ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2006

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

COST (In Thousands)	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
691 NATO RSCH & DEVEL	4598	4832	4946	5136	5235	5330	5428	0	42674

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 and our cooperative partners, including the North Atlantic Treaty Organization (NATO), U.S. major non-NATO allies and Friendly Foreign countries. Through technology sharing and joint equipment development these projects help reduce U.S. acquisition costs and leverage important technologies for the Army Transformation and the development of the Future Combat system. Cooperative efforts also improve multinational force compatibility with potential coalition partners through the development and use of similar equipment and improved interfaces. The program focuses specifically on international cooperative technology demonstration, validation, and interoperability of Army weapon and command, control, communications and information (C3I) systems. Projects are implemented through international agreements with foreign partners that define scope, cost and work sharing arrangements, management, contracting, security, data protection and third party transfers. Funds are used to pay for only the U.S. work share that occurs in the United States at U.S. Government and U.S. contractors' facilities.

Accomplishments/Planned Program	FY 2005	FY 2006	FY 2007
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 extend the effort into a sustainable program to incorporate lessons learned into national systems.	450	600	640
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.	740	802	808
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.	200	200	200
Network Enabled Shared Awareness (NESA) (Potential Partners: United Kingdom, France, Italy, Sweden, Spain and Germany) NESA would develop concepts, methods and standards that will make better use of existing information; share data in an interoperable environment; leverage national operational picture capabilities; and enable progressive development of interoperability of data, databases, applications and systems networks. NESA will show that information sharing can be accomplished through developing an architecture and interoperability framework (horizontal and vertical) needed to meet coalition operations and by rapid prototyping and demonstrations of Net-Centric warfighter services. This project would produce a National Operational Concepts (OPCON) and CONOPS (BDE and below). The end result would be integration of national C2 and Net-Centric Systems of Record (SORs)into an NCES environment. Included would be a report on NESA military operational utility. This would provide architectures and seed funding to SORs to accelerate migration. Benefits would include lessons learned on NESA implications for coalition operations.	460	500	506
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	100	100	100

Concept Technology Demonstrator (ACTD), will pursue the NATO Staff Requirement and a STANAG for the Dismounted Soldier ID.			
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.	400	0	0
Senior National Representatives (Army) (SNR-(A)) Projects (Partners: France, Germany, United Kingdom and 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 Military Operation in Urban Terrain (MOUT) study will benefit the Five Power nations as they identify requirements and materiel solutions for Multinational forces in and around urban terrain. The Sturctured Technology Demo (STD) hosted by the U.S. reps to Land Group 6, NATO Army Armaments Group (NAAG), will provide and opportunity to observe and demonstrate the current and future capability of participaing NATO nations with a view to assisting future operational and materiel interoperability.	995	1100	1100
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 Land Warfare Concepts and Technologies that are focused on Future Combat System enabling technologies, the maturation of which may lead to the development of technologically superior conventional weapon systems.	780	930	952
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.	300	300	320
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.	173	300	320
Total	4598	4832	4946

B. Program Change Summary	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2006)	4600	4902	4994
Current BES/President's Budget (FY 2007)	4598	4832	4946
Total Adjustments	-2	-70	-48
Congressional Program Reductions		-21	
Congressional Rescissions	-2	-49	
Congressional Increases			
Reprogrammings			
SBIR/STTR Transfer			
Adjustments to Budget Years			-48

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

ARMY RDT&E COST ANALYSIS (R3)

February 2006

BUDGET ACTIVITY: **4 - Advanced Component Development and Prototypes**

PE NUMBER AND TITLE: **0603790A - NATO Research and Development**

PROJECT: **691**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Multilateral Interoperability Program (MIP)	CPFF	C3S, CSC Fort Washington, PA	861	100	1Q	150	1Q	150	1Q	0	1261	0
International Agreement Tracking System (IATS) - Software Development	CPFF	JIL Information Systems Vienna, VA	1311	520	2Q	552	2Q	560	2Q	0	2943	0
Low Level Air Defense Interoperability (LLAPI)	MIPR	AMCOM, Redstone Ars, AL	437	115	1Q	115	1Q	115	1Q	0	782	0
Shared Tactical Ground Picture (STGP)/Single Integrated Ground Picture (SIGP)	MIPR	CECOM, Ft. Monmouth, VA	69	346	2Q	346	2Q	346	2Q	0	1107	0
Combat Identification	MIPR	CECOM, Ft. Monmouth, VA	787	25	1Q	25	1Q	25	1Q	0	862	0
Simulation & C2 Information System Connectivity Experimentation (SINCE) - C2 Systems	MIPR	CECOM, Ft. Monmouth, VA	1417	140	1Q	0	1Q	0		0	1557	0
Senior National Representatives (Army) (SNR[A])	TBD	TBD	2997	690	2Q	761	2Q	761	2Q	0	0	0
TRDP	TBD	TBD	0	312	2Q	300	2Q	300	2Q	0	0	0
Artillery Command and Control Interoperability (ASCA)	MIPR	CECOM, Ft. Monmouth, NJ	344	208	1Q	208	1Q	208	1Q	0	968	0
Joint Tactical Radio System (JTRS)	MIPR	PM JTRS, Rosslyn, VA	50	100	1Q	150	1Q	150	1Q	0	450	0
Subtotal:			8273	2556		2607		2615		0	9930	0

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
MIP	MIPR	CECOM Ft. Monmouth, NJ	208	100	1Q	150	1Q	190	1Q	0	648	0

IATS	MIPR	RDECOM, Ft. Belvoir, VA	300	116	1Q	126	1Q	125	1Q	0	667	0
Low Level Air Defense Interoperability (LLAPI)	MIPR	AMCOM, Redstone Ars, AL	244	41	1Q	41	1Q	41	1Q	0	367	0
Shared Tactical Ground Picture (STGP)/Single Integrated Ground Picture (SIGP)	MIPR	CECOM, Ft. Monmouth, VA	15	77	1Q	77	1Q	83	1-3Q	0	252	0
Combat Identification	MIPR	CECOM Ft. Monmouth, NJ	439	25	1Q	25	1Q	25	1Q	0	514	0
Simulation and C2 Information System Connectivity Experimentation (SINCE)	MIPR	CECOM Ft. Monmouth, NJ	384	100	1Q	0	1Q	0		0	484	0
SNR(A)	MIPR	TBD	642	154	1Q	169	1Q	169	1Q	0	1134	0
TRDP	MIPR	TBD	0	313	1Q	300	1Q	309	1Q	0	0	0
Artillery Command and Control Interoperability (ASCA)	MIPR	CECOM Ft. Monmouth, NJ	73	46	1Q	46	1Q	66	1Q	0	231	0
Joint Tactical Radio System (JTRS)	MIPR	PM JTRS, Rosslyn, VA	25	50	1Q	75	1Q	95	1Q	0	245	0
Subtotal:			2330	1022		1009		1103		0	4542	0

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
MIP	MIPR	CECOM Ft Monmouth, NJ	147	100	1Q	150	1Q	150	1Q	0	547	0
IATS	MIPR	RDECOM, Ft. Belvoir, VA	201	77	1Q	84	1Q	83	1Q	0	445	0
Low Level Air Defense Interoperability (LLAPI)	MIPR	AMCOM, Redstone Ars, AL	99	13	1Q	13	1Q	13	1Q	0	138	0
Shared Tactical Ground Picture (STGP)/Single Integrated Ground Picture (SIGP)	MIPR	AMSAA, Aberdeen Proving Ground, NJ	10	20	1Q	52	1Q	52	1Q	0	134	0
Combat Identification	MIPR	CECOM Ft Monmouth,	419	25		25	1Q	25	1Q	0	494	0

		NJ										
Simulation and C2 Information System Connectivity Experimentation (SINCE)	MIPR	CECOM Ft Monmouth, NJ	291	100	1Q	0		0		0	391	0
SNR(A)	MIPR	TBD	405	103	1Q	113	1Q	113	1-2Q	0	734	0
TRDP	MIPR	TBD	0	0		0		0		0	0	0
ASCA	MIPR	CECOM Ft Monmouth, NJ	50	31	1Q	31	1Q	31	1Q	0	143	0
Joint Tactical Radio System (JTRS)	MIPR	CECOM Ft Monmouth, NJ	12	10	1Q	38	1Q	38	1Q	0	98	0
Subtotal:			1634	479		506		505		0	3124	0

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
MIP	MIPR	PEO C3S, Ft. Monmouth, NJ	86	100	1Q	150	1Q	150	1Q	0	486	0
IATS	MIPR	RDECOM, Ft. Belvoir, VA	98	37	1Q	41	1Q	41	1Q	0	217	0
Low Level Air Defense Interoperability (LLAPI)	MIPR	AMCOM, Redstone, Ars, AL	143	31	1Q	31	1Q	31	1Q	0	236	0
Shared Tactical Ground Picture (STGP)/Single Integrated Ground Picture (SIGP)	MIPR	CECOM, Ft. Monmouth, VA	5	17	1Q	25	1Q	25	1Q	0	72	0
Combat Identification	MIPR	CECOM, Ft. Monmouth, NJ	357	25	1Q	25	1Q	25	1Q	0	432	0
Simulation and C2 Information System Connectivity Experimentation (SINCE)	MIPR	CECOM, Ft. Monmouth, NJ	192	100	1Q	0	1Q	0	1Q	0	292	0
SNR(A)	MIPR	TBD	217	46	1Q	56	1Q	56	1Q	0	375	0
TRDP	MIPR	TBD	0	155	1Q	329	1Q	342	1Q	0	0	0
Artillery Command and Control	MIPR	CECOM, Ft.	24	15	1Q	15	1Q	15	1Q	0	69	0

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February 2006

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4 - Advanced Component Development and Prototypes	**0603790A - NATO Research and Development**	**691**

Interoperability (ASCA)		Monmouth, NJ										
JTRS	MIPR	PM JTRS, Rosslyn, VA	12	15		38		38		0	103	0
Subtotal:			1134	541		710		723		0	2282	0
Project Total Cost:			**13371**	**4598**		**4832**		**4946**		**0**	**19878**	**0**