	ARMY RDT&E BUDGET ITEM JUS	Fe	February 2004							
	ACTIVITY stem Development and Demonstration		PE NUMBER 0604817			fication				
	COST (In Thousands)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	498	11817	6994	2991	4955	6932	5941	Continuing	Continuing
482 902	GROUND COMBAT IDENTIFICATION INDIVIDUAL COMBAT IDENTIFICATION SYSTEM (ICIDS)	(4983	3504 3 8313		2991 0	4955 0	6932 0	5941 0	Continuing 0	Continuing 19055

A. Mission Description and Budget Item Justification: Survivability is one of the seven tenets of the Army Transformation Strategy and combat identification technologies represent an integral part of that strategy as they work to reduce incidents of fratricide. A key survivability enabler is the rapid, reliable identification of friends, foes, and neutrals. Project 482 supports the transition of ground-to-ground and air-to-ground combat identification technology to the Future Force with potential application as an embedded solution. Project 482 also supports the Combat Identification International Program to develop the North Atlantic Treaty Organization (NATO) interoperable combat identification technology as directed by the Senior National Representatives (Army). Project 902 addresses the individual soldier-to-soldier combat identification mission. Both project lines provide a critical link to ensuring compatibility and interoperability to the Future Combat System.

These systems support the Current/Future Force transition path of the Transformation Campaign Plan (TCP).

FY05 funds will identify technical solutions for reducing the unit procurement costs of Battlefield Target Identification Devices (BTID) for vehicle-to-vehicle fratricide reduction. These funds will also be used for the development of the concept of operations and tactics, techniques and procedures (TTP) for Radio Frequency Tags (RF Tags) to achieve reductions in air-to-ground fratricide.

0604817A Combat Identification Item No. 120 Page 1 of 15

1122

Exhibit R-2

Budget Item Justification

ARMY RDT&E BUDGET ITEM JUSTIFI	CATION (R2 Exhibit)	February 2004
BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604817A - Combat Identification	

B. Program Change Summary	FY 2003	FY 2004	FY 2005
Previous President's Budget (FY 2004)	4985	3541	0
Current Budget (FY 2005 PB)	4983	11817	6994
Total Adjustments	-2	8276	6994
Congressional program reductions		-112	
Congressional rescissions			
Congressional increases		8400	
Reprogrammings	-2	-12	
SBIR/STTR Transfer			
Adjustments to Budget Years			6994

FY2005: The \$6.994M adjustment is for Army and Joint Forces Command (JFCOM) enhancements. It is a combination of \$\$3.994M that will provide for a Battlefield Target Identification cost reduction study and \$3.000M that will fund flight tests and the development of the concept of operations and Tactical Targeting Programs for RF Tags.

0604817A Combat Identification Item No. 120 Page 2 of 15 1123

ARMY RDT&E BUDGET ITEM JUS	Fe								
BUDGET ACTIVITY 5 - System Development and Demonstration		PE NUMBER 0604817			fication			PROJECT 482	
COST (In Thousands)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
482 GROUND COMBAT IDENTIFICATION		0 3504	6994	2991	4955	6932	5941	Continuing	Continuing

<u>A. Mission Description and Budget Item Justification:</u>Ground Combat Identification (CID) is intended to minimize fratricide while maximizing combat effectiveness given rapidly changing and intense tactical situations.

These funds support the transition of Air-to-Ground Combat Identification technology to the Future Force (FF). As the CCID Transition Manager and Co-Chairman of the FIST Working Group, PM TIMS will cost-share the building of prototype Air-to-Ground Combat Identification systems to be evaluated in an operational demonstration and continue to use these prototypes to design vehicle integration solutions.

FY05 funding will identify technical solutions for reducing the unit procurement costs of the Battlefield Combat Identification Devices (BTID) for vehicle-to-vehicle fratricide reduction. These funds will also develop the concept of operations and tactics, techniques, and procedures (TTP) for Radio Frequency Tags (RF Tags) to achieve reductions in air-to-ground fratricide.

This system suports the Current/Future Force transition path of the Transformation Campaign Plan (TCP).

Accomplishments/Planned Program	FY 2003	FY 2004	FY 2005
Design and Develop Potential Air-to-Ground CID Solution	0	2898	0
Identify technical solutions for reducing the unit procurement costs of BTID for vehicle-to-vehicle fratricide reduction.	0	0	3994
Development of the concept of operation and TTPs for RF Tags to achieve reductions in air-to-ground fratricide.	0	0	2500
Conduct fixed and rotary-wing flight tests.	0	0	500
Develop the NATO interoperable CID technology for the International CID program	0	439	0
Undistributed Congressional Adjustments	0	65	0
Small Business Innovative Research/Small Business Technology Transfer Program	0	102	0
Totals	0	3504	6994

ARMY RDT&E BUDGET ITEM	JUSTIFI	CATIC	ON (R-	2A Ex	hibit)		February 2004				
BUDGET ACTIVITY 5 - System Development and Demonstration		BER AND T 17A - C C		entificat	ion	PROJECT 482					
B. Other Program Funding Summary	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost		
OPA2, SSN BA0510, Combat Identification Program	973	0	0	0	0	0	6000	0	12529		
RDT&E, PE 654645 Project 470, Future Combat Systems Progam - SDD	157649	1245118	2734900	3547091	2631654	1266385	326817	35000000	46909614		
WTCV, SSN G86100, Future Combat Systems	0	0	0	0	753000	3185000	3145000	13568000	20651000		

<u>C. Acquisition Strategy:</u> FY04 dollars will fund the FCS Integrated Support Team (FIST) efforts for the FCS Combat ID (CID) Architecture. Sandia National Labs, Intelligence and Information Wargare Director (I2WD) and Program Manager, Tactical Information Systems (PM TIMS) will be executing these efforts.

ARMY RDT&E COST ANALYSIS(R3)

February 2004

BUDGET ACTIVITY **5 - System Development and Demonstration** PE NUMBER AND TITLE 0604817A - Combat Identification PROJECT 482

. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . B-Kit Development	C/CPAF	TRW, CA	69765	0		0		0		0	69765	69765
b . A-Kit Development (Abrams)	CPFF	GDLS, MI	10909	0		0		0		0	10909	10909
c . A- Kit Development (Bradley)	CPFF	UDLP, CA	3364	0		0		0		0	3364	3364
d . A-Kit Development (Various)	Misc.	E&S, TRW, UDLP, AM General, Raytheon.	5836	0		0		0		0	5836	0
e . Air-to-Ground Solution Efforts	MIPR	Sandia National Labs/DOE	0	0		2628	2-3Q	0		0	2628	0
f . Combat Identification International Efforts	TBD	TBD	0	0		445	2-3Q	0		0	445	0
g . BTID Cost Reduction Studies	TBD	TBD	0	0		0		3674	1Q	3022	6696	0
h.RF Tags Program Efforts	TBD	TBD	0	0		0		3000	1Q	0	3000	0
i . SDD for Non-FCS UofA Vehicular CI Solution	TBD	TBD	0	0		0		0		16199	16199	0
j. SBIT/STTR	Various		0	0		102	2Q	0		0	102	0

1126

ARMY RDT&E COST ANALYSIS(R3) February 2004 BUDGET ACTIVITY PE NUMBER AND TITLE PROJECT 5 - System Development and Demonstration 0604817A - Combat Identification 482 I. Product Development Contract Performing Activity & Total FY 2003 FY 2003 FY 2004 FY 2004 FY 2005 FY 2005 Cost To Total Target Method & PYs Cost Cost Award Cost Award Cost Award Complete Cost Value of (continued) Location Date Date Date Contract Type 89874 0 3175 6674 19221 118944 84038 Subtotal: II. Support Cost Contract Performing Activity & Total FY 2003 FY 2003 FY 2004 FY 2004 FY 2005 FY 2005 Cost To Total Target Method & **PYs Cost** Award Complete Cost Value of Location Cost Award Cost Award Cost Type Date Date Date Contract **MIPR** CECOM, Fort 0 0 8390 a . Matrix Support 8240 50 2Q 100 1Q 0 Monmouth NJ b . System Eng/Tech T&M/MIPR COLSA, Falls Church. 7057 0 95 2Q 100 1Q 0 7252 0 Assistance VA; Sytex, Eatontown, NJ c. Test Planning **MIPR** CECOM, Fort 437 0 0 n 437 0 Monmouth NJ d . Technical Support **MIPR** Sandia National O 0 570 570 0 Laboratories/IDA e . SDD Matrix Support **MIPR** TBD 0 0 0 250 250 0 f. SDD Technical Support MIPR ი **TBD** 0 250 250 0 16304 0 145 200 500 17149 0 Subtotal:

ARMY RDT&E COST ANALYSIS(R3) February 2004 BUDGET ACTIVITY PE NUMBER AND TITLE PROJECT 5 - System Development and Demonstration 0604817A - Combat Identification 482 III. Test and Evaluation Contract Performing Activity & Total FY 2003 FY 2003 FY 2004 FY 2004 FY 2005 FY 2005 Cost To Total Target Method & Location PYs Cost Cost Cost Value of Award Award Cost Award Complete Cost Contract Type Date Date Date a. Technical Test, Log **MIPR** ATEC. YPG. AZ 3513 0 0 0 3513 Demo. SCD. IOTE b . Limited User Test **MIPR** ATEC, YPG, AZ 0 0 0 673 0 673 c. ASCIET **MIPR** 0 0 O 0 0 Misc. 6651 6651 d. SDD DT/OT **MIPR TBD** 0 0 0 1000 1000 0 n 0 0 10837 1000 11837 Subtotal: FY 2005 FY 2003 FY 2004 Cost To IV. Management Services Contract Performing Activity & Total FY 2003 FY 2004 FY 2005 Total Target Method & PYs Cost Location Cost Award Cost Award Cost Award Complete Cost Value of Type Date Date Date Contract a . Program Management In-house PM NavSys/TIMS, Ft. 5454 0 120 O 5693 119 1-4Q 1-4Q support Monmouth. NJ b . SDD Program PM NavSys/TIMS, Ft. 0 O 0 500 500 0 In-house Management Support Monmouth, NJ c. Undistributed PM NavSys/TIMS, Ft. 0 0 65 2Q 65 0 Adjustments Congressional Monmouth, NJ Adjustments

	ARM	Y RDT&E CO	SIAN	ALYS	IS(R3)				February 2004				
BUDGET ACTIVITY 5 - System Development and Demonstration					UMBER ANI)4817A -	D TITLE Combat	Identific			PROJEC 482			
IV. Management Services	Contract	Performing Activity &	Total	FY 2003	FY 2003	FY 2004	FY 2004	FY 2005	FY 2005	Cost To	Total	Targe	
(continued)	Method &	Location	PYs Cost	Cost	Award	Cost	Award	Cost	Award	Complete	Cost	Value o	
	Туре				Date		Date		Date			Contrac	
Subtotal:			5454	0		184		120		500	6258		
Project Total Cost:			122469	0		3504		6994		21221	154188	8403	

Schedule	Prof	ile (F	₹4	Ex	hib	it)										Fel	orua	ry 20	004			
BUDGET ACTIVITY 5 - System Development and Demo	nstrat	ion							ND TIT - Cor	LE nbat l	lde	entific	atio	า	48				ROJECT 482			
Event Name		02 3 4	1	FY (03 3 4		FY 04	4 4		Y 05	+	FY 1 2			FY (07 3 4		FY 08			FY 0)9 3 4
Concept & Technology Development				_		Stud	_				†			Г	_		Г	_	_	Π	_	
BTID Cost Reduction Studies									ВТ	ID Cos	st F	Reduct	ion									
RF Tags Program Efforts									RF	Tags												
System Development and Demonstration (SDD)																S	DD					
Developmental Test & Evaluation (DT&E)																			DT	&E		
Initial Operational Test & Evaluation (IOT&E)																				от8	kΕ	
(1) Milestone C: Production Decision																				мѕ	С	
A-Kit Integration																				A-ł	Kit lı	ntgr
Low Rate Initial Production (LRIP)																					LRII	P
(IRTF)																	Sys Sup BTII Ider	T: Fut tems port D: Ba ntifica Rad	Inte Tear attlef ation	graten m field Dev	ed Tarç ice	get
																	Kr:	rau	IU FÎ	eque	#IIC y	,

0604817A (482) Ground Combat Identification

Item No. 120 Page 9 of 15 1130

Schedule Detail (R4a B	Exhibit)					February 2004				
BUDGET ACTIVITY 5 - System Development and Demonstration		ER AND TIT 7A - Co i	on	PF						
Schedule Detail	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009			
Milestone (MS) B for FCS	3Q									
Design and Develop Air-to-Ground CID Solution		1-4Q								
Transition Air-to-Ground solution to FCS/FF programs		4Q								
Execute Combat Identification International program efforts		1-4Q								
Conduct BTID Cost Reduction Studies			1-4Q	1-4Q						
RF Tags Program Efforts			1-4Q							
SDD for the Non-FCS Unit of Action Vehicular Combat Identification Solution				1-4Q	1-4Q					
MS C for the Non-FCS Unit of Action Vehicular Combat Identification Solution						4Q				
Integration Efforts for the Non-FCS Unit of Action Vehicular Combat Identification Solution							1-4Q			
LRIP for the Non-FCS Unit of Action Vehicular Combat Identification Solution							1-4Q			

	ARMY RDT&E BUDGET ITEM JUS	F	February 2004							
	ACTIVITY tem Development and Demonstration		PE NUMBER 0604817			fication			PROJECT 902	
	COST (In Thousands)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
902	INDIVIDUAL COMBAT IDENTIFICATION SYSTEM (ICIDS)	498	8313	0	0	0	0	0	0	19055

A. Mission Description and Budget Item Justification: The identification of friendly forces on future battlefields will be more complex due to the highly mobile, dispersed, non-linear formations found in unconventional warfare. The Individual Combat Identification System (ICIDS) program was terminated by the Army in Fiscal Year 2002, precipitated by the need to fund other high-priority programs supporting Army Transformation. The Army recognizes the need to protect soldiers on the battlefield and has already transferred the funding and technology from the ICIDS program to the Land Warrior program in order to integrate this capability into the Land Warrior System. The ICIDS Milestone Decision Authority and Program Executive Office Soldier approved a transition plan detailing the transfer of technology and PM Land Warrior is using these funds to integrate this capability and the technologies into the Land Warrior System. The existing program was restructured to produce ICIDS/Land Warrior compatible equipment, with technology to support the Objective Force. The system will fulfill requirements in the Operational Requirements Document (ORD) for use by Army, Marine and Special Operations Forces. Combat Identification (CID) is a combination of Target Tidentification (TI), Situation Awareness (SA) and Tactics, Techniques and Procedures. The Integrated Battlespace Combat Situation Awareness System (IBCSAS) is focused on the SA piece of Combat Identification and is an alternative technology approach to providing soldier to soldier combat identification functionality into the Land Warrior System. This is in line with the goal of Network Centric Warfare for the Future Force. By enhancing situation awareness at the soldier level and provding the capability to report position, location and tracking (PLT) information in a Network Centric environment, identification of friendly forces will be enhanced. The Land Warrior System provides PLT and SA via the Navigation Subsystem and Global Positioning System (GPS), and the Communi

Accomplishments/Planned Program	FY 2003	FY 2004	FY 2005
Develop Ultra Wide Band and Geometric Pairing algorithms and software hosted on man-portable platforms for demonstration in a Military Operations on Urbanized Terrain (MOUT) environment.	4983	0	0
Enhance performance, accuracy and range of Ultra Wide Band and Geometric Pairing and bring GP beyond 2 dimensions. Demonstrate enhanced UWB and GP as well as RF-Tag technologies on man-portable platforms in a MOUT environment.	0	8071	0
Small Business Innovative Research/Small Business Technology Transfer Program	0	242	0
Totals	4983	8313	0

Item No. 120 Page 11 of 15

ARMY RDT&E BUDGET ITER	M JUSTIFI	CATIC	ON (R-	2A Ex	hibit)		Febru	ary 2004	
BUDGET ACTIVITY 5 - System Development and Demonstration			BER AND T 17A - CO		entificat	ion		ECT	
B. Other Program Funding Summary	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
OPA2, SSN BA0515 Combat ID/Aiming Light	6811	0	0	0	0	0	0	0	16775
RDTE, 604713A, D667 Land Warrior	53949	81029	91279	104793	115729	128791	86853	Continuing	Continuing
RDTE, 0603001, DJ50, Future Warrior Technology Integration	37499	44476	56676	62579	47880	74806	75220	Continuing	Continuing
OPA3, M80500, Land Warrior	0	1538	8896	89700	193458	157673	149960	Continuing	Continuing
OPA4, MS3610, Land Warrior Initial Spares	0	667	711	851	967	490	128	Continuing	Continuing

C. Acquisition Strategy: The Individual Combat Identification System (ICIDS) program was terminated by the Army in FY 02, precipitated by the need to fund other high priority programs supporting Army Transformation. The Integrated Battlespace Combat Situation Awareness System (IBCSAS) is an alternative technology approach to providing soldier-to-soldier-combat identification functionality into the Land Warrior System.

ARMY RDT&E COST ANALYSIS(R3) February 2004 BUDGET ACTIVITY PE NUMBER AND TITLE **PROJECT** 5 - System Development and Demonstration 0604817A - Combat Identification 902 . Product Development Contract Performing Activity & Total FY 2003 FY 2003 FY 2004 FY 2004 FY 2005 FY 2005 Cost To Total Target Method & Location PYs Cost Cost Award Cost Complete Value of Award Cost Award Cost Contract Type Date Date Date a. Integrated Battlefield C/CPIF General Dynamics, 0 3459 4Q 6742 1Q 10201 10192 Combat Situational Scottsdale, AZ Awareness b . ICIDS (previous years) 2892 0 0 2892 0 c. SBIR/STTR Various 0 0 242 1Q O 242 0 3459 2892 6984 13335 10192 Subtotal: Remarks: Boeing is a sub-contractor effort to General Dynamics. II. Support Cost Performing Activity & Total FY 2003 FY 2003 FY 2004 FY 2004 FY 2005 FY 2005 Cost To Total Contract Target Method & Location PYs Cost Cost Award Cost Award Cost Award Complete Cost Value of Date Date Date Contract Type a . Sys Eng/Tech Assist **MIPR** Various 0 1435 4Q 825 1-2Q 0 2260 925 0 1435 825 2260 925 Subtotal:

ARMY RDT&E COST ANALYSIS(R3)									February 2004					
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604817A - Combat Identification					PROJECT 902				
II. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date		Total Cost	Targe Value o Contrac		
Subtotal:			0	0		0		0		0	0	C		
V. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date		Total Cost	Targe Value o Contrac		
a . Program Management	MIPR/In- house	Fort Monmouth, NJ	0	89	4Q	504	1-2Q	0		0	593	610		
Subtotal:			0	89		504		0		0	593	610		
Captotal.														
Project Total Cost:			2892	4983		8313		0		0	16188	11727		

Schedule Detail (R4a Exhibit)						February 2004					
BUDGET ACTIVITY 5 - System Development and Demonstration		PE NUMBER AND TITLE 0604817A - Combat Identification					PROJECT 902				
Schedule Detail	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009				
IBCSAS Contract Award	4Q										
MOUT Site Survey/Selection of man-portable hardware Phase I Demonstration	4Q	3Q									
Phase II Demonstration		4Q									