

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 1999
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BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0305114F Air Traffic Cntrl/Approach/Landing Sys (ATCALs)
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COST (\$ In Thousands)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	7,876	4,389	5,588	11,854	12,381	5,629	5,942	6,059	Continuing	TBD
2026 System Support	70	253	242	254	239	248	196	195	Continuing	TBD
3587 Air Traffic Control Systems	7,806	4,136	5,346	11,600	12,142	5,381	5,746	5,864	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	1/1	0	0	0	0	0	0

(U) A. Mission Description

This effort was originally established for development of Military Microwave Landing System Avionics (MMLSA) and acquisition of the commercially developed Commercial Microwave Landing System Avionics (CMLSA). It was part of a twenty-year program to transition Air Force operations from the use of Precision Approach Radar (PAR) and Instrument Landing System (ILS) to the Microwave Landing System (MLS) for precision approach and landing. With termination of the MLS as the national precision landing standard, the effort is now being redirected to develop a replacement box for ILS avionics to sustain precision landing capability until the follow-on capability is chosen. The current Air Force ILS receivers do not meet the new specification required by the International Civil Aviation Organization (ICAO) for protection from interference problems forecast to occur after 1998. This program accomplished an Analysis of Alternatives (AOA) for the Joint Precision Approach and Landing System (JPALS) program which resulted in identification of the follow-on to the ILS and PAR systems. This program will also fund continuing studies to obtain an autonomous precision landing capability, and air traffic control studies under Global Access, Navigation, and Safety (GANS) efforts. Project 2026 funds ongoing liaison and interagency cooperative studies, between the USAF Air Traffic Control (ATC) and Landing Systems (ATCALs) program office and various organizations to include other Services, the Federal Aviation Administration (FAA) and ICAO. Project 3587 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 REGAF).

(U) B. Budget Activity Justification

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

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BUDGET ACTIVITY 7 - Operational System Development			PE NUMBER AND TITLE 0305114F Air Traffic Cntrl/Approach/Landing Sys (ATCALs)		
(U) C. <u>Program Change Summary (\$ in Thousands)</u>					
	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Total Cost</u>
(U) Previous President's Budget (FY 1999 PB)	5,928	4,729	6,989	5,580	TBD
(U) Appropriated Value	13,471	4,729			
(U) Adjustments to Appropriated Value					
a. Cong Reductions	-536	-340			
b. SBIR	-334				
c. Omnibus or Other Above Threshold Reprogram	-6,761				
d. Below Threshold Reprogramming	2,036				
e. Recisions					
f. Other		*			
(U) Adjustments to Budget Years Since FY 1999 PB			-1,401	6,274	
(U) Current Budget Submit/FY 2000 PB	7,876	4,389	5,588	11,854	TBD
(U) Significant Program Changes:					
Funding:					
(U) 1. FY 99: \$145,000 identified as a source for SBIR					
(U) 2. FY 00 includes a -\$1,300 adjustment in support of the public key initiatives and defense information infrastructure					
(U) 3. FY01 includes a +\$6,500 increase for Mobile Approach Control System development.					
*(U) 4. \$7,980 awaiting reclassification to support development of Mobile Approach Control System for Air National Guard and USAF					

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)	DATE February 1999
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BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0305114F Air Traffic Cntrl/Approach/Landing Sys (ATCALs)	PROJECT 2026
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COST (\$ In Thousands)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
2026 System Support	70	253	242	254	239	248	196	195	Continuing	TBD

(U) A. Mission Description

This continuing effort funds ongoing liaison and interagency cooperative studies, as well as interoperability analyses between the USAF Air Traffic Control and Landing Systems (ATCALs) Program Office and various organizations which include the other services, the Federal Aviation Administration (FAA), and the International Civil Aviation Organization (ICAO). Continues mission support for the ATCALs programs including several joint efforts with the FAA. RDT&E funds are used to resolve or minimize technical interface problems associated with interoperability between existing or planned DoD/FAA ATCALs equipment and capabilities.

(U) FY 1998 (\$ in Thousands):

- (U) \$ 10 Support for all ATCALs projects
- (U) \$ 50 Conduct interoperability and interface evaluations
- (U) \$ 10 Support for the precision landing system studies for the Joint Special Operations Command (JSOC)
- (U) \$ 70 Total

(U) FY 1999 (\$ in Thousands):

- (U) \$ 89 Support for all Air Traffic Control and Landing Systems (ATCALs) projects
- (U) \$113 Conduct interoperability and interface evaluations
- (U) \$ 51 Support for the precision landing system studies for the Joint Special Operations Command (JSOC)
- (U) \$253 Total

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

- (U) \$ 88 Support for all Air Traffic Control and Landing Systems (ATCALs) projects
- (U) \$108 Conduct interoperability and interface evaluations
- (U) \$ 46 Support for the precision landing system studies for the Joint Special Operations Command (JSOC)
- (U) \$242 Total

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)		DATE February 1999
BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0305114F Air Traffic Cntrl/Approach/Landing Sys (ATCALs)	PROJECT 2026
<p>(U) <u>FY 2001 (\$ in Thousands):</u></p> <ul style="list-style-type: none"> - (U) \$ 92 Support for all Air Traffic Control and Landing Systems (ATCALs) projects - (U) \$113 Conduct interoperability and interface evaluations - (U) \$ 49 Support for the precision landing system studies for the Joint Special Operations Command (JSOC) - (U) \$254 Total <p>(U) B. <u>Project Change Summary - Description of Significant Changes:</u></p> <p>Not Applicable</p> <p>(U) C. <u>Other Program Funding Summary (\$ in Thousands)</u></p> <p>Not Applicable.</p> <p>(U) D. <u>Acquisition Strategy:</u> Engineering Manufacturing Development, Fixed Price Incentive Fee (FPIF), No Non-Developmental Items (NDI)</p>		
Project 2026	<i>Page 4 of 14 Pages</i>	Exhibit R-2A (PE 0305114F)

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)	DATE February 1999
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BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0305114F Air Traffic Cntrl/Approach/Landing Sys (ATCALs)	PROJECT 2026
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(U) E. Schedule Profile

	<u>FY 1998</u>				<u>FY 1999</u>				<u>FY 2000</u>				<u>FY 2001</u>			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
(U) Acquisition Milestones N/A																
(U) Contract Milestone																
(U) Initial Tower Restoral Vehicle (TRV) Delivery			*													
(U) Test and Evaluation Milestones																
(U) Operational Testing Complete																
(U) First Article Testing Complete	*															
(U) Conduct Precision Landing Studies					*					X					X	

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)						DATE February 1999					
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT	
7 - Operational System Development					0305114F Air Traffic Cntrl/Approach/Landing Sys (ATCALs)					2026	
(U) A. <u>Project Cost Breakdown (\$ in Thousands)</u>											
					<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>			
(U) System Engineering					40	143	147	147			
(U) Contract Engineering					20	90	75	87			
(U) Test and Evaluation Support					0	0	0	0			
(U) Program Management Support					5	10	10	10			
(U) Travel					5	10	10	10			
(U) Total					70	253	242	254			
(U) B. <u>Budget Acquisition History and Planning Information (\$ in Thousands)</u>											
Performing Organizations: AFMC, ESC, Hanscom AFB, MA manages the overall ATCALs effort. MITRE Corporation, Bedford, MA, provides technical engineering support											
<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 1998</u>	<u>Budget FY 1998</u>	<u>Budget FY 1999</u>	<u>Budget FY 2000</u>	<u>Budget FY 2001</u>	<u>Budget to Complete</u>	<u>Total Program</u>
<u>Product Development Organizations:</u>											
None					0						
<u>Support and Management Organizations</u>											
Various	Multiple	Multiple	N/A		948	70	253	242	254	TBD	TBD
<u>Test and Evaluation Organizations</u>											
N/A:	N/A	N/A	0	0	0	0	0	0	0	0	0
Project 2026				Page 6 of 14 Pages				Exhibit R-3 (PE 0305114F)			

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)	DATE February 1999
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BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0305114F Air Traffic Cntrl/Approach/Landing Sys (ATCALs)	PROJECT 2026
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(U) B. Budget Acquisition History and Planning Information Continued (\$ in Thousands)

Government Furnished Property:

<u>Item Description</u>	<u>Contract Method/Type or Funding Vehicle</u>	<u>Award or Obligation Date</u>	<u>Delivery Date</u>	<u>Total Prior to FY 1998</u>	<u>Budget FY 1998</u>	<u>Budget FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Budget to Complete</u>	<u>Total 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										
Subtotal Product Development				0	0	0	0	0		
Subtotal Support and Management				948	70	253	242	254		
Subtotal Test and Evaluation				0	0	0	0	0		
Total Project				948	70	253	242	254		

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)	DATE February 1999
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BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0305114F Air Traffic Cntrl/Approach/Landing Sys (ATCALs)	PROJECT 3587
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COST (\$ In Thousands)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
3587 Air Traffic Control Systems	7,806	4,136	5,346	11,600	12,142	5,381	5,746	5,864	Continuing	TBD

(U) A. Mission Description

DoD and the Department of Transportation (DOT) have a goal to develop and acquire a common civil/military precision approach and landing system that is capable of operating with Category I, II, or III signal guidance accuracy. The International Civil Aviation Organization (ICAO) and NATO designated worldwide implementation for Precision Landing System (PLS) for January 1998 with Microwave Landing System (MLS) as the standard. Due to the emergence of the Global Positioning System (GPS), as a more cost effective solution, the Air Force's precision landing development has been redirected to develop a replacement box for the Instrument Landing System (ILS) to support a precision landing capability until GPS becomes available. The replacement box capability will allow DoD to meet the ICAO requirements for FM frequency protection. This is especially critical in Europe where there is a high density of FM radio stations. The Air Force has worldwide deployment commitments and large numbers of aircraft must comply with the ICAO Standards and recommended practices. In FY97, the Air Force began a new effort to install the Precision Landing System Receiver (PLSR) on its C-17 aircraft to solve short-term operational deficiencies. In FY98, an analysis of alternatives for the Joint Precision Approach and Landing System The DoD is also tasked to maintain commonality and interoperability with new and emerging technologies being developed, introduced and placed into civil and military usage by the FAA and its NATO allies. It is essential the Air Force maintain currency in the area of emerging technologies in order to interoperable with all current and future U.S. Civil and NATO air traffic control systems.

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BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0305114F Air Traffic Cntrl/Approach/Landing Sys (ATCALs)	PROJECT 3587
<p>(U) <u>FY 1998 (\$ in Thousands):</u></p> <ul style="list-style-type: none"> - (U) \$865 Continue development of a precision landing capability to include Differential GPS - (U) \$113 Perform platform integration and system engineering analyses - (U) \$208 Begin Precision Landing System (PLS) flight certification - (U)\$3,720 Joint Precision Approach and Landing System - (U)\$2,900 Autonomous Landing Guidance System - (U)\$7,806 Total <p>(U) <u>FY 1999 (\$ in Thousands):</u></p> <ul style="list-style-type: none"> - (U) \$ 84 Continue to perform platform integration and system engineering analyses - (U) \$ 365 Complete PLS flight testing /certification - (U) \$1,680 Mobile Approach Control System Analysis of Alternatives - (U) \$1,862 Begin Air Force Terminal Instrument Procedures System Development - (U) \$ 145 Identified as source of SBIR - (U) \$4,136 Total <p>(U) <u>FY 2000 (\$ in Thousands):</u></p> <ul style="list-style-type: none"> - (U) \$3,046 Begin Mobile Approach Control System Development - (U) \$ 466 Support field to ensure USAF ATC interoperability with FAA and NATO - (U) \$1,309 Complete Air Force Terminal Instrument Procedures System development and testing - (U) \$ 525 Begin technology insertion studies to determine USAF ATC applicability with coalition allies - (U) \$5,346 Total <p>(U) <u>FY 2001 (\$ in Thousands):</u></p> <ul style="list-style-type: none"> - (U) \$ 9,700 Continue Mobile Approach Control System Development - (U) \$ 514 Support field activities to ensure USAF ATC interoperability with FAA and NATO - (U) \$ 610 Continue technology insertion studies to determine USAF ATC applicability with coalition allies - (U) \$ 776 Investigate improvements in Mode S capabilities - (U) \$11,600 Total 		
Project 3587	Page 9 of 14 Pages	Exhibit R-2A (PE 0305114F)

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BUDGET ACTIVITY 7 - Operational System Development				PE NUMBER AND TITLE 0305114F Air Traffic Cntrl/Approach/Landing Sys (ATCALs)				PROJECT 3587																																																								
<p>B. (U) <u>Project Change Summary (\$ in Thousands)</u></p> <p>(U) Significant Program Changes:</p> <p style="padding-left: 40px;">(U) 1. FY00 includes a -\$1,300 adjustment in support of the public key initiatives and defense information infrastructure</p> <p style="padding-left: 40px;">(U) 2. FY01 includes a +\$6,500 increase for Mobile Approach Control System development</p> <p>(U) C. <u>Other Program Funding Summary (\$ in Thousands):</u></p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>FY 1998</u></th> <th style="text-align: center;"><u>FY 1999</u></th> <th style="text-align: center;"><u>FY 2000</u></th> <th style="text-align: center;"><u>FY 2001</u></th> <th style="text-align: center;"><u>FY 2002</u></th> <th style="text-align: center;"><u>FY 2003</u></th> <th style="text-align: center;"><u>FY 2004</u></th> <th style="text-align: center;"><u>FY 2005</u></th> <th style="text-align: center;"><u>To Compl</u></th> <th style="text-align: center;"><u>Total Cost</u></th> </tr> </thead> <tbody> <tr> <td>(U) 3010</td> <td style="text-align: right;">148</td> <td style="text-align: right;">0</td> <td style="text-align: center;">cont</td> <td style="text-align: center;">TBD</td> </tr> <tr> <td>(U) 3080 - BA 3</td> <td style="text-align: right;">2,350</td> <td style="text-align: right;">7,890*</td> <td style="text-align: right;">9,025</td> <td style="text-align: right;">10,624</td> <td style="text-align: right;">33,903</td> <td style="text-align: right;">42,157</td> <td style="text-align: right;">76,033</td> <td style="text-align: right;">85,132</td> <td style="text-align: center;">cont</td> <td style="text-align: center;">TBD</td> </tr> <tr> <td>(U) 3080 (PE 84775)</td> <td style="text-align: right;">6,675**</td> <td style="text-align: right;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">6,675</td> </tr> <tr> <td>(U) 3300</td> <td style="text-align: right;">3,400</td> <td style="text-align: right;">16,514</td> <td style="text-align: right;">0</td> <td style="text-align: right;">4,000</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> <td style="text-align: center;">cont</td> <td style="text-align: center;">TBD</td> </tr> </tbody> </table> <p>*Awaiting reclassification from APPN 3080 to APPN 3600 for development of the Mobile Approach Control System for the Air National Guard and USAF</p> <p>** For procurement of Air Traffic Control Simulators and Part task Trainers in support of the Air Traffic Control school house at Keesler AFB MS</p> <p>(U) D. <u>Acquisition Strategy:</u> Engineering Manufacturing Development, Fixed Price Incentive Fee (FPIF), No Non-Developmental Items (NDI)</p>											<u>FY 1998</u>	<u>FY 1999</u>	<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>To Compl</u>	<u>Total Cost</u>	(U) 3010	148	0	0	0	0	0	0	0	cont	TBD	(U) 3080 - BA 3	2,350	7,890*	9,025	10,624	33,903	42,157	76,033	85,132	cont	TBD	(U) 3080 (PE 84775)	6,675**	0	0	0	0	0	0	0	0	6,675	(U) 3300	3,400	16,514	0	4,000	0	0	0	0	cont	TBD
	<u>FY 1998</u>	<u>FY 1999</u>	<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>To Compl</u>	<u>Total Cost</u>																																																						
(U) 3010	148	0	0	0	0	0	0	0	cont	TBD																																																						
(U) 3080 - BA 3	2,350	7,890*	9,025	10,624	33,903	42,157	76,033	85,132	cont	TBD																																																						
(U) 3080 (PE 84775)	6,675**	0	0	0	0	0	0	0	0	6,675																																																						
(U) 3300	3,400	16,514	0	4,000	0	0	0	0	cont	TBD																																																						
Project 3587			Page 10 of 14 Pages				Exhibit R-2A (PE 0305114F)																																																									

DATE
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BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
**0305114F Air Traffic Cntrl/Approach/Landing Sys
(ATCALs)**

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)												DATE February 1999				
BUDGET ACTIVITY 7 - Operational System Development						PE NUMBER AND TITLE 0305114F Air Traffic Cntrl/Approach/Landing Sys (ATCALs)						PROJECT 3587				
(U) E. <u>Schedule Profile</u>																
		<u>FY 1998</u>				<u>FY 1999</u>				<u>FY 2000</u>				<u>FY 2001</u>		
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
(U) Acquisition Milestones:																
(U) Contract Milestones																
(U) Contract Award (GCA-2000)																
(U) Delivery of 1 st System																
(U) C-17 Precision Landing System																
Receiver Contract Modification																
(U) MACS AOA																
(U) AFTERPS Contract Award																
(U) MACS Contract Award																
					X											
													X			

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)						DATE February 1999					
BUDGET ACTIVITY				PE NUMBER AND TITLE			PROJECT				
7 - Operational System Development				0305114F Air Traffic Cntrl/Approach/Landing Sys (ATCALs)			3587				
(U) A. <u>Project Cost Breakdown (\$ in Thousands)</u>											
				<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>				
(U)	Primary Hardware Development			3,765	246	3,046	9,700				
(U)	Test and Evaluation Support			95	51	80	80				
(U)	Engineering/Technical Support			190	107	210	200				
(U)	Technology Insertion Studies/integration activities					611	1,530				
(U)	Program Management Support			20	15	40	40				
(U)	Analysis of Alternatives (AOA) (JPALS)			3,720							
(U)	Mobile Approach Control System (MACS) AOA				1,680						
(U)	Air Force Terminal Instrument Procedures Development				1,862	1,309					
(U)	Identified as source of SBIR				145						
(U)	Travel			16	30	50	50				
(U)	Total			7,806	4,136	5,346	11,600				
(U) B. <u>Budget Acquisition History and Planning Information (\$ in Thousands)</u>											
Performing Organizations:											
Contractor or Government Performing <u>Activity</u>	Contract Method/Type or Funding <u>Vehicle</u>	Award or Obligation <u>Date</u>	Performing Activity <u>EAC</u>	Project Office <u>EAC</u>	Total Prior to <u>FY 1998</u>	Budget <u>FY 1998</u>	Budget <u>FY 1999</u>	Budget <u>FY 2000</u>	Budget <u>FY 2001</u>	Budget to Complete	Total Program
Identified as source of SBIR							145				
<u>Product Development Organizations</u>											

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)										DATE	
BUDGET ACTIVITY										PROJECT	
7 - Operational System Development										3587	
PE NUMBER AND TITLE											
0305114F Air Traffic Cntrl/Approach/Landing Sys (ATCALs)											
Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY 1998	Budget FY 1998	Budget FY 1999	Budget FY 2000	Budget FY 2001	Budget to Complete	Total Program
GEC Marconi-Hazeltine	FPIF	Jun 93	19,400	19,400	9,300	865	246	0	0	TBD	TBD
Lear Astronics	FFP	Dec 97	2,900	2,900	0	2,900	0	0	0		
TBD	TBD	TBD	TBD	TBD			3,542	4,966	11,230	Continue	TBD
<u>Support and Management Organizations</u>											
Various	Multiple	Multiple	N/A	N/A		4,041	203	380	370	Continue	TBD
<u>Test and Evaluation Organizations</u>											
FAA Test Center	MIPR	May 97			142	0	0			0	142
(U) B. Budget Acquisition History and Planning Information Continued (\$ in Thousands)											
Government Furnished Property:											
Item Description	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Delivery Date		Total Prior to FY 1998	Budget FY 1998	Budget FY 1999	Budget FY 2000	Budget FY 2001	Budget to Complete	Total Program
<u>Product Development Property:</u> N/A											
<u>Support and Management Property:</u> N/A											
<u>Test and Evaluation Property:</u> N/A											

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)					DATE
					February 1999
BUDGET ACTIVITY	PE NUMBER AND TITLE				PROJECT
7 - Operational System Development	0305114F Air Traffic Cntrl/Approach/Landing Sys (ATCALs)				3587
Identified as a source for SBIR				145	
Subtotal Product Development	9,300	3,765	3,788	4,966	11,230
Subtotal Support and Management		4,041	203	380	370
Subtotal Test and Evaluation			0	0	0
Total Project	9,300	7,806	4,136	5,346	11,595

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