

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)									DATE February 2003	
BUDGET ACTIVITY 07 - Operational System Development					PE NUMBER AND TITLE 0305206F Airborne Reconnaissance Systems					
COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	60,513	60,381	77,823	66,609	58,741	59,506	61,237	61,470	Continuing	TBD
4818 Imaging and Targeting Support	11,447	8,707	13,921	14,633	15,397	16,182	17,165	16,806	Continuing	TBD
4819 Common Data Link (CDL)	48,799	44,452	45,462	36,677	35,274	36,133	36,759	37,252	Continuing	TBD
4882 Compass Bright	267	4,784	4,949	5,129	5,176	5,267	5,358	5,430	Continuing	TBD
5038 Network Centric Collaborative Targeting	0	2,438	11,539	8,217	963	0	0	0	Continuing	TBD
5092 JTC/SIL MUSE	0	0	1,952	1,953	1,931	1,924	1,955	1,982	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	0
<p>- FY03 Congressional actions included: \$6.8M add for Theater Airborne Reconnaissance System (TARS); \$2M add for Senior Year Electro-optical Reconnaissance Systems (SYERS); \$1.7M add for ultra-wideband airborne laser communications; and the transfer of \$15.775M from Imaging and Targeting Support (Project 674818) program to PE 0305205F, Endurance Unmanned Aerial Vehicles, Project 674799, Global Hawk.</p> <p>- The Joint Technology Center/System Integration Laboratory Multiple UAV Simulation Environment (JTC/SIL MUSE) was transferred from PE 0308601F, Modeling and Simulation, into this PE (Project 675092) starting in FY04. JTC/SIL FY02 data can be found in PE 0305205F and FY03 data in PE 0308601F.</p>										
<p>(U) <u>A. Mission Description</u></p> <p>The Airborne Reconnaissance Systems program coordinates the development of advanced airborne reconnaissance system technologies (i.e., sensors, data links, targeting networks and products, and quick reaction capabilities) in support of multiple airborne reconnaissance platforms, both manned and unmanned. Its objective is to develop, demonstrate, and rapidly transition advanced, interoperable, multi-platform solutions to reduce the find, fix, target, and track kill chain timeline. This program also coordinates the development of common collection, processing, and dissemination solutions for near-real time intelligence, surveillance, and reconnaissance (ISR).</p>										

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BUDGET ACTIVITY

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0305206F Airborne Reconnaissance Systems(U) **B. Budget Activity Justification**

This program is categorized as Budget Activity 7 because it provides for development of technologies and capabilities in support of operational system development.

(U) **C. Program Change Summary (\$ in Thousands)**

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Total Cost</u>
(U) Previous President's Budget	57,208	66,810	75,866	TBD
(U) Appropriated Value	57,785	61,535		
(U) Adjustments to Appropriated Value				
a. Congressional/General Reductions	-577	-650		
b. Small Business Innovative Research				
c. Omnibus or Other Above Threshold Reprogram		-504		
d. Below Threshold Reprogram	3,600			
e. Rescissions	-295			
(U) Adjustments to Budget Years Since FY 2003 PBR			1,957	
(U) Current Budget Submit/FY 2004 PBR	60,513	60,381	77,823	TBD
(U) <u>Significant Program Changes:</u>				

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0305206F Airborne Reconnaissance Systems

PROJECT

4818

COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
4818 Imaging and Targeting Support	11,447	8,707	13,921	14,633	15,397	16,182	17,165	16,806	Continuing	TBD

- FY03 Congressional add of \$6.8M for Theater Airborne Reconnaissance System (TARS), \$2M for Senior Year Electro-optical Reconnaissance System (SYERS) and \$1.7M for ultra-wideband airborne laser communications. TARS and SYERS will be executed from PE 0305206F, project 4818, Imaging and Targeting Support. Ultra-wideband airborne laser communications will be executed from PE 0305206F, BPAC 4819, Common Data Link. The FY03 request for project 4818 was \$15.775M which Congress transferred to PE 0305205F, project 4799, Global Hawk. Project 4818 FY03 funds will support the following developmental efforts: continue to support the transition of advanced sensors (e.g. Spectral Infrared Remote Imaging Transisiton Testbed (SPIRITT), Low frequency SAR) to airborne reconnaissance platforms, development of advanced sensor processing capabilities (e.g. automatic registration, automated target detection/recognition), and enhancement of Imagery Intelligence (IMINT) product quality (e.g. tactical sensor model development and image chain analysis). See PE 0305205F for additional information.

- Network Centric Collaborative Targeting (NCCT) has been realigned under its own project 5038, within this PE. This resulted in a \$12.5M reduction to the I&TS project between FY03-06.

(U) A. Mission Description

The purpose of the Imaging and Targeting Support (I&TS) program is to develop next generation, common imagery reconnaissance sensors (e.g., radar and electro-optical systems) for multiple airborne platforms, and sensor products to aid in rapid targeting (e.g., geolocation models, sensor-based exploitation tools, sensor networking capabilities). Developmental efforts pursued are improved sensors (including hyperspectral imaging [HSI], measurement and signature intelligence [MASINT] sensors, polarimetric imaging, ground moving target indication, foliage penetration, and other radar and electro-optical modes), increased geolocation accuracy, advanced sensor data correlation, automated target detection, network centric warfare, and other intelligence, surveillance, and reconnaissance (ISR) technologies to reduce both target search and kill chain timelines; as well as, supporting traditional intelligence activities. I&TS will increase interoperability amongst developed systems by developing common standards and tools. I&TS focuses on the following thrust areas:

Development of common radar and electro-optical sensors (e.g., Synthetic Aperture Radar (SAR), Electro-Optical (EO), and Infrared (IR)) and their operational modes (e.g., High Resolution Imagery, Moving Target Indication, Spectral Identification) for multiple airborne platforms.

Development of advanced airborne tactical sensor processing algorithms and tools (e.g., automatic registration, automatic target detection/recognition, network centric warfare). These efforts focus on reducing the find, fix and track elements of the time critical targeting kill-chain timeline while improving operator and decision-maker efficiency.

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4818(U) **A. Mission Description Continued**

Enhancement of IMINT product quality. Development of open architecture between tactical sensor models and target exploitation tools. Development of tactical sensor models for airborne reconnaissance platforms. Development and implementation of imagery standards (e.g., Common Ground Moving Target Indicator [GMTI], National Imagery Transmission Format [NITF] for Hyperspectral Imagery [HSI]). Monitoring and enhancement of IMINT product quality (e.g., radar and EO/IR imagery, GMTI data, and spectral information) and timeliness throughout the image chain (i.e. from sensor to user).

This program is categorized as Budget Activity 7 because it provides for development of technologies and capabilities in support of operational system development.

(U) **FY 2002 (\$ in Thousands)**

(U) \$0 Accomplishment/Planned Program

(U) \$50 Initiated efforts to transition HSI technology and hardware into airborne reconnaissance platforms.

(U) \$50 Continued Automated Targeting and Cross-Cueing (ATACCS) risk reduction efforts. Demonstrate and evaluate ATACCS capabilities in operational environment (i.e., Combined Air Operations Center - Experimental [CAOC-X] with live feed).* Studied/demonstrated auto-registration MASINT tracker technologies.

(U) \$887 Initiated efforts to build an open architecture for tactical sensor models for airborne reconnaissance platforms used to improve geolocation accuracies required for precision targeting. Initiate image quality assessment program.

(U) \$10,356 Congressional add for TARS.

(U) \$104 Mission Support

(U) \$11,447 Total

*ATACCS efforts have been re-scoped and focused to demonstrate near real-time image processing capabilities (automated geolocation and automated target detection) developed during the risk reduction phase. There are no plans to pursue the 'Airborne' system once envisioned. Ongoing efforts will demonstrate 'Automated' Targeting and Cross-Cueing System (ATACCS) capabilities and where they can be integrated into ISR architectures, such as Distributed Common Ground Station, ISR Manager, Network Centric Collaborative Targeting, etc.

(U) **FY 2003 (\$ in Thousands)**

(U) \$0 Accomplishment/Planned Program

(U) \$1,900 Congressional add for SYERS-2 improvements.

(U) \$6,707 Congressional add for TARS. Completes airborne information transmission data system (ABIT), EO and SAR pod, and solid state recorder development. Program will complete system development and demonstration (SDD) phase and be ready for LRIP end of FY04.

(U) \$100 Mission Support

(U) \$8,707 Total

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4818(U) **A. Mission Description Continued**(U) **FY 2003 (\$ in Thousands) Continued**

*\$15.775M Congressionally transferred to PE 0305205F, Endurance Unmanned Aerial Vehicles, project 4799, Global Hawk. This funding supports the following developmental efforts: continue to support the transition of advanced sensors (e.g. SPIRITT, Low frequency SAR) to airborne reconnaissance platforms, development of advanced sensor processing capabilities (e.g. automatic registration, automated target detection/recognition), and enhancement of IMINT product quality (e.g. tactical sensor model development and image chain analysis). See PE 0305205F for additional information.

(U) **FY 2004 (\$ in Thousands)**

(U) \$0 Accomplishment/Planned Program

(U) \$7,876 Continue efforts to transition HSI technology and hardware, such as the SPIRITT sensor, into airborne reconnaissance platforms.

(U) \$930 Continue development of near real time image processing capabilities for automated geolocation and automated target detection/recognition for future integration into ground and/or airborne ISR architectures.

(U) \$4,300 Continue tactical sensor model development and delivery for airborne reconnaissance platforms, such as Predator, U-2, and Global Hawk.

Continue image quality baselining and assessment efforts for airborne reconnaissance sensors.

(U) \$815 Mission Support

(U) \$13,921 Total

(U) **B. Project Change Summary**

Not applicable.

(U) **C. Other Program Funding Summary (\$ in Thousands)**

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	

(U) AF RDT & E

(U) Other APPN

(U) **D. Acquisition Strategy**

This program targets high payoff technologies ready to integrate into operational systems to satisfy critical unmet airborne imagery sensor and targeting system requirements. Funds are provided to develop these systems, and to reduce risk associated with their implementation in production systems. Emphasis is placed on maximizing commercial and national development efforts and investment. Multiple contracting methods are used including the use of Engineering Change Proposals (ECPs) to modify existing contracts and new contracts. Contracts have been awarded both competitively and on a sole source basis.

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(U) E. Schedule Profile

	<u>FY 2002</u>				<u>FY 2003</u>				<u>FY 2004</u>			
	1	2	3	4	1	2	3	4	1	2	3	4
(U) SPIRITT ATD Demonstration												X
(U) SPIRITT SDD Contract award										X		
(U) ATACCS Demos, Contract Comp	*		*	*			X					
(U) Publish TSM TRD/API						X						
(U) Tactical Sensor Model Deliveries							X		X		X	
(U) Image Quality Contract award							X					
(U) COMPLEX SAR Compression Demo										X		
(U) TARS: ABIT on contract				*								
(U) TARS: SAR/EO Pods on contract					*							
(U) TARS: ABIT delivered								X				
(U) TARS: SAR/EO Pods OT/DT&E start											X	
(U) TARS: SAR Pod delivered												
* - Denotes completed event												
X - Denotes planned event												

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)								DATE February 2003		
BUDGET ACTIVITY					PE NUMBER AND TITLE				PROJECT	
07 - Operational System Development					0305206F Airborne Reconnaissance Systems				4818	
(U) <u>A. Project Cost Breakdown (\$ in Thousands)</u>										
							<u>FY 2002</u>		<u>FY 2003</u>	<u>FY 2004</u>
(U)	Hardware and Software Development						687		0	8,296
(U)	Systems Engineering						150		0	3,450
(U)	Contractor Engineering Support						50		0	1,360
(U)	Government Engineering Support						204		100	815
(U)	Congressional add for TARS Development						10,356		6,707	0
(U)	Congressional add for SYERS Development						0		1,900	0
(U)	Total						11,447		8,707	13,921
(U) <u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u>										
(U) <u>Performing Organizations:</u>										
<u>Contractor or</u>	<u>Contract</u>									
<u>Government</u>	<u>Method/Type</u>	<u>Award or</u>	<u>Performing</u>	<u>Project</u>						
<u>Performing</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Activity</u>	<u>Office</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>	<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Organizations</u>										
Veridian	Various	ongoing	TBD	TBD	85	843			Continuing	TBD
BAE	Various	ongoing	TBD	TBD	0			5,300	Continuing	TBD
Def Syst Contr - Various	TBD	TBD	TBD	TBD	3,075			7,806	Continuing	TBD
BAE (TARS)	Cost Plus	10 Dec 02	TBD	TBD	0	3,860	2,200			6,060
	Fixed Fee									
Lockheed Martin (TARS)	Firm Fixed	30 Sept 02	TBD	TBD	0	4,910	2,500			7,410
	Price									
L3Comm (TARS)	Cost Plus	4 Sept 02	TBD	TBD	0	1,000	900			1,900
Congressional add for							1,900			1,900
SYERS										
Other	Various	Various	TBD	TBD	1,292	586	1,107		Continuing	TBD
<u>Support and Management Organizations</u>										
Other Gov't Orgs	Multiple	Multiple	TBD	TBD	1,657	248	100	815	Continuing	TBD
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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE			
							February 2003			
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07 - Operational System Development				0305206F Airborne Reconnaissance Systems				4818		
(U) <u>Performing Organizations Continued:</u>										
<u>Test and Evaluation Organizations</u>										
Range Support		Various	Multiple	TBD	TBD	638		Continuing	TBD	
					<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Subtotals</u>					<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>	<u>Program</u>
Subtotal Product Development					4,452	11,199	8,607	13,106	TBD	TBD
Subtotal Support and Management					1,657	248	100	815	TBD	TBD
Subtotal Test and Evaluation					638				TBD	TBD
Total Project					6,747	11,447	8,707	13,921	TBD	TBD

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07 - Operational System Development

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0305206F Airborne Reconnaissance Systems

PROJECT

4819

COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
4819 Common Data Link (CDL)	48,799	44,452	45,462	36,677	35,274	36,133	36,759	37,252	Continuing	TBD

- FY02: \$7M Congressional Plus-up for Wideband Integrated Common Data Link development. \$3.5M Congressional Plus-up to continue development of High Rate Laser Communications. \$3.6M Below Threshold Reprogramming provided to network centric collaborative targeting (NCCT) based on Air Force priorities. \$4.2M shifted to NCCT from Multi-Platform Common Data Link (MP-CDL) within project 4819 based on Air Force execution priorities. (MP-CDL provided additional funds in FY04 to re-phase schedule.)

- FY03: \$1.7M Congressional Plus-up to continue development of High Rate Laser Communications.

- FY04: \$4.0M added to address time-shifting of MP-CDL development.

(U) **A. Mission Description**

The objective of the CDL effort within the Air Force is to define an interoperable command, control and communications capability for intelligence and reconnaissance assets to include both manned and unmanned platforms. CDL will achieve interoperable communications paths by employing an architecture based on developed hardware, software, and waveforms to promote commonality among the Services. As the CDL Executive Agent the Air Force is responsible for ensuring design configuration commonality and interoperability. The CDL design will permit existing and future reconnaissance assets to operate worldwide, providing sensor data directly via point to point or via a point multipoint broadcast to ground sites and airborne platforms or via satellite or air-to-air relay when the asset and ground site are not within line-of-sight. This effort will integrate commercial and other satellite communications into the available satellite relay options to ensure sufficient wideband data relay capability. The system will have sufficient bandwidth to accommodate numerous sensors collecting Signals Intelligence (SIGINT), Imagery Intelligence (IMINT) (including video), Multi-spectral and other data. CDL concept and technology development and system development and demonstration efforts will support continuous improvements and implementation of line of sight and network Command and Control, Intelligence, Surveillance and Reconnaissance (C2ISR) capabilities to enable a joint global strike task force. Modular design allows for future technology insertion. The commonality of modular components reduces non-recurring engineering and life cycle costs to the DoD user. Interoperability provides for the exchange of data across service or agency boundaries. (Note: the term A-series refers to full rate/capability CDL systems and T-Series refers to TCDL systems)

This program is categorized as Budget Activity 07 because it provides for development of technologies and capabilities in support of operational system development.

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(U) **A. Mission Description Continued**

(U) **FY 2002 (\$ in Thousands)**

(U) \$0	Accomplishment/Planned Program
(U) \$2,600	Continued to lease a commercial transponder in support of Global Hawk and studies and analysis of alternative satellite communications to support airborne reconnaissance relay requirements.
(U) \$5,720	Continued evolutionary development of TCDL (T-Series) for operational suitability on ISR platforms such as Guardrail Legacy Replacement, P-3, EP-3, TUAV, VTUAV and Predator.
(U) \$5,375	Continued Airborne Information Transmission (ABIT) (A-Series) technology integration into CDL systems for application to ISR platforms such as Theater Airborne Reconnaissance System (TARS) and continue ABIT system cost reduction initiatives.
(U) \$6,055	Continued configuration control of CDL architecture, standards, specification, and modules; provided for Joint-Service interoperability certification and spectrum management.
(U) \$133	Started development of KGV-135 replacement, initiate CDL migration to DoD network-based encryption architecture.
(U) \$2,734	Continued development of interface to additional platform and surface terminal equipment (e.g. JSTARS, CDL-N), advanced technology insertion activities, and CDL certification test equipment development.
(U) \$4,847	Started MP-CDL development of wideband integrated common data link to support MP-RTIP and NCCT.
(U) \$2,684	Continued satellite communications (SATCOM) interoperability enhancements/Global Grid development/wideband communication airborne networks.*
(U) \$7,000	Continued NCCT wideband integrated common data link development. This was an FY02 Congressional Plus-up.
(U) \$8,151	Continued wideband integrated common data link and other development for NCCT.**
(U) \$3,500	High Rate Laser Communications development (Phase II). This was an FY02 Congressional Plus-up.***
(U) \$48,799	Total

* SATCOM interoperability enhancements/Global Grid work continued due to changing system availability and user requirements.

** Majority of funding was from BTR provided to NCCT (\$3.6M) and shift of funding within project 4819 from MP-CDL to NCCT (\$4.2M). Both changes are in support of Air Force priorities.

*** High Rate Laser Communications work expected to continue through 3QFY04 using FY02 plus-up funds.

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(U) <u>A. Mission Description Continued</u>		
(U) <u>FY 2003 (\$ in Thousands)</u>		
(U) \$0	Accomplishment/Planned Program	
(U) \$2,613	Complete requirement to lease a commercial transponder in support of Global Hawk and studies and analysis of alternative satellite communications to support airborne reconnaissance relay requirements.	
(U) \$7,976	Continue evolutionary development of TCDL (T-Series) for operational suitability on ISR platforms such as Guardrail Legacy Replacement, P-3, EP-3, TUAV, VTUAV and Predator.	
(U) \$5,025	Continue Airborne Information Transmission (ABIT) (A-Series) technology integration into CDL systems for application to ISR platforms such as Theater Airborne Reconnaissance System and continue ABIT system cost reduction initiatives.	
(U) \$5,025	Continue configuration control of CDL architecture, standards, specification, and modules; provide for Joint-Service interoperability certification and spectrum management.	
(U) \$181	Continue development of KGV-135 replacement and initiate CDL migration to DoD network-based encryption architecture.	
(U) \$6,582	Continue development of advanced technology insertion activities (to include studies and analysis of future data link requirements and architectures), CDL certification test equipment development, and related Joint Service interoperability certification and spectrum management requirements.	
(U) \$10,916	Continue MP-CDL development of wideband integrated common data link to support MP-RTIP and NCCT.	
(U) \$502	Continue SATCOM interoperability enhancements/Global Grid development/wideband communication airborne networks.	
(U) \$1,005	Continue NCCT wideband integrated common data link development	
(U) \$1,700	Start Ultra-wideband Airborne Laser Communications development. This is an FY03 Congressional Plus-up.	
(U) \$2,927	Provide CDL mission support.*	
(U) \$44,452	Total	
* Broken out for clarity purposes. Previously spread among all other tasks.		
(U) <u>FY 2004 (\$ in Thousands)</u>		
(U) \$0	Accomplishment/Planned Program	
(U) \$10,426	Continue evolutionary development of TCDL (T-Series) for operational suitability on ISR platforms such as Guardrail Legacy Replacement, P-3, EP-3, TUAV, VTUAV and Predator.	
(U) \$5,274	Continue ABIT (A-Series) technology integration into CDL systems for application to ISR platforms and continue ABIT system cost reduction initiatives.	
(U) \$6,425	Continue configuration control of CDL architecture, standards, specification, and modules.	
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4819

(U) **A. Mission Description Continued**(U) **FY 2004 (\$ in Thousands) Continued**

(U) \$105 Continue development of KGV-135 replacement and initiate CDL migration to DoD network-based encryption architecture.

(U) \$6,096 Continue development of advanced technology insertion activities (to include studies and analysis of future data link requirements and architectures), CDL certification test equipment development, and related Joint Service interoperability certification and spectrum management requirements.

(U) \$13,554 Continue MP-CDL development of wideband integrated common data link to support MP-RTIP and NCCT.

(U) \$261 Continue SATCOM interoperability enhancements/Global Grid development/wideband communication airborne networks.

(U) \$211 Continue NCCT wideband integrated common data link development.

(U) \$0 Ultra-wideband airborne laser communications development.

(U) \$3,110 Provide CDL mission support.

(U) \$45,462 Total

(U) **B. Project Change Summary**

Not applicable

(U) **C. Other Program Funding Summary (\$ in Thousands)**

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) None										

(U) **D. Acquisition Strategy**

CDL funds are provided to various government laboratories and program offices to support new and on-going development efforts in support of providing a common, interoperable wideband data link as mandated by ASD/C3I policy.

(U) **E. Schedule Profile**

	<u>FY 2002</u>				<u>FY 2003</u>				<u>FY 2004</u>			
	1	2	3	4	1	2	3	4	1	2	3	4
(U) Complete high rate laser communications development											X	
(U) Start ultra-wideband airborne laser communications development							X					
(U) Complete Phase 1 ultra-wideband airborne laser comm development											X	
(U) Continue Commercial Satellite Transponder Lease		*				X						

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PE NUMBER AND TITLE

PROJECT

07 - Operational System Development

0305206F Airborne Reconnaissance Systems

4819

(U) E. Schedule Profile Continued

	<u>FY 2002</u>					<u>FY 2003</u>					<u>FY 2004</u>			
	1	2	3	4	1	2	3	4	1	2	3	4		
(U) TCDL\TUAV Risk Reduction Demo			*											
(U) TCDL for Army TUAV Integration Start											X			
(U) Complete ABIT P3I Module Development							X							
(U) Initiate ABIT P3I Systems Development							X							
(U) Release MP-CDL RFP				*										
(U) MP-CDL Contract Awards					*									
(U) MP-CDL CDR								X						
(U) Begin TIGDL-II Prototype Build	*													
(U) TIGDL-II Phase I Test								X						
(U) TIGDL-II Phase II Demo										X				

Note: MP-CDL Request for Proposal and contract award slipped due to program requirements definition and approval.

*-Denotes completed event

X-Denotes planned event

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE

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PE NUMBER AND TITLE

PROJECT

07 - Operational System Development

0305206F Airborne Reconnaissance Systems

4819

(U) **A. Project Cost Breakdown (\$ in Thousands)**

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>
(U) Hardware and Software Development	37,523	30,577	31,072
(U) Systems Engineering	2,000	1,437	3,164
(U) Satellite Communications	2,600	2,613	0
(U) Configuration Management	2,301	3,717	4,316
(U) Contractor Engineering Support	715	1,934	2,300
(U) Government Management and Support	3,660	4,174	4,610
(U) Total	48,799	44,452	45,462

(U) **B. Budget Acquisition History and Planning Information (\$ in Thousands)**(U) **Performing Organizations:**

<u>Contractor or</u> <u>Government</u> <u>Performing</u> <u>Activity</u>	<u>Contract</u> <u>Method/Type</u> <u>or Funding</u> <u>Vehicle</u>	<u>Award or</u> <u>Obligation</u> <u>Date</u>	<u>Performing</u> <u>Activity</u> <u>EAC</u>	<u>Project</u> <u>Office</u> <u>EAC</u>	<u>Total Prior</u> <u>to FY 2002</u>	<u>Budget</u> <u>FY 2002</u>	<u>Budget</u> <u>FY 2003</u>	<u>Budget</u> <u>FY 2004</u>	<u>Budget to</u> <u>Complete</u>	<u>Total</u> <u>Program</u>
<u>Product Development Organizations</u>										
L-3 Communications	Multiple	Multiple			30,301	13,260	20,677	22,377	Continuing	TBD
Harris Corp	Other	23 Jul 97	TBD	TBD	9,312	4,720	5,420	6,328	Continuing	TBD
	Transaction									
Trex Corp	CPIF		TBD	TBD	2,900	3,500	0	0		6,400
SATCOM Interop/Global	Multiple	Multiple	N/A	N/A	6,398	2,684	502	261	Continuing	TBD
Grid/Other Govt Orgs										
L-3 COMCEPT	Multiple	Jun 01	TBD	TBD	6,243	15,150	1,005	0	Continuing	TBD
ITT		TBD	TBD	TBD	0	0	1,700	0	Continuing	TBD
Other	Multiple	Multiple			23,078	209	2,710	5,270	Continuing	TBD
<u>Support and Management Organizations</u>										
SATCOM	FFP	17 Jul 95			15,937	2,600	2,613	0	Continuing	TBD
Various	Multiple	Multiple			5,445	6,246	9,132	10,171	Continuing	TBD

Project 4819

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2003	
BUDGET ACTIVITY			PE NUMBER AND TITLE				PROJECT	
07 - Operational System Development			0305206F Airborne Reconnaissance Systems				4819	
(U) <u>Performing Organizations Continued:</u>								
<u>Test and Evaluation Organizations</u>								
JITC	MIPR	FY99	1,100	430	693	1,055	Continuing	TBD
			<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Subtotals</u>			<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>	<u>Program</u>
Subtotal Product Development			78,232	39,523	32,014	34,236	TBD	TBD
Subtotal Support and Management			21,382	8,846	11,745	10,171	TBD	TBD
Subtotal Test and Evaluation			1,100	430	693	1,055	TBD	TBD
Total Project			100,714	48,799	44,452	45,462	TBD	TBD

Project 4819

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07 - Operational System Development

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0305206F Airborne Reconnaissance Systems

PROJECT

4882

COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
4882 Compass Bright	267	4,784	4,949	5,129	5,176	5,267	5,358	5,430	Continuing	TBD

(U) **A. Mission Description**

The COMPASS BRIGHT program develops, demonstrates, and rapidly transitions advanced Air Force-specific signal intelligence (SIGINT) and radio frequency (RF) measurement and signature intelligence (MASINT) capabilities against emerging and future target signals.

This program is categorized as Budget Activity 7 because it provides for development of technologies and capabilities in support of operational system development.

(U) **FY 2002 (\$ in Thousands)**

(U) \$0 Accomplishment/Planned Program
 (U) \$267 Mission Support, Program Management Activities
 (U) \$267 Total

(U) **FY 2003 (\$ in Thousands)**

(U) \$0 Accomplishment/Planned Program
 (U) \$4,384 Continue COMPASS BRIGHT development projects in the signal intelligence (SIGINT) and radio frequency (RF) measurement and signature intelligence (MASINT) areas
 (U) \$400 Mission Support, Program Management Activities
 (U) \$4,784 Total

(U) **FY 2004 (\$ in Thousands)**

(U) \$0 Accomplishment/Planned Program
 (U) \$4,479 Continue COMPASS BRIGHT development projects in the SIGINT and RF MASINT areas
 (U) \$470 Mission Support, Program Management Activities
 (U) \$4,949 Total

(U) **B. Project Change Summary**

- FY02 Appropriations act removed \$41.0M from Joint SIGINT Avionics Family (JSAF) and provided \$16M to PE 0305205F (Endurance Unmanned Air Vehicles) for a High Band Sub-System (HBSS) demonstration. This reduction exceeded the FY02 PB request for JSAF funding, so an additional reduction of \$4.6M was taken from COMPASS BRIGHT.

Project 4882

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BUDGET ACTIVITY

07 - Operational System Development

PE NUMBER AND TITLE

0305206F Airborne Reconnaissance Systems

PROJECT

4882

(U) **C. Other Program Funding Summary (\$ in Thousands)**

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) AF RDT&E										
(U) Other APPN										

(U) **D. Acquisition Strategy**

The COMPASS BRIGHT program objective is to develop technologies for application in SIGINT and RF MASINT systems/subsystems. Acquisition and production of these developed technologies will occur within the appropriate platform programs. On-going COMPASS BRIGHT technology development and demonstration contracts will continue through existing laboratory relationships and other existing contractual vehicles. The acquisition approach for future development projects will emphasize full and open competition.

(U) **E. Schedule Profile**

	<u>FY 2002</u>				<u>FY 2003</u>				<u>FY 2004</u>			
	1	2	3	4	1	2	3	4	1	2	3	4
(U) Active Interference Cancellation Prototype Testing		*										
(U) FY02 Projects Authorized to Proceed	*											
(U) FY03 Proposal Call				*								
(U) FY03 Proposals Evaluated and Approved					*							
(U) FY03 Projects Authorized to Proceed						X						
(U) FY04 Proposal Call								X				
(U) FY04 Proposals Evaluated and Approved									X			
(U) FY04 Projects Authorized to Proceed										X		
(U) FY05 Proposal Call												X

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)										DATE
										February 2003
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT
07 - Operational System Development					0305206F Airborne Reconnaissance Systems					4882
(U) <u>A. Project Cost Breakdown (\$ in Thousands)</u>										
					FY 2002		FY 2003		FY 2004	
(U) COMPASS BRIGHT projects							4,384		4,479	
(U) Mission Support/Program Management Activities					267		400		470	
(U) Total					267		4,784		4,949	
(U) <u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u>										
(U) <u>Performing Organizations:</u>										
<u>Contractor or Government</u>		<u>Contract Method/Type</u>		<u>Award or Obligation</u>		<u>Performing Activity</u>		<u>Project Office</u>		
<u>Performing Activity</u>		<u>or Funding Vehicle</u>		<u>Date</u>		<u>EAC</u>		<u>EAC</u>		
						<u>Total Prior to FY 2002</u>		<u>Budget FY 2002</u>		
								<u>Budget FY 2003</u>		
								<u>Budget FY 2004</u>		
								<u>Budget to Complete</u>		
										<u>Total Program</u>
<u>Product Development Organizations</u>										
Various		Various		Various		TBD		TBD		
						0		4,384		
								4,479		
								Continuing		
										TBD
<u>Support and Management Organizations</u>										
Various		Various		Various		TBD		TBD		
						0		267		
								400		
								470		
								Continuing		
										TBD
<u>Test and Evaluation Organizations</u>										
None										
(U) <u>Government Furnished Property:</u>										
		<u>Contract Method/Type</u>		<u>Award or Obligation</u>		<u>Delivery</u>				
<u>Item Description</u>		<u>or Funding Vehicle</u>		<u>Date</u>		<u>Date</u>				
								<u>Total Prior to FY 2002</u>		
								<u>Budget FY 2002</u>		
								<u>Budget FY 2003</u>		
								<u>Budget FY 2004</u>		
								<u>Budget to Complete</u>		
										<u>Total Program</u>
<u>Product Development Property</u>										
Subtotal					0				0	
<u>Support and Management Property</u>										
Subtotal					0				0	
<u>Test and Evaluation Property</u>										
None					0				0	
Project 4882										
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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)					DATE February 2003	
BUDGET ACTIVITY		PE NUMBER AND TITLE			PROJECT	
07 - Operational System Development		0305206F Airborne Reconnaissance Systems			4882	
		<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Total</u>
		<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Program</u>
<u>Subtotals</u>						
Subtotal Product Development		0		4,384	4,479	TBD
Subtotal Support and Management		0	267	400	470	TBD
Subtotal Test and Evaluation		0				0
Total Project		0	267	4,784	4,949	TBD

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PE NUMBER AND TITLE

PROJECT

07 - Operational System Development**0305206F Airborne Reconnaissance Systems****5038**

COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
5038 Network Centric Collaborative Targeting	0	2,438	11,539	8,217	963	0	0	0	Continuing	TBD

- In FY02, funds for FY03-06 were transferred from project 4818, Imaging and Targeting Support to create this project.

- FY02: NCCT received \$7M Congressional plus-up in PE 0305206F project 4819, Common Data Link (see Section C, CDL below). NCCT received \$1M Congressional plus-up in PE 0305208F, Distributed Common Ground Station (see Section C, DCGS below). NCCT received \$3.6M via BTR in PE 305206F project 4819 (see Section C, CDL below) based on Air Force priorities. \$4.2M shifted to NCCT from multi-platform common data link [MP-CDL] within project 4819 based on Air Force execution priorities (see Section C, CDL below).

- FY03: NCCT received \$8M Congressional plus-up in Manned Reconnaissance Systems PE 0305207F (see Section C, RC-135 below).

- FY04: Increase of \$6.6M required to fully fund participation of all planned ACTD platforms

(U) A. Mission Description

The Network Centric Collaborative Targeting (NCCT) is a CENTCOM sponsored Advanced Concept Technology Demonstration (ACTD) initiated in FY01 that will demonstrate technologies and operational concepts required by Joint/Coalition warfighters. It will provide significant improvements in accuracy and timeliness of time sensitive targeting through 'front end' horizontal integration and collaboration of multiple intelligence, surveillance, and reconnaissance (ISR) assets. NCCT will use a spiral development process to integrate, demonstrate, and assess the ACTD capabilities. The NCCT prototype network, expanded common network processing, and participant interface modules will be installed on selected ISR platforms and systems for demonstrations during FY04 and FY05.

This program is categorized as Budget Activity 7 because it provides for development of technologies and capabilities in support of operational system development.

(U) FY 2002 (\$ in Thousands)

(U) \$0 Accomplishment/Planned Program

(U) \$0 No FY02 activity within this project. NCCT efforts in FY02 were funded in other PEs (See Section C).

(U) \$0 Total

(U) FY 2003 (\$ in Thousands)

(U) \$0 Accomplishment/Planned Program

(U) \$2,138 Continue development of NCCT core technology such as NCCT Network Controller, NCCT Communications Equipment, and NCCT Operator Interface.

(U) \$300 Program management support.

(U) \$2,438 Total

Project 5038

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Exhibit R-2A (PE 0305206F)

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BUDGET ACTIVITY

07 - Operational System Development

PE NUMBER AND TITLE

0305206F Airborne Reconnaissance Systems

PROJECT

5038(U) **A. Mission Description Continued**(U) FY 2004 (\$ in Thousands)

(U) \$0 Accomplishment/Planned Program

(U) \$6,089 NCCT core technology development and testing.

(U) \$2,250 Platform Interface Module (PIM) development and testing.

(U) \$2,600 NCCT integration and testing on platforms.

(U) \$600 Program management support.

(U) \$11,539 Total

(U) **B. Project Change Summary**

Not applicable.

(U) **C. Other Program Funding Summary (\$ in Thousands)**

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) AF RDT&E										
(U) E-3 AWACS PE 0207417F	150	250	500							900
(U) E-8 JSTARS PE 0207581F	250	250	500							1,000
(U) RC-135 PE 0305207F	1,000	9,000	1,000	1,000	100					12,100
(U) DCGS PE 0305208F	1,000									1,000
(U) CDL PE 0305206F (Project 4819)	15,151	1,005	211	1,000	1,000					18,367
(U) OSD PE 0603750D	5,000	5,000	5,000	1,000	1,000					17,000
(U) Army Guardrail PE 0203744A		250	1,000	1,000	1,000					3,250
(U) Other APPN										

Prior to FY03, NCCT funding was primarily from PE 0305206F project 4819, Common Data Link (CDL). The ACTD includes participating platforms as shown above. United Kingdom Nimrod is also participating in the ACTD with their own funds.

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

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07 - Operational System Development

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0305206F Airborne Reconnaissance Systems

PROJECT

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(U) **D. Acquisition Strategy**

NCCT approved as an ACTD by USD(AT&L) and validated by Joint Requirements Oversight Council in FY01. ASC/RA, Big Safari at Wright Patterson, AFB, manages the Cost Plus Fixed Fee contract used to develop NCCT core technology. Individual platform program offices (Rivet Joint, Joint STARS, AWACS, Air Force DCGS, and Army Guardrail) manage and contract directly for Platform Interface Module development and integration on their platforms. United Kingdom Nimrod program is participating with their own funds.

(U) **E. Schedule Profile**

	<u>FY 2002</u>				<u>FY 2003</u>				<u>FY 2004</u>			
	1	2	3	4	1	2	3	4	1	2	3	4
(U) Core technology development begins	*											
(U) Gather data for Tactics, Techniques, and Procedure (TTPs) at JCIET 02		*										
(U) Implement TTPs gathered from JCIET 02			*									
(U) NCCT Systems Integration Lab demo (Spiral #1)					*							
(U) NCCT Hardware in the Loop Systems Integration Lab demo							X					
(U) Complete Participant Integration Module (PIM) development											X	
(U) Complete PIM integration and testing									X			
(U) NCCT Military Utility Assessment live-fly (Spiral #2)												X
X Denotes Planned Event												
* Denotes Completed Event												

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2003			
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT		
07 - Operational System Development				0305206F Airborne Reconnaissance Systems				5038		
(U) <u>A. Project Cost Breakdown (\$ in Thousands)</u>										
						<u>FY 2002</u>		<u>FY 2003</u>		<u>FY 2004</u>
(U)	NCCT Core Technology Development							2,138		6,089
(U)	NCCT Integration & Testing									2,600
(U)	Platform Integration & Testing									2,250
(U)	Program Management							300		600
(U)	Total							2,438		11,539
(U) <u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u>										
(U) <u>Performing Organizations:</u>										
	<u>Contract</u>	<u>Method/Type</u>	<u>Award or</u>	<u>Performing</u>	<u>Project</u>					
	<u>Government</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Activity</u>	<u>Office</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>
	<u>Performing</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>	<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>
	<u>Activity</u>									<u>Total</u>
	<u>Product Development Organizations</u>									
	L-3 ComCept, Inc.	Multiple	FY01	TBD	TBD		2,138	8,618	Continuing	TBD
	Various Contractors							2,321	Continuing	TBD
	<u>Support and Management Organizations</u>									
	Various Contractors						300	600	Continuing	TBD
	<u>Test and Evaluation Organizations</u>									
(U) <u>Government Furnished Property:</u>										
	<u>Contract</u>	<u>Method/Type</u>	<u>Award or</u>	<u>Delivery</u>						
	<u>Item</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Date</u>		<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>
	<u>Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>		<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>
	<u>Product Development Property</u>									
	<u>Support and Management Property</u>									
	<u>Test and Evaluation Property</u>									

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)					DATE February 2003	
BUDGET ACTIVITY		PE NUMBER AND TITLE			PROJECT	
07 - Operational System Development		0305206F Airborne Reconnaissance Systems			5038	
		<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>
		<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>
<u>Subtotals</u>						<u>Total</u>
Subtotal Product Development				2,138	10,939	TBD
Subtotal Support and Management				300	600	TBD
Subtotal Test and Evaluation						
Total Project				2,438	11,539	TBD

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07 - Operational System Development

PE NUMBER AND TITLE

0305206F Airborne Reconnaissance Systems

PROJECT

5092

COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
5092 JTC/SIL MUSE	0	0	1,952	1,953	1,931	1,924	1,955	1,982	Continuing	TBD

The Joint Technology Center/Systems Integration Laboratory Multiple UAV simulation Environment (JTC/SIL MUSE) BPAC was transferred from PE 0308601F to this program to better align it with JMIP programs and funding. For FY02 data see PE 0305205F, Endurance Unmanned Aerial Vehicles, and for FY03 data see PE 0308601F, Modeling and Simulation.

(U) **A. Mission Description**

The Joint Technology Center/Systems Integration Laboratory Multiple UAV Simulation Environment (JTC/SIL MUSE) provides simulations of UAVs; their tactical and strategical reconnaissance uses and how their imagery products are used and disseminated within the DoD reconnaissance system. These simulations are utilized for the development of the Army's tactical UAV (TUAV), the Navy's vertical take off UAV (VTUAV), Air Force's Predator medium altitude endurance EUAV and the Air Force's Global Hawk high altitude endurance UAV.

(U) **FY 2002 (\$ in Thousands)**

(U) \$0 No Activity

(U) \$0 Total

See PE 0305205F for FY02 data.

(U) **FY 2003 (\$ in Thousands)**

(U) \$0 No Activity

(U) \$0 Total

See PE 0308601F for FY03 data

(U) **FY 2004 (\$ in Thousands)**

(U) \$0 No Activity

(U) \$367 Laboratory sustainment

(U) \$1,035 Air Force Synthetic Environment for Reconnaissance and Surveillance (AFSERS) development

(U) \$550 Maintenance, Licenses and equipment purchases

(U) \$1,952 Total

(U) **B. Project Change Summary**

Not applicable.

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Exhibit R-2A (PE 0305206F)

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

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BUDGET ACTIVITY

07 - Operational System Development

PE NUMBER AND TITLE

0305206F Airborne Reconnaissance Systems

PROJECT

5092

(U) **C. Other Program Funding Summary (\$ in Thousands)**

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	

(U) AF RDT&E

(U) Other APPN

The program receives approximately \$2.3M per year from the Army and approximately \$1.7M per year from the Navy, through FY09.

(U) **D. Acquisition Strategy**

All funding for JTC/SIL MUSE support sustainment operations; personnel (both government and contractor support), laboratory expenses, maintenance, licenses, equipment purchases and other expenses associated with operating and maintaining facilities. When contracts are required, they will be awarded after full and open competition.

(U) **E. Schedule Profile**

	<u>FY 2002</u>				<u>FY 2003</u>				<u>FY 2004</u>			
	1	2	3	4	1	2	3	4	1	2	3	4
(U) Complete development of laser designator						X						
(U) Begin development of auto track						X						
(U) Begin development of damage to fix targets						X						

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)										DATE
										February 2003
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT
07 - Operational System Development					0305206F Airborne Reconnaissance Systems					5092
(U) <u>A. Project Cost Breakdown (\$ in Thousands)</u>										
					<u>FY 2002</u>		<u>FY 2003</u>		<u>FY 2004</u>	
(U) JTC/SIL MUSE									1,952	
(U) Total									1,952	
(U) <u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u>										
(U) <u>Performing Organizations:</u>										
<u>Contractor or</u>		<u>Contract</u>								
<u>Government</u>		<u>Method/Type</u>		<u>Award or</u>		<u>Performing</u>		<u>Project</u>		
<u>Performing</u>		<u>or Funding</u>		<u>Obligation</u>		<u>Activity</u>		<u>Office</u>		
<u>Activity</u>		<u>Vehicle</u>		<u>Date</u>		<u>EAC</u>		<u>EAC</u>		
<u>Product Development Organizations</u>						<u>Total Prior</u>		<u>Budget</u>		<u>Budget</u>
JTC/SIL MUSE						to FY 2002		FY 2002		Budget FY 2003
<u>Support and Management Organizations</u>										Budget FY 2004
<u>Test and Evaluation Organizations</u>										Budget to Complete
										Total Program
<u>Subtotals</u>						<u>Total Prior</u>		<u>Budget</u>		<u>Budget</u>
Subtotal Product Development						to FY 2002		FY 2002		Budget FY 2003
Subtotal Support and Management										Budget FY 2004
Subtotal Test and Evaluation										Budget to Complete
Total Project										Total Program