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

February 2003

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603790A - NATO Research and Development**	**691**

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
691 NATO RSCH & DEVEL	6202	4559	4779	5263	7612	9330	9521	9696	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program implements the provisions of Title 10 U.S. Code, Section 2350a, Cooperative Research and Development (R&D) Projects: Allied Countries. The objective is to improve, through the application of emerging technologies, the conventional defense capabilities of the United States, the North Atlantic Treaty Organization (NATO), U.S. major non-NATO allies and Friendly Foreign countries. This program element only funds the U.S. equitable share of the cooperative R&D project spent in the U.S. Projects are implemented with the partners through international agreements which define the scope, cost and work sharing arrangements, management, contracting, security, data protection and third party transfers. By technology sharing the program jointly develops equipment with our partners to improve operational efforts by achieving multi-national force compatibility through the use of similar equipment and improved interfaces. Funds support all the R&D costs including the identification of cooperative opportunities and administration of the program. All funds are used to pay for the U.S. work share in the United States at U.S. Government and U.S. contractors' facilities. This program focuses on international cooperative technology demonstration, validation, and interoperability of Army weapon and command, control, communications and information (C3I) systems.

Accomplishments/Planned Program	FY 2002	FY 2003	FY 2004	FY 2005
Multilateral Interoperability Program (MIP) (Partners: Germany, France, United Kingdom, Canada, Italy): Continued integration work from the Command and Control Systems Interoperability Program (C2SIP) into an Advanced Concept Technology Demonstration (ACTD) to achieve NATO levels four (messaging) and five (database) interoperability and also extended the effort into a sustainable program to incorporate lessons learned into national systems.	1000	0	0	0
Simulation and Command and Control (C2) Information System Connectivity Experimentation (SINCE) (Partner: Germany): Continues to define and demonstrate a generic solution for interfacing and networking Brigade/Battalion (BDE/BN) Command and Control Information Systems (C2IS) and applicable Modeling and Simulation (M&S) systems as required to support Coalition Force Collaborative Mission Management Experimentation.	900	800	0	0
Automated Identification Technology for Asset Tracking/Total Asset Visibility (TAV) (Partner: United Kingdom): Asset Tracking Data System allows seamless tracking and identification of US and UK materiel shipment/consignments and significantly enhances US coalition warfare capabilities.	500	850	900	1000

Accomplishments/Planned Program (continued)	FY 2002	FY 2003	FY 2004	FY 2005
Senior National Representatives (Army) (SNR(A))/International Cooperative Opportunities (ICO) Projects (Partners: France, Germany, United Kingdom, Italy): Supports harmonization of programs at various levels; exchanging information, identifying knowledge gaps and conducting feasibility studies to further promote cooperative development; standardizing, fielding and roadmapping various processes; distributing the workload among the different nations. The Mine Protection for Armored Vehicles (MPAV) Working Group, specifically, will explore mine protection techniques and technologies in pursuit of advanced armor opportunities in mine protections, and other applicable cooperative R&D areas over FY 2002 and FY 2003. Another ongoing program is Lightweight Soldier System Working Group which examines digitized soldier power-sharing during coalition operations. The study explores various requirements associated with standardization of soldier communications to define levels of interconnectivity and hardware solutions.	1900	1000	1000	1000
International Agreement Tracking System (IATS)/International Online (IO) Development and Implementation, NATO/International Cooperative R&D Policy Development, and Report to Congress Pursuant to 10 USC 2350a, prepare and provide to USD(A&T) the Army section of the Report to Congress on the International Cooperative Research and Development Program.	502	690	710	750
Technology Research and Development Projects (TRDP) (Partners: United Kingdom, Germany, France, Canada, Australia, Netherlands, Korea, Norway): The scope of this MOU encompasses R&D collaboration on basic, exploratory and advanced technologies, the maturation of which may lead to the development of technologically superior conventional weapon systems.	0	219	669	913
Engineer and Scientist Exchange Program (ESEP) (Partner: Major NATO Allies): Supports and facilitates cooperation by expanding the MOU participants' knowledge of each others' research, development and acquisition process.	500	500	800	800
Low Level Air Defense Interoperability (LLAPI) (Partners: Major NATO Allies): The objective of this program is to successfully demonstrate Command and Control (C2) interoperability among the participant nations' Short Range Air Defense (SHORAD) assets for automated air picture exchange.	400	100	100	100
Combat Identification (Partners: UK, Germany, France and Italy): Combat ID will pursue the extension of tasks required for implementing the associated NATO Standardization Agreement (STANAG 4579), allied participation in Coalition Combat ID Advanced Concept Technology Demonstrator (ACTD), will pursue the NATO Staff Requirement and a STANAG for the Dismounted Soldier ID.	500	100	100	100
Artillery Command and Control Interoperability (ASCA) (Partners: France, Germany, Italy, UK): The Participants in this program will develop an automated software interface between their national field artillery command and control systems. The nations will be able to receive and provide mutual fire support (i.e. cannon and rocket fire) in combined operations more rapidly and with minimal errors.	0	300	300	400

Accomplishments/Planned Program (continued)	FY 2002	FY 2003	FY 2004	FY 2005
Joint Tactical Radio System (JTRS) (Partners: Japan, Sweden, UK): The participants in these programs will develop and implement Software-enabled radios as replacements to current radio systems. The projects shall be focused on maintaining interoperability as the countries pursue their own separate software radio programs. The project agreements (PAs) will include a joint development of software radio specifications, separate development and testing of software waveforms, and joint interoperability testing using the system assets developed as part of the agreements.	0	0	200	200
Totals	6202	4559	4779	5263

B. Program Change Summary	FY 2002	FY 2003	FY 2004	FY 2005
Previous President's Budget (FY 2003)	6375	8773	8912	9110
Current Budget (FY 2004/2005 PB)	6202	4559	4779	5263
Total Adjustments	-173	-4214	-4133	-3847
Congressional program reductions		-4000		
Congressional rescissions		-53		
Congressional increases				
Reprogrammings	4	-30		
SBIR/STTR Transfer	-177	-131		
Adjustments to Budget Years			-4133	-3847

Change Summary Explanation: Funding - FY 2004/2005: Funding realigned to higher priority programs.

C. Other Program Funding Summary: None

D. Acquisition Strategy: All projects are test or technical demonstrations to feed into potential new requirements in support of Army Transformation to the Objective Force or as product improvements to Legacy Force.

ARMY RDT&E COST ANALYSIS(R-3)

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BUDGET ACTIVITY
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I. 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 . Multilateral Interoperability Program (MIP)	CPFF	C3S, CSC Fort Washington, PA	692	0		0		0		0	692	0
b . International Agreement Tracking System (IATS) - Software Development	TBD	JIL Information Systems Vienna, VA	347	477		491		519		0	1834	0
c . Automated Identification Technology for Asset Tracking/Total Asset Visibility (TAV) - Software	TBD	TBD	346	588		623		692		0	2249	0
d . Engineer-Scientist Exchange Program (ESEP)	TBD	TBD	346	346		642		642		0	1976	0
e . Simulation & C2 Information System Connectivity Experimentation (SINCE) - C2 Systems	TBD	TBD	623	554		0		0		0	1177	0
f . Senior National Representatives (Army) (SNR[A])	TBD	TBD	1315	692		692		692		0	3391	0
g . TRDP	TBD	TBD	0	0		0		300		0	300	0
h . Low Level Air Defense Interoperability (LLAPI)			277	15		58		58		0	408	0

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I. Product Development (continued)	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
i . Combat Identification			346	25		25		25		0	421	0
j . Artillery Command and Control Interoperability (ASCA)			0	208		208		277		0	693	0
k . Joint Tactical Radio System (JTRS)			0	0		100		100		0	200	0
Subtotal:			4292	2905		2839		3305		0	13341	0

II. Support Cost	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 . MIP	MIPR	CECOM Ft. Monmouth, NJ	154	0		0		0		0	154	0
b . IATS	MIPR	TBD	77	106		110		116		0	409	0
c . Low Level Air Defense Interoperability (LLAPI)	MIPR		62	43		21		21		0	147	0
d . Automated Identification Technology for Asset Tracking/TAV	MIPR	LOGSA	77	131		139		154		0	501	0

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II. Support Cost (continued)	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
e . ESEP	MIPR	TBD	77	77		104		104		0	362	0
f . Combat Identification	MIPR		77	25		25		25		0	152	0
g . Simulation and C2 Information System Connectivity Experimentation (SINCE)	MIPR	CECOM Ft. Monmouth, NJ	139	123		0		0		0	262	0
h . SNR(A)	MIPR	TBD	293	154		154		154		0	755	0
i . TRDP	MIPR	TBD	0	109		335		300		0	744	0
j . Artillery Command and Control Interoperability (ASCA)			0	46		46		62		0	154	0
k . Joint Tactical Radio System (JTRS)			0	0		50		50		0	100	0
Subtotal:			956	814		984		986		0	3740	0

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III. 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	Cost To Complete	Total Cost	Target Value of Contract
a . MIP	MIPR	CECOM Ft Monmouth, NJ	102	0		0		0		0	102	0
b . IATS	MIPR	TBD	51	71		73		77		0	272	0
c . Low Level Air Defense Interoperability (LLAPI)	MIPR	TBD	41	12		6		6		0	65	0
d . Automated Identification Technology for Asset Tracking/TAV	MIPR	AMSAA, Aberdeen Proving Ground, NJ	51	87		92		103		0	333	0
e . ESEP	MIPR	TBD	51	51		53		53		0	208	0
f . Combat Identification	MIPR		51	25		25		25		0	126	0
g . Simulation and C2 Information System Connectivity Experimentation (SINCE)	MIPR	CECOM Ft Monmouth, NJ	92	82		0		0		0	174	0
h . SNR(A)	MIPR	TBD	195	103		103		103		0	504	0
i . TRDP	MIPR	TBD	0	0		0		0		0	0	0
j . ASCA			0	31		31		41		0	103	0
k . Joint Tactical Radio System (JTRS)			0	0		25		25		0	50	0

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III. Test and Evaluation (continued)	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
Subtotal:			634	462		408		433		0	1937	0

IV. 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	Cost To Complete	Total Cost	Target Value of Contract
a . MIP	MIPR	PEO C3S, Ft. Monmouth, NJ	51	0		0		0		0	51	0
b . IATS	MIPR	TBD	26	35		36		38		0	135	0
c . Low Level Air Defense Interoperability (LLAPI)	MIPR		21	31		15		15		0	82	0
d . Automated Identification Technology for Asset Tracking/TAV	MIPR	LOGSA	26	44		46		51		0	167	0
e . ESEP	MIPR	TBD	26	26		1		1		0	54	0
f . Combat Identification	MIPR		26	25		25		25		0	101	0
g . Simulation and C2 Information System Connectivity Experimentation (SINCE)	MIPR	CECOM, Ft. Monmouth, NJ	46	41		0		0		0	87	0

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IV. Management Services (continued)	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
h . SNR(A)	MIPR	TBD	98	51		51		51		0	251	0
i . TRDP	MIPR	TBD	0	110		334		313		0	757	0
j . Artillery Command and Control Interoperability (ASCA)			0	15		15		20		0	50	0
k . JTRS			0	0		25		25		0	50	0
Subtotal:			320	378		548		539		0	1785	0
Project Total Cost:			6202	4559		4779		5263		0	20803	0

Schedule Profile Detail (R-4a Exhibit)

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Schedule Detail	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Multilateral Interoperability Program (MIP)								
- Complete C2SIP ATCD	3Q							
- Complete Integration into MCS		3Q						
- Complete System Test and Report	4Q							
SINCE - C2 Systems								
- Interface/Network Definition	4Q							
- Complete Modeling and Simulation		4Q						
- Complete Demonstration			4Q					
- Final Report				2Q				
Total Asset Visibility (TAV)								
- Conclude International Agreement	3Q							
- Complete Requirements Definition		4Q						
- Develop Asset Tracking Architecture			1-4Q					
- Joint Testing and Demonstration				1-4Q				
- Complete Final Report					2Q			
Senior National Representatives (Army)								
- Mine Protection For Armored Vehicles (MPAV) Feasibility Study	2-4Q	1-4Q						
- Identify International Cooperative Opportunities	1-4Q	1-4Q	1-4Q	1-4Q				
International Agreement Tracking System (IATS) / International On Line (IOL)								
- Initial Operational Capability of IOL	3Q							
- Incorporate Tier II and Tier III IOL Requirements	3-4Q	1-4Q						
Engineer and Scientist Exchange Program (ESEP)								
- Identify and Complete ESEP Assignments	1-4Q	1-4Q						
Technology Research and Development Projects (TRDP)								
- Identify and Conclude TRDP Project Agreements	1-4Q	1-4Q						