Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Army

**DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

2040: Research, Development, Test & Evaluation, Army

PE 0603790A: NATO Research and Development

BA 4: Advanced Component Development & Prototypes (ACD&P)

COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	4.848	5.060	4.765	-	4.765	4.908	5.002	5.161	5.001	Continuing	Continuing
691: NATO RSCH & DEVEL	4.848	5.060	4.765	-	4.765	4.908	5.002	5.161	5.001	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 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, including the NATO Defense Against Terrorism initiatives. 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.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	5.022	5.060	5.129	-	5.129
Current President's Budget	4.848	5.060	4.765	-	4.765
Total Adjustments	-0.174	-	-0.364	-	-0.364
<ul> <li>Congressional General Reductions</li> </ul>		-			
<ul> <li>Congressional Directed Reductions</li> </ul>		-			
<ul> <li>Congressional Rescissions</li> </ul>	-	-			
<ul> <li>Congressional Adds</li> </ul>		-			
<ul> <li>Congressional Directed Transfers</li> </ul>		-			
<ul> <li>Reprogrammings</li> </ul>	-	-			
SBIR/STTR Transfer	-0.174	-			
Adjustments to Budget Years	-	-	-0.364	-	-0.364

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Exhibit R-2A, RDT&E Project Just	ification: PE	3 2012 Army							DATE: Febi	uary 2011	
	APPROPRIATION/BUDGET ACTIVITY 1040: Research, Development, Test & Evaluation, Army				R-1 ITEM NOMENCLATUREPROJECTPE 0603790A: NATO Research and691: NATO RSCH & DEVEL			VEL			
BA 4: Advanced Component Develo	pment & Pro	totypes (AC	D&P)	Developme	nt						
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
691: NATO RSCH & DEVEL	4.848	5.060	4.765	-	4.765	4.908	5.002	5.161	5.001	Continuing	Continuing
Quantity of RDT&E Articles											

#### A. Mission Description and Budget Item Justification

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

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, including the NATO Defense Against Terrorism initiatives. 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.

FY 2010

FY 2011

FY 2012

<b>U</b>			
Title: Scientific and Technology Enterprise Management	0.825	0.840	0.860
Articles:	0	0	
<b>Description:</b> Scientific and Technology Enterprise Management (STEM)/International Online (IOL) Development and Implementation NATO/International Cooperative R&D (AR 70-41) and International Acquisition (AR 70-1, AR 70-3)			
FY 2010 Accomplishments:  The goal of this program is to expand worldwide allied standardization and interoperability through cooperative research and development (R&D) and technology sharing per SECDEF guidance and especially in support of the U.S. Army. This program partially funds the travel costs and administrative support (studies, analysis, interpretation, equipment, etc.) required to participate in internationally, such as the North Atlantic Treaty Organization (NATO) Army Armaments Group (NAAG), Defense Against Terrorism (DAT) and to pursue new cooperative R&D initiatives and international cooperative agreements such as memoranda of understanding. This program also includes: the United States' share of costs of the NATO Civil Budget, Chapter IX, which funds the NATO Industrial Advisory Group (NIAG) and the Special Fund for Cooperative Planning (U. S. Army is Executive Agent for this NATO bill); partially funds the Five Power Senior National Representatives, Army [SNR (A)], the Technical Cooperative Program, Bilateral SNR(A)s, and Army armaments working groups with many nations.			
FY 2011 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: Fe	bruary 2011	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603790A: NATO Research and Development	<b>PROJEC1</b> 691: <i>NAT</i> 0	ORSCH & D	PEVEL	
B. Accomplishments/Planned Programs (\$ in Millions, Article Qua	antities in Each)		FY 2010	FY 2011	FY 2012
The goal of this program is to expand worldwide allied standardization development (R&D) and technology sharing per SECDEF guidance ar funds the travel costs and administrative support (studies, analysis, intinternationally, such as the North Atlantic Treaty Organization (NATO) Terrorism (DAT) and to pursue new cooperative R&D initiatives and in understanding. This program also includes: the United States' share of the NATO Industrial Advisory Group (NIAG) and the Special Fund for NATO bill); partially funds the Five Power Senior National Representational Bilateral SNR(A)s, and Army armaments working groups with many national Representations.	nd especially in support of the U.S. Army. This proterpretation, equipment, etc.) required to participal Army Armaments Group (NAAG), Defense Againsternational cooperative agreements such as mental costs of the NATO Civil Budget, Chapter IX, wo Cooperative Planning (U.S. Army is Executive Actives, Army [SNR (A)], the Technical Cooperative	ogram ate in nst moranda of hich funds gent for this			
FY 2012 Plans: The goal of this program is to expand worldwide allied standardization development (R&D) and technology sharing per SECDEF guidance ar funds the travel costs and administrative support (studies, analysis, intinternationally, such as the North Atlantic Treaty Organization (NATO) Terrorism (DAT) and to pursue new cooperative R&D initiatives and in understanding. This program also includes: the United States' share of the NATO Industrial Advisory Group (NIAG) and the Special Fund for NATO bill); partially funds the Five Power Senior National Representations.	nd especially in support of the U.S. Army. This proterpretation, equipment, etc.) required to participal Army Armaments Group (NAAG), Defense Againsternational cooperative agreements such as mental costs of the NATO Civil Budget, Chapter IX, wo Cooperative Planning (U.S. Army is Executive Actives, Army [SNR (A)], the Technical Cooperative	ogram ate in nst moranda of hich funds gent for this			
Title: Multilateral Interoperability Program		Articles:	0.686	0.667 0	0.67
<b>Description:</b> Multilateral Interoperability Program (MIP) (Partners: Ge integration work from the Command and Control Systems Interoperability Technology Demonstration (ACTD) to achieve NATO levels four (messes the effort into a sustainable program to incorporate lessons learned into	ility Program (C2SIP) into an Advanced Concept saging) and five (database) interoperability and a				
FY 2010 Accomplishments: Continued integration work from the Command and Control Systems In Technology Demonstration (ACTD) to achieve NATO levels four (mess the effort into a sustainable program to incorporate lessons learned integrated in FY 2011 Plans:	saging) and five (database) interoperability and				

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: Fe	bruary 2011	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603790A: NATO Research and Development	<b>PROJEC</b> 691: <i>NA</i> 7	T ORSCH & D	DEVEL	
B. Accomplishments/Planned Programs (\$ in Millions, Article Qu	antities in Each)		FY 2010	FY 2011	FY 2012
Continued integration work from the Command and Control Systems Technology Demonstration (ACTD) to achieve NATO levels four (mest the effort into a sustainable program to incorporate lessons learned in	ssaging) and five (database) interoperability and				
FY 2012 Plans: Continued integration work from the Command and Control Systems Technology Demonstration (ACTD) to achieve NATO levels four (mesting the effort into a sustainable program to incorporate lessons learned in	ssaging) and five (database) interoperability and				
Title: Low Level Air Defense Interoperability		Articles:	0.220 0	0.225 0	0.209
<b>Description:</b> Low Level Air Defense Interoperability (LLAPI) (Partner successfully demonstrate Command and Control (C2) interoperability (shared) assets for automated air picture exchange.					
FY 2010 Accomplishments:  Major NATO Allies: The objective of this program is to successfully d among the participant nations' Short Range Air Defense (shared) ass	• • • • • • • • • • • • • • • • • • • •	erability			
FY 2011 Plans: The objective of this program is to successfully demonstrate Commar nations' Short Range Air Defense (shared) assets for automated air p		earticipant			
FY 2012 Plans: The objective of this program is to successfully demonstrate Commar nations' Short Range Air Defense (shared) assets for automated air p		participant			
Title: Multi-National Network Enabled Capabilities		Articles:	0.547 0	0.540 0	0.550
<b>Description:</b> Multi-National Network Enabled Capabilities (MNNEC) Intelligence Surveillnace and Reconnaissance (C4ISR)(Potential Part NATO Allies) MNNEC would foucs on developing a single solutions s and leverage existing interoperability standards developed by NATO Power Net Centrick PA. A single solution standard will include commo better use of exising information, shared data, leverage national operations.	ners: United Kingdom, France, Italy, Germany a tandard avoiding development of multiple uniqu as well as other international forums such as the on doctrine, technical and procedural specificati	and major e solutions e Five ons to make			

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: Fe	bruary 2011	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603790A: NATO Research and Development	<b>PROJEC</b> 691: <i>NA</i>	TO RSCH & D		
B. Accomplishments/Planned Programs (\$ in Millions, Article Qu	antities in Each)		FY 2010	FY 2011	FY 2012
interoperability of data, databases, applications, security domains and interoperability of information systems; it is the complete networking on building Net-Centric interoperability among coalition tactical land of the Brigade and Below level, but not excluding using the services profocus, endeavoring to define migration strategies for Net-Centric capa to determine the time-phased implementations of a Multi-National Ne integration of national C2/C4ISR systems into an NCES environment and the 5 Powers Net Centric Project Agreement.	of information systems with sensors and shoote components operating in a Joint Environment, f ovided at higher echelons. The MNNEC has a f abilities in the 2010-2025 timeframe with part o twork Enabled Capability. The end results wou	ers focusing ocused at future force f the work ld be an			
Related to Command, Control, Communications, Computers, Intellige Partners: United Kingdom, France, Italy, Germany and major NATO A standard avoiding development of multiple unique solutions and lever NATO as well as other international forums such as the Five Power N common doctrine, technical and procedural specifications to make be national operating picture capabilities and enable the development of domains and national networks architectures. The MNNEC is more the networking of information systems with sensors and shooters focusin tactical land components operating in a Joint Environment, focused at the services provided at higher echelons. The MNNEC has a future for Net-Centric capabilities in the 2010-2025 timeframe with part of the work Multi-National Network Enabled Capability. The end results would be environment to include the NATO Network Enabled Capabilities (NNE)	Allies) MNNEC would foucs on developing a sir rage existing interoperability standards developed to Centrick PA. A single solution standard will etter use of exising information, shared data, less interoperability of data, databases, application an interoperability of information systems; it is gon building Net-Centric interoperability amon at the Brigade and Below level, but not excluding orce focus, endeavoring to define migration strayork to determine the time-phased implementation integration of national C2/C4ISR systems in	ngle solutions led by include verage s, security the complete g coalition ng using lategies for ions of a nto an NCES			
FY 2011 Plans: Command, Control, Communications, Computers, Intelligence Survei United Kingdom, France, Italy, Germany and major NATO Allies) MN avoiding development of multiple unique solutions and leverage exist as other international forums such as the Five Power Net Centrick PA	NEC would foucs on developing a single solution interoperability standards developed by NA	ons standard TO as well			

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technical and procedural specifications to make better use of exising information, shared data, leverage national operating picture capabilities and enable the development of interoperability of data, databases, applications, security domains and national networks architectures. The MNNEC is more than interoperability of information systems; it is the complete networking of information systems with sensors and shooters focusing on building Net-Centric interoperability among coalition tactical land components operating in a Joint Environment, focused at the Brigade and Below level, but not excluding using the services

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: Fel	bruary 2011	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603790A: NATO Research and Development	PROJECT 691: NATO RSCH & DEVEL			
B. Accomplishments/Planned Programs (\$ in Millions, Article Qu	uantities in Each)		FY 2010	FY 2011	FY 2012
provided at higher echelons. The MNNEC has a future force focus, ecapabilities in the 2010-2025 timeframe with part of the work to deter Network Enabled Capability. The end results would be an integration include the NATO Network Enabled Capabilities (NNEC) and the 5 F	rmine the time-phased implementations of a Multi-Nan of national C2/C4ISR systems into an NCES environ	ational			
FY 2012 Plans:  Multi-National Network Enabled Capabilities (MNNEC) related Common Surveillnace and Reconnaissance (C4ISR)(Potential Partners: Unite MNNEC would fouce on developing a single solutions standard avoid existing interoperability standards developed by NATO as well as oth PA. A single solution standard will include common doctrine, technic information, shared data, leverage national operating picture capabilidatabases, applications, security domains and national networks are information systems; it is the complete networking of information systemic interoperability among coalition tactical land components operation define migration strategies for Net-Centric capabilities in the 2010-phased implementations of a Multi-National Network Enabled Capabilities into an NCES environment to include the NATO Network Enabled Capabilities in the 2010-phased implementations of a multi-National Network Enabled Capabilities in the 2010-phased implementations of a multi-National Network Enabled Capabilities in the 2010-phased implementations of a multi-National Network Enabled Capabilities in the 2010-phased implementations of a multi-National Network Enabled Capabilities in the 2010-phased implementations of a multi-National Network Enabled Capabilities in the 2010-phased implementations of a multi-National Network Enabled Capabilities in the 2010-phased implementations of a multi-National Network Enabled Capabilities in the 2010-phased implementations of a multi-National Network Enabled Capabilities in the 2010-phased implementations of a multi-National Network Enabled Capabilities in the 2010-phased implementations of a multi-National Network Enabled Capabilities in the 2010-phased implementations of a multi-National Network Enabled Capabilities in the 2010-phased implementations of a multi-National Network Enabled Capabilities in the 2010-phased implementations of a multi-National Network Enabled Capabilities in the 2010-phased implementations of a multi-National Network Enabled Capabilities in the 2010-phased im	ed Kingdom, France, Italy, Germany and major NATO ding development of multiple unique solutions and lether international forums such as the Five Power Nether all and procedural specifications to make better use dities and enable the development of interoperability exhitectures. The MNNEC is more than interoperability externs with sensors and shooters focusing on building erating in a Joint Environment, focused at the Brigate echelons. The MNNEC has a future force focus, ending 2025 timeframe with part of the work to determine the bility. The end results would be an integration of national difference in the surface of the surface	O Allies) Everage Centrick of exising of data, of g Net- de and leavoring ne time-			
Title: Combat Identification		Articles:	0.050 0	0.050 0	0.050
<b>Description:</b> Combat Identification (Partners: UK, Germany, France required for implementing the associated NATO Standardization Agr Combat ID Advanced Concept Technology Demonstrator (ACTD), w Dismounted Soldier ID.	reement (STANAG 4579), allied participation in Coal	ition			
FY 2010 Accomplishments:  Combat ID will pursue the extension of tasks required for implementi (STANAG 4579), allied participation in Coalition Combat ID Advance					
NATO Staff Requirement and a STANAG for the Dismounted Soldie					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: Fe	bruary 2011	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603790A: NATO Research and Development	<b>PROJEC</b> 691: <i>NAT</i>	O RSCH & DEVEL		
B. Accomplishments/Planned Programs (\$ in Millions, Article Qu	antities in Each)		FY 2010	FY 2011	FY 2012
Combat Identification (Partners: UK, Germany, France and Italy): Co implementing the associated NATO Standardization Agreement (STA ID Advanced Concept Technology Demonstrator (ACTD), will pursue Dismounted Soldier ID.	NAG 4579), allied participation in Coalition Cor	nbat			
FY 2012 Plans: CI (Partners: UK, Germany, France and Italy): Combat ID will pursue associated NATO Standardization Agreement (STANAG 4579), allied Technology Demonstrator (ACTD), will pursue the NATO Staff Requirement.	d participation in Coalition Combat ID Advanced	Concept			
Title: Technology Research and Development Projects		Articles:	0.932 0	0.980 0	0.809
<b>Description:</b> Technology Research and Development Projects (TRD Australia, Netherlands, Korea, Norway): The scope of this MOU enco advanced Land Warfare Concepts and Technologies that are focused maturation of which may lead to the development of technologically s	ompasses R&D collaboration on basic, explorated on Future Combat System enabling technolog	ory and			
FY 2010 Accomplishments: Technology Research and Development Projects (TRDP) (Partners: Netherlands, Korea, Norway): The scope of this MOU encompasses Warfare Concepts and Technologies that are focused on Future Commay lead to the development of technologically superior conventional	R&D collaboration on basic, exploratory and ad abat System enabling technologies, the maturati	vanced Land			
FY 2011 Plans: Technology Research and Development Projects Partners: United Kirkorea, Norway): The scope of this MOU encompasses R&D collabora Concepts and Technologies that are focused on Future Combat Systems to the development of technologically superior conventional weapons	ation on basic, exploratory and advanced Land em enabling technologies, the maturation of wh	Warfare			
FY 2012 Plans: Technology Research and Development Projects (TRDP) (United Kin Korea, Norway): The scope of this MOU encompasses R&D collabora Concepts and Technologies that are focused on Future Combat Systems to the development of technologically superior conventional weapons	ation on basic, exploratory and advanced Land em enabling technologies, the maturation of wh	Warfare			
Title: Senior National Representatives (Army) (SNR-(A))			0.738	0.873	0.725

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: Feb	ruary 2011	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603790A: NATO Research and Development	<b>PROJEC</b> 691: <i>NAT</i> 6	C RSCH & D	EVEL	
B. Accomplishments/Planned Programs (\$ in Millions, Article Qua	intities in Each)		FY 2010	FY 2011	FY 2012
		Articles:	0	0	
<b>Description:</b> Senior National Representatives (Army) (SNR-(A)) Projet Italy): Supports harmonization of programs at various levels: exchanging feasibility studies to further promote cooperative development; standard distributing the workload among the different nations. Technology Dem NATO Army Armaments Group (NAAG), will provide and opportunity to of participating NATO nations with a view to assisting future operations studies, analysis and technology demonstrations.	ng information, identifying knowledge gaps and c rdizing, fielding and roadmapping various process nonstrations hosted by the U.S. reps to Land Gro o observe and demonstrate the current and future	onducting ses; up 6, e capability			
FY 2010 Accomplishments: Senior National Representatives (Army) (SNR-(A)) Projects (Partners: harmonization of programs at various levels: exchanging information, i studies to further promote cooperative development; standardizing, fie the workload among the different nations. Technology Demonstrations Armaments Group (NAAG), will provide and opportunity to observe an participating NATO nations with a view to assisting future operational and technology demonstrations.	dentifying knowledge gaps and conducting feasily lding and roadmapping various processes; distributes hosted by the U.S. reps to Land Group 6, NATC didemonstrate the current and future capability o	pility puting Army f			
FY 2011 Plans: Senior National Representatives (Army) (SNR-(A)) Projects (Partners: harmonization of programs at various levels: exchanging information, i studies to further promote cooperative development; standardizing, fie the workload among the different nations. Technology Demonstrations Armaments Group (NAAG), will provide and opportunity to observe an participating NATO nations with a view to assisting future operational analysis and technology demonstrations.	identifying knowledge gaps and conducting feasited lding and roadmapping various processes; distributes hosted by the U.S. reps to Land Group, NATO And demonstrate the current and future capability o	oility outing army f			
FY 2012 Plans: Senior National Representatives (Army) (SNR-(A)) Projects (Partners: harmonization of programs at various levels: exchanging information, i studies to further promote cooperative development; standardizing, fie the workload among the different nations. Technology Demonstrations Armaments Group (NAAG), will provide and opportunity to observe and	identifying knowledge gaps and conducting feasily lding and roadmapping various processes; distributes hosted by the U.S. reps to Land Group, NATO A	pulity puting army			

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: Fel	oruary 2011	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603790A: NATO Research and Development	PROJEC 691: NAT	PROJECT 91: NATO RSCH & DEVEL		
B. Accomplishments/Planned Programs (\$ in Millions, Article Q	uantities in Each <u>)</u>		FY 2010	FY 2011	FY 2012
participating NATO nations with a view to assisting future operational analysis and technology demonstrations.	al and materiel interoperability. Army support of NAAC	G studies,			
Title: Joint Tactical Radio System		Articles:	0.300 0	0.270 0	0.265
<b>Description:</b> Joint Tactical Radio System (JTRS) (Partners: Japan, develop and implement Software-enabled radios as replacements to maintaining interoperability as the countries pursue their own separa will include a joint development of software radio specifications, separation interoperability testing using the system assets developed as partners.	current radio systems. The projects shall be focuse ate software radio programs. The project agreements arate development and testing of software waveforms	d on (PAs)			
FY 2010 Accomplishments: Joint Tactical Radio System (JTRS) (Partners: Japan, Sweden, UK): implement Software-enabled radios as replacements to current radio interoperability as the countries pursue their own separate software a joint development of software radio specifications, separate develo interoperability testing using the system assets developed as part of	o systems. The projects shall be focused on maintain radio programs. The project agreements (PAs) will in opment and testing of software waveforms, and joint	ning			
FY 2011 Plans: Joint Tactical Radio System (Partners: Japan, Sweden, UK): The passoftware-enabled radios as replacements to current radio systems. as the countries pursue their own separate software radio programs development of software radio specifications, separate development testing using the system assets developed as part of the agreements.	The projects shall be focused on maintaining interop. The project agreements (PAs) will include a joint and testing of software waveforms, and joint interoperate the projects and testing of software waveforms.	erability			
FY 2012 Plans: Joint Tactical Radio System (JTRS) (Japan, Sweden, UK): The part Software-enabled radios as replacements to current radio systems. as the countries pursue their own separate software radio programs development of software radio specifications, separate development testing using the system assets developed as part of the agreements	The projects shall be focused on maintaining interop. The project agreements (PAs) will include a joint and testing of software waveforms, and joint interoperate the projects and testing of software waveforms.	erability			
Title: Artillery Command and Control Interoperability		Articles:	0.350	0.365 0	0.365

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: Fel	oruary 2011	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603790A: NATO Research and Development	PROJECT 691: NATO RSCH & DEVEL			
B. Accomplishments/Planned Programs (\$ in Millions, Article Qu	antities in Each)		FY 2010	FY 2011	FY 2012
<b>Description:</b> Artillery Command and Control Interoperability (ASCA) this program will develop an automated software interface between the nations will be able to receive and provide mutual fire support (i.e. call and with minimal errors.	neir national field artillery command and control sys	stems. The			
FY 2010 Accomplishments:  Artillery Command and Control Interoperability (Partners: France, Gedevelop an automated software interface between their national field able to receive and provide mutual fire support (i.e. cannon and rocked errors.	artillery command and control systems. The natio	ns will be			
FY 2011 Plans: Artillery Command and Control Interoperability (ASCA) (France, German automated software interface between their national field artillery creceive and provide mutual fire support (i.e. cannon and rocket fire) in	command and control systems. The nations will be	able to			
FY 2012 Plans: ASCA (Partners: France, Germany, Italy, UK): The Participants in thi between their national field artillery command and control systems. T support (i.e. cannon and rocket fire) in combined operations more rap	he nations will be able to receive and provide mut				
Title: Force Protection Projects		Articles:	0.200 0	0.250 0	0.25
<b>Description:</b> Force Protection Projects (FPP) (Partners: United Kingo Protection Projects will include R&D collaborationon technologies suc Improvised Explosive Devices (C-IED). Programs include Military Ope Against Terrorism (DAT) initiatives such as Defense Against Mortar A (JPADS).	ch as Counter Rocket and Mortar (C-RAM) and Co erations in Urban Terrain (MOUT) and a variety of	unter Defense			
FY 2010 Accomplishments: Force Protection Projects (Partners; United Kingdom, France, Germa will include R&D collaborationon technologies such as Counter Rocke					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army	DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT	
2040: Research, Development, Test & Evaluation, Army	PE 0603790A: NATO Research and	691: <i>NATO</i>	RSCH & DEVEL
BA 4: Advanced Component Development & Prototypes (ACD&P)	Development		

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Devices (C-IED). Programs include Military Operations in Urban Terrain (MOUT) and a variety of Defense Against Terrorism (DAT) initiatives such as Defense Against Mortar Attacks (DAMA) and Joint Precision Air Drop System (JPADS).			
FY 2011 Plans: Force Protection Projects (FPP) (Partners: United Kingdom, France, Germany, Italy, Sweden, Canada): Force Protection Projects will include R&D collaborationon technologies such as Counter Rocket and Mortar (C-RAM) and Counter Improvised Explosive Devices (C-IED). Programs include Military Operations in Urban Terrain (MOUT) and a variety of Defense Against Terrorism (DAT) initiatives such as Defense Against Mortar Attacks (DAMA) and Joint Precision Air Drop System (JPADS).			
FY 2012 Plans: Force Protection Projects (FPP) (United Kingdom, France, Germany, Italy, Sweden, Canada): Force Protection Projects will include R&D collaborationon technologies such as Counter Rocket and Mortar (C-RAM) and Counter Improvised Explosive Devices (C-IED). Programs include Military Operations in Urban Terrain (MOUT) and a variety of Defense Against Terrorism (DAT) initiatives such as Defense Against Mortar Attacks (DAMA) and Joint Precision Air Drop System (JPADS).			
Accomplishments/Planned Programs Subtotals	4.848	5.060	4.765

## C. Other Program Funding Summary (\$ in Millions)

N/A

### 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.

### E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army

APPROPRIATION/BUDGET ACTIVITY

2040: Research, Development, Test & Evaluation, Army

BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 ITEM NOMENCLATURE

PE 0603790A: NATO Research and

Development

**DATE:** February 2011

PROJECT 691: NATO RSCH & DEVEL

Management Services (	nent Services (\$ in Millions)			FY 2	011		FY 2012 Base		FY 2012 OCO				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
STEM/IOL	TBD	RDECOM,:Ft. Belvoir, VA	0.363	-		0.035		-		0.035	Continuing	Continuing	0.000
MIP	Various	PEO C3S,:Ft. Monmouth, NJ	0.796	0.140		0.140		-		0.140	Continuing	Continuing	0.000
Low Level Air Defense Interoperability (LLAPI)	TBD	AMCOM,:Redstone Aresnal, AL	0.345	0.032		-		-		-	Continuing	Continuing	0.000
Shared Tactical GroundPicture (STGP)/Single Integrated Ground Picture (SIGP)	TBD	CECOM,:Ft. Monmouth,	0.072	-		-		-		-	Continuing	Continuing	0.000
Multi-National Network Enabled Capabilities (MNNEC) related to C4ISR	TBD	CECOM,:Ft. Monmouth,	0.342	-		-		-		-	Continuing	Continuing	0.000
Combat Identification	TBD	CECOM,:Ft. Monmouth,	0.497	0.025		0.025		-		0.025	Continuing	Continuing	0.000
SNR(A)	TBD	ARL,:APG, MD	0.544	0.045		-		-		-	Continuing	Continuing	0.000
TRDP	TBD	REDCOM,:Ft. Belvoir, VA	1.751	0.300		0.310		-		0.310	Continuing	Continuing	0.000
Artillery Command and Control Interoperability (ASCA)	TBD	CECOM,:Ft. Monmouth,	0.106	0.007		0.015		-		0.015	Continuing	Continuing	0.000
JTRS	TBD	PM JTRS,:Ft. Monmouth, NJ	0.098	-		-		-		-	Continuing	Continuing	0.000
Force Protection Projects (FPP)	TBD	RDECOM,:Ft. Belvoir, VA	0.013	0.025		0.050		-		0.050	0.000	0.088	0.000
	_	Subtotal	4.927	0.574		0.575		-		0.575			0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army

APPROPRIATION/BUDGET ACTIVITY

2040: Research, Development, Test & Evaluation, Army

BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 ITEM NOMENCLATURE

PE 0603790A: NATO Research and

Development

**DATE:** February 2011

PROJECT

691: NATO RSCH & DEVEL

Product Development (\$ in Millions)			FY 2011		FY 20 Bas		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete Total Cost	Target Value of Contract	
Multilateral Interoperability Program (MIP)	TBD	Various:Various	1.706	0.186		0.177		-		0.177	Continuing	Continuing	Continuing
STEM-IOL	TBD	LSS/GDIT,:Fairfax, VA	4.535	0.595		0.595		-		0.595	Continuing	Continuing	Continuing
Low Level Air Defense Interoperability (LLAPI)	TBD	AMCOM,:Redstone Arsenal, AL	1.062	0.120		0.120		-		0.120	Continuing	Continuing	Continuing
Shared Tactical Ground Picture (STGP)/Single Integrated Ground Picture (SIGP)	TBD	CECOM,:Ft. Monmouth,	1.107	-		-		-		-	Continuing	Continuing	Continuing
Combat Identification	TBD	CECOM,:Ft. Monmouth, NJ	0.942	0.025		-		-		-	Continuing	Continuing	Continuing
Multi-National Network Enabled Capabilities (MNNEC) related to C4ISR	TBD	CECOM,:Ft. Monmouth,	2.594	0.455		0.455		-		0.455	Continuing	Continuing	Continuing
Senior National Representatives (Army) (SNR[A])	Various	ARDEC,:Arlignton, VA	7.210	0.619		0.500		-		0.500	Continuing	Continuing	Continuing
TRDP	Various	Batelle/LMI,:McLean, VA	1.778	0.332		0.194		-		0.194	Continuing	Continuing	Continuing
Artillery Command and Control Interoperability (ASCA)	Various	CECOM,:Fort Monmouth, NJ	1.588	0.220		0.185		-		0.185	Continuing	Continuing	Continuing
Joint Tactical Radio System (JTRS)	Various	PM JTRS,:San Diego, CA	0.742	0.108		0.165		-		0.165	Continuing	Continuing	Continuing
Force Protection Projects (FPP)	Various	RDECOM,:Ft Belvoir, VA	0.100	0.125		0.115		-		0.115	0.000	0.340	Continuing
		Subtotal	23.364	2.785		2.506		-		2.506			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army

APPROPRIATION/BUDGET ACTIVITY

2040: Research, Development, Test & Evaluation, Army

BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 ITEM NOMENCLATURE

PE 0603790A: NATO Research and

Development

PROJECT DATE: February 2011

691: NATO RSCH & DEVEL

Support (\$ in Millions)			FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MIP	Various	CECOM:Ft. Monmouth, NJ	1.048	0.200		0.200		-		0.200	Continuing	Continuing	Continuing
STEM/IOL	Various	GDIT:Fairfax, VA	1.043	0.130		0.130		-		0.130	Continuing	Continuing	Continuing
Low Level Air Defense Interoperability (LLAPI)	Various	AMCOM,:Redstond Arsenal, AL	0.525	0.049		0.089		-		0.089	Continuing	Continuing	Continuing
Shared Tactical Ground Picture (STGP)/Single Integrated Ground Picture (SIGP)	Various	CECOM,:Fort Monmouth, NJ	0.246	-		-		-		-	Continuing	Continuing	Continuing
Combat Identification	Various	CECOM:Ft Monmouth, Nj	0.589	-		0.025		-		0.025	Continuing	Continuing	Continuing
Multi-National Network Enabled Capabilities (MNNEC) related to C4ISR	Various	CECOM:Fort Monmouth, NJ	0.745	0.080		0.095		-		0.095	Continuing	Continuing	Continuing
SNR(A)	Various	ARL,:Aberdeen, Md	1.538	0.145		0.080		-		0.080	Continuing	Continuing	Continuing
TRDP	Various	RDECOM,:Ft. Belvoir, VA	1.788	0.333		0.305		-		0.305	Continuing	Continuing	Continuing
Joint Tactical Radio System (JTRS)	Various	PM JTRS,:San Diego, VA	0.385	0.117		0.100		-		0.100	Continuing	Continuing	Continuing
Artillery Command and Control Interoperability (ASCA)	Various	CECOM:Ft Monmouth,	0.410	0.083		0.115		-		0.115	Continuing	Continuing	Continuing
Force Protection Projects (FPP)	Various	RDECOM,:Fort Belvoir, VA	0.010	0.022		0.050		-		0.050	0.000	0.082	Continuing
		Subtotal	8.327	1.159		1.189		-		1.189			
Test and Evaluation (\$	in Millions			FY 2	2011	FY 2			2012 CO	FY 2012 Total			

FY 2011 Base oco Total Contract **Total Prior** Target Value of Method Performing Years **Award Award** Award Cost To **Cost Category Item** & Type **Activity & Location** Cost Cost Date Cost Date Cost Date Cost Complete **Total Cost** Contract CECOM:Ft. Monmouth, MIP 0.160 Various 0.967 0.160 0.160 Continuing Continuing 0.000 NJ

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army

APPROPRIATION/BUDGET ACTIVITY

2040: Research, Development, Test & Evaluation, Army

BA 4: Advanced Component Development & Prototypes (ACD&P)

**Project Cost Totals** 

42.169

5.060

R-1 ITEM NOMENCLATURE

PE 0603790A: NATO Research and

Development

**DATE:** February 2011

PROJECT

691: NATO RSCH & DEVEL

4.765

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
STEM/IOL	Various	RDECOM,:Various	0.705	0.100		0.100		-		0.100	Continuing	Continuing	0.000
Low Level Air Defense Interoperability (LLAPI)	Various	AMCOM,:Redstone Aresnal, AL	0.208	0.019		-		-		-	Continuing	Continuing	0.000
Shared Tactical Ground Picture (STGP)/Single Integrated Ground Picture (SIGP)	Various	AMSAA,:Ft. Monmouth,	0.134	-		-		-		-	Continuing	Continuing	0.000
Combat Identification	Various	CECOM:Ft Monmouth, NJ	0.534	-		-		-		-	Continuing	Continuing	0.000
Multi-National Network Enabled Capabilities (MNNEC) related to C4ISR	TBD	CECOM:Ft. Monmouth,	0.498	-		-		-		-	Continuing	Continuing	0.000
SNR(A)	TBD	various:various	1.074	0.120		0.145		-		0.145	Continuing	Continuing	0.000
TRDP	TBD	To Be Determined:to Be Determined	1.010	-		-		-		-	Continuing	Continuing	0.000
ASCA	TBD	CECOM:Ft. Monmouth, NJ	0.249	0.040		0.050		-		0.050	Continuing	Continuing	0.000
Joint Tactical Radio System (JTRS)	TBD	CECOM:Ft. Monmouth, NJ	0.160	0.075		-		-		-	Continuing	Continuing	0.000
Force Protection Projects (FPP)	TBD	RDECOM,:Ft. Belvoir, VA	0.012	0.028		0.040		-		0.040	0.000	0.080	0.000
	Subtotal 5		5.551	0.542		0.495		-		0.495			0.000
Тс		Total Prior Years Cost	FY 2	011	FY 2 Ba			2012 CO	FY 2012 Total	Cost To	Total Cost	Target Value of Contract	

Remarks

**UNCLASSIFIED** 

4.765

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