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

DATE

February 2003

BUDGET ACTIVITY

07 - Operational System Development

PE NUMBER AND TITLE

0305114F Air Traffic Control/Approach/Landing
System (ATCALs)

PROJECT

3587

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
3587 Air Traffic Control Systems	25,075	9,614	10,622	5,886	5,944	6,046	6,135	6,218	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	0

(U) A. Mission Description

This project funds research and development of new air traffic control surveillance, positioning, and precision approach capabilities (including the Mobile Approach Control System (MACS) which replaces non-standard, unsupportable, large footprint mobile radar approach systems with a common, easily-transportable system for both the Air National Guard and USAF). This project funds the development of a replacement system for automated development of terminal instrument procedures (the precisely-measured information that tells pilots how to fly during final approach to avoid obstacles). This project is also key to ensuring Air Force Air Traffic Systems work collaboratively to safely and efficiently provide ATC services within the National Airspace System (NAS) and in host nations overseas. For example, over the next 15 years, the FAA plans to implement new or improved capabilities into the NAS in an evolutionary manner. FY 2004-2009 will concentrate on deployment of the next generation of communications, navigation, and surveillance (CNS) technologies and the automation upgrades necessary to accommodate them. FY 2010-2015 will see additional capabilities being added to enable the concept of Free Flight throughout the NAS. Since the Air Force must provide the same level of air traffic service to the military and flying public, funds are required to conduct interoperability and architecture studies and analyses as necessary on a wide range of aviation concepts. This effort complements similar activities associated with other safety of flight and airspace access programs such as Global Air Traffic Management that predominantly focus on aircraft issues.

(U) FY 2002 (\$ in Thousands)

(U) \$0	Accomplishments/Planned Programs
(U) \$8,849	Continued Mobile Approach Control System (MACS) Airport Surveillance Radar (ASR) and operations shelter development
(U) \$14,178	Continued MACS Precision Approach Radar (PAR) development
(U) \$799	Completed development of Air Force Terminal Instrument Procedures System - Replacement (AFTERPS-R)
(U) \$1,249	Continued support for all ATCALs Projects
(U) \$25,075	Total

Project 3587

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3587(U) **A. Mission Description Continued**(U) FY 2003 (\$ in Thousands)

(U) \$0	Accomplishments/Planned Programs
(U) \$4,189	Complete MACS ASR and operations shelter development
(U) \$4,198	Continue MACS PAR development
(U) \$1,227	Continue support for all ATCALs projects
(U) \$9,614	Total

(U) FY 2004 (\$ in Thousands)

(U) \$0	Accomplishments/Planned Programs
(U) \$4,747	Complete MACS PAR development
(U) \$1,275	Continue support for all ATCALs Projects
(U) \$4,600	Begin ATCALs pre-planned product improvement (P3I)
(U) \$10,622	Total

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

This program is in budget activity 7, Operational System Development, because it upgrades currently fielded weapon systems.

(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	26,595	9,865	5,875	
(U) Appropriated Value	26,982	9,865		
(U) Adjustments to Appropriated Value				
a. Congressional/General Reductions	-387	-50		
b. Small Business Innovative Research	-737			
c. Omnibus or Other Above Threshold Reprogram				
d. Below Threshold Reprogram	-660			
e. Rescissions		-104		
(U) Adjustments to Budget Years Since FY 2003 PBR	-123	-97	4,747	
(U) Current Budget Submit/FY 2004 PBR	25,075	9,614	10,622	TBD

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(U) C. Program Change Summary (\$ in Thousands) Continued(U) Significant Program Changes:

FY04 funds in the amount of \$4.9M were realigned from the procurement appropriation to ensure adequate test resources for the Mobile Approach Control System (MACS)

(U) D. 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) OPAF - BA 3 (PE 305114F)	4,666	52,038	77,793	53,540	3,535	5,902	1,000	1,000	Continuing	TBD
Weapon System Code										
833010										
(U) OPAF, BA 3, (PE 305137F)	46,604	55,561	43,883	47,577	56,477	63,633	64,850	66,083	Continuing	TBD
Weapon System Code										
833020										
(U) OPAF, BA 5, (PE 305137F)	5,846	4,714	4,088	4,268	5,758	6,658	6,672	6,778	Continuing	TBD
Weapon System Code										
86190A Initial Spares										

(U) E. Acquisition Strategy

Award multiple, competitive Fixed Price (FFP) and Fixed Price Award Fee (FPAF) contract vehicles. Use Engineering Manufacturing Development (EMD), emphasize off-the-shelf technology, and minimize non-developmental items (NDIs).

(U) F. Schedule ProfileFY 2002FY 2003FY 2004

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(U) F. 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) Complete development of AFTERPS-R	*													
(U) Complete MACS ASR operations shelter development								X						
(U) Complete MACS PAR development									X					
(U) Begin ATCALs P3I										X				
(U) Contract Milestones														
(U) MACS PAR contract award		*												
(U) ASR/OPS operational testing						X								
(U) PAR operational testing							X							
(U) ATCALs P3I contract award										X				

X Denotes a planned event

* Denotes a 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					0305114F Air Traffic Control/Approach/Landing System (ATCALs)				3587		
(U) <u>A. Project Cost Breakdown (\$ in Thousands)</u>											
					FY 2002		FY 2003		FY 2004		
(U) MACS ASR and Operation Shelter development					8,534		3,669				
(U) MACS PAR development					13,906		3,599		3,288		
(U) Studies/field/integration activities to support on-going air traffic control					585		920		2,175		
(U) AFTERPS-R development					801		0		0		
(U) Government Program Management Support and Travel for ATCALs activities					1,249		1,426		1,623		
(U) MACS P3I									3,536		
(U) Total					25,075		9,614		10,622		
(U) <u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u>											
(U) <u>Performing Organizations:</u>											
<u>Contractor or Government Performing Activity</u>		<u>Contract Method/Type or Funding Vehicle</u>	<u>Award or Obligation Date</u>	<u>Performing Activity EAC</u>	<u>Project Office 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>											
AFTERPS-R - Canadian Commercial Corp		FPAF	Apr 01	N/A	N/A	2,450	403	0	0	0	2,853
ASR and Operational Shelter Development - ITT Gilfillan		FPAF	Oct 00	N/A	N/A	29,823	7,920	838	0	Continuing	TBD
MITRE Corp		FFP	Oct 00	N/A	N/A	1,407	1,555	1,565	1,677	Continuing	TBD
MCR Federal Inc.		FFP	Apr 99	N/A	N/A	550	114	117	121	Continuing	TBD
ACS			June 02	N/A	N/A	0	1,235	1,145	1,732	Continuing	TBD
Various		Multiple	Multiple	Continuing	Continuing	2,765	983	680	823	Continuing	TBD
MACS Precision Approach Radar (PAR) Development		FFP	Jan 02	N/A	N/A		11,959	3,549	4,943	Continuing	TBD
<u>Support and Management Organizations</u>											
Various		Multiple	Multiple	Continuing	Continuing	523	574	535	787	Continuing	TBD
Project 3587											
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(U) <u>Performing Organizations Continued:</u>											
<u>Test and Evaluation Organizations</u>											
46th Test Wing, Eglin AFB		PO	Multiple	N/A	N/A	787	332	1,185	539	Continuing	TBD
FL											
(U) <u>Government Furnished Property:</u>											
		<u>Contract</u>									
	<u>Method/Type</u>	<u>Award or</u>									
<u>Item</u>	<u>or Funding</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 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</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>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						36,995	24,169	7,894	9,296	TBD	TBD
Subtotal Support and Management						523	574	535	787	TBD	TBD
Subtotal Test and Evaluation						787	332	1,185	539	TBD	TBD
Total Project						38,305	25,075	9,614	10,622	TBD	TBD
Project 3587											
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