

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604817A - Combat Identification						PROJECT 482			
COST (In Thousands)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
482 Ground Combat Identification	2193	39	11362	3404						16998

A. Mission Description and Budget Item Justification: The ultimate goal of Combat Identification (CID) is to maximize overall combat effectiveness by minimizing and mitigating incidents of fratricide and maximizing the situational understanding of the trigger puller. This is achieved by rapid, reliable identification of friends, foes, and neutrals in the Joint battlespace. This program supports the development of mounted ground-to-ground (G-G) CID solutions for the current force, while ensuring interoperability with the Future Combat System (FCS). It also supports CID initiatives approved by the Army Marine Corps Board in March 2006 to narrow existing CID capability gaps. Millimeter Wave (mmW) was selected by the AMCB to be the technology of choice to address Joint Cooperative Target Identification in the direct fires G-G CID Mission Area known as JCTI-G. JCTI-G provides near real-time CID that aids in the prevention of G-G friendly fire incidents and resulting fratricides. In this instance, JCTI-G can be defined as a cooperative (question and answer) technology that uses mmWs in the Ka-Band frequency spectrum to query a battle-space entity of interest and allows the recipient of that query to respond to that same query as a friend. JCTI-G systems generally consist of an interrogation antenna and a separate transponder antenna coupled to a central processing unit or Communications-Electronics Interface Unit (CEIU). Upon triggering the vehicle Laser Range Finder (LRF), the gunner and/or commander of the host vehicle platform automatically initiates the interrogator antenna to query the battle space entity of interest using a Low Probably of Detection and Interception (LPI/LPD) directional mmW signal to determine if the target is a friend or unknown entity. Any vehicle equipped with this technology that is within the specified beam width of the interrogation wave will respond in an omni-directional reply indicating it is a friend. This entire process takes less than 1 second to ensure firing operations are not disrupted. Indications received by the Commander and/or Gunner will be visual in the vehicle sighting unit and/or audible through the vehicle's intercommunications system. The technology will correctly identify a potential target as a friend or unknown from ranges of over 3 miles (>5.5 Km) more than 98% of the time. If tied to an existing US and Coalition Country ratified NATO Standardization Agreement (STANAG 4579), the technology can then be made to be Coalition and Joint Service interoperable.

FY08/09 funds will support the JCTI-G System Development & Demonstration (SDD) Phase and prepare for a Milestone C decision to initiate the Low Rate Initial Production (LRIP) Phase of the program.

<u>Accomplishments/Planned Program:</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Identified technical solutions for reducing the unit procurement costs of BTID for vehicle-to-vehicle fratricide reduction	1643			
Conduct JCTI-G Milestone (MS) B			500	
Initiate JCTI-G System Development and Demonstration (SDD)			7362	
Conduct JCI-G Developmental Test (DT)			2000	
Complete JCTI-G SDD				2404
Prepare for JCTI-G MS C				500
Support internal program management office requirements	550	38	1500	500
Small Business Innovative Research/Small Business Technology Transfer Programs			1	

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Total		2193	39
			11362
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<u>B. Program Change Summary</u>	FY 2006	FY 2007	FY 2008	FY 2009	
Previous President's Budget (FY 2007)	5395	39	20225	21733	
Current BES/President's Budget (FY 2008/2009)	2193	39	11362	3404	
Total Adjustments	-3202		-8863	-18329	
Congressional Program Reductions					
Congressional Recissions					
Congressional Increases					
Reprogrammings	-3202				
SBIR/STTR Transfer					
Adjustments to Budget Years			-8863	-18329	

<u>C. Other Program Funding Summary</u>	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA2, SSN BA0510 Combat Identification Program			4228	31637	54215	101966	104236	97193	Continuing	Continuing

Comment:

D. Acquisition Strategy C. Acquisition Strategy : This will be a joint Army and Marine Corps acquisition beginning with a MS B decision to move forward with an SDD effort for a Cooperative Target Identification (CTI) Device that is NATO Standardization Agreement (STANAG) 4579 compliant for use in joint and coalition operations. Post MS B activities will consist of the solicitation of a competitive cost-plus type contract award to baseline the design consistent with existing Joint Capability Development Documentation (CDD) and to conduct a demonstration phase, resulting in a baseline production configuration item. Following a MS C Decision, Cost As an Independent Variable (CAIV) goals will be utilized to award follow-on options for LRIP quantities.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604817A - Combat Identification									PROJECT 482		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
B-Kit Development	C/CPAF	TRW, CA	69765										69765	69765
A-Kit Development (Abrams)	C/CPFF	GDLS, MI	10909										10909	10909
A-Kit Development (Bradley)	C/CPFF	UDLP, CA	3364										3364	3364
A-Kit Development (Various)	Misc.	E&S, TRW, UDLP, AM General, Raytheon.	5836										5836	5836
Air-to-Ground Efforts	MIPR	I2WD Ft. Monmouth, NJ	2206										2206	
Air-to-Ground Solution Efforts	MIPR	Sandia National Labs/DOE Albuquerque, NM	550										550	
Combat Identification International Efforts	C/CPFF	Raytheon Ft. Wayne, IN	415										415	
BTID Cost Reduction Efforts	FFP	Raytheon Ft. Wayne, IN	3421	1643	3Q								5064	
RF Tags Program Efforts	MIPR	I2WD Ft. Monmouth, NJ	2023											
RF Tag Prototypes	C/CPFF	BAE Nashua, NH	800										800	
JCTI-G MS B	MIPR	PM TIMS/CE LCMC/Support Contractors						500	1Q				500	
JCTI-G SDD	C/CP	TBD						7362	1Q	2404	1Q		9766	
JCTI-G MS C	MIPR	PM TIMS/ CE LCMC/Support Contractors								500	1Q		500	
Subtotal:			99289	1643				7862		2904			109675	89874
II. Support Costs	Contract Method &	Performing Activity & Location	Total PYs	FY 2006 Cost	FY 2006 Award	FY 2007 Cost	FY 2007 Award	FY 2008 Cost	FY 2008 Award	FY 2009 Cost	FY 2009 Award	Cost To Complete	Total Cost	Target Value of

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February 2007

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	Type		Cost		Date		Date		Date		Date	e	Contract	
Matrix Support	MIPR	CE LCMC, Fort Monmouth NJ	8303	82	1-4Q			370	1Q	125	1Q		8880	
System Eng/Tech Assistance	MIPR	COLSA, Falls Church, VA; Tecolote, Crystal City, VA; Sytex, Eatontown, NJ	7242	298	1Q			500	1Q	125	1Q		8165	
Test Planning	MIPR	CERDEC, Fort Monmouth NJ	437					130	1Q				567	
Technical Support	MIPR	Sandia National Laboratories/IDA Albuquerque, NM	570										570	
Subtotal:			16552	380				1000		250			18182	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test, Log Demo, SCD, IOTE	MIPR	ATEC, TBD	3513					2000	1Q				5513	
Limited User Test	MIPR	ATEC, YPG, AZ	673										673	
ASCIET	MIPR	Misc.	6651										6651	
Subtotal:			10837					2000					12837	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management	In-house support	PM NavSys/PM TIMS, Ft. Monmouth, NJ	5995	170	1-4Q	39	1Q	500	1-4Q	250	1-4Q		6954	
Subtotal:			5995	170		39		500		250			6954	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - System Development and Demonstration

0604817A - Combat Identification

482

Project Total Cost:

132673

2193

39

11362

3404

147648

89874

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604817A - Combat Identification

PROJECT
482

Event Name	FY 06				FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
(1) Coalition Combat Identification (CCID) ACTD Military Utility Assessment (MUA)	▲ ₁ CCID ACTD MUA																															
BTID Cost Reduction Studies	BTID UPC Reduction																															
JCTI-G Milestone (MS) B Preparation					MS B Preparation																											
(2) JCTI-G Request for Proposal (RFP), (3) JCTI-G Source Selection Evaluation Board (SSEB)					▲ ₂ ▲ ₃ SSEB RFP Release																											
(4) JCTI-G MS B									▲ ₄ MS B																							
JCTI-G SDD									SDD																							
(5) JCTI-G MS C													▲ ₅ MS C																			
JCTI-G LRIP																	LRIP															
(6) JCTI-G First Unit Equipped (FUE), (7) JCTI-G Initial Operating Capability (IOC)																	▲ ₆ FUE				▲ ₇ IOC											
(8) JCTI-G Full Rate Production (FRP) IPR																					▲ ₈ FRP IPR											
JCTI-G FRP																					JCTI-G FRP											
RBCI Integration									RBCI Integration																							

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604817A - Combat Identification

PROJECT
482

<u>Schedule Detail</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>
Coalition Combat Identification (CCID) ACTD Military Utility Assessment (MUA)	2Q							
BTID Cost Reduction Studies	1Q - 4Q	1Q						
JCTI-G Milestone (MS) B Preparation		1Q - 4Q	1Q					
JCTI-G Request for Proposal (RFP)		3Q						
JCTI-G Source Selection Evaluation Board (SSEB)		4Q						
JCTI-G MS B			1Q					
JCTI-G SDD Contract			1Q					
JCTI-G SDD			1Q - 4Q	1Q - 3Q				
JCTI-G DT			3Q					
JCTI-G MS C				4Q				
JCTI-G LRIP Contract				4Q				
JCTI-G LRIP				4Q	1Q - 4Q	1Q - 2Q		
JCTI-G First Unit Equipped (FUE)					2Q			
JCTI-G Initial Operating Capability (IOC)						2Q		
JCTI-G Full Rate Production (FRP) IPR						2Q		
JCTI-G FRP						2Q - 4Q	1Q - 4Q	1Q - 4Q
RBCI Integration			1Q - 4Q	1Q - 4Q				