CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2, RDT&E Budget Item Justification						DATE:	
						Februai	y 2004
APPROPRIATION/BUDGET ACTIVITY							
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY /	BA-7		Systems				
COST (\$ in Millions)	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost	16.171	26.989	10.191	29.125	18.745	19.124	19.504
H2694 Advanced Digital Sensors	2.521	12.206	10.191	29.125	18.745	19.124	19.504
R2476 Framing Reconnaissance Camera	2.817						
R2807 Hyperspectral Upgrade to Airborne Cameras	3.416	3.955					
R9114 Electro-Optical Framing Reconnaissance Camera	4.977	3.461					
R9115 NRL Applied Optics Reconnaissance Technology	2.440						
R9437 Deploy Unmanned Sys for Targeting, Exploitation, Reconn (DUST	ER)	5.142					
R9438 Multi-spectral glass windows for Airborne Reconn Poded Sensors		2.225					

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. Starting in FY05, the advanced sensor developments will provide the technology transition modules for operational use necessary to support the EP-3E JMOD Baseline program 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 components for the EP-3E and Special Projects (SP) aircraft and follow-on candidate aircraft.

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, 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 have been successful.

R-1 SHOPPING LIST - Item No.

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UNCLASSIFIED

Exhibit R-2, RDTEN Budget Item Justification (Exhibit R-2, page 1 of 63)

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification		DATE:
		February 2004
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 te of employing emerging technologies in system upgrades, new system acquisitions, or Advanced Concept Technolog 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 produce.	echnology for airborne reconnai ogy Demonstrations (ACTDs), be e set forth in the Integrated Airl PP), published in November 19 nd Advanced Focal Plane Array	ssance applications and (2) to reduce the risk by integrating and exercising them in borne Reconnaissance Strategy (IARS). 194. Transition of sensors to AF TARS, and or of smaller electro-optical framing size, (2)

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justificati	on						DATE:						
APPROPRIATION/RUDGET ACTIVITY	PROGRAM ELEME	NT NUMBER AND	NAME		PRO IECT NI IMBE	R AND NAME	Februa	ry 2004					
RDT&E, N / BA-7	PROPRIATION/BUDGET ACTIVITY PROGRAM ELEMENT NUMBER AND NAME PROJECT NUMBER AND NAME OT&E, N / BA-7 O305206N Airborne Reconnaissance Systems H2694 Advanced Digital Sensors												
COST (\$ in Millions)		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009					
Project Cost		2.521	12.206	10.191	29.125	18.745	19.124	19.504					

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.

FY05 begins the development of JMOD Baseline Configuration into all EP-3 aircraft. These efforts carry forward the developments from prior years and continues the development efforts to ensure that EP-3 aircraft maintain their interoperability and relevance to emerging threats and changing technology. This funding provides for the development of the JMOD Baseline capabilities and Spirals. The JMOD Baseline program builds on a common baseline with two spirals. Spiral 1 (ForceNet) includes high band and special collection subsystems (Story Finder and MPEG) and data dissemination (Story Teller). Spiral 2 (Precision Targeting) includes a precision targeting capabilities, obsolescence and Story Maker. The Special Projects development efforts are on-going as planned.

R-1 SHOPPING LIST - Item No.

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EXHIBIT R-2a, RDT&E Project Justifica	ation			DATE:					
				Februa	ry 2004				
PROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMB	ER AND NAME	PROJECT NUMBER AND N	AME					
DT&E, N / BA-7	0305206N Airborne Reconnai	ssance Systems	H2694 Advanced Digital Sensors						
B. Accomplishments/Planned Program									
		FY 03	FY 04	FY 05					
Accomplishments/Effort/Subtotal Cost		0.386	0.700	0.000					
RDT&E Articles Quantity									
Collection upgrades and demonstration.									
Collection upgrades and demonstration.									
Collection upgrades and demonstration.		FY 03	FY 04	FY 05					
Accomplishments/Effort/Subtotal Cost		FY 03 0.733	FY 04 2.684	FY 05 0.000					
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity	ace for Story Teller upgrades; including	0.733	2.684	0.000	ment and Integration.				
Accomplishments/Effort/Subtotal Cost		0.733 CDL. Story Teller and	2.684 Common Data Link (CDL) integra	0.000	ment and Integration.				
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Development of hardware and software interface.		0.733 CDL. Story Teller and	2.684 Common Data Link (CDL) integra	0.000	ment and Integration.				
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Development of hardware and software interface.		0.733 CDL. Story Teller and nna upgrade into aircra	2.684 Common Data Link (CDL) integra ft.	0.000 tion into SIL. Imagery develop	ment and Integration.				

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CLASSIFICATION:

•	ion			DATE: February 2004					
ROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUME	RER AND NAME	PROJECT NUMBER AND N		uary 2004				
T&E, N / BA-7	0305206N Airborne Reconna		H2694 Advanced Digital S						
TOL, N / BA-1	0303200N Allborne Recollina	dissance Systems	1 12094 Advanced Digital 3	6115015					
B. Accomplishments/Planned Program									
		FY 03	FY 04	FY 05	٦				
Accomplishments/Effort/Subtotal Cost		0.000	0.317	0.000					
RDT&E Articles Quantity									
Story Book DT/OT (including OPAL/ONYX). S	tory Book upgrade (including CPC).	Story Book signals an	alysis and upgrade receivers. De	velopment of Story Book An	nalysis upgrades				
		F)/ 00		5 /4-	7				
Accomplishments/Effort/Subtotal Cost		FY 03 0.450	FY 04	FY 05	4				
RDT&E Articles Quantity		0.450	0.813	0.000	-				
Story Maker development, integration and dem	ionstration. Story Maker Into System	s integration Lab (SIL)	and perform flight test.						
		FY 03	FY 04	FY 05]				
Accomplishments/Effort/Subtotal Cost		FY 03 0.000	FY 04 4.943	FY 05 3.490					
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity									
RDT&E Articles Quantity JMOD Imagery engineering investigations. Mis	ssion system weight development. E e update.	0.000	4.943	3.490	ements Review (SRR).				
RDT&E Articles Quantity JMOD Imagery engineering investigations. Mis Special Projects Communications/Infrastructure	ssion system weight development. Ce update.	0.000 Develop and demonstra	4.943	3.490	ements Review (SRR).				
RDT&E Articles Quantity JMOD Imagery engineering investigations. Mis Special Projects Communications/Infrastructure Accomplishments/Effort/Subtotal Cost	ssion system weight development. Ce update.	0.000 Develop and demonstra	4.943 te Special Projects (SP) DF upgra	3.490 de for SP Systems Require	ements Review (SRR).				
RDT&E Articles Quantity JMOD Imagery engineering investigations. Mis Special Projects Communications/Infrastructure	ssion system weight development. Ce update.	0.000 Develop and demonstra	4.943 te Special Projects (SP) DF upgra	3.490 de for SP Systems Require FY 05	ements Review (SRR).				
RDT&E Articles Quantity JMOD Imagery engineering investigations. Mis Special Projects Communications/Infrastructure Accomplishments/Effort/Subtotal Cost	e update.	0.000 Develop and demonstra FY 03 0.490	4.943 te Special Projects (SP) DF upgra	3.490 de for SP Systems Require FY 05 0.000	ments Review (SRR).				

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justifica	tion		DATE:						
DDODDIATION/DUDOET ACTIVITY	DDOOD AM ELEMENT NUMBER AND NAME	DDO IFOT NILIMBED AND N		ry 2004					
PROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N							
DT&E, N / BA-7	0305206N Airborne Reconnaissance Systems	H2694 Advanced Digital S	al Sensors						
B. Accomplishments/Planned Program									
	FY 03	FY 04	FY 05						
Accomplishments/Effort/Subtotal Cost	0.000	0.000	4.043						
RDT&E Articles Quantity									
	FY 03	FY 04	FY 05						
Accomplishments/Effort/Subtotal Cost	0.000	0.000	2.658						
RDT&E Articles Quantity	ing capabilities, obsolescence and Story Maker.								
RDT&E Articles Quantity									
RDT&E Articles Quantity									
RDT&E Articles Quantity									
RDT&E Articles Quantity									
RDT&E Articles Quantity									
RDT&E Articles Quantity									
RDT&E Articles Quantity									
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RDT&E Articles Quantity									
RDT&E Articles Quantity									

R-1 SHOPPING LIST - Item No.

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Exhibit R-2a, RDTEN Project Justification (Exhibit R-2a, page 6 of 63)

CLASSIFICATION:

			DATE:
			February 2004
PROGRAM ELEMENT NUMBER AND NAME		PROJECT NUMBER AND	ID NAME
0305206N Airborne Reconnaissance Systems		H2694 Advanced Digita	tal Sensors
FY 2003	FY 2004	FY 2005	
2.521	13.345	10.313	
2.521	12.206	10.191	
0.000	-1.139	-0.122	
	-0.148		
		-0.033	
	-0.991	-0.089	
- <u></u>			
0.000	-1.139	-0.122	
	0305206N Airborne Reconnaissance Systems FY 2003 2.521 2.521 0.000	FY 2003 FY 2004 2.521 13.345 2.521 12.206 0.000 -1.139 -0.148	Page

(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. OT originally scheduled to complete in 1Q/04 is now combined with Spiral 1 OT in 2Q/05. Story Finder DT slipped due to aircraft availability to 1Q/04. The FY05 Story Maker DT/OT was deleted since it is now included in Spiral 2 DT/OT. Spiral 1 DT/OT is 2Q/05. Spiral 2 DT/OT is 1Q/06. 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. Both Spiral 1 and Spiral 2 contract awards are expected 2Q/05.

(U) Technical:

Not Applicable

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE:	Februa	rv 2004	
PPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	LEMENT NUM	BER AND NAM	MBER AND N	,					
RDT&E, N / BA-7	0305206N Air	H2694 Adva	nced Digital S	Sensors						
(U) D. OTHER PROGRAM FUNDING SUMMARY	/ :									
(0, 2, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	•							То	Total	
Line Item No. & Name	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	<u>Complete</u>	Cost	
Line Item #33 APN-5 EP-3E OSIP 11-01	57.646	55.392	28.339	55.554	62.415	29.063	30.218	10.389	329.016	
Line Item #44 APN-5 Special Projects Aircraft OSIP 19-97	10.807	56.131	12.415	20.686	14.205	14.475	14.714	0.000	143.433	

(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:				
e 1)									February 200)4	
ITY	PROGRAM E	LEMENT			PROJECT NU	IMBER AND	NAME				
							Sensors				
						-					
	,	-			-						Target Value of Contract
				Date	Cost	Date	Cosi	Date	Complete		
	, , , , , , , , , , , , , , , , , , ,										4.287
	•			40/00	0.070	04/04					
33/CPFF	Lockneed Martin, CO	0.977	0.366	12/02	0.270	04/04				1.033	1.033
SS/CPFF	Raytheon Systems, IN		0.100	12/02	0.300	01/04				0.400	0.400
SS/CPFF	Raytheon Systems, TX		0.400	12/02						0.400	0.400
SS/CPFF	Raytheon Systems, TX	1.447								1.447	1.447
SS/CPFF	Raytheon Systems, TX	2.414								2.414	2.414
SS/CPFF	Condor, San Jose, CA	2.868								2.868	2.868
SS/CPFF	CTC, Johnstown, PA	4.228								4.228	4.228
SS/CPFF	Raytheon Indianapolis, IN				5.162	02/04				5.162	5.162
SS/CPFF	L3Com,TX				1.148	02/04				1.148	1.148
SS/CPFF	Argon, VA				2.500	01/04				2.500	2.500
SS/CPFF	TBD						3.490	12/04		3.490	3.527
SS/CPFF	Raytheon Systems, TX								12.897	12.897	12.897
	TBD						2.425	01/05	Continuing	Continuing	
	TBD						1.580	01/05	Continuing	Continuing	
		17 110	0 000		0 200		7 405		Continuing	Continuing	
	Method & Type SS/CPFF SS/CPFF SS/CPFF SS/CPFF SS/CPFF SS/CPFF SS/CPFF SS/CPFF SS/CPFF SS/CPFF SS/CPFF SS/CPFF SS/CPFF	Contract Method Activity & Location SS/CPFF BTG, Vienna, VA SS/CPFF Raytheon Systems, IN/TX SS/CPFF Raytheon Systems, IN/TX SS/CPFF Raytheon Systems, TX SS/CPFF Condor, San Jose, CA SS/CPFF CTC, Johnstown, PA SS/CPFF Raytheon Indianapolis, IN SS/CPFF L3Com,TX SS/CPFF Argon, VA SS/CPFF TBD SS/CPFF Raytheon Systems, TX TBD	TY PROGRAM ELEMENT 0305206N Airborne Reconn Contract Method & Type Location SS/CPFF BTG, Vienna, VA SS/CPFF Raytheon Systems, IN/TX SS/CPFF Raytheon Systems, IN SS/CPFF Raytheon Systems, TX SS/CPFF Raytheon Systems, TX SS/CPFF Raytheon Systems, TX SS/CPFF Raytheon Systems, TX SS/CPFF Raytheon Systems, TX SS/CPFF Raytheon Systems, TX SS/CPFF Raytheon Systems, TX SS/CPFF Raytheon Systems, TX SS/CPFF Raytheon Systems, TX SS/CPFF CTC, Johnstown, PA 4.228 SS/CPFF Raytheon Indianapolis, IN SS/CPFF Argon, VA SS/CPFF Raytheon Systems, TX TBD TBD TBD	Contract Method Activity & Performing Activity & Py s Fy 03 Cost SS/CPFF BTG, Vienna, VA 0.898 SS/CPFF Raytheon Systems, IN/TX 4.287 SS/CPFF Raytheon Systems, TX 0.400 SS/CPFF Raytheon Systems, TX 1.447 SS/CPFF Raytheon Systems, TX 2.414 SS/CPFF Raytheon Systems, TX 2.414 SS/CPFF Condor, San Jose, CA 2.868 SS/CPFF Raytheon Indianapolis, IN SS/CPFF Raytheon Indianapolis, IN SS/CPFF Raytheon Systems, TX TBD TBD TBD TBD	PROGRAM ELEMENT	PROGRAM ELEMENT 0305206N Airborne Reconnaissance Systems	PROGRAM ELEMENT 0305206N Airborne Reconnaissance Systems	PROGRAM ELEMENT Q305206N Airborne Reconnaissance Systems	PROGRAM ELEMENT 0305206N Airborne Reconnaissance Systems	PROGRAM ELEMENT O305206N Airborne Reconnaissance Systems	PROJECT NUMBER AND NAME PROJECT NUMBER A

Remarks:

CLASSIFICATION:

								DATE:				
Exhibit R-3 Cost Analysis (pagaPPROPRIATION/BUDGET ACTIV	ge 1)									February 200	04	
APPROPRIATION/BUDGET ACTIV	'ITY	PROGRAM E	LEMENT			PROJECT NU						
RDT&E, N / BA-7		0305206N Air		naissance Syste		H2694 Adva		Sensors				
Cost Categories		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
Develop Support		GRCI, Vienna, VA	1.99			0.560					2.816	
Develop Support	WX	NAWC,WD, China Lake, CA	3.51	1 0.434	12/02	0.835	01/04				4.780	,
Develop Support	WX	NSWC, Dahlgren, VA	0.58	9		0.225	12/03				0.814	,
Software Development - Story Maker	SS/CPFF	GD, Sunnyvale, CA	1.80	6 0.550	12/02	0.326	02/04				2.682	2 2.682
Develop Support - Spiral 1		TBD						1.096	01/05	Continuing	Continuing	1
Develop Support - Spiral 2		TBD						0.730		Continuing		_
Subtotal Support			7.90	0 1.24	6	1.946		1.826	;	Continuing	Continuing	1
Remarks:												

CLASSIFICATION:

									DATE:									
Exhibit R-3 Cost Analysis	(page 2)						T				February 200)4						
APPROPRIATION/BUDGET A			OGRAM EL				PROJECT NU											
RDT&E, N / BA-					aissance Syste	FY 03	H2694 Adva	nced Digital	Sensors	IEV 05	1	1	т —					
Cost Categories	Contract Method	Performing Activity &		Total PY s	FY 03	Award	FY 04	Award	FY 05	FY 05 Award	Cost to	Total	Target Value					
	& Type	Location				Date	Cost	Date	Cost	Date		Cost	of Contract					
DT/OT & Eval	WX	NAWC,AD Pax R		0.250		Date	0.270		0001	Date	Complete	0.520	1					
DT/OT & Eval	WX	NRL, MD	IVOI, IVID	0.100		11/02	0.110					0.310	1					
T&E - Spiral 1	TBD	TBD		0.100	0.100	11/02	0.110	02/01	0.37	0 01/05	Continuing	Continuing						
Tal Opilal I	100	155							0.07	0 01700	Continuing	Continuing						
Subtotal T&E				0.350	0.100		0.380)	0.37	0	Continuing	Continuing						
Remarks:																		
Systems Eng Suppt	WX	NAWC,AD Pax R	iver, MD	0.811	0.139	11/02	0.350	01/04	0.35	01/05	Continuing	Continuing	1					
Travel	wx	NAWC,AD Pax R		0.100	0.100		0.100	11/03	0.10	0 01/05	Continuing	Continuing	1					
ILS Suppt	wx	NAWC,AD Pax R		0.050	0.050		0.050		0.05	01/05	Continuing	Continuing	1					
											·	•						
Subtotal Management				0.961	0.289		0.500)	0.50	00	Continuing	Continuing	,					
Remarks:																		
1																		
Total Cost				26.330	2.521		12.206	;	10.19	11	Continuing	Continuing	Ţ					
	I	1		20.000	2.021	I	.2.200	1	.0.10									
Remarks:																		

CLASSIFICATION:

EXHIBIT R4, Schedule	Profile)																							DATE	:	F	ebrua	rv 20	004		
APPROPRIATION/BUDGET									PROC	SRAM	ELEM	ENT N	UMBE	R AND	NAM (E						ECT N						obi ac	y	/0 1		
RDT&E, N /	BA-7	7							03052	206N /	Airborn	ne Rec	onnais	sance	Systen	ns	1				H269	4 Adv	anced	Digit	al Ser	sors			1			
Fiscal Year						20	03			20	04			20	05			20	06			20	07			20	08			200)9	
	1	2	3	4	1	2	3	4	1	2	3		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Program Milestones Milestones						LRIP	II		S	SP SRI	R F	RP																				
Engineering Milestones						PDR		CDR																								
Test & Evaluation Milestones							Co	mplet	e DT																							
Development Test									SF DT	ļ 				Spiral	1																	
Development Test/ Operational Test													2		7		Spiral	2														
Contract Milestones												0 : 1	4.0																			
														tract A																		

CLASSIFICATION:

Exhibit R-4a, Schedule Detail					F	DATE: ebruary 200)4			
APPROPRIATION/BUDGET ACTIVITY	PROGRAM E	LEMENT			PROJECT NU	MBER AND NA	AME			
RDT&E, N / BA-7	0305206N Ai	rborne Reconna	aissance Syste	ms	H2694 Advanced Digital Sensors					
Schedule Profile		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009		
System Requirements Review (SRR)			SP 2Q							
Preliminary Design Review (PDR)		2Q								
LRIP II		2Q								
Critical Design Review (CDR)		4Q								
Developmental Testing		3Q-4Q								
Full Rate Production (FRP)			3Q							
Story Finder DT			1Q							
Spiral 1 DT/OT				2Q						
Spiral 2 DT/OT					1Q					
Spiral 1 Contract Award				2Q						
Spiral 2 Contract Award				2Q						
								<u> </u>		

R-1 SHOPPING LIST - Item No.

CLASSIFICATION:

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

CLASSIFICATION:

	tion			DATE: February	2004
ROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBE	FR AND NAME	PROJECT NUMBER AND N		2004
T&E, N / BA-7	0305206N Airborne Reconnais		R2476 Framing Reconnaiss		
•	030320011 Allbottle Recollitats	ssance Systems	N2470 Framing Recommass	ance Camera	
B. Accomplishments/Planned Program					
		FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost		0.500	0.000	0.000	
RDT&E Articles Quantity					
Demonstration of JPEG 2000 Image Decomposition	ression Boards completed.				
		FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost		0.500	0.000	0.000	
RDT&E Articles Quantity					
		5)/ 00			
		FY 03	FY 04	FY 05	
		0.000	FY 04 0.000	FY 05 0.000	
RDT&E Articles Quantity	Strike. Real time data fusion processor	0.000			
RDT&E Articles Quantity	Strike. Real time data fusion processor	0.000			
RDT&E Articles Quantity	Strike. Real time data fusion processor	0.000			
RDT&E Articles Quantity	Strike. Real time data fusion processor	0.000 completed.	0.000	0.000	
RDT&E Articles Quantity EO Framing Camera Upgrades for Precision S	Strike. Real time data fusion processor	0.000 completed.	0.000 FY 04	0.000 FY 05	
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity EO Framing Camera Upgrades for Precision S Accomplishments/Effort/Subtotal Cost	Strike. Real time data fusion processor	0.000 completed.	0.000	0.000	
RDT&E Articles Quantity EO Framing Camera Upgrades for Precision S Accomplishments/Effort/Subtotal Cost	Strike. Real time data fusion processor	0.000 completed.	0.000 FY 04	0.000 FY 05	
RDT&E Articles Quantity EO Framing Camera Upgrades for Precision S		0.000 completed.	0.000 FY 04	0.000 FY 05	
RDT&E Articles Quantity EO Framing Camera Upgrades for Precision S Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity		0.000 completed.	0.000 FY 04	0.000 FY 05	
RDT&E Articles Quantity EO Framing Camera Upgrades for Precision S Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity		0.000 completed.	0.000 FY 04	0.000 FY 05	
RDT&E Articles Quantity EO Framing Camera Upgrades for Precision S Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity		0.000 completed.	0.000 FY 04	0.000 FY 05	
RDT&E Articles Quantity EO Framing Camera Upgrades for Precision S Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity		0.000 completed.	0.000 FY 04	0.000 FY 05	
RDT&E Articles Quantity EO Framing Camera Upgrades for Precision S Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity		0.000 completed.	0.000 FY 04	0.000 FY 05	

Exhibit R-2a, RDTEN Project Justification (Exhibit R-2a, page 15 of 63)

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification				DATE:	
					February 2004
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME		PROJECT NUMBER AND	D NAME	
RDT&E, N / BA-7	0305206N Airborne Reconnaissance Systems		R2476 Reconnaissance (Camera	
(U) C. PROGRAM CHANGE SUMMARY:					
(U) Funding:	FY 2003	FY 2004	FY 2005		
Previous President's Budget: Current BES/President's Budget	2.887	0.000	0.000		
Total Adjustments		0.000	0.000		
Summary of Adjustments Congressional program reductions	-0.054				
Congressional undistributed reductions	0.65				
Congressional rescissions SBIR/STTR Transfer					
Economic Assumptions	-0.016				
Reprogrammings					
Other adjustments					
Reprioritization of requirements Congressional increases					
Subtotal	-0.070	0.000	0.000		
(U) Schedule:					
Not Applicable.					
(U) Technical:					
` '					
Not Applicable					
	D_1 QHODDING LIGT_IF	NI-	100		

CLASSIFICATION:

HIBIT R-2a, RDT&	E Project Justification							DATE:		
									Februar	y 2004
PROPRIATION/BUDGE		PROGRAM E	LEMENT NUM	IBER AND NAM	ИE	PROJECT NU	IMBER AND N	IAME		
T&E, N /	BA-5	0305206N Air	borne Reconn	aissance Syste	ems	R2476 Framin	g Reconnaiss	ance Camera		
(U) D. OTHER PRO	OGRAM FUNDING SUMMARY:									
(0) 21 0 111211 111									То	Total
Line Item No. & N	<u>ame</u>	<u>FY 2003</u>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Complete	Cost
PE 0305207N	DARP, Special Project A/C	29.335	10.649	10.939	11.410	11.589			11.764	85.686
1 2 000020111,	Driver, Opeolar Fojocervo	20.000	10.010	10.000	11.110	11.000			1101	00.000
(II) E AGGUIGITION	OTD ATEOV									
(U) E. ACQUISITION	STRATEGY:									
The program is	to develop framing reconnaissance ca	amera technology to sur	port improved	capabilities for	programs suc	h as SHARP.				
ino program io	to develop manning recommendation of	amera teermelegy to eap	pop. 0.00	oapasoo ioi	programo out					

CLASSIFICATION:

Remarks:

								DATE:				
Exhibit R-3 Cost Analysis (page	1)										February 2004	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM	ELEMENT			PROJECT NU	JMBER AND	O NAME				
RDT&E. N / BA-7		0305206N		nnaiseance A	dvanced Devel			issance Camera				
Cost Categories	Contract	Performing	Total		FY 03	5 112-47 0 1 Tallill	FY 04		FY 05			
Cost Categories	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	0031	Date	0031	Date	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	1							2.00	
Hyperspectral Module	C/CPFF	Recon Opt., Barrington, IL	1.500				1				1.50	
Camera for Hyperspectral	C/CPFF	Recon Opt., Barrington, IL	1.000				1				1.00	-
Visible and SWIR Modules	C/CPFF	ITS, Honolulu, HI	3,300								3.30	
Precision Strike System	C/CPFF	Recon Opt., Barrington, IL	1.250								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	0 1.29
100 Megapixel Camera Test	C/CPFF	Recon Opt., Barrington, IL	4.513	3							4.51	3 4.51
Hyperspectral Modular Upgrades	CPFF	Recon Opt., Barrington, IL	6.500)							6.50	0 6.50
Development Upgrade Integrate Sensor	CPFF	Recon Opt., Barrington, IL	4.980)							4.98	4.98
Develop advanced focal plane shutter	WR	MIT Lincoln Lab, Bedford MA	0.170)							0.17	0.17
Hyperspectral Target Cueing Demo	CPFF	Recon Opt., Barrington, IL	0.656	0.35	09/03						1.00	1.00
EO Framing Camera Upgrades	CPFF	Recon Opt., Barrington, IL	5.903	0.20	0 10/03						6.10	6.10
Decompression Board Development	CPFF	Space Dyn. Lab. Logan, UT	0.800)							0.80	
Real Time Data Fusion Processor	TBD	TBD									0.00	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		0.35	0 09/03						0.35	0.35
ARIES Upgrades	CPFF	Space Dyn. Lab. Logan, UT		1.41	7 03/03						1.41	7 1.41
Subtotal Product Development			54.365	2.31	7	0.000	0	0.0	000		56.68	56.68

CLASSIFICATION:

									DATE:				
Exhibit R-3 Cost Analysis (p	age 2)										February 20	04	
APPROPRIATION/BUDGET ACT	IVITY		PROGRAM E	ELEMENT			PROJECT	NUMBER AN	D NAME		•		
RDT&E, BA-7			0305206N	Airborne Recor	naissance Ad	vanced Develo	p R2476 Fra		aissance Came	ra			
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
	& Type	Location		Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	of Contract
Camera test support	C/CPFF	NRL, Wash, D		0.672							0.000		
Technical Support	WR	NRL, Wash, D	OC .		0.50	0 09/03						0.50	0
Subtotal T&E				0.672	0.50	0					0.000	0 1.17	2
Remarks:													
Contractor Engineering Support	C/CPFF	Various		4.234								4.23	4.234
Systems Support	WR	NRL, Wash, DC)	1.114								1.11	
						ļ							
													+
Subtotal Management				5.348	0.00	0			0.	000		5.34	3
Remarks:													
Total Cost				60.385	2.81	7	0.	000	0.	000		63.20	2
Remarks: This program has no	support costs				DDINIC LIST		100						

CLASSIFICATION:

EXHIBIT R4, Schedule	e Profile	!																							DATE	<u> </u>	Fe	ebrua	ry 20	04		
APPROPRIATION/BUDGE RDT&E, N /	T ACTIV													R AND								ECT N				/IE ance (
RDTQL, N 7		20	n2			20	03		03032		04	e Neci		200		113		2	006		11247	200		(CCOII	lilaiss	20		as		20	19	
Fiscal Year			T				оо Г				T .									I						T		I				
	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																																
Engineering Milestones	JF	EG 20	000 L				JPEG	2000	Demo	₹ ∨	rget	_	Aries Upgra	ades																		
										Cı	eing																					
Test & Evaluation Milestones																																
Development Test Operational Test																																
Contract Milestones																																
														DDIN																		<u> </u>

R-1 SHOPPING LIST - Item No. 199

Exhibit R-4 Schedule Profile (Exhibit R-4, page 20 of 63)

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:		
						l	February 20	004
APPROPRIATION/BUDGET ACTIVITY	PROGRAM	ELEMENT			PROJECT NU	MBER AND NA		
RDT&E, N / BA-7	0305206N	Airborne Reconna	R2476 Frami	ing Reconnais	ssance Came	eras		
Schedule Profile		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Complete Decompression Boards		4Q						
JPEG 2000 Demonstration			2Q					
Target Cueing Demonstration			3Q					
Complete Aries Upgrades			4Q					
					1			

R-1 SHOPPING LIST - Item No.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification	n						DATE:	
							February 2004	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT N	UMBER AND	NAME		PROJECT NUMBE	R AND NAME		
RDT&E, BA-7	0305206N Airborne Reco	nnaissance	Systems		R2807 Hyperspe	ctral Upgrade to	Airborne Cameras	
COST (\$ in Millions)	F	Y 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost		* 3.416	** 3.955					
RDT&E Articles Qty								

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

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 FY2004 includes Congressional adds reflecting Modular Upgrades to Airborne Reconnaissance Sensors (\$3.9 million) which will be executed under R2807.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justificati	on			DATE:	
•				February	2004
PROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBE	R AND NAME	PROJECT NUMBER AND N		
T&E, N / BA-7	0305206N Airborne Reconnais	sance Systems	R2807 Hyperspectral Upg	rade to Airborne Cameras	
•		· · · · · · · · · · · · · · · · · · ·			
B. Accomplishments/Planned Program					
		FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost		3.200	0.000	0.000	
RDT&E Articles Quantity					
	1				
Hyperspectral upgrade to airborne cameras con	ipieted.				
Hyperspectral upgrade to airborne cameras con	ipleted.				
Hyperspectral upgrade to airborne cameras con	ppieted.				
Hyperspectral upgrade to airborne cameras con	ріетеа.				
Hyperspectral upgrade to airborne cameras con	ріетеа.				
Hyperspectral upgrade to airborne cameras con	ріетеа.				
Hyperspectral upgrade to airborne cameras con	ipieted.	FY 03	FY 04	FY 05	
	ipieted.	FY 03 0.216	FY 04 0.000	FY 05 0.000	
	ipieted.				
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity	ipieted.				
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity	ipieted.				
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity	ipieted.				
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity	pieted.				
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity	pieted.	0.216			
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity amera test support.	ipieted.				
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity	ipieted.	0.216	0.000	0.000	
RDT&E Articles Quantity amera test support.	ipieted.	0.216 FY 03	0.000 FY 04	0.000 FY 05	

R-1 SHOPPING LIST - Item No.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:
			February 2004
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND	
RDT&E, N / BA-7	0305206N Airborne Reconnaissance Systems	R2807 Hyperspectral Up	ograde to Airborne Cameras
(U) C. PROGRAM CHANGE SUMMARY:			
(U) Funding:	FY 2003	FY 2004 FY 2005	
Previous President's Budget:	3.416	0.000 0.000	
Current BES/President's Budget	3.416	3.955 0.000	
Total Adjustments	0.000	3.955 0.000	
Summary of Adjustments Congressional program reductions Congressional undistributed reductions Congressional rescissions SBIR/STTR Transfer Economic Assumptions Reprogrammings Other Adjustments Reprioritization of requirements Congressional increases Subtotal	0.000	3.955 3.955 0.000	
Subtotal	0.000	3.955 0.000	
(U) Schedule:			
Not Applicable.			
(U) Technical:			
Not Applicable			
	R-1 SHOPPING LIST - It	em No. 199	

CLASSIFICATION:

חוסוו א-2a, אטומו	E Project Justification							DATE:	Februai	n 2004
PROPRIATION/BUDGE	T ACTIVITY	PROGRAM EI	EMENT NUM	BER AND NAM	ΛΕ.	PROJECT NU	IMBER AND N	I IAMF	rebiuai	y 2004
DT&E, N /	BA-5	0305206N Air						rade to Airbo	rne Cameras	
•		<u> </u>				, ,,		,		
(U) D. OTHER PRO	GRAM FUNDING SUMMARY:									
Lina Itama Na 9 N	la ma a	EV 0000	EV 0004	EV 000E	FV 0000	F)/ 0007	E)/ 0000	F)/ 0000	То	Total
Line Item No. & N	<u>lame</u>	<u>FY 2003</u>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	<u>Complete</u>	Cost
PE 0305207N,	DARP, Special Project A/C	29.335	10.649	10.939	11.410	11.589			11.764	85.686
(U) E. ACQUISITION	STRATEGY:									
The program is	to develop framing reconnaissance ca	mera technology to sur	nort improved	canabilities for	nrograms su	ch as SHARP				
The program is	to do voiop manning rooti maiocarioo oc	amora toormology to our	port improvod	capabilities for	programo ou	011 40 01 1/4 11 1				

CLASSIFICATION:

Г									1				
									DATE:				
Exhibit R-3 Cost Analysis (pag	ge 1)										February 2	:004	
APPROPRIATION/BUDGET ACTIV	'ITY		PROGRAM	ELEMENT			PROJECT NU	JMBER AND	NAME				
RDT&E, N / BA-7			0305206N	Airborne Reco	nnaissance Adv	anced Develop	R2807 Hype	rspectral Up	grade to Airb	orne Camer	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		of Contract
Hyperspectral Modular Upgrades	C/CPFF	TBD			3.200	09/03						3.200	3.200
Longwave Infrared Upgrade	C/CPFF	TBD					3.655	05/04				3.655	3.655
									+				
													
0.1.1.1.5					2.00							0.055	0.055
Subtotal Product Development					3.200)	3.655					6.855	6.855
Remarks:													
													

CLASSIFICATION:

									DATE:				
Exhibit R-3 Cost Ana	alysis (page 2)										February 200	04	ļ
APPROPRIATION/BUD	OGET ACTIVITY		PROGRAM	M ELEMENT			PROJECT NU	MBER AND	NAME		•		
RDT&E, N /	BA-7		0305206N	Airborne Reco	nnaissance /		elop R2807 Hypei	rspectral Up	grade to Airb		as		ŀ
Cost Categories	Contra Metho		ng &	Total PY s	FY 03	FY 03 Award		FY 04 Award	FY 05	FY 05 Award	Cost to	Total	Target Value
	& Type	e Location	î	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	of Contract
Camera test support	C/CPF			-	0.2			2 4.15	1	1	0.000		
Camera test support		FF NRL, Wa					0.300	02/04					
Cubtatal TVE				0.000	0.	046	0.300				0.000	0.516	
Subtotal T&E				0.000	0.2	16	0.300	<u> </u>			0.000	0.510	4
					T					T		0.000	0.000
												0.000	0.000
				_	 	+				+		+	-
		_		+	+	+			+	+			+
				1	t	<u> </u>			1	1	1	†	
Subtotal Management				0.000	0.0	00			0.00)0		0.000)
Remarks:													
Total Cost				0.000	3.4	16	3.955		0.00)0		7.371	6.855
Remarks: This prograr	m has no support co	osts.											

CLASSIFICATION:

EXHIBIT R4, Schedule	e Profile																								DATE	:	Fé	brua	ry 20	04		
APPROPRIATION/BUDGE	T ACTIVI													R AND								ECT N 7 Hyp				1E de to A						
Fiscal Year		20	02			20	03			20				20				20	006			200				20				20	09	
riscal real	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																																
						ŀ	Hypersp	pectral	Modu																							
Engineering Milestones								\triangle	7	, 	amera	Upgra	de																			
Engineering Milestones															Long Upgr	wave I ade	nfrared	I														
Test & Evaluation Milestones																																
Development Test Operational Test																																
Contract Milestones																																

R-1 SHOPPING LIST - Item No. 199

Exhibit R-4, Schedule Profile (Exhibit R-4, page 28 of 63)

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:		
							ebruary 20	004
APPROPRIATION/BUDGET ACTIVITY	PROGRAM E	LEMENT			PROJECT NU			
RDT&E, N / BA-7	0305206N Ai	rborne Reconna	aissance Syste	ems	R2807 Hypei	spectral Upgi	rade to Airbo	rne Cameras
Schedule Profile		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Camera Upgrade			3Q					
Hyperspectral Module		4Q						
Commence Longwave Infrared Upgrade			3Q					
Complete Longwave Infrared Upgrade				2Q				

R-1 SHOPPING LIST - Item No.

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, BA-7	ptical Framing Re	Reconnaissance Camera						
COST (\$ in Millions)		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost		* 4.977	** 3.461					
RDT&E Articles Qty								

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

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 FY2004 includes Congressional adds reflecting Advanced Airborne Image Processor (\$3.461 million) which will be executed under R9114.

CLASSIFICATION:

XHIBIT R-2a, RDT&E Project Justificat	on		DATE:	
CORPLATION (PURCET A OTIVITY	DDOOD AN ELEMENT AUMDED AND MAKE	DDO JEOT NIJIMBED AND A	February 2004	
ROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND I		
T&E, N / BA-7	0305206N Airborne Reconnaissance Systems	R9114 Electro-Optical Fr	aming Reconnaissance Camera	
B. Accomplishments/Planned Program				
	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	0.000	0.000	0.000	
RDT&E Articles Quantity				
•		<u> </u>	<u> </u>	
Electro-Optical Framing Reconnaissance Came	eras completed.			
	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	0.450	0.000	0.000	
RDT&E Articles Quantity	0.400	0.000	0.000	
TO TOE 7 II II O O COUNTY				
	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	1.977	0.000	0.000	
RDT&E Articles Quantity				
•	<u> </u>	<u>.</u>	<u> </u>	
Electro-Optical Framing Reconnaissance (Cameras completed.			
,	·			
	TV 02	EV 04	EV of	
Accomplishments/Effort/Subtatal Cost	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	FY 03 0.000	FY 04 3.461	FY 05 0.000	
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity				
RDT&E Articles Quantity	0.000			
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity An Advanced Airborne Image Processor w	0.000			
RDT&E Articles Quantity	0.000			
RDT&E Articles Quantity	0.000			
RDT&E Articles Quantity	0.000			

Exhibit R-2a, RDTEN Project Justification

CLASSIFICATION:

	ELEMENT NUMBER AND NAME Airborne Reconnaissance Systems FY 03 0.700	PROJECT NUMBER AND N. R9114 Electro-Optical Fra	February 200 AME Iming Reconnaissance Camera FY 05 0.000	4
DT&E, N / BA-7 0305206N DT&E, N / BA-7 0305206N DELOTATION OF THE PROPERTY	Airborne Reconnaissance Systems FY 03	R9114 Electro-Optical Fra	AME Iming Reconnaissance Camera	
Accomplishments/Planned Program Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity				
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity				
RDT&E Articles Quantity				
RDT&E Articles Quantity	0.700	0.000	0.000	
Electro-Optical Framing Reconnaissance Cameras completed.				
Electro-Optical Framing Reconnaissance Cameras completed.				
	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	1.850	0.000	0.000	
RDT&E Articles Quantity				

R-1 SHOPPING LIST - Item No.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification				DATE:
				February 2004
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME		CT NUMBER AND	
RDT&E, N / BA-7	0305206N Airborne Reconnaissance Systems	R9114	1 Electro-Optical I	Framing Reconnaissance Camera
(U) C. PROGRAM CHANGE SUMMARY:				
(U) Funding:	FY 2003		Y 2005	
Previous President's Budget:	4.977	0.000	0.000	
Current BES/President's Budget	4.977	3.461	0.000	
Total Adjustments	0.000	3.461	0.000	
Summary of Adjustments				
Congressional program reductions				
Congressional undistributed reductions				
Congressional rescissions				
SBIR/STTR Transfer				
Economic Assumptions				
Reprogrammings				
Othre Adjustments				
Reprioritization of requirements Congressional increases	0.000	3.461		
Subtotal	0.000	3.461	0.000	
Custotal	0.000	0.101	0.000	
(U) Schedule:				
Not Applicable.				
(U) Technical:				
Not Applicable				
••				
	P_1 SHODDING LIST - It	am No 100		

CLASSIFICATION:

XHIBIT R-2a, RDT&I	E Project Justification							DATE:		
PPROPRIATION/BUDGE	T ACTIVITY	PROGRAM EL	EMENT NUM	BER AND NAM	ИF	PROJECT NU	IMBER AND N	JAME	Februa	ry 2004
DT&E, N /	BA-5	0305206N Air							naissance Cam	iera
				•				<u> </u>		
(U) D. OTHER PRO	GRAM FUNDING SUMMARY:								То	Total
Line Item No. & N	<u>ame</u>	<u>FY 2003</u>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Complete	Cost
PE 0305207N,	DARP, Special Project A/C	29.335	10.649	10.939	11.410	11.589			11.764	85.686
40										
(U) E. ACQUISITION										
The program is	to develop framing reconnaissance c	amera technology to sup	port improved	capabilities for	programs suc	ch as SHARP.				

CLASSIFICATION:

									DATE:				l
Exhibit R-3 Cost Analysis (pagaPPROPRIATION/BUDGET ACTIV	ge 1)										February 20)04	
APPROPRIATION/BUDGET ACTIV	/ITY		PROGRAM E	ELEMENT			PROJECT NU	JMBER AND I	NAME				
RDT&E, N / BA-7			0305206N	Airborne Recor	nnaissance Adv	anced Develor	R9114 Elect	ro-Optical Fr	aming Recor	ınaissance C	camera		
Cost Categories	Contract	Performing		Total		FY 03		FY 04	T	FY 05			
_	Method	Activity &		PY s	FY 03	Award	FY 04	Award	FY 05	Award	Cost to	Total	Target Value
	& Type	Location		Cost		Date	Cost	Date	Cost	Date	Complete		of Contract
Framing Camera Upgrades		Recon Opt., I	Barrington, IL		4.460	10/03						4.460	
Airborne Image Processor	C/CPFF	TBD					3.261	05/04				3.261	3.261
													<u> </u>
					<u> </u>		_	<u> </u>					
					 	 	 						ļ
		 			 	+	 	<u> </u>		+			
				+	 		+	<u> </u>					-
		+		+	+		+	 		+			+
	_	+		+	+	+	+	 	+	+		+	+
	+	+		+	+	+	+	 	+	+		+	+
	+	+		+	+	+	+	+	+	+	_	+	+
		+		+	+	+	+	 	+	+	-	-	+
	+	+		+	+	†	+		-	+		+	+
	_	†		+	†	†	†			1		+	
		1		1	1	1	1	1					
		1			1	1	1						
		T			1	T			1				
		<u> </u>				<u> </u>							
Subtotal Product Development					4.460)	3.261					7.721	7.721
Remarks:													

CLASSIFICATION:

									DATE:				
Exhibit R-3 Cost Ana	alysis (page 2)										February 20	04	
APPROPRIATION/BUDG	GET ACTIVITY		PROGRAM E	LEMENT			PROJECT NU	JMBER AND	NAME		-		
RDT&E, N /	BA-7		0305206N A	Airborne Recor	nnaissance		Develop R9114 Electi	ro-Optical F	raming Recor	nnaissance C	Camera		
Cost Categories	Contract Method	Activity &			FY 03	FY 03 Award	FY 04	FY 04 Award	FY 05	FY 05 Award	Cost to	Total	Target Value
	& Type				Cost	Date	Cost	Date	Cost	Date	Complete	Cost	of Contract
Camera test support	WR	NRL, Wash, I		0.000	0	.517					0.000		
Camera test support	WR	NRL, Wash, [)C				0.200	02/04				0.200	1
Subtotal T&E				0.000) ().517	0.200)			0.00	0 0.717	7 0.517
		T		Τ	Τ			Τ	1			0.000	
												0.000	0.000
		+			<u> </u>			<u> </u>	_				+
		T		†	<u> </u>			T	1	<u> </u>			†
Subtotal Management		\Box		0.000		0.000			0.00	00		0.000	
Remarks:													
Total Cost				0.000	1 4	1.977	3.461		0.00	00		8.438	8.238
Remarks: This program	ı has no support cos	ts.											

CLASSIFICATION:

EXHIBIT R4, Schedule	Profile																								DATE	:	E,	hrua	ry 20	0.4		
APPROPRIATION/BUDGE RDT&E, N /	T ACTIVI									GRAM 206N A															I D NAM Frami					mera		
Fiscal Year		20	02			20	03			20					05			20	006			20				20				200		
riscal feal	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																																
									IF C	RFPA p emo	roduci	bility																				
Engineering Milestones											<u> </u>	Imi	proved	came	ra																	
Engineering Milestones										. <u> </u>	\triangle				Airbo	rne Im essor	age															
Test & Evaluation Milestones																																
Development Test Operational Test																																
Contract Milestones																																
																														le Pro		

R-1 SHOPPING LIST - Item No. 199

Exhibit R-4, Schedule Profile

(Exhibit R-4, page 37 of 63)

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:		
							February 20	04
APPROPRIATION/BUDGET ACTIVITY	PROGRAM E	LEMENT			PROJECT NU	MBER AND N	AME	
RDT&E, N / BA-7	0305206N Ai	rborne Reconna	aissance Syste	ms	R9114 Electr	o-Optical Fra	ming Reconn	ı Camera
Schedule Profile		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
IRFPA Producibility			2Q/3Q					
Improved Camera			3Q/4Q					
Commence Airborne Image processor			3Q					
Complete Airborne Image processor				2Q				
								<u> </u>
								<u> </u>
								<u> </u>
								<u> </u>
		ļ						<u> </u>

R-1 SHOPPING LIST - Item No.

CLASSIFICATION:

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

R-1 SHOPPING LIST - Item No.

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

CLASSIFICATION:

ROGRAM ELEMENT NUMBER AND NAME		DATE:	
ROGRAM ELEMENT NUMBER AND NAME		February 200	4
NOONAM ELLIMENT NOMBER AND NAME	PROJECT NUMBER AND N	AME	
305206N Airborne Reconnaissance Systems	R9115 NRL Applied Option	s Reconnaissance Technology	
FY 03	FY 04	FY 05	
0.790	0.000	0.000	
latad			
ietea.			
FY 03	FY 04	FY 05	
0.500	0.000	0.000	
completed.			
FY 03	FY 04	FY 05	
	0.000	0.000	
1 () (5()		0.000	
0.750			
	0.790 eted. FY 03 0.500 ompleted.	0.790 0.000 eted. FY 03 FY 04 0.500 0.000 ompleted.	0.790 0.000 0.000 eted. FY 03 FY 04 FY 05 0.500 0.000 0.000 ompleted.

Exhibit R-2a, RDTEN Project Justification (Exhibit R-2a, page 40 of 63)

CLASSIFICATION:

	DATE:	
T&E, N / BA-7 0305206N Airborne Reconnaissance Systems 3. Accomplishments/Planned Program FY 03 Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity	February 2004	
T&E, N / BA-7 0305206N Airborne Reconnaissance Systems B. Accomplishments/Planned Program FY 03 Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity	PROJECT NUMBER AND NAME	
B. Accomplishments/Planned Program FY 03 Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity	R9115 NRL Applied Optics Reconnaissance Technology	
Accomplishments/Effort/Subtotal Cost 0.400 RDT&E Articles Quantity		
Accomplishments/Effort/Subtotal Cost 0.400 RDT&E Articles Quantity		
RDT&E Articles Quantity	FY 04 FY 05	
	0.000 0.000	
IRL Applied Optics Reconnaissance Technology completed.		
IRL Applied Optics Reconnaissance Technology completed.		

R-1 SHOPPING LIST - Item No.

CLASSIFICATION:

EXHIBIT R-2a	a, RDT&E Project Justification				DATE:
					February 2004
	N/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME		PROJECT NUMBER ANI	
RDT&E, N /	BA-7	0305206N Airborne Reconnaissance Systems		R9115 NRL Applied O	ptics Reconnaissance Technology
(U) C. PR	OGRAM CHANGE SUMMARY:				
	Funding:	FY 2003	FY 2004	FY 2005	
	vious President's Budget:	2.440	0.000	0.000	
	ent BES/President's Budget	2.440	0.000	0.000	
Tota	al Adjustments	0.000	0.000	0.000	
	Summary of Adjustments				
	Congressional program reductions				
	Congressional undistributed reductions				
	Congressional rescissions				
	SBIR/STTR Transfer				
	Economic Assumptions				
	Reprogrammings				
	Other Adjustments				
	Reprioritization of requirements				
	Congressional increases				
	Subtotal	0.000	0.000	0.000	
	Gubiotal	0.000	0.000	0.000	
(11) 9	Schedule:				
1	Not Applicable.				
(U) ⁻	Technical:				
	Not Applicable				
		R-1 SHOPPING LIST - Ite	em No.	199	

CLASSIFICATION:

,	E Project Justification							DATE:	Februai	ry 2004
ROPRIATION/BUDGE	T ACTIVITY	PROGRA	M ELEMENT NUM	IBER AND NAM	ЛЕ	PROJECT NU	IMBER AND N	IAME	i coi dai	y 2004
DT&E, N /	BA-5		I Airborne Reconn						sance Technolo	oav
										0,
(U) D. OTHER PRO	OGRAM FUNDING SUMMARY:								To	Total
Line Item No. & N	ame	_ FY 200	3 FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	<u>Complete</u>	<u>Cost</u>
PE 0305207N,	DARP, Special Project A/C	29.335	10.649	10.939	11.410	11.589			11.764	85.686
(U) E. ACQUISITION	STRATEGY:									
The program is	s to develop framing reconnaissance	camera technology to	support improved	l capabilities for	programs su	ch as SHARP.				

CLASSIFICATION:

										1				
										DATE:				
Exhibit R-3 Cost Ana	alysis (pag	e 1)										February 20	004	
APPROPRIATION/BUD		TY		PROGRAM I					NUMBER AND					
RDT&E, N /	BA-7			0305206N		nnaissance Ad		p R9115 NR	L Applied Opt	ics Reconnai		nology		
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
Reconnaissance Techno	ologies	CPFF	TBD			2.000	12/03						2.000	2.000
								+						
						+		-	_	_				
								+	+	+				
Subtotal Product Develop	ment					2.000	0						2.000	2.000
Remarks:														
						DDINIO LIOT								

CLASSIFICATION:

										DATE:					
Exhibit R-3 Cost Ana APPROPRIATION/BUDG	lysis (page 2)											Februar	y 200)4	
			PROGRAM	ELEMENT				PROJECT	NUMBER AND	D NAME					
RDT&E, N /	BA-7		0305206N	Airborne Reco	nnaissa	nce Adv	vanced Develo	R9115 NI	RL Applied Op	ptics Reconnai	ssance Tec	hnology			
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	WR	NRL, Wash, I	DC	0.000)	0.440	09/03						0.000	0.440)
		1		+											
		-										_			<u> </u>
Subtotal T&E				0.000	1	0.440							0.000	0.440	
Odbiotai 142		1		0.000	<u> </u>	0.110				1	ı	I	0.000	0.110	'I
		T												0.000	0.000
														0.000	0.000
Subtotal Management		-		0.000		0.000				0.0	20	_		0.000	1
Subtotal Management		1		0.000	ــــــــــــــــــــــــــــــــــــــ	0.000	1			0.0	00			0.000	'
Remarks:															
Total Cost				0.000)	2.440		0.	.000	0.0	00			2.440)
Remarks: This program	n has no support costs	i.					Itom No	100							

CLASSIFICATION:

EXHIBIT R4, Schedule	e Profile																								DATE	:	Fe	ebrua	ry 20	04		
APPROPRIATION/BUDGE RDT&E, N /	T ACTIVI										ELEME Airborn										PROJ R911											
Fiscal Year		20	02			20	03			20	04			20	05			20	006			20	07			20	80			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																																
								Ball (Gimbal	l Moun	t	Adva	nced	Camer	а																	
Engineering Milestones																																
Test & Evaluation Milestones																																
Development Test Operational Test																																
Contract Milestones																																

(Exhibit R-4, page 46 of 63)

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:		
						I	ebruary 20	04
APPROPRIATION/BUDGET ACTIVITY	PROGRAM E	LEMENT			PROJECT NU	MBER AND NA	AME	
RDT&E, N / BA-7	0305206N A	irborne Reconna	aissance Syste	ms	R9115 NRL /	Applied Optics	s Reconnaiss	ance Tech
Schedule Profile		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Ball Gimbal Mount			2Q/3Q					
Long focal length lens			4Q					
Interchangeable EO and IR			3Q					
High frame rate camera			4Q					
Advanced Camera			4Q					

R-1 SHOPPING LIST - Item No.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE:	
							Feb	oruary 2004
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMI	ENT NUMBER AND	O NAME		PROJECT NUMBI	ER AND NAME		
RDT&E, BA-7	0305206N Airborn	e Reconnaissance	Systems		R9437 Deployable	Unmanned Sys fo	r Targeting, Exploita	ation, and Reconn (DUSTER)
COST (\$ in Millions)		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost		0.000	* 5.142					
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 FY2004 includes Congressional adds reflecting Deployable Unmanned Aerial Vehicle (UAV) System for Targeting Exploitation and Reconnaissance (DUSTER) (\$5.142 million) which will be executed under R9437.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:
			February 2004
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	ÎAME
RDT&E, N / BA-7	0305206N Airborne Reconnaissance Systems	R9437 Deployable Unmanne	ed Sys for Targeting, Exploitation, and Reconn (DUSTER)
	•	•	

(U) B. Accomplishments/Planned Program

	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	0.000	5.142	0.000
RDT&E Articles Quantity			

Plans are to integrate newly developed technologies in the areas of real-time reconnaissance, imagery processing/exploitation, avionics, and control stations with command and control and imagery exploitation capabilities onto a single long-range airborne capability suitable for UAV's.

R-1 SHOPPING LIST - Item No.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification				DATE:
				February 2004
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME		PROJECT NUMBER AN	
RDT&E, N / BA-7	0305206N Airborne Reconnaissance Systems	F	R9437 Deployable Unma	anned Sys for Targeting, Exploitation, and Reconn (DUSTER)
(U) C. PROGRAM CHANGE SUMMARY:				
(U) Funding:	FY 2003	FY 2004	FY 2005	
Previous President's Budget:	0.000	0.000	0.000	
Current BES/President's Budget	0.000	5.142	0.000	
Total Adjustments	0.000	5.142	0.000	
Summary of Adjustments				
Congressional program reductions				
Congressional undistributed reductions				
Congressional rescissions				
SBIR/STTR Transfer				
Economic Assumptions				
Reprogrammings				
Other Adjustments				
Reprioritization of requirements	0.000	- 440		
Congressional increases Subtotal	0.000	5.142	0.000	
Subtotal	0.000	5.142	0.000	
(U) Schedule:				
• •				
Not Applicable.				
(U) Technical:				
Not Applicable				
	P-1 SHOPPING LIST - It		100	

CLASSIFICATION:

(HIBIT R-2a, RDT&	E Project Justification								DATE:		
	•									Februa	ry 2004
PROPRIATION/BUDGE			PROGRAM EI	EMENT NUM	BER AND NAM	ΛE	PROJECT NU	IMBER AND N	AME		
DT&E, N /	BA-5		0305206N Air	borne Reconn	aissance Syste	ems	R9437 Deploy	able Unmanne	ed Sys for Targ	eting, Exploitation	n, and Reconn (DUST
(U) D. OTHER PRO	OGRAM FUNDING SUMMARY:										
Line Item No. & N	lame_	_	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To <u>Complete</u>	Total <u>Cost</u>
PE 0305207N,	DARP, Special Project A/C		29.335	10.649	10.939	11.410	11.589			11.764	85.686
(U) E. ACQUISITION	STRATEGY:										
	s to develop framing reconnaissance	camera te	chnology to sup	port improved	capabilities for	programs suc	h as SHARP.				
1 13	, J					7 - 5					

CLASSIFICATION:

										DATE:				
Exhibit R-3 Cost A	nalysis (pag	ge 1)										February 2	2004	I
APPROPRIATION/BL	JDGET ACTIV	ITY		PROGRAM I	ELEMENT			PROJECT NU	JMBER AND	NAME				
RDT&E, N /	BA-7			0305206N	Airborne Red	connaissance	Advanced Deve	lop R9437 Deploy	able Unmanr	ned Sys for Ta	argeting, Explo	itation, and Reconr	า (DUSTER)	
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
Reconnaissance Syst	em for UAV	C/CPFF	TBD					4.742	05/04				4.74	2 4.742
														_
														_
		-			_				-			+		-
		+												+
											+			
														+
					+					+				+
														+
												+		+
														-
Subtotal Product Deve	opment							4.742	!				4.74	2 4.742
Remarks:														

CLASSIFICATION:

											1						
											DATE:						
Exhibit R-3 Cost Ana	alysis (page 2)												Februar	y 200)4		
APPROPRIATION/BUD			PROGRAM I							NUMBER AN							
RDT&E, N /	BA-7		0305206N		Recon	naissar			elop R9437 Dep		anned Sys for		oitation, and Rec	onn (D	USTER)		
Cost Categories	Contract	Performing	•	Total				FY 03		FY 04		FY 05					1
	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	WR	NRL, Wash,	DC		0.000		0.000		0.4	00 02/04	4			0.000	C	.400	0.000
																	
Subtotal T&E					0.000		0.000		0.4	-00				0.000	C	.400	0.000
Remarks:																	
Remarks:																	
															1 0	.000	0.000
																.000	0.000
																	<u> </u>
																	<u> </u>
																	
Subtotal Management					0.000		0.000				(0.000			C	.000	·
Remarks:																	
Total Cost					0.000		0.000		5.1	42	(0.000			5	.142	4.742
Domorko, Thio program	n haa na ayanart aaat	•															
Remarks: This prograr	n nas no support cosi	S.															

CLASSIFICATION:

EXHIBIT R4, Schedule																									DATE	:	F	ebrua	ry 20	04		
APPROPRIATION/BUDGET RDT&E, N /	ACTIVI BA-7													R AND						PRO.						Targe	tina E	voloita	tion o	nd Do	onn (F	NIETE
Fiscal Year	DA-1	20	002			20	03		03032	20		ie ivec	Officials	20		113		20	006	11343	ГВері	20		anneu	J 101	200		хріопа	tion, ai	20		J001L
	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																																
											^			_																		
Engineering Milestones															Re Sy	conna stem f	issanc or UA\	e /														
										<u>-</u>																						
Test & Evaluation Milestones																																
Development Test Operational Test																																
Contract Milestones																																

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Exhibit R-4, Schedule Profile (Exhibit R-4, page 54 of 63)

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:		
,							F	ebruary 2004
APPROPRIATION/BUDGET ACTIVITY	PROGRAM E	LEMENT			PROJECT NU	MBER AND N		
RDT&E, N / BA-7	0305206N Aii	rborne Reconna	aissance Syste	ems	R9437 Deploy			geting, Exploitation, and Reconn (DUSTER
Schedule Profile		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Commence Reconnaissance System for UAV			3Q					
Complete Reconnaissance System for UAV				2Q				

R-1 SHOPPING LIST - Item No.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE:	
·							Feb	ruary 2004
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEM	ENT NUMBER AN	D NAME		PROJECT NUMBI	ER AND NAME		
RDT&E, BA-7	0305206N Airborr	ne Reconnaissance	Systems		R9438 Multi-spect	ral glass windows	for Airborne Reconi	naissance Podded Sensors
COST (\$ in Millions)		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost		0.000	2.225					
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 FY2004 includes Congressional adds reflecting Multi-Spectral Glass Windows for Airborne Reconnaissance Podded Sensors (\$2.225 million) which will be executed under R9438.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification	on		DATE:	
			February 2	2004
PPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	AME	
DTOE N / DA 7	020520CNL Airbarra Danamaianana Custama	DO429 Multi apportral along v	rindows for Airborne Reconnaissan	on Poddod Sonsors
J) B. Accomplishments/Planned Program	0305206N Airborne Reconnaissance Systems	R9450 Multi-spectial glass w	illidows for Allbottle Neconitialssam	ce rodded Sensois
•	U3U3206N Airborne Reconnaissance Systems FY 03	FY 04	FY 05	ce Fouded Sellsols
,				Le rouved Sellsois

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification				DATE:
				February 2004
PPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME		PROJECT NUMBER AN	
RDT&E, N / BA-7	0305206N Airborne Reconnaissance Systems		R9438 Multi-spectral gla	ss windows for Airborne Reconnaissance Podded Sensors
(U) C. PROGRAM CHANGE SUMMARY:				
(U) Funding:	FY 2003	FY 2004	FY 2005	
Previous President's Budget:	0.000	0.000		
Current BES/President's Budget	0.000	2.225		
Total Adjustments	0.000	2.225		
Summary of Adjustments				
Congressional program reductions				
Congressional undistributed reductions				
Congressional rescissions				
SBIR/STTR Transfer				
Economic Assumptions				
Reprogrammings				
Other Adjustments				
Reprioritization of requirements				
Congressional increases	0.000	2.225		
Subtotal	0.000	2.225	0.000	
(U) Schedule:				
Not Applicable.				
(U) Technical:				
Not Applicable				
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CLASSIFICATION:

XHIBIT R-2a, RDT&	E Project Justification					·		DATE:	·	·
									Februa	ry 2004
PPROPRIATION/BUDGE		PROGRAM EI	EMENT NUM	BER AND NAM	ΛE	PROJECT NU	JMBER AND I	NAME		•
DT&E, N /	BA-5	0305206N Air	borne Reconn	aissance Syste	ems	R9438 Multi-s	pectral glass	windows for Airl	oorne Reconnais	sance Podded Sensor
(U) D. OTHER PRO	OGRAM FUNDING SUMMARY:									
Line Item No. & N	Name_	<u>FY 2003</u>	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To <u>Complete</u>	Total <u>Cost</u>
PE 0305207N,	DARP, Special Project A/C	29.335	10.649	10.939	11.410	11.589			11.764	85.686
(U) E. ACQUISITION	STRATEGY:									
The program is	s to develop framing reconnaissance ca	amera technology to sup	port improved	capabilities for	programs suc	ch as SHARP.				

CLASSIFICATION:

										TDATE									
Exhibit R-3 Cost Ana	alysis (page	e 1)					DATE: February 2004												
APPROPRIATION/BUD	GET ACTIVIT	ſΥ		PROGRAM E	LEMENT			PROJECT NUMBER AND NAME											
RDT&E, N /	BA-7			0305206N	Airborne Recor	nnaissance Adv	vanced Develor	R9438 Multi-s	R9438 Multi-spectral glass windows for Airborne Reconnaissance Podded Sensors										
Cost Categories		Contract	Performing	- L	Total	T	FY 03		FY 04	T	FY 05								
		Method	Activity &		PY s	FY 03		FY 04		FY 05	Award	Cost to	Total	Target Value					
			Location		Cost	Cost	Date	Cost	Date	Cost	Date	Complete		of Contract					
Optical Quality Windows		C/CPFF	TBD					1.975	05/04				1.975	1.975					
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		 	+		+	+	+	+	 	+	+	+	 	+					
		 	+		+	+	+	+	+	+	+	+	 	 					
		 	+		+	+	+	+	+	+	+	+	†	 					
			+		+	+	+	+	+	+	+	+							
		†	†		†	†	†	†	†	†	†	†	†						
			+		+	†	†	1	†	+	†								
Subtotal Product Develop	ment							1.975	i	1			1.975	1.975					
,		•			-	-	-	-		-		-	•	•					
Remarks:																			
Remarks.																			

CLASSIFICATION:

									DATE:									
Exhibit R-3 Cost Ana	alysis (page 2)				February 2004													
APPROPRIATION/BUD			PROGRAM				PROJECT NUMBER AND NAME											
RDT&E, N /	BA-7		0305206N		nnaissance		lop R9438 Multi-s	R9438 Multi-spectral glass windows for Airborne Reconnaissance Podded Sensors										
Cost Categories	Contra Method	Activity &		Total PY s	FY 03	FY 03 Award	FY 04	FY 04 Award	FY 05	FY 05 Award	Cost to	Total	Target Value					
Comerc toot ournert	& Type WR	Location NRL, Wash,	DC	Cost 0.000	Cost	Date 000	Cost 0.250	Date 02/04	Cost	Date	Complete 0.000	Cost 0.250	of Contract 0.000					
Camera test support	WR	INRL, Wash,	DC	0.000	0.	000	0.250	02/04			0.000	0.250	0.000					
Subtotal T&E				0.000	0	.000	0.250)			0.000	0.250	0.000					
Remarks:																		
												0.000	0.000					
												0.000	0.000					
Subtotal Management				0.000	0	.000			0.0	000		0.000						
Remarks:																		
Total Cost				0.000	0	.000	2.225	5	0.0	000		2.225	1.975					
Remarks: This prograr	m has no support co	sts.				OT Kees No	400											

CLASSIFICATION:

XHIBIT R4, Schedule Profile															DATE: February 2004																	
										PROGRAM ELEMENT NUMBER AND NAME PROJECT NUMBE 0305206N Airborne Reconnaissance Systems R9438 Multi-spectr											R AND NAME al glass windows for Airborne Reconnaissance Podded Sensors											
Fiscal Year	BA-1	20	02			2003			03032	20		e Reci	2005			2006			K9430	2007			S WILL	2008				2009				
riscarrear	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																																
Engineering											_				Op	otical C	Quality															
Milestones										 					W	ndows	issand	e														
Test & Evaluation Milestones																																
Development Test Operational Test																																
Contract Milestones																																

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Exhibit R-4, Schedule Profile (Exhibit R-4, page 62 of 63)

CLASSIFICATION:

Exhibit R-4a, Schedule Detail	DATE:													
	February 2004													
APPROPRIATION/BUDGET ACTIVITY	UMBER AND NAME													
RDT&E, N / BA-7	0305206N Air	borne Reconna	aissance Syste	ms	R9438 Multi-s	R9438 Multi-spectral glass windows for Airborne Reconnaissance Podded Sensors								
Schedule Profile		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009						
Commence Optical Quality Reconnaissance Windows			3Q											
Complete Optical Quality Reconnaissance Windows				2Q										

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