

UNCLASSIFIED

PE NUMBER: 0604750F

PE TITLE: Intelligence Equipment

Exhibit R-2, RDT&E Budget Item Justification

DATE

February 2006

BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604750F Intelligence Equipment

Cost (\$ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	2.426	2.730	1.426	1.453	1.480	1.513	1.537	Continuing	TBD
2053 National Air Intel Center	2.426	2.730	1.426	1.453	1.480	1.513	1.537	Continuing	TBD

(U) **A. Mission Description and Budget Item Justification**

Intelligence Equipment (IE) Program performs the engineering development of software, and/or automated information operations (IO) techniques (i.e., Information Superiority) to streamline the processing, integration, exploitation, display, and dissemination of strategic and tactical threat assessment intelligence information from the National Air and Space Intelligence Center (NASIC), Wright-Patterson AFB, OH and the Air Force Information Warfare Center (AFIWC), Lackland AFB, San Antonio, TX.

IE provides continuing development and upgrades of threat analysis capabilities to produce integrated, predictive air and space intelligence to enable military operations, force modernization decisions, and policy making. IE both accelerates and increases the accuracy of threat estimates and system descriptions to deployed operational forces via Reachback. IE also provides clients with accurate, predictive, relevant, timely, and actionable intelligence that will support client processes, operational planning, and mission execution. Both NASIC and AFIWC are tasked with providing detailed foreign technology intelligence information to a variety of DOD and non-DOD customers. NASIC and AFIWC customers' requirements have become more sophisticated, dictating more detailed and timely intelligence not only in the technology regime but also in the economic, world crisis, and political arenas. IE develops and provides NASIC and AFIWC with the tools necessary to produce timely intelligence regarding performance and characteristics of foreign weapon systems and also develops the tools to model and assess foreign air and space systems operations.

This is the only AF program developing new or upgraded analysis, modeling and simulation tools focused on intelligence production in support of AF operational and developmental functions. IE directs the engineering and development of specialized software to conduct Information Operations with systems which process, integrate, display, and distribute intelligence data for HQ Air Combat Command (ACC) and the Air Intelligence Agency (AIA). In general, each of the development projects within the overall IE program portfolio transition technologies to the operational communities through the spin off of incremental upgrade versions to their end-users over a period of several years as the individual development projects progress towards their final complete full-up configuration. IE may reallocate existing resources to support out-of-cycle new/updated warfighter requirements for development of intelligence tools.

This effort is Budget Activity 5, System Demonstration and Development (SDD), because the program develops and inserts new technology into existing systems and models to keep existing systems current.

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(U) **B. Program Change Summary (\$ in Millions)**

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Previous President's Budget	1.349	1.369	1.413
(U) Current PBR/President's Budget	2.426	2.730	1.426
(U) Total Adjustments	1.077	1.361	
(U) Congressional Program Reductions			
Congressional Rescissions	-0.023	-0.039	
Congressional Increases	1.100	1.400	
Reprogrammings			
SBIR/STTR Transfer			

(U) **Significant Program Changes:**

Congress added \$1.1M in FY05 and \$1.4M in FY06 for Hard and Deeply Buried Target and Underground Facilities Detection (HDBT / UGF - D) efforts. These funds are being used to advance and enhance planned projects (mainly new HDBT-UGF detection / analysis tools and techniques) in this area.

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Exhibit R-2a, RDT&E Project Justification

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BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

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PROJECT NUMBER AND TITLE

2053 National Air Intel Center

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2053 National Air Intel Center	2.426	2.730	1.426	1.453	1.480	1.513	1.537	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

Congress added \$1.1M in FY05 and \$1.4M in FY06 for Hard and Deeply Buried Target and Underground Facilities Detection (HDBT / UGF - D) efforts. These funds are being used to advance and enhance planned projects (mainly new HDBT-UGF detection / analysis tools and techniques) in this area.

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(U) B. Accomplishments/Planned Program (\$ in Millions)	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Continued / Complete High Speed Engine Propulsion Tools Phase 4 (SCRAM Jet Engine Model)	0.265	0.050	0.050
(U) Completed Advanced Analysis Capabilities (AAC) -- Integrated Avionics Support (IAS)	0.138		
(U) Completed Laser Weapons (LODUR) Threat Assessment Tool	0.153		
(U) Completed Analysis & Exploitation of Hardened & Deeply Buried Target - Detection (HDBT-D) Using Hyperspectral and MASINT Tools	0.273		
(U) Completed Analysis & Exploitation of Hardened & Deeply Buried Target - Detection (HDBT-D) Using Hyperspectral and MASINT Tools (Part of FY05 Congressional Add for HDBT-D)	0.065		
(U) Initiated / Continue Terrain Map Comparison Tools for HDBT-D (Partial FY05 / FY06 Congressional Adds for HDBT-D)	0.336	0.400	
(U) Complete Terrain Map Comparison Tools for HDBT-D			0.150
(U) Initiated / Continue / Complete MASINT Exploitation Technology Applications Facility (METAF) for HDBT / UGF Algorithm Development and Test	0.270	0.609	0.263
(U) Continue Upgrade of TEL-SCOPE Tool with Expanded Operational Capability (EOC)	0.212	0.310	0.200
(U) Initiated / Continue Phase 1 of Adaptive Signature Library (ASL) for HDBT-D (ASL for Paint Degradation) (Part of FY05 / FY06 Congressional Adds for HDBT-D)	0.450	0.400	
(U) Complete Phase 1 of ASL for HDBT-D			0.100
(U) Initiated / Continue Phase 2 of ASL for HDBT-D (ASL for Seasonal Vegetation Changes) (Partial of FY05 / FY06 Congressional Adds for HDBT-D)	0.264	0.400	
(U) Complete Phase 2 of ASL for HDBT-D			0.100
(U) Initiate Automatic Registration Tools for HDBT-D (Part of FY06 Congressional Add for HDBT-D)		0.200	
(U) Complete Automatic Registration Tools for HDBT-D			0.100
(U) Initiate / Continue Information in Warfare (IIW) -- Geospatial Information System (GIS)-Based Integrated Analytic Environment (GIANT)		0.050	0.050
(U) Initiate / Continue Integrated Air Defense System (IADS) -- TEL-SCOPE / Air Defense Net (ADNet) Machine-to-Machine (M2M) Integration		0.311	0.363
(U) Initiate Radio Frequency (RF) Cross Detection Capabilities			0.050
(U) Total Cost	2.426	2.730	1.426

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

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</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>Complete</u>	
(U) Not Applicable									

Exhibit R-2a, RDT&E Project Justification

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2053 National Air Intel Center

(U) D. Acquisition Strategy

Requirements for new / upgraded intelligence analysis tools for NASIC and AFIWC are gathered and prioritized by the Air Intelligence Agency (AIA). Development of capabilities to meet those requirements is managed by AF Research Laboratories (Rome Research Site). Prototype products (usually software), once evaluated by the users, are fielded in incremental capability spirals. All major contracts within this project are awarded after full and open competition.

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Exhibit R-3, RDT&E Project Cost Analysis										DATE February 2006			
BUDGET ACTIVITY 05 System Development and Demonstration (SDD)					PE NUMBER AND TITLE 0604750F Intelligence Equipment					PROJECT NUMBER AND TITLE 2053 National Air Intel Center			
(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract	
(U) Product Development													
High Speed Propulsion Tools Phase 4 (Scram-Jet)	C/CPFF	Pratt & Whitney West Palm Beach, FL	0.250	0.265	Jan-05	0.050	Mar-06	0.050	Nov-06	0.000	0.615	0.654	
Advanced Analysis Capability: Integrated Avionics Support Model	C/CPFF	Northrop-Grumman Corp (Defense Mission Systems), Fairborn, OH & SAIC, Beavercreek, OH	0.740	0.138	Nov-04	0.000		0.000		0.000	0.878	0.878	
Laser Weapons (LODUR) Threat Assessment Tool	C/CPFF	Applied Sciences Laboratories, Inc., Albuquerque, NM	0.330	0.153	Nov-04	0.000		0.000		0.000	0.483	0.483	
Analysis & Exploitation of Hardened, Deeply-Buried Targets / Underground Facilities (HDBT / UGF) Using Hyperspectral & MASINT Tools (Including part of FY05 Congressional Add for HDBT-D)	C/CPFF	CACI / MTL Systems Inc., Dayton, OH	0.180	0.338	Nov-04	0.000		0.000		0.000	0.518	0.518	
Terrain Map Comparison Tools for HDBT / UGF Detection (HDBT / UGF - D) (Including parts of FY05 / FY06 Congressional Adds for HDBT-D)	C/CPFF	CACI / MTL Systems Inc., Dayton, OH	0.000	0.336	Jun-05	0.400	Mar-06	0.150	Nov-06	0.650	1.536	1.536	
MASINT Exploitation Technology Applications Facility (METAF) for HDBT / UGF - D Algorithm Development and Test	C/CPFF	Alion Science and Technology, Albuquerque, NM and Rome, NY	0.000	0.270	Mar-05	0.609	Mar-06	0.263	Nov-06	0.000	1.142	1.142	
TEL-SCOPE Expanded Operational Capability (EOC)	C/FFP	Prediction Systems, Inc., Spring Lake, NJ & Northrop Grumman Mission	0.100	0.212	Nov-04	0.310	Dec-05	0.200	Dec-06	Continuing	TBD	0.822	
Project 2053													
R-1 Shopping List - Item No. 90-6 of 90-9													
Exhibit R-3 (PE 0604750F)													

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Exhibit R-3, RDT&E Project Cost Analysis										DATE February 2006		
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT NUMBER AND TITLE		
05 System Development and Demonstration (SDD)					0604750F Intelligence Equipment					2053 National Air Intel Center		
Phase 1 of Adaptive Signature Library (ASL) for HDBT-D (ASL for Paint Degradation) (Including parts of FY 05 / FY06 Congressional Adds for HDBT-D)	C/CPFF	Systems, Fairborn, OH CACI / MTL Systems Inc., Dayton, OH	0.000	0.450	Mar-05	0.400	Mar-06	0.100	Nov-06	0.000	0.950	0.950
Phase 2 of ASL for HDBT-D (ASL for Seasonal Vegetation Changes) (Including parts of FY05 / FY06 Congressional Adds for HDBT-D)	C/CPFF	CACI / MTL Systems Inc., Dayton, OH	0.000	0.264	Mar-05	0.400	Mar-06	0.100	Nov-06	0.000	0.764	0.764
Automatic Registration Tools for HDBT-D (Including part of FY06 Congressional Add for HDBT-D)	C/CPFF	CACI / MTL Systems Inc., Dayton, OH	0.000	0.000		0.200	Mar-06	0.100	Nov-06	0.000	0.300	0.300
Information in Warfare (IIW) -- Geospatial Information System (GIS) - Based Integrated Analytic Environment (GIANT)	C/TBD	TBD	0.000	0.000		0.050	Apr-06	0.050	Nov-06	Continuing	TBD	TBD
Integrated Air Defense System (IADS) Model / ADNet TEL-SCOPE M2M Integration	C/CPFF	Prediction Systems Inc, Spring Lake, NJ & BAE Systems, Burlington, MA & Northrop Grumman Mission Systems, Fairborn, OH	0.000	0.000		0.311	Mar-06	0.363	Nov-06	Continuing	TBD	TBD
Radio Frequency (RF) Cross Detection Capabilities	C/TBD	TBD	0.000	0.000		0.000		0.050	Jan-07	Continuing	TBD	TBD
Subtotal Product Development			1.600	2.426		2.730		1.426		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			1.600	2.426		2.730		1.426		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile

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BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

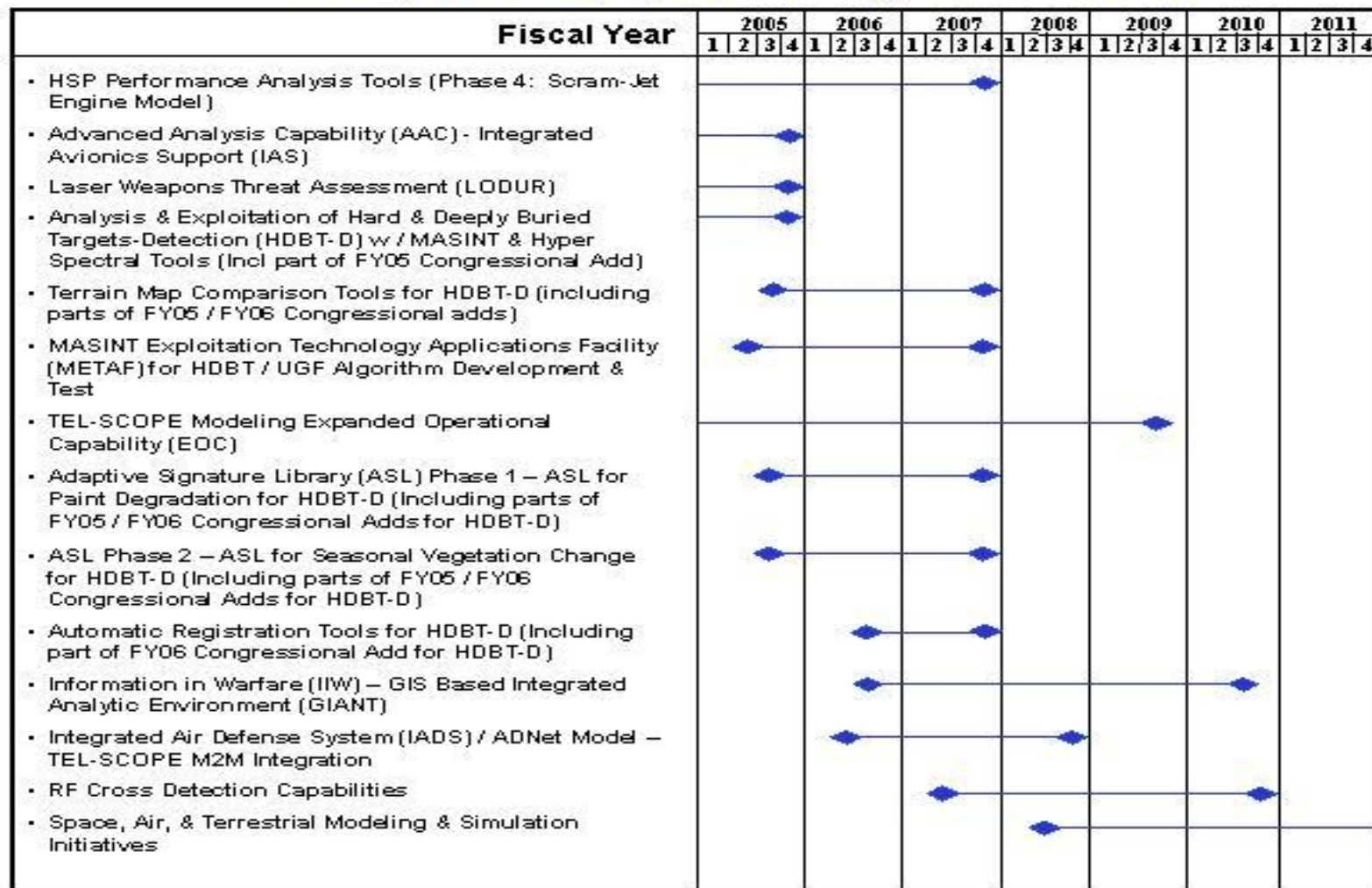
PE NUMBER AND TITLE

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2053 National Air Intel Center

Intelligence Equipment Program Schedule



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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006	
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE	
05 System Development and Demonstration (SDD)	0604750F Intelligence Equipment	2053 National Air Intel Center	
(U) <u>Schedule Profile</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Continue / Complete HSP Engine Propulsion Tools (Phase 4: SCRAM Jet Engine Model)	1-4Q	1-4Q	4Q
(U) Completed Advanced Analysis Capabilities (AAC) -- Integrated Avionics Support (IAS)	4Q		
(U) Completed Laser Weapons (LODUR) Threat Assessment Tool	4Q		
(U) Completed Analysis and Exploitation of HDBT-D using Hyperspectral & MASINT Tools (Including FY05 Congressional Add)	4Q		
(U) Initiated / Continue / Complete Terrain Map Comparison Tools for HDBT-D (Includes parts of FY05 / FY06 Congressional Adds for HDBT-D)	3Q	1-4Q	4Q
(U) Initiated / Continue / Complete MASINT Exploitation Technology Applications Facility (METAF) for HDBT / UGF Algorithm Development and Test	2Q	1-4Q	4Q
(U) Continue TEL-SCOPE Expanded Operational Capability (EOC)	1-4Q	1-4Q	1-4Q
(U) Initiated / Continue / Complete Phase 1 of Adaptive Signature Library (ASL) for HDBT-D (ASL for Paint Degradation) (Includes parts of FY05 / FY06 Congressional Adds for HDBT-D)	3Q	1-4Q	4Q
(U) Initiated / Continue / Complete Phase 2 of ASL for HDBT-D (ASL for Seasonal Vegetation Changes) (Includes parts of FY05 / FY06 Congressional Adds for HDBT-D)	3Q	1-4Q	4Q
(U) Initiate / Complete Auto Registration Tools for HDBT-D (Includes part of FY06 Congressional Add for HDBT-D)		3Q	4Q
(U) Initiate / Continue Information in Warfare (IIW) -- Geospacial Information System (GIS)-Based Integrated Analytic Environment (GIANT)		3Q	1-4Q
(U) Initiate / Continue Integrated Air Defense System (IADS) Model--TEL-SCOPE / ADNET M2M Integration		2Q	1-4Q
(U) Initiate Radio Frequency (RF) Cross Detection Capabilities			2Q