile (Exhibit R-4, page 19 of 46)

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:		
						l	February 20	003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EL	EMENT			PROJECT NU	MBER AND NA	AME	
RDT&E, N / BA-7	0305206N Air	borne Reconna	aissance Syste	ms	R2476 Fram	ing Reconnais	ssance Came	eras
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Complete Decompression Boards	2Q							
JPEG 2000 Demonstration		3Q						
Target Cueing Demonstration			1Q					
Complete Real Time Fusion Processor			2Q					
Complete Aries Upgrades			3Q					
					<u> </u>			

R-1 SHOPPING LIST - Item No.

CLASSIFICATION:

							1	
EXHIBIT R-2a, RDT&E Project Justification							DATE:	
							Februa	ry 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEM	ENT NUMBER AND	NAME		PROJECT NUMBE	R AND NAME		
RDT&E, BA-7	0305206N Airborn	e Reconnaissance	Systems		R2807 Hyperspe	ctral Upgrade to A	Airborne Cameras	
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	0.000	3.416						
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

There are two primary objectives for the Advanced Technology funding: (1) to evaluate the utility and maturity of technology for airborne reconnaissance applications and (2) to reduce the risk of employing emerging technologies in system upgrades, new system acquisitions, or Advanced Concept Technology Demonstrations (ACTDs), by integrating and exercising them in developmental and operational tests. These technologies help satisfy the requirements of the objective architecture set forth in the Integrated Airborne Reconnaissance Strategy (IARS). These technology investments are also identified in the Airborne Reconnaissance Technology Program Plan (ARTPP), published in November 1994. Transition of sensors to AF TARS, and Navy TARPS-CD and SHARP programs has been successful. Congress added funds in FY 2001 to (1) develop and Advanced Focal Plane Array for smaller electro-optical framing size, (2) develop and upgrade the Sensor to and 18 inch lens and integrate an existing dual banned sensor into the TARP pod, and (3) to upgrade the Airborne Reconnaissance System Hyperspectral Module.

R-1 SHOPPING LIST - Item No.

^{*}The FY2003 includes Congressional adds reflecting Hyperspectral Upgrades to Airborne Cameras (\$3.416 million) which will be executed under R2807.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justificati	ion			DATE:	
				Februar	y 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUM	IBER AND NAME	PROJECT NUMBER AND	NAME	
RDT&E, N / BA-7	0305206N Airborne Recon	naissance Systems	R2807 Hyperspectral Up	grade to Airborne Cameras	
(U) B. Accomplishments/Planned Program					
	FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	0.000	3.416	0.000	0.000	
RDT&E Articles Quantity					
Hyperspectral upgrade to airborne cameras.					

R-1 SHOPPING LIST - Item No.

CLASSIFICATION:

PROGRAM ELEMENT NUMBER AND NAME PROJECT NUMBER AND NAME R2807 Hyperspectral Upgrade to Airborne Cameras	2003
Current BES/President's Budget	
(U) C. PROGRAM CHANGE SUMMARY: (U) Funding: FY 2002 FY 2003 FY 2004 FY 2005 Previous President's Budget: 0.000 0.000 0.000 0.000 Current BES/President's Budget 0.000 0.000 0.000 0.000 Total Adjustments 0.000 0.000 0.000 0.000 Summary of Adjustments Congressional program reductions Congressional rescissions SBIR/STTR Transfer Economic Assumptions Reprogrammings Other Navy/OSD Adjustments Reprioritization of requirements Congressional increases Subtotal 0.000 3.416 0.000 0.000	
Current BES/President's Budget:	
Previous President's Budget: Current BES/President's Budget 0.000 0.00	
Previous President's Budget: 0.000 0.000 0.000 0.000 0.000	
Current BES/President's Budget Total Adjustments Summary of Adjustments Congressional program reductions Congressional undistributed reductions Congressional rescissions SBIR/STTR Transfer Economic Assumptions Reprogrammings Other Navy/OSD Adjustments Reprioritization of requirements Congressional increases Subtotal	
Total Adjustments Summary of Adjustments Congressional program reductions Congressional program reductions Congressional rescissions SBIR/STTR Transfer Economic Assumptions Reprogrammings Other Navy/OSD Adjustments Reprioritization of requirements Congressional increases Subtotal O.000	
Summary of Adjustments Congressional program reductions Congressional undistributed reductions Congressional rescissions SBIR/STTR Transfer Economic Assumptions Reprogrammings Other Navy/OSD Adjustments Reprioritization of requirements Congressional increases Subtotal 0.000 3.416 0.000 0.000	
Congressional program reductions Congressional undistributed reductions Congressional rescissions SBIR/STTR Transfer Economic Assumptions Reprogrammings Other Navy/OSD Adjustments Reprioritization of requirements Congressional increases Subtotal O.000 3.416 0.000 0.000	
Congressional program reductions Congressional undistributed reductions Congressional rescissions SBIR/STTR Transfer Economic Assumptions Reprogrammings Other Navy/OSD Adjustments Reprioritization of requirements Congressional increases Subtotal 0.000 3.416 0.000 0.000	
Congressional undistributed reductions Congressional rescissions SBIR/STTR Transfer Economic Assumptions Reprogrammings Other Navy/OSD Adjustments Reprioritization of requirements Congressional increases Subtotal 0.000 3.416 0.000 0.000	
Congressional rescissions SBIR/STTR Transfer Economic Assumptions Reprogrammings Other Navy/OSD Adjustments Reprioritization of requirements Congressional increases Subtotal 0.000 3.416 0.000 0.000	
SBIR/STTR Transfer Economic Assumptions Reprogrammings Other Navy/OSD Adjustments Reprioritization of requirements Congressional increases Subtotal 0.000 3.416 0.000 0.000	
Economic Assumptions Reprogrammings Other Navy/OSD Adjustments Reprioritization of requirements Congressional increases Subtotal 0.000 3.416 0.000 0.000	
Reprogrammings Other Navy/OSD Adjustments Reprioritization of requirements Congressional increases Subtotal 3.416 0.000 0.000 0.000	
Other Navy/OSD Adjustments Reprioritization of requirements Congressional increases Subtotal 3.416 0.000 0.000 0.000	
Reprioritization of requirements Congressional increases Subtotal 3.416 0.000 0.000 0.000	
Congressional increases 3.416 Subtotal 0.000 3.416 0.000 0.000	
Subtotal 0.000 3.416 0.000 0.000	
(U) Schedule:	
Not Applicable.	
(U) Technical:	
Not Applicable	
R-1 SHOPPING LIST - Item No. 206	

CLASSIFICATION:

(HIBIT R-2a, RDT&E Project Justification								DATE:	Februa	ry 2003
PROPRIATION/BUDGET ACTIVITY		PROGRAM EI	LEMENT NUM	BER AND NAM	1E	PROJECT NU	IMBER AND N	AME		
DT&E, N / BA-5		0305206N Air	rborne Reconn	aissance Syste	ms	R2807 Hype	rspectral Upg	rade to Airbo	rne Cameras	
(U) D. OTHER PROGRAM FUNDING SUMMARY	′ :								То	Total
Line Item No. & Name	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Complete	Cost
PE 0305207N, DARP, Special Project A/C	27.443	29.335	10.649	10.939	11.410	11.589			11.764	113.129
(U) E. ACQUISITION STRATEGY:										
The program is to develop framing reconnais	sance camera te	echnology to sup	port improved	capabilities for	programs suc	ch as SHARP.				

CLASSIFICATION:

									DATE:				
Exhibit R-3 Cost Analysis (p APPROPRIATION/BUDGET AC	page 1)										February 2	2003	
APPROPRIATION/BUDGET AC	TIVITY		PROGRAM	ELEMENT			PROJECT	NUMBER AND	NAME				
RDT&E, N / BA-7 Cost Categories			0305206N		onnaissance Adv	anced Develor	R2807 Hy	perspectral U	Ipgrade to Air		as		
Cost Categories	Contract	Performing	•	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
Hyperspectral Modular Upgrades	C/CPFF				3.000	06/03	1						3.000
Technical Support	WR	NRL, Wash DC	;		0.208		1					0.1	208 0.208
							+		-				
Г							+						
							1						
Subtotal Product Development					3.208	1	1					3.	208 3.208
Remarks:													
<u> </u>													

CLASSIFICATION:

										DATE:					
Exhibit R-3 Cost Ana	alysis (page 2)											Februar	y 200	3	
Exhibit R-3 Cost Ana APPROPRIATION/BUDG	GET ACTIVITY		PROGRAM	ELEMENT				PROJECT	NUMBER AN	D NAME					
RDT&E, N /	BA-7		0305206N	Airborne Reco	nnaissa	ince Ad	vanced Deve	elop R2807 H	yperspectral l	Jpgrade to Air	oorne Came	ras			
Cost Categories	Contract	Performing	•	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
Camera test support	C/CPFF	NRL, Wash, I	DC	0.672	2	0.208	1						0.000	0.88	0.880
					-										
Subtotal T&E				0.672	2	0.208							0.000	0.88	0
Odbiolai Tal	L	l .		0.077	-	0.200	<u>'</u> 1		l e		l l	l .	0.000	0.00	<u> </u>
														0.00	0.000
														0.00	
Subtotal Management				0.000	2	0.000				0.0	100			0.00	0
Subtotal Management				0.000	<u> </u>	0.000	'			0.0	100			0.00	U]
Remarks:															
Total Cost				0.672	2	3.416	6	0	.000	0.0	000			4.08	8
Remarks: This progran	n has no support costs	 S.					Itom No.	206							

CLASSIFICATION:

EXHIBIT R4, Schedule																									DATE		Fe	ebrua	ry 20	03		
APPROPRIATION/BUDGE RDT&E, N /	FACTIV BA-7													R AND							PROJ R280											
			002			20	03		00002	20				20		110		20	006		11200	200		ourare) 	20		110 04	Inorac	200	09	
Fiscal Year	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
Program Milestones Milestones																																
					Hypers	spectra	l Modu	le		Cam	era Up	ograde																				
Engineering Milestones					,,,,,,	<u> </u>																										
Test & Evaluation Milestones																																
Development Test Operational Test																																
Operational rest																																
Contract Milestones																																

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

CLASSIFICATION:

	JMBER AND NA		rne Cameras
R2807 Hype	rspectral Upg	rade to Airbo	
		1	

R-1 SHOPPING LIST - Item No.

CLASSIFICATION:

							•	
EXHIBIT R-2a, RDT&E Project Justification							DATE:	
							Februa	ry 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEM	ENT NUMBER AND	NAME		PROJECT NUMBE	R AND NAME		
RDT&E, BA-7	0305206N Airborn	e Reconnaissance	Systems		R9114 Electro-O	otical Framing Re	connaissance Car	mera
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	0.000	4.977						
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

There are two primary objectives for the Advanced Technology funding: (1) to evaluate the utility and maturity of technology for airborne reconnaissance applications and (2) to reduce the risk of employing emerging technologies in system upgrades, new system acquisitions, or Advanced Concept Technology Demonstrations (ACTDs), by integrating and exercising them in developmental and operational tests. These technologies help satisfy the requirements of the objective architecture set forth in the Integrated Airborne Reconnaissance Strategy (IARS). These technology investments are also identified in the Airborne Reconnaissance Technology Program Plan (ARTPP), published in November 1994. Transition of sensors to AF TARS, and Navy TARPS-CD and SHARP programs has been successful. Congress added funds in FY 2001 to (1) develop and Advanced Focal Plane Array for smaller electro-optical framing size, (2) develop and upgrade the Sensor to and 18 inch lens and integrate an existing dual banned sensor into the TARP pod, and (3) to upgrade the Airborne Reconnaissance System Hyperspectral Module.

R-1 SHOPPING LIST - Item No.

^{*}The FY2003 includes Congressional adds reflecting Electro-Optical Framing Reconnaissance Cameras (\$4.977 million) which will be executed under R9114.

CLASSIFICATION:

XHIBIT R-2a, RDT&E Project Justification	on			DATE:	
				February 20	003
ROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUM	MBER AND NAME	PROJECT NUMBER AND N	IAME	
T&E, N / BA-7	0305206N Airborne Recon	naissance Systems	R9114 Electro-Optical Fra	aming Reconnaissance Camera	
3. Accomplishments/Planned Program					
	FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	0.000	0.250	0.000	0.000	
RDT&E Articles Quantity		0.000			
•		•	<u> </u>	<u>. </u>	
lectro-Optical Framing Reconnaissance Came	ras. Improve the producibility of la	arge format infrared focal	plane array detectors.		
, 5	, ,	3			
	FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	0.000	0.450	0.000	0.000	
RDT&E Articles Quantity		0.100		-	
to rain rains quartity	L				
	amoros Dovolon zoom long cons	shility			
I Floatra Ontical Framina Decembricanno C		idility.			
Electro-Optical Framing Reconnaissance C	ameras. Develop zoom lens cape				
Electro-Optical Framing Reconnaissance C	ameras. Bevelop 200m lene cape				
Electro-Optical Framing Reconnaissance C					
Electro-Optical Framing Reconnaissance C					
Electro-Optical Framing Reconnaissance C		FY 03	FY 04	FY 05	
	FY 02	FY 03	FY 04 0.000	FY 05	
Electro-Optical Framing Reconnaissance C Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity		FY 03 2.277	FY 04 0.000	FY 05 0.000	

R-1 SHOPPING LIST - Item No.

CLASSIFICATION:

	tion			DATE:	2002
PROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NU	MDED AND NAME	PROJECT NUMBER AND N	February 2	2003
T&E, N / BA-7				aming Reconnaissance Camera	
Tae, N / BA-/	0305206N Airborne Recor	inaissance Systems	R9114 Electro-Optical F18	aming Reconnaissance Camera	
B. Accomplishments/Planned Program					
	FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	0.000	0.400	0.000	0.000	
RDT&E Articles Quantity					
Electro-Optical Framing Reconnaissance Came	eras. Incorporate LWIR spectrom	eter into camera.			
	5)/00	F)/ 00			
Accomplishments/Effort/Subtotal Cost	FY 02	FY 03 1.600	FY 04	FY 05	
RDT&E Articles Quantity	0.000	1.000	0.000	0.000	
RDT&E Afficies Quantity					

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification					DATE:	
						February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER			PROJECT NUMBER		
RDT&E, N / BA-7	0305206N Airborne Reconnaissa	ance Systems	F	R9114 Electro-Opti	cal Framing Reconn	aissance Camera
(U) C. PROGRAM CHANGE SUMMARY:						
(U) Funding:	FY 2002	FY 2003	FY 2004	FY 2005		
Previous President's Budget:	0.000	0.000	0.000	0.000		
Current BES/President's Budget	0.000	0.000	0.000	0.000		
Total Adjustments	0.000	0.000	0.000	0.000		
Summary of Adjustments						
Congressional program reductions						
Congressional undistributed reductions						
Congressional rescissions						
SBIR/STTR Transfer						
Economic Assumptions						
Reprogrammings						
Othre Navy/OSD Adjustments						
Reprioritization of requirements						
Congressional increases		4.977				
Subtotal	0.000	4.977	0.000	0.000		
(U) Schedule:						
. ,						
Not Applicable.						
(U) Technical:						
Not Applicable						
•••						
	D 4 0110 D D	ING LIST - It	ana Nia	206		

CLASSIFICATION:

IBIT R-2a, RDT&E	Project Justification								DATE:	Eshrus	m, 2002
ROPRIATION/BUDGET			PROGRAM EI	LEMENT NUM	BER AND NAM	ИE	PROJECT NU	IMBER AND N	I IAME	rebrua	ry 2003
T&E, N /	BA-5		0305206N Air	rborne Reconn	aissance Syste	ems	R9114 Elect	ro-Optical Fr	aming Reconr	naissance Cam	era
(U) D. OTHER PROC	GRAM FUNDING SUMMARY:	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To <u>Complete</u>	Total <u>Cost</u>
	OARP, Special Project A/C	27.443	29.335	10.649	10.939	11.410	11.589			11.764	113.129
(U) E. ACQUISITION S	TRATEGY:										
The program is t	o develop framing reconnaissa	ance camera te	chnology to sup	port improved	capabilities for	programs su	ch as SHARP.				

CLASSIFICATION:

									I					
									DATE:					
Exhibit R-3 Cost Ana	lysis (page 1)										February	2003		
APPROPRIATION/BUDG			PROGRAM I					NUMBER AND						
RDT&E, N /	BA-7		0305206N	Airborne Re	connaissance Ad		p R9114 E		Framing Rec		Camera			
Cost Categories	Cont	act Performing	•	Total		FY 03		FY 04		FY 05				
	Meth	od Activity &		PY s	FY 03	Award	FY 04	Award	FY 05	Award	Cost to	Total		Target Value
	& Ty	e Location		Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost		of Contract
Framing Camera Upgrades	C/CF	FF Recon Opt.,	Barrington, IL		4.20	06/03							4.200	4.200
Technical Support	WR	NRL, Wash [OC		0.38	8							0.388	0.388
						1								
						+								
				-			+							
					<u> </u>	+				-				
						+								
							+		-					
						1								
Subtotal Product Developn	nent				4.58	8							4.588	4.588
	ı.	II.				- 1			I.		l.			
Damada														
Remarks:														

CLASSIFICATION:

										DATE:					
Exhibit R-3 Cost Ana	alysis (page 2)											Februar	y 200	3	
Exhibit R-3 Cost Ana APPROPRIATION/BUDG	GET ACTIVITY		PROGRAM	ELEMENT				PROJECT	NUMBER ANI	D NAME					
RDT&E, N /	BA-7		0305206N	Airborne Reco	nnaissa	nce Adv	vanced Deve	elop R9114 El		Framing Reco	nnaissance	Camera			
Cost Categories	Contract	Performing	•	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
Camera test support	C/CPFF	NRL, Wash, I	DC	0.000)	0.389							0.000	0.38	9 0.389
				+						+					+
Subtotal T&E				0.000)	0.389							0.000	0.38	9
odbiotai i de		1		0.000	<u> </u>	0.000	1		I	I			0.000	0.00	<u> </u>
														0.00	0.000
														0.00	
Subtotal Management				0.000	,	0.000				0.0	20			0.00	0
Subtotal Management				0.000	/	0.000	'			0.0	50[0.00	o _l
Remarks:															
Total Cost				0.000)	4.977		0	.000	0.0	00			4.97	7
Remarks: This progran	n has no support costs	 S.					Itom No.	206							

CLASSIFICATION:

EXHIBIT R4, Schedule								PROGRAM ELEMENT NUMBER AND NAME 0305206N Airborne Reconnaissance Systems PROJE													DATE		Fe	brua	ry 20	03						
APPROPRIATION/BUDGET RDT&E, N /	ACTIVI BA-7																															
KDI&E, N /	BA-1								03052			e Reci	onnais			is					Kall			pucai	FIAIIII			aissari	ce Ca			
Fiscal Year		20	02			20	03			200	04			200	05			20	006			20	07			20	80			200)9	
	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
Program Milestones Milestones																																
											A prod	ducibili	ty																			
Engineering Milestones										dem		_lmp	l roved (camera	1 1																	
Test & Evaluation Milestones																																
Development Test Operational Test																																
Contract Milestones																																

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Exhibit R-4, Schedule Profile (Exhibit R-4, page 36 of 46)

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:						
						l	February 20	003				
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EL	EMENT			PROJECT NU	IMBER AND NAME						
RDT&E, N / BA-7	0305206N Air	borne Reconna	aissance Syste	R9114 Electro-Optical Framing Reconn Cam								
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009				
IRFPA Producibility			2Q									
Zoom lens			2Q									
CMOS Imager			3Q									
LWIR spectrometer			3Q									
Precision Strike Camera			4Q									

R-1 SHOPPING LIST - Item No.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE:	
							Februa	ry 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEM	ENT NUMBER AND	NAME		PROJECT NUMBE	R AND NAME		
RDT&E, BA-7	0305206N Airborn	e Reconnaissance	Systems		R9115 NRL Appl	ied Optics Recon	naissance Techno	ology
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	0.000	2.440						
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

There are two primary objectives for the Advanced Technology funding: (1) to evaluate the utility and maturity of technology for airborne reconnaissance applications and (2) to reduce the risk of employing emerging technologies in system upgrades, new system acquisitions, or Advanced Concept Technology Demonstrations (ACTDs), by integrating and exercising them in developmental and operational tests. These technologies help satisfy the requirements of the objective architecture set forth in the Integrated Airborne Reconnaissance Strategy (IARS). These technology investments are also identified in the Airborne Reconnaissance Technology Program Plan (ARTPP), published in November 1994. Transition of sensors to AF TARS, and Navy TARPS-CD and SHARP programs has been successful. Congress added funds in FY 2001 to (1) develop and Advanced Focal Plane Array for smaller electro-optical framing size, (2) develop and upgrade the Sensor to and 18 inch lens and integrate an existing dual banned sensor into the TARP pod, and (3) to upgrade the Airborne Reconnaissance System Hyperspectral Module.

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^{*}The FY2003 includes Congressional adds reflecting NRL Applied Optics Reconnaissance Technology (\$2.440 million) which will be executed under R9114.

CLASSIFICATION:

XHIBIT R-2a, RDT&E Project Justification	on			DATE:	
				February 200	3
ROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUM		PROJECT NUMBER AND N	:: :::=	
Γ&E, N / BA-7	0305206N Airborne Reconn	aissance Systems	R9115 NRL Applied Option	s Reconnaissance Technology	
3. Accomplishments/Planned Program					
	FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	0.000	0.790	0.000	0.000	
RDT&E Articles Quantity					
	FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	0.000	0.500	0.000	0.000	
RDT&E Articles Quantity					
NRI Applied Optics Reconnaissance Techn	nology. Interchangeable EO and IF	R lenses.			
The Applied Optios Recommissance Technic					
	FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	FY 02 0.000	FY 03 0.750	FY 04 0.000	FY 05 0.000	
TALE Applied Opiles Recommunisation reciti	FY 02	FY 03	FY 04	FY 05	

R-1 SHOPPING LIST - Item No.

CLASSIFICATION:

PROPRIATION/BUDGET ACTIVITY PROGRAM ELEMENT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissance PROJECT NUMBER AND NAME R9115 NRL Applied Optics Reconnaissa	
B. Accomplishments/Planned Program FY 02 Accomplishments/Effort/Subtotal Cost O.000 RDT&E Articles Quantity R9115 NRL Applied Optics Reconnaissance R9115	February 2003
B. Accomplishments/Planned Program FY 02 FY 03 FY 04 FY 05 Accomplishments/Effort/Subtotal Cost 0.000 0.400 0.000 0.000 RDT&E Articles Quantity	
FY 02 FY 03 FY 04 FY 05 Accomplishments/Effort/Subtotal Cost 0.000 0.400 0.000 0.000 RDT&E Articles Quantity 0.000 0.000 0.000 0.000	e Technology
FY 02 FY 03 FY 04 FY 05 Accomplishments/Effort/Subtotal Cost 0.000 0.400 0.000 0.000 RDT&E Articles Quantity 0.000 0.000 0.000 0.000	
Accomplishments/Effort/Subtotal Cost 0.000 0.400 0.000 0.000 RDT&E Articles Quantity	
RDT&E Articles Quantity	
NRL Applied Optics Reconnaissance Technology. Ball gimbal mount.	

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification					DATE:
					February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER A	ND NAME		PROJECT NUMBER AN	D NAME
RDT&E, N / BA-7	0305206N Airborne Reconnaissan	ce Systems		R9115 NRL Applied O	ptics Reconnaissance Technology
#N					
(U) C. PROGRAM CHANGE SUMMARY:					
(U) Funding:	FY 2002	FY 2003	FY 2004	FY 2005	
Previous President's Budget:	0.000	0.000	0.000	0.000	
Current BES/President's Budget	0.000	0.000	0.000	0.000	
Total Adjustments	0.000	0.000	0.000	0.000	
Summary of Adjustments					
Congressional program reductions					
Congressional undistributed reductions					
Congressional rescissions					
SBIR/STTR Transfer					
Economic Assumptions					
Reprogrammings					
Other Navy/OSD Adjustments					
Reprioritization of requirements					
Congressional increases		2.440			
Subtotal	0.000	2.440	0.000	0.000	
(U) Schedule:					
Not Applicable.					
(U) Technical:					
Not Applicable					
	R-1 SHOPPII	NC LIST 14	om No	206	

CLASSIFICATION:

(U) D. OTHER PROGRAM FUNDING SUMMARY: Line Item No. & Name FY 2002 FY 2003 FY 2004 FY 2005 FY 2006 FY 2006 FY 2007 FY 2008 FY 2008 FY 2009 Complete Cost PE 0305207N, DARP, Special Project A/C 27.443 29.335 10.649 10.939 11.410 11.589 11.764 113.129										DATE:	Februa	ry 2003			
(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 PE 0305207N, DARP, Special Project A/C 27.443 29.335 10.649 10.939 11.410 11.589 11.764 113.129 (U) E. ACQUISITION STRATEGY:	OPRIATION/BUDGET A	CTIVITY		PROGRAM EI	LEMENT NUM	BER AND NAM	1E	PROJECT NU	MBER AND N	AME					
Line Item No. & Name FY 2002 FY 2003 FY 2004 FY 2005 FY 2006 FY 2007 FY 2008 FY 2009 To Complete Cost PE 0305207N, DARP, Special Project A/C 27.443 29.335 10.649 10.939 11.410 11.589 11.764 113.129 (U) E. ACQUISITION STRATEGY:	Γ&E, N /	BA-5		0305206N Aiı	rborne Reconn	aissance Syste	ms	R9115 NRL	Applied Optic	Reconnaissance Technology					
Line Item No. & Name FY 2002 FY 2003 FY 2004 FY 2005 FY 2006 FY 2007 FY 2008 FY 2009 Complete Cost PE 0305207N, DARP, Special Project A/C 27.443 29.335 10.649 10.939 11.410 11.589 11.764 113.129 (U) E. ACQUISITION STRATEGY:	(U) D. OTHER PROGR	AM FUNDING SUMMARY:							T .	Total					
(U) E. ACQUISITION STRATEGY:	Line Item No. & Name	<u> </u>	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009					
	PE 0305207N, DA	RP, Special Project A/C	27.443	29.335	10.649	10.939	11.410	11.589			11.764	113.129			
	(U) E. ACQUISITION STR	RATEGY:													
The program is to develop framing recominassance camera technology to support improved capabilities for programs such as STANC.			nce camera te	chnology to sur	port improved	canabilities for	programe eu	sh as SHADD							
	The program is to	sevelop framing reconnaissa	ince camera te	ormology to sup	port improved	capabilities for	programs suc	iras orizīti .							

CLASSIFICATION:

										DATE:				
Exhibit R-3 Cost An APPROPRIATION/BUD	alysis (page	1)										February 2	2003	
APPROPRIATION/BUD	GET ACTIVIT	Υ		PROGRAM					NUMBER AND					
RDT&E, N / Cost Categories	BA-7			0305206N		onnaissance Adv	anced Develo	R9115 NR	RL Applied Op	tics Reconna	issance Tech	nnology		
Cost Categories		Contract	Performing	•	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
	ı		Location		Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	of Contract
Reconnaissance Technolo	ogies	TBD				1.500							1.5	
Technical Support		WR	NRL, Wash DC			0.470)						0.4	70 0.470
					-						_			
			1											
			+						+					
Subtotal Product Develop	oment					1.970)						1.9	70 1.970
Remarks:														
					D 4 0110	DDING LIST	Itaaa Nia	000						

CLASSIFICATION:

										DATE:						-
Exhibit R-3 Cost Ana	alysis (page 2)											Februar	y 200)3		
Exhibit R-3 Cost Ana APPROPRIATION/BUDG	GET ACTIVITY		PROGRAM	ELEMENT				PROJECT	NUMBER ANI	O NAME						
RDT&E, N /	BA-7		0305206N	Airborne Reco	nnaissaı	nce Adv	anced Deve	elop R9115 N	RL Applied Op	otics Reconna	ssance Tec	hnology				
Cost Categories	Contract	Performing	•	Total			FY 03		FY 04		FY 05					
	Method	Activity &			FY 03		Award	FY 04	Award	FY 05	Award	Cost to		Total	Targ	get Value
	& Type	Location		Cost	Cost		Date	Cost	Date	Cost	Date	Complete		Cost		Contract
Camera test support	C/CPFF	NRL, Wash, I	DC	0.000)	0.470							0.000	0.4	70	0.470
								+								
Subtotal T&E				0.000		0.470							0.000	0.4	70	
odbiotai i de				0.000	11	00							0.000	· · · ·	. •	
														0.0	00	0.000
														0.0	00	0.000
Subtotal Management				0.000	1	0.000				0.0	00			0.0	00	
Oubtotal Management				0.000	1	0.000	l			0.0	00			0.0	00	
Remarks:																
Total Cost				0.000)	2.440		0	.000	0.0	00			2.4	40	
Remarks: This progran	n has no support costs	S.		D 4 CHOI				206								

CLASSIFICATION:

EXHIBIT R4, Schedul																									DATE		Fe	brua	ry 20	03		
APPROPRIATION/BUDGE RDT&E, N /	ET ACTIV BA-7										ELEME Airborn										PROJ R911						naissa	ance T	echno	ology		
Fiscal Year		200	02			20	03			20				20				20	006		2007		·		20				200	9		
	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
Program Milestones Milestones																																
								Ball (Gimbal	l Moun	t			0																		
Engineering Milestones												Adva	incea	Camer	а																	
Test & Evaluation Milestones																																
Development Test Operational Test																																
Contract Milestones																																
	-											R-1	SHC	PPIN	G LIS	ST - It	em N	0.	206							Fxhi	hit R-	4 Sc	hedu	le Pro	file	

Exhibit R-4, Schedule Profile (Exhibit R-4, page 45 of 46)

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:							
						l	February 20	03					
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EL	EMENT			PROJECT NU	MBER AND NA	AME						
RDT&E, N / BA-7	0305206N Air	borne Reconna	aissance Syste	ms	R9115 NRL	Applied Optics Reconnaissance Tech							
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009					
Ball Gimbal Mount			2Q	2Q									
Long focal length lens			2Q										
Interchangeable EO and IR lens			3Q										
High frame rate camera			3Q										
Advznced Camera			4Q										

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