

## UNCLASSIFIED

## RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)

DATE

June 2001

BUDGET ACTIVITY

**05 - Engineering and Manufacturing Development**

PE NUMBER AND TITLE

**0604750F Intelligence Equipment**

PROJECT

**2053**

COST (\$ in Thousands)	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
2053 National Air Intel Center	830	4,754	1,323	1,347	1,375	1,403	1,433	1,463	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	0

FY03-FY07 budget numbers do not reflect the DoD strategic review results.

(U) **A. Mission Description**

Intelligence Equipment (IE) provides continuing development and upgrades of threat analysis capabilities of the National Air Intelligence Center (NAIC) and Air Force Information Warfare Center (AFIWC). Both organizations are tasked with providing detailed foreign technology intelligence information to a variety of DOD and non-DOD customers. In the past few years, customers' requirements have been 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 provides NAIC and AFIWC with the tools necessary to produce timely intelligence of foreign weapon systems and develops the tools to model and assess foreign airborne and aerospace systems. This is the only AF program developing new, or upgraded analysis, modeling and simulation tools focused on intelligence production in support of AF developmental and operational functions. IE directs the engineering and development of specialized hardware and software to conduct Information Operations (IO) with systems which process, integrate, display, and distribute intelligence data/ information for HQ ACC, the Air Intelligence Agency (AIA) -- primarily their NAIC and AFIWC subordinates.

(U) **FY 2000 (\$ in Thousands)**

- (U) \$316 Completed Comm Network Modeling Tool-Upgrade (TEL-SCOPE)
- (U) \$151 Continued Adv Infrared Countermeasures Systems Assessment Model (AIRSAM) Update
- (U) \$226 Continued Radio Frequency Weapons Modeling Improvements (HEIMDAL v 2.0+)
- (U) \$67 Initiated High Speed Propulsion Modeling (Phase 1: Pulsed-Detonation Engine Model)
- (U) \$70 Initiated Missile System (Phase 1: DIODE Objectives Model [DOM])
- (U) \$830 Total

(U) **FY 2001 (\$ in Thousands)**

- (U) \$283 Complete Advanced Infrared Countermeasures Systems Assessment Model (AIRSAM) Update
- (U) \$183 Complete Radio Frequency Weapons Modeling Improvements (HEIMDAL v 2.0+)
- (U) \$193 Continue High Speed Engine Propulsion Modeling (Phase 1: Pulsed-Detonation Engine Model)
- (U) \$313 Continue Missile System (Phase 1: DIODE Objectives Model [DOM])
- (U) \$71 Initiate/Complete Missile System (Phase 2: MiTAS)

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BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

05 - Engineering and Manufacturing Development

0604750F Intelligence Equipment

2053

(U) **A. Mission Description Continued**(U) **FY 2001 (\$ in Thousands) Continued**

- (U) \$335 Initiate Standard Visualization Solution (SVS) - IVIEW 2000 Upgrade/JView
- (U) \$3,376 Initiate/Complete Radio Frequency Weapon Threat Assessment (RFWA Program) (Congressional Plus-up)
- (U) \$4,754 Total

The following net transactions are not reflected in the FY01 program total: BTR=+0 K , ATR=+0 K, and SBIR=-40 K. These transactions are not reflected in other sections of the R-docs where an FY01 total is shown.

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

- (U) \$39 Complete High Speed Engine Propulsion Modeling Tools (Phase 1: Pulsed Detonation Engine Model)
- (U) \$239 Initiate High Speed Engine Propulsion Modeling Tools (Phase 2: Air Turbo-Ramjet Engine Model)
- (U) \$239 Initiate High Speed Engine Propulsion Modeling Tools (Phase 3: Turbo-Ramjet Engine Model)
- (U) \$229 Complete Missile System ( Phase 1: DIODE Objectives Model [DOM])
- (U) \$115 Continue Standard Visualization Solution (SVS) - IVIEW 2000 Upgrade/JView
- (U) \$214 Initiate Missile System Upgrades (Phase 3: CRMPS [Computer Requirements Model for Payload Study])
- (U) \$214 Initiate Missile System Upgrades (Phase 4: BRACE [Ballistic Reentry Vehicle Accuracy Estimate] )
- (U) \$34 Initiate Advanced Analysis Capabilities (AAC) - Integrated Avionics Support (IAS)
- (U) \$1,323 Total

(U) **B. Budget Activity Justification**

This effort is Budget Activity 5, Engineering & Manufacturing Development, because the program develops and inserts new technology into existing systems and models to keep existing systems current.

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

	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Total Cost</u>
(U) Previous President's Budget (FY 2001 PBR)	1,336	1,298	1,315	TBD
(U) Appropriated Value	1,345	4,798		
(U) Adjustments to Appropriated Value				
a. Congressional/General Reductions				
b. Small Business Innovative Research	-41			
c. Omnibus or Other Above Threshold Reprogram	-368			

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)							DATE June 2001				
BUDGET ACTIVITY <b>05 - Engineering and Manufacturing Development</b>				PE NUMBER AND TITLE <b>0604750F Intelligence Equipment</b>			PROJECT <b>2053</b>				
(U) <b><u>C. Program Change Summary (\$ in Thousands) Continued</u></b>											
				<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Total Cost</u>				
	d. Below Threshold Reprogram			-101							
	e. Rescissions			-5	-44						
(U)	Adjustments to Budget Years Since FY 2001 PBR					8					
(U)	Current Budget Submit/FY 2002 PBR			830	4,754	1,323		TBD			
(U) <b><u>Significant Program Changes:</u></b>											
FY2000 database update will reflect an additional -\$6K BTR.											
(U) <b><u>D. Other Program Funding Summary (\$ in Thousands)</u></b>											
		<u>FY 2000</u>	<u>FY 2001</u>	<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>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)	Not Applicable										
(U) <b><u>E. Acquisition Strategy</u></b>											
All major contracts within this Program Element were awarded after full and open competition.											
(U) <b><u>F. Schedule Profile</u></b>											
				<u>FY 2000</u>			<u>FY 2001</u>			<u>FY 2002</u>	
				1	2	3	4	1	2	3	4
(U)	Completed Communication Network Modeling Tool Upgrade (TEL-SCOPE)						*				
(U)	Complete Advanced IRCM Systems Assessment Model (AIRSAM) Update								X		
(U)	Complete Radio Frequency Weapons Modeling Improvements (HEIMDALL-2+)								X		
(U)	Begin High Speed Propulsion / Pulsed-Detonation Engine Model (Phase 1)				*						X
(U)	Begin High Speed Propulsion / Air-Turbo Ramjet Engine Model (Phase 2)									X	
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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)										DATE <b>June 2001</b>		
BUDGET ACTIVITY <b>05 - Engineering and Manufacturing Development</b>					PE NUMBER AND TITLE <b>0604750F Intelligence Equipment</b>					PROJECT <b>2053</b>		
(U) <b><u>F. Schedule Profile Continued</u></b>												
		<u>FY 2000</u>				<u>FY 2001</u>				<u>FY 2002</u>		
	1	2	3	4	1	2	3	4	1	2	3	4
(U) Begin High Speed Propulsion / Turbo-Ramjet Engine Model (Phase 3)												X
(U) Begin Missile System / Phase 1: DIODE Objectives Model (DOM)	*											X
(U) Begin/Complete Missile System / Phase 2: MiTAS					*				X			
(U) Begin IVIEW 2000 Upgrade/JView Standard Visualization Solution (SVS)					*							
(U) Begin Advanced Analysis Capabilities (AAC) - Integrated Avionics Supt												X
(U) Begin Radio Frequency Weapon Threat Assessment (RFWA)						X						X
(U) Begin Missile System /Phase 3: CRMPS										X		
(U) Begin Missile System/Phase 4: BRACE												X
Note: * denotes completed event, X denotes planned event.												

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE June 2001			
BUDGET ACTIVITY					PE NUMBER AND TITLE			PROJECT		
<b>05 - Engineering and Manufacturing Development</b>					<b>0604750F Intelligence Equipment</b>			<b>2053</b>		
(U) <b><u>A. Project Cost Breakdown (\$ in Thousands)</u></b>										
					<u>FY 2000</u>			<u>FY 2001</u>		
								<u>FY 2002</u>		
(U) Tel-Scope (Communication Network Modeling Tool)					316					
(U) Adv IRCM Systems Assessment Model (AIRSAM) Update					151			283		
(U) Radio Frequency Weapon Modeling Improvements (HEIMDALL 2+)					226			183		
(U) High Speed Propulsion / P1: Pulsed Detonation Engine Model					67			193		
(U) High Speed Propulsion / P2: Air Turbo Rocket Engine Model										
(U) High Speed Propulsion / P3: Turbo-Ramjet Engine Model										
(U) Missile System / Phase 1: DIODE Objectives Model (DOM)					70			313		
(U) Missile System / Phase 2: MiTAS								71		
(U) Missile System / Phase 3: CRMPS										
(U) Missile System/ Phase 4: BRACE										
(U) IVIEW 2000 Upgrade / JView - Standard Visualization Solution								335		
(U) Terrorist RF Weapon Threat Assessment								3,376		
(U) Adv Analysis Capability: Integrated Avionics Support Model										
(U) Total					830			4,754		
(U) <b><u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u></b>										
(U) <b><u>Performing Organizations:</u></b>										
<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 2000</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Organizations</u>										
Planning Research	CPFF	31 Jul 98	N/A	N/A	221	316			Continuing	TBD
Corp(PRC)/Litton 95-C-0048										
(Tel-Scope)										
Sterling Software, Inc	CPFF	Sep 99	N/A	N/A	130	151	283		Continuing	TBD
98-D-0318/06 (AIRSAM)										
Applied Sciences Laboratory	CPFF	17 Jul 97	N/A	N/A		226	183			409

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE		
							June 2001		
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT	
05 - Engineering and Manufacturing Development				0604750F Intelligence Equipment				2053	
(U) <u>Performing Organizations Continued:</u>									
<u>Product Development Organizations</u>									
97-C-0036/01(RF Weapons)									
Applied Sciences Laboratory	CPFF	26 May 99	N/A	N/A		3,376			3,376
97-C-0036/02 (RF Weapons)									
Calspan Veridian Corporation	CPFF	31 Jul 98	N/A	N/A	70	313	229		612
99-DC-0050 (DOM)									
Sterling Software, Inc	CPFF	12 Feb 99	N/A	N/A	67	193	39		299
98-D-0318/02 (HSP-P-DE)									
TBD - Phase 2: High Speed	TBD	TBD	N/A	N/A			239		239
Propulsion (ATR)									
TBD - Phase 3: High Speed	TBD	TBD	N/A	N/A			239		239
Propulsion (T-R)									
TBD - Missile System / Phase	CPFF		N/A	N/A		71			71
2: MiTAS									
TBD - Missile System / Phase	TBD	TBD	N/A	N/A			214		214
3: CRMPS									
TBD - Missile System/ Phase	TBD	TBD	N/A	N/A			214		214
4: BRACE									
TBD - IVIEW 2000	CPFF	TBD	N/A	N/A		335	115		450
Upgrade/JView SVS									
TBD - Adv Analysis			N/A	N/A			34		34
Capability: Integrated									
Avionics Support Model									
TBD - Laser Weapons								800	800
Simulation & Analysis									
(LODUR)									
<u>Support and Management Organizations</u>									
N/A									
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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE		June 2001		
BUDGET ACTIVITY				PE NUMBER AND TITLE					PROJECT		
05 - Engineering and Manufacturing Development				0604750F Intelligence Equipment					2053		
(U) <u>Performing Organizations Continued:</u>											
<u>Test and Evaluation Organizations</u>											
N/A											
(U) <u>Government Furnished Property:</u>											
<u>Contract</u>											
<u>Method/Type</u>											
<u>Award or</u>											
<u>Obligation</u>											
<u>Delivery</u>											
<u>Total Prior</u>											
<u>Budget</u>											
<u>Budget</u>											
<u>Budget</u>											
<u>Budget to</u>											
<u>Total</u>											
<u>Description</u>											
<u>Vehicle</u>											
<u>Date</u>											
<u>Date</u>											
<u>to FY 2000</u>											
<u>FY 2000</u>											
<u>FY 2001</u>											
<u>FY 2002</u>											
<u>Complete</u>											
<u>Program</u>											
<u>Product Development Property</u>											
N/A											
<u>Support and Management Property</u>											
N/A											
<u>Test and Evaluation Property</u>											
N/A											
<u>Subtotals</u>											
<u>to FY 2000</u>											
<u>FY 2000</u>											
<u>FY 2001</u>											
<u>FY 2002</u>											
<u>Complete</u>											
<u>Program</u>											
Subtotal Product Development											
351											
830											
4,754											
1,323											
TBD											
TBD											
Subtotal Support and Management											
Subtotal Test and Evaluation											
Total Project											
351											
830											
4,754											
1,323											
TBD											
TBD											

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