Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

2040: Research, Development, Test & Evaluation, Army

PE 0604256A: THREAT SIMULATOR DEVELOPMENT

BA 6: RDT&E Management Support

COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	22.015	25.091	26.158	0.000	26.158	17.300	17.648	17.442	17.597	Continuing	Continuing
976: ARMY THREAT SIM (ATS)	22.015	25.091	26.158	0.000	26.158	17.300	17.648	17.442	17.597	Continuing	Continuing

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

This program supports the design, development, acquisition, integration and fielding of realistic mobile threat simulators and realistic threat simulation products utilized in Army training and developmental and operational tests. While this project originally funded simulators representing Soviet equipment, the changing world order has expanded the scope of this program to address other world threats. Army Threat Simulator and Threat Simulation products are utilized to populate test battlefields for U.S. Army Test and Evaluation Command (ATEC), to conduct developmental and operational tests, and to support Program Executive Office (PEO) required user testing in System Integration Laboratories and hardware/simulation in-the-loop facilities. Army threat simulator and threat simulation products developed or fielded under this program support Army-wide, non-system specific threat product requirements. Each capability is pursued in concert and coordination with existing Army and tri-service capabilities to eliminate duplication of products and services, while providing the proper mix of resources needed to support Army testing and training. These battlefield simulators represent systems (e.g. missile systems, command, control and communications systems, electronic warfare systems, etc.) that are used to portray a realistic threat environment during testing of U.S. weapon systems. Simulator development is responsive to Office of the Secretary of Defense and General Accounting Office guidance for the Army to conduct operational testing in a realistic threat environment. Actual threat equipment is acquired when appropriate (in lieu of development) and total package fielding is still required (i.e., instrumentation, operations and maintenance, manuals, new equipment training, etc.). Threat simulator development is accomplished under the auspices of the Project Manager for Instrumentation, Targets and Threat Simulators (PM ITTS) and the Director, Operational Test and Evaluation, Threat Simulator Investment Working Group

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BA~6: RDT&E~Management~Support

## **B. Program Change Summary (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Previous President's Budget	25.092	22.222	17.163	0.000	17.163
Current President's Budget	22.015	25.091	26.158	0.000	26.158
Total Adjustments	-3.077	2.869	8.995	0.000	8.995
<ul> <li>Congressional General Reductions</li> </ul>		-0.131			
<ul> <li>Congressional Directed Reductions</li> </ul>		0.000			
<ul> <li>Congressional Rescissions</li> </ul>	0.000	0.000			
<ul> <li>Congressional Adds</li> </ul>		3.000			
<ul> <li>Congressional Directed Transfers</li> </ul>		0.000			
<ul> <li>Reprogrammings</li> </ul>	-2.602	0.000			
• SBIR/STTR Transfer	-0.475	0.000			
<ul> <li>Adjustments to Budget Years</li> </ul>	0.000	0.000	8.995	0.000	8.995

## **Change Summary Explanation**

Change Summary Explanation: Project 976 includes \$9.2 million FY11 RDTE incorrectly placed in this funding line. It was intended for 0605602A - Army Technical Test Instrumentation and Targets Project 62C Modeling and Simulation Instrumentation in support of operational and developmental testing.

DATE: Fobruary 2010

Exhibit R-2A, RD1&E Project Justinication: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACT 2040: Research, Development, Test & BA 6: RDT&E Management Support		ту					PROJECT 976: ARMY	THREAT SIM (ATS)			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
976: ARMY THREAT SIM (ATS)	22.015	25.091	26.158	0.000	26.158	17.300	17.648	17.442	17.597	Continuing	Continuing
Quantity of RDT&E Articles											

### A. Mission Description and Budget Item Justification

Exhibit D 24 DDT&F Project Justification, DR 2011 Army

This program supports the design, development, acquisition, integration, and fielding of realistic mobile threat simulators and realistic threat simulation products used in Army training, developmental tests, and operational tests. While this project originally funded simulators representing Soviet equipment, the operational environment has expanded the scope of this program to address other world threats. Army Threat Simulator and Threat Simulation products are used to populate test battlefields for U.S. Army Test and Evaluation Command (ATEC), to conduct developmental and operational tests, and to support Program Executive Office (PEO) required user testing in System Integration Laboratories and hardware/ simulation in-the-loop facilities. Army threat simulator and threat simulation products developed or fielded under this program support Army-wide, non-system specific threat product requirements. Each capability is pursued in concert and coordination with existing Army and tri-service capabilities to eliminate duplication of products and services, while providing the proper mix of resources needed to support Army testing and training. These battlefield simulators represent systems (e.g. missile systems, command, control and communications systems, electronic warfare systems, etc.) that are used to portray a realistic threat environment during testing of U.S. weapon systems. Simulator development is responsive to Office of the Secretary of Defense and Government Accountability Office guidance for the Army to conduct operational testing in a realistic threat environment. Actual threat equipment is acquired when appropriate (in lieu of development) and total package fielding is still required (i.e., instrumentation, operations and maintenance, manuals, new equipment training, etc.). Threat simulator development is accomplished under the auspices of the Project Manager for Instrumentation, Targets and Threat Simulators (PM ITTS) and the Director, Operational Test and Evaluation, Threat Simulator Investment Worki

## B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1	3.473	3.499	3.253	0.000	3.253
FY09-FY11: Continue development of Network Exploitation Test Tool (NETT). Combines with the wireless NETT program in FY09 to provide single program approach for both technologies.					
FY 2009 Accomplishments: FY 2009					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army					<b>DATE:</b> February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 6: RDT&E Management Support	R-1 ITEM NOMENCLATURE PE 0604256A: THREAT SIMULATOR DEVELOPMENT		PROJECT 976: ARMY THREAT SIM (ATS)					
B. Accomplishments/Planned Program (\$ in Millions)								
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total		
FY 2010 Plans: FY 2010								
FY 2011 Base Plans: FY 2011 Base								
FY 2011 OCO Plans: FY 2011 OCO								
Program #2		2.261	2.286	1.851	0.000	1.851		
FY09-FY11: Conduct Threat Systems Management Office Operations e to match Army T&E mission areas.	fforts. FY09 program mission re-scoped							
FY 2009 Accomplishments: FY 2009								
FY 2010 Plans: FY 2010								
FY 2011 Base Plans: FY 2011 Base								
FY 2011 OCO Plans: FY 2011 OCO								
Program #3		0.328	3.054	3.874	0.000	3.874		
FY09-FY11: Develop Threat Intelligence and Electronic Warfare (IEW) Warfare capabilities.	Environment to simulate Electronic							

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: Febr	ruary 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 6: RDT&E Management Support	<b>R-1 ITEM NOMENCLATURE</b> PE 0604256A: <i>THREAT SIMULATOR DEVELOPMENT</i>	PROJECT 976: ARMY THREAT SIM (ATS)			(ATS)	
B. Accomplishments/Planned Program (\$ in Millions)			1			
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #4		3.189	2.914	0.000	0.000	0.000
FY09-FY10: Follow-on development for an Electronic Combat and Conscenarios. This is a follow-on to a FY08 Congressional Add Threat Sys Townsend Electronic Combat Training Range.  FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army	<b>DATE:</b> February 2010			
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT		
2040: Research, Development, Test & Evaluation, Army	PE 0604256A: THREAT SIMULATOR	976: ARMY THREAT SIM (ATS)		
BA 6: RDT&E Management Support	DEVELOPMENT			

## **B.** Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #5	3.757	3.782	3.858	0.000	3.858
FY09-11: Develop the functionality of the Threat Battle Command Center (TBCC) to support new threat systems/equipment.					
FY 2009 Accomplishments: FY 2009					
FY 2010 Plans: FY 2010					
FY 2011 Base Plans: FY 2011 Base					
FY 2011 OCO Plans: FY 2011 OCO					
Program #6	2.650	2.675	1.128	0.000	1.128
FY09-FY11: Develop design for 2-channel man-pack Remote Jamming Unit (RJU) and 10 watt environmentally sealed Control Signal Transmitter (CST) for Threat Signal Injection Jammer (TSIJ).					
FY 2009 Accomplishments: FY 2009					
FY 2010 Plans: FY 2010					
FY 2011 Base Plans: FY 2011 Base					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			<b>DATE:</b> February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 6: RDT&E Management Support	R-1 ITEM NOMENCLATURE PE 0604256A: THREAT SIMULATOR DEVELOPMENT	PROJECT 976: ARMY T				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: FY 2011 OCO						
Program #7		2.573	2.463	0.667	0.000	0.667
FY09-FY11: Begins development of Control of Signal Transmission-Ope Intelligence/Direct Finding (SIGINT/DF) sensors onto a larger aerial plat  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2011 Base Plans: FY 2011 OCO Plans: FY 2011 OCO		2.373	2.103	0.007	0.000	0.007
Program #8		0.996	1.027	0.000	0.000	0.000
FY09-FY10: Develops Networked Electronic Support Threat Sensors (Nintegration within threat force.	ESTS) systems up to 3GHz for					
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						

	UNCLASSIFILD					
Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			<b>DATE:</b> February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 6: RDT&E Management Support	R-1 ITEM NOMENCLATURE PE 0604256A: THREAT SIMULATOR DEVELOPMENT		PROJECT 976: ARMY THREAT SIM (ATS)			
B. Accomplishments/Planned Program (\$ in Millions)	·					
	FY 20	09 FY 201	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #9	2	788 2.8	06 2.327	0.000	2.327	
FY09-FY11: Develops key Computer Network Operations (CNO) Te	eam support for threat events.					
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #10	0	000 0.5	85 0.000	0.000	0.000	
FY09: Small Business Innovative Research/Small Business Technological	gy Transfer Programs.					
FY 2009 Accomplishments: FY 2009						

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B. Accomplishments/Planned Program (\$ in Millions)			I				
•		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
FY 2010 Plans: FY 2010							
FY 2011 Base Plans: FY 2011 Base							
FY 2011 OCO Plans: FY 2011 OCO							
Program #11		0.000	0.000	9.200	0.000	9.20	
FY11: Project 976 includes \$9,200K FY11 RDTE incorrectly pla for 0605602A - Army Technical Test Instrumentation and Target Instrumentation in support of operational and developmental testi	s Project 62C Modeling and Simulation						
FY 2009 Accomplishments: FY 2009							
FY 2010 Plans: FY 2010							
FY 2011 Base Plans: FY 2011 Base							
FY 2011 OCO Plans: FY 2011 OCO							
	Accomplishments/Planned Programs Subtotals	22.015	25.091	26.158	0.000	26.15	

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APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT		
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BA 6: RDT&E Management Support	DEVELOPMENT			

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

N/A

### **D.** Acquisition Strategy

THREAT SIMULATOR Test Programs Supported: Aircraft (MH-47E) Follow On Operational Test II, MH-60K Aircraft, Aircraft (MH-60K) Follow On Operational Test II, RAH-66 Comanche EUTE, RAH-66 Comanche FDTE I, Suite of Integrated Radio Countermeasures (SIRFCM), Suite of Integrated Radio Countermeasures (SIRCM), Unmanned Aerial Vehicle (UAV) - Payload, Force XXI Battle Command Brigade and Below, Army Airborne Command and Control, Army TACMS Block II/BAT, Bradley Fighting Vehicle-A3, Crusader FDTE, Extended Range MLRS, FAAD Block III, GPS in Joint Battle Space Environment, Guardrail/Common Sensor System II, Handheld Standoff Mine Field Detection System, IEW Tactical Proficiency Trainer, Joint Close Air Support HT&E, Joint Suppression of Enemy Air Defense (JSEAD), Land Warrior, Long Range Advanced Scout Surveillance System, Navigational Warfare Global Positioning System, OH-58D Kiowa Warrior, Patriot Advanced Capabilities PAC-3 Config-3, UH-60Q, Theater High Altitude Area Defense System.

#### E. Performance Metrics

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Performance metrics used	d in the pre	enaration of this	instification material ma	y be found in the FY 2010 Arm	v Performance Bud	get Justification Book d	ated May 2010
i cirorinance metres used	a m me pro	cparation of tins	justification material ma	iy be round in the r r 2010 min	y i cirorinance bud	get Justification Dook, a	aica May 2010.