

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 1999
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BUDGET ACTIVITY 4 - Demonstration and Validation	PE NUMBER AND TITLE 0603742F Combat Identification Technology	PROJECT 2597
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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
2597 Noncooperative Identification Subsystems	1,317	6,158	7,393	8,529	9,092	11,598	17,204	20,260	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	0

* Classified information can be provided upon request.

(U) A. Mission Description

(U) U.S. Combat Air Forces have a critical requirement to positively identify enemy, friendly, and neutral aircraft and battlefield equipment. Timely and reliable Combat Identification (CID) reduces fratricide, and enables the battlefield commander to effectively manage and control the battle. Such consequences have fostered the following operational requirements for CID systems:

- High confidence of ID
- High probability of ID (friend, foe, and neutral)
- All weather capable
- Day/night capable
- Worldwide operations capable

The Combat ID Technologies program element develops, demonstrates, and transitions promising target identification technologies to meet the requirements cited above and conducts studies to quantify combat identification requirements. Project 2597 funds the Ultra-High Range Resolution (UHRR) radar program; a Non-Cooperative Target Recognition technique code named HAVE CENTAUR. Project 2597 also develops and demonstrates the most promising air-to-ground combat techniques such as the Enhanced Recognition and Sensing Ladar (ERASER) program which is transitioning from PE 0603203F.

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

- (U) \$ 295 Conduct HAVE CENTAUR algorithm validation and data analysis, continue synthetic target database development and provide test support.
- (U) \$ 205 Air-to-Ground (A/G) CID study and NATO Identification Data Combining Process (IDCP) algorithm work
- (U) \$ 100 AIMS Program Office support of next generation IFF equipment integration with current IFF capabilities.
- (U) \$ 717 CID Integrated Management Team and engineering support for integration and management of Air Force CID programs, conducting related studies/demos to increase warfighter's CID capabilities.
- (U) \$ 1,317 Total

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<p>(U) <u>FY 1999 (\$ in Thousands):</u></p> <ul style="list-style-type: none"> - (U) \$ 2,880 Conduct HAVE CENTAUR algorithm validation, continue synthetic target database development, and provide test support. - (U) \$ 1,600 Continue development and demonstration planning of other promising air-to-ground and air-to-air identification techniques for reduced battlefield fratricide and enhanced mission performance including ERASER program transitioning from PE 63203F. - (U) \$ 480 Air-to-Ground (A/G) CID study. Analyze selected systems to determine mission effectiveness and optimal A/G CID system architecture. - (U) \$ 250 Funds AIMS Program Office support of next generation IFF equipment integration with current IFF capabilities. - (U) \$ 750 CID Integrated Management Team and engineering support for integration and management of Air Force CID programs, conducting related analysis to increase warfighter's CID capabilities. - (U) \$ 198 Identified as a source for SBIR - (U) \$ 6,158 Total <p>(U) <u>FY 2000 (\$ in Thousands):</u></p> <ul style="list-style-type: none"> - (U) \$ 2,765 Conduct HAVE CENTAUR algorithm validation, continue synthetic target database development, and provide test support. - (U) \$ 3,600 Continue development demonstration planning of other promising air-to-ground and air-to-air identification techniques for reduced battlefield fratricide and enhanced mission performance, including ERASER program. - (U) \$ 250 Funds AIMS Program Office support of next generation IFF equipment integration with current IFF capabilities. - (U) \$ 778 CID Integrated Management Team and engineering support for integration and management of Air Force CID programs, conducting related studies/demos to increase warfighter's CID capabilities.. - (U) \$ 7,393 Total <p>(U) <u>FY 2001 (\$ in Thousands):</u></p> <ul style="list-style-type: none"> - (U) \$ 2,800 Conduct HAVE CENTAUR algorithm validation, continue synthetic target database development, and provide test support. - (U) \$ 4,590 Continue development demonstration planning of other promising air-to-ground and air-to-air identification techniques for reduced battlefield fratricide and enhanced mission performance, including ERASER program. - (U) \$ 250 Funds AIMS Program Office support of next generation IFF equipment integration with current IFF capabilities. - (U) \$ 889 CID Integrated Management Team and engineering support for integration and management of Air Force CID programs, conducting related studies/demos to increase warfighter's CID capabilities. - (U) \$ 8,529 Total 		
Project 2597	Page 2 of 7 Pages	Exhibit R-2 (PE 0603742F)

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)					DATE February 1999
BUDGET ACTIVITY	PE NUMBER AND TITLE				PROJECT
4 - Demonstration and Validation	0603742F Combat Identification Technology				2597
(U) B. <u>Budget Activity Justification:</u>					
This program is in Budget Activity 4 - The PE includes advanced technology demonstrations that help transition technologies from laboratory to operational use.					
(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 (FY1999 PB)	1,276	6,177	6,428	6,491	Continue
(U) Appropriated Value	1,395	6,177			
(U) Adjustments to Appropriated Value					
a. Cong Reductions	-91	-19			
b. SBIR	-28				
c. Omnibus or Other Above Threshold Reprogram	-9				
d. Below Threshold Reprogramming	50				
e. Recissions					
(U) Adjustments to Budget Years Since FY 1999 PB			965	2,038	
(U) Current Budget Submit/FY2000 PB	1,317	6,158	7,393	8,529	Continue
FY99: \$198 identified as a source for SBIR					
(U) Significant Program Changes: FY00 through FY05 funding increase to augment Air Force combat identification transition activities.					
(U) D. <u>Other Program Funding Summary (\$ in Thousands)</u> None.					
(U) E. <u>Acquisition Strategy:</u> The HAVE CENTAUR program development was awarded under a competitive bid process. Other combat identification efforts in project 2597 also focus on developing and demonstrating the most promising Air-to-Ground Combat ID techniques and will also be contracted for under a competitive Request For Proposal (RFP) process.					
Project 2597					
Page 3 of 7 Pages					
Exhibit R-2 (PE 0603742F)					

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 1999				
BUDGET ACTIVITY 4 - Demonstration and Validation				PE NUMBER AND TITLE 0603742F Combat Identification Technology				PROJECT 2597			
(U) A. Project Cost Breakdown (\$ in Thousands):											
				<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>				
Data Synthesis, Algorithms, Database Support				215	740	1,250	1,250				
Hardware/Software and Prime Mission Product				0	2,950	4,265	5,263				
TEMS and Travel				752	947	978	1,091				
Program Office Support/ IMT Training/SPO Ops				115	325	475	475				
Analysis/Modeling and Simulation, Plans and Reports				235	855	255	297				
Range Time				0	143	170	153				
Identified as a source for SBIR					198						
Total				1,317	6,158	7,393	8,529				
(U) B. Budget Acquisition History and Planning Information (\$ in Thousands):											
Performing Organizations:											
Contractor or Government	Contract										
Performing <u>Activity</u>	Method/Type	Award or	Performing	Project	Total						
	or Funding	Obligation	Activity	Office	Prior to	Budget	Budget	Budget	Budget	Budget to	Total
	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>	<u>FY 1998</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Complete</u>	<u>Program</u>
Identified as a source for SBIR							198				
Product Development Org.											
Raytheon Co, El Segundo CA	CPFF	Sep 92	38,529	38,529	30,479	0	1,022	865	850	Continue	Cont
Westinghouse Elec Co	CPFF	Aug 93	1,780	1,780	1,780	0	0	0	0	0	1,780
McDonnell Douglas	AF616	Aug 94	3,550	3,550	3,550	0	0	0	0	0	3,550
Veridian (Veda), Dayton, OH	CPFF	Aug 94	12,221	12,221	12,221	0	0	0	0	0	12,221
Veridian (Veda) Dayton, OH	CPFF	Aug 98	13,000	13,000	0	215	800	800	800	Continue	Cont
National Air Intel Center	AF616	Annually	3,329	3,329	3,329	0	0	0	0	0	3,329
Northrop Grumman Corp	CPFF	FY00	TBD	TBD	0	0	300	300	350	Continue	Cont
USAF Wright Laboratory		N/A	4,000	4,000	2,332	50	275	475	500	Continue	Cont
Combat ID IMT Studies/Demos	Various	N/A	TBD	TBD		205	480			Continue	Cont
ERASER-Raytheon, Plano TX	CPFF	Dec 97	5,532	5,532	1	0	500	2,500	3,440	Continue	Cont
Patuxent River Naval Res	MIPR	Annually	TBD	TBD	0	0	100	50	50	Continue	Cont
Raytheon, SADL-JTIDS Gateway	MIPR	Annually	TBD	TBD	0	0	308	300	300	Continue	Cont
Demeco, Inc	CPFF	Aug 94	9,004	9,004	6,604	0	700	650	750	Continue	Cont
Project 2597				Page 5 of 7 Pages				Exhibit R-3 (PE 0603742F)			

UNCLASSIFIED

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BUDGET ACTIVITY 4 - Demonstration and Validation					PE NUMBER AND TITLE 0603742F Combat Identification Technology					PROJECT 2597	
Contractor or Government Performing <u>Activity</u>	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
<u>Support and Management</u>											
<u>Organizations</u>											
Georgia Tech Res Inst. (GTRI)	CPFF	Aug 94	1,978	1,978	1,978	0	0	0	0	0	1,978
USAF Combat ID IMT and Engineering Support	Various	N/A	TBD	TBD		717	750	778	889	Continue	Cont
AIMS Program Office, WRALC	MIPR	Annual	TBD	TBD		100	250	250	250	Continue	Cont

UNCLASSIFIED

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BUDGET ACTIVITY 4 - Demonstration and Validation					PE NUMBER AND TITLE 0603742F Combat Identification Technology					PROJECT 2597		
<u>Test and Evaluation</u>												
<u>Organizations</u>												
3246 th Test Wing, Eglin AFB, FL	Mixed, CPF, MIPRS	N/A	3,769	3,769	2,319	30	475	425	350	Continue	Cont	
544 th Range Group, Nellis AFB, NV												
Government Furnished												
Equipment: None												
Identified as a Source for SBIR												
Subtotal Product Development												
				60,296	470	4,485	5,940	7,040	Continue	Cont		
				1,978	817	1,000	1,028	1,139	Continue	Cont		
				2,319	30	475	425	350	Continue	Cont		
				64,593	1,317	6,158	7,393	8,529	Continue	Cont		

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