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

R-1 ITEM NOMENCLATURE

APPROPRIATION/BUDGET ACTIVITY2040: Research, Development, Test & Evaluation, Army

PE 0603015A: Next Generation Training & Simulation Systems

DATE: February 2010

BA 3: Advanced Technology Development (ATD)

COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	Base FY 2011 Estimate	OCO FY 2011 Estimate	Total FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	24.769	25.362	15.334	0.000	15.334	13.317	19.060	20.236	21.481	0	154.893
HB5: IMMERSIVE ENVIRONMENTS DEMONSTRATIONS (CA)	1.993	1.990	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
S28: Immersive Learning Environments	4.728	3.001	3.054	0.000	3.054	3.154	3.257	3.353	3.442	Continuing	Continuing
S29: MODELING & SIMULATION - Adv Tech Dev	3.769	5.852	7.380	0.000	7.380	5.262	5.320	6.368	7.402	Continuing	Continuing
S31: Modeling and Simulation Infrastructure Technology	9.794	10.460	4.900	0.000	4.900	4.901	10.483	10.515	10.637	Continuing	Continuing
S33: TRAINING AND SIMULATION SYSTEMS INITIATIVES (CA)	4.485	4.059	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

Efforts in this program element (PE) mature and demonstrate tools to enable effective training capability for the Warfighter. The PE matures and demonstrates simulation technologies developed by the Institute for Creative Technology (project S28); incorporates advanced modeling and simulation (M&S), training, and leader development technology into immersive training demonstrations as well as demonstrates a framework for future embedded training and simulation systems for future force combat and tactical vehicles, and dismounted Soldier systems (project S29); develops, integrates and demonstrates an overarching M&S architecture that incorporates multi-resolution entity-based models, simulations, and tools to enable Network-Centric Warfare (NCW) M&S capability (project S31). Immersive Environments Demonstrations (project HB5) and Training and Simulation Initiatives (project S33) fund congressional special interest items. Work in this PE is related, to and fully coordinated with efforts in PE 0602308A (Advanced Concepts and Simulation), PE 0602785 (Manpower/Personnel/Training Technology), PE 0602787A (Medical Technology), and PE 0603007A (Manpower, Personnel and Training Advance Technology). The cited work is consistent with the Director, Defense Research and Engineering Strategic Plan, the Army Modernization Strategy, and the Army Science and Technology Master Plan. Work in this PE is performed by the Research, Development, and Engineering Command (RDECOM), Simulation and Training Technology Center (STTC), Orlando, FL.

Exhibit R-2, PB 2011 Army RDT&E Budget Item Justification		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	
2040: Research, Development, Test & Evaluation, Army	PE 0603015A: Next Generation Training & Simulation Systems	
BA 3: Advanced Technology Development (ATD)		

B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	25.298	19.415	19.407	0.000	19.407
Current President's Budget	24.769	25.362	15.334	0.000	15.334
Total Adjustments	-0.529	5.947	-4.073	0.000	-4.073
 Congressional General Reductions 		-0.133			
 Congressional Directed Reductions 					
 Congressional Rescissions 		0.000			
 Congressional Adds 		6.080			
 Congressional Directed Transfers 					
 Reprogrammings 	0.180	0.000			
 SBIR/STTR Transfer 	-0.709	0.000			
 Adjustments to Budget Years 	0.000	0.000	-4.073	0.000	-4.073

Change Summary Explanation

FY10 Congressionally directed increases.FY11 funding realigned to higher priority efforts.

DATE: February 2010

2040: Research, Development, Test & E	PROPRIATION/BUDGET ACTIVITY 0: Research, Development, Test & Evaluation, Army 3: Advanced Technology Development (ATD)				NOMENCLA A: Next Gener systems	TURE ration Trainin	g &	PROJECT HB5: IMMERSIVE ENVIRONMENTS DEMONSTRATIONS (CA)			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	Base FY 2011 Estimate	OCO FY 2011 Estimate	Total FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
HB5: IMMERSIVE ENVIRONMENTS DEMONSTRATIONS (CA)	1.993	1.990	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

Exhibit R-2A, PB 2011 Army RDT&E Project Justification

Congressional Interest Item funding for Immersive Environments advanced technology development.

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

	FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
Program #1	1.993	1.990	0.000	0.000	0.000
Joint Fires and Effects Training System (JFETS). Provided immersive capabilities for institutional training and enhancements to the field. Improved portable capability (smaller footprint for Joint Forward Observer Military Transition Team and deployed training), provided inclusion of Air Defense Artillery training capability as well as provided balance in training capability (Institutional and home station training) by providing enhancements to fielded Call For Fire Trainer systems.					
FY 2009 Accomplishments: FY 2009					
FY 2010 Plans: FY 2010					
Base FY 2011 Plans: FY 2011 Base					
OCO FY 2011 Plans: FY 2011 OCO					

DATE: February 2010

2011

0.000

FY 2011

0.000

FY 2011

0.000

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APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT	PROJECT				
2040: Research, Development, Test & Evaluation, Army	PE 0603015A: Next Generation Training &	HB5: IMME	HB5: IMMERSIVE ENVIRONMENTS				
BA 3: Advanced Technology Development (ATD)	Simulation Systems	DEMONSTR	DEMONSTRATIONS (CA)				
B. Accomplishments/Planned Program (\$ in Millions)							
			Base FY	осо	Total		

Accomplishments/Planned Programs Subtotals

FY 2009

1.993

FY 2010

1.990

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

Exhibit R-2A, PB 2011 Army RDT&E Project Justification

N/A

D. Acquisition Strategy

N/A

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.

DATE: February 2010

APPROPRIATION/BUDGET ACTI	VITY			R-1 ITEM N	NOMENCLA	TURE		PROJECT				
2040: Research, Development, Test &	Evaluation, Ar	my		PE 0603015.	A: Next Gene	ration Trainir	ıg &	S28: Immers	ive Learning	Environments	5	
BA 3: Advanced Technology Developm	nent (ATD)			Simulation S	Systems							
COST (\$ in Millions)	FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	Cost To		
	Actual	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Complete	Total Cost	
S28: Immersive Learning	4.728	3.001	3.054	0.000	3.054	3.154	3.257	3.353	3.442	Continuing	Continuing	
Environments												

A. Mission Description and Budget Item Justification

Exhibit R-2A, PB 2011 Army RDT&E Project Justification

Efforts in this project mature and demonstrate immersive technologies that include the application of photorealistic synthetic environments, multi-sensory interfaces, virtual humans, and training applications on low-cost game platforms. This project uses advanced modeling, simulation, and leadership development techniques to leverage the emerging immersive technologies that are created at the Institute of Creative Technologies (ICT) University Affiliated Research Center (UARC) at the University of Southern California to formulate training demonstrations with an emphasis on urban operations and asymmetric warfare. The ICT's collaboration with its entertainment partners creates a true synthesis of creativity and technology that harnesses the capabilities of industry, and the research and development community to advance the Army's ability to train and practice military skills across the full spectrum of conflict. The cited work is consistent with the Director, Defense Research and Engineering Strategic Plan, the Army Modernization Strategy and the Army Science and Technology Master Plan. Work in this project is performed by the Research, Development, and Engineering Command (RDECOM), Simulation and Training Technology Center (STTC), Orlando, FL.

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

	FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
Program #1	4.728	2.917	3.054	0.000	3.054
Immersive Techniques: This effort demonstrates and matures technological advancements from PE 0602308A/ project D02 into complex state-of-the-art simulation environments in support of multi-student and team training. In FY09, integrated photorealistic representations of complex terrain; integrated rendering of specific individual facial features onto interactive virtual human models; demonstrated intelligent tutoring/computer coaching with virtual instructors; developed and demonstrated tools which reduced the man-hours required to convert and enhance terrain data to/from various data formats; and developed learning environment focused on preparing leaders on exercising decisions in complex environments within cultural environments. In FY10, demonstrate and refine methods and technologies that expand immersive environments to support multi-student and team training; demonstrate and mature methods to support computer generated after-action reviews, virtual human-based mentoring, and computer-directed scenario adaptation based on multi-player distributed training techniques; and					

Exhibit R-2A, PB 2011 Army RDT&E Project Justification	Exhibit R-2A, PB 2011 Army RDT&E Project Justification					DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	o.	PROJECT		F					
2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD)	PE 0603015A: Next Generation Training Simulation Systems	ig &	g & S28: Immersive Learning Environments							
B. Accomplishments/Planned Program (\$ in Millions)										
		FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011				
mature and assess environment for leaders to practice decision making ski In FY11, will mature and refine software tools that rapidly author automat applications; will mature methods to implement training applications on p	ed tutoring systems for specific training									
FY 2009 Accomplishments: FY 2009										
FY 2010 Plans: FY 2010										
Base FY 2011 Plans: FY 2011 Base										
OCO FY 2011 Plans: FY 2011 OCO										
Program #2		0.000	0.084	0.000	0.000	0.000				
Small Business Innovative Research/Small Business Technology Transfer	Programs									
FY 2009 Accomplishments: FY 2009										
FY 2010 Plans: FY 2010										
Base FY 2011 Plans: FY 2011 Base										
		<u> </u>								

Exhibit R-2A, PB 2011 Army RDT&E Project Justification		DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603015A: Next Generation Trainin Simulation Systems	PROJECT S28: Immers	ive Learning	Environments	,	
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
OCO FY 2011 Plans: FY 2011 OCO						
A	accomplishments/Planned Programs Subtotals	4.728	3.001	3.054	0.000	3.054

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

N/A

D. Acquisition Strategy

N/A

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.

DATE: February 2010

APPROPRIATION/BUDGET ACTI 2040: Research, Development, Test & I BA 3: Advanced Technology Developm	Evaluation, Ar	my			NOMENCLA A: Next Gener Systems	_		PROJECT S29: MODELING & SIMULATION - Adv			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	Base FY 2011 Estimate	OCO FY 2011 Estimate	Total FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
S29: MODELING & SIMULATION - Adv Tech Dev	3.769	5.852	7.380	0.000	7.380	5.262	5.320	6.368	7.402	Continuing	Continuing

A. Mission Description and Budget Item Justification

Exhibit R-2A, PB 2011 Army RDT&E Project Justification

Efforts in this project mature and demonstrate next generation training and simulation systems that focus on integrating virtual threats, asymmetric warfare, network-centric operations, and embedding training capabilities and technologies into operational go-to-war future force systems to include dismounted warrior systems. The synergy between these embedded training capabilities and the immersive training advanced technology development in project S28 provides Army units with a set of complementary embedded and deploy-on-demand systems that provide just-in-time, dynamic, realistic training, and mission rehearsal capabilities. Demonstrations include technologies that form a framework for future training applications for the range of future force operations such as robotic control and other sensor operations; mission planning and rehearsal; command, control, and maneuver; Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) network analysis to support distributed simulations; and vehicle system interface requirements. This project creates a joint environment by synchronizing virtual and constructive simulated forces with the next generation and current training systems from the Army, Navy, Air Force, and Marine forces. The cited work is consistent with the Director, Defense Research and Engineering Strategic Plan, the Army Modernization Strategy, and the Army Science and Technology Master Plan. Work in this project is performed by the Research, Development, and Engineering Command (RDECOM), Simulation and Training Technology Center (STTC), Orlando, FL.

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

	FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
Program #1	3.769	5.688	5.880	0.000	5.880
Embedded Techniques: This effort matures and demonstrates capabilities (most provided from PE 0602308A/ project C90) built into or added onto operational systems, subsystems, or equipment, to enhance and maintain the skill proficiency of Soldiers, and maximizes component commonality among combat vehicles and Soldier computer systems. In FY09, matured combat vehicle and dismounted soldier embedded training systems by conducting experiments in operational environments; conducted demonstrations, provided results and prototypes for dismounted soldier embedded training to support next generation soldier systems in collaboration with U.S. Army Natick Soldier Research, Development and Engineering Center (NSRDEC) and U.S. Army Communications-Electronic Research, Development and Engineering Center (CERDEC). In FY10, team with					

Exhibit R-2A, PB 2011 Army RDT&E Project Justification				DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603015A: Next Generation Trainin Simulation Systems	PROJECT S29: MODE	LING & SIMU	ULATION - A	dv Tech Dev			
B. Accomplishments/Planned Program (\$ in Millions)	1		1					
		FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011		
CERDEC, to exploit employing modeling and simulation technologies (i.e. Adversarial Intelligence Decision aid) in embedded training for current and systems used to train for asymmetric urban warfare environments; exploit to generated behaviors to simulate terrorist/insurgency urban warfare for future continue technology maturity for dismounted soldier embedded training proceedings systems in collaboration with NSRDEC and CERDEC. In FY11, we portable and mobile devices such as commercial personal digital assistants will assess and demonstrate software authoring tools for real-time creation systems to distributed multi-student teams. FY 2009 Accomplishments: FY 2010 Plans: FY 2010 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO	future Command and Control (C2) echnology development of computer- re embedding into C2 systems; ototypes to support next generation will demonstrate immersive training on and militarized personal computers;							
Program #2 Advanced simulation to treat Post Traumatic Stress Disorder (PTSD): This advanced simulation technologies developed at the Institute for Creative Te PTSD. In FY11, will mature and evaluate the ICT developed immersive sin will evaluate large samples Soldiers to obtain statistically significant results quantify the immersive simulation treatment effects and the long term result	schnology (ICT) to treat the effects of mulation with soldiers having PTSD; s; will evaluate, demonstrate and	0.000	0.000	1.500	0.000	1.500		

UNCLASSIFIED

R-1 Line Item #38 Page 9 of 20 1344 of 1536

Exhibit R-2A, PB 2011 Army RDT&E Project Justification				DATE: Febr	uary 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603015A: Next Generation Trainin Simulation Systems	PE 0603015A: Next Generation Training & S2			JLATION - Ad	dv Tech Dev
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
FY 2009 Accomplishments: FY 2009 FY 2010 Plans:						
FY 2010 Base FY 2011 Plans: FY 2011 Base						
OCO FY 2011 Plans: FY 2011 OCO						
Program #3		0.000	0.164	0.000	0.000	0.000
Small Business Innovative Research/Small Business Technology Tr	ransfer Programs					
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
Base FY 2011 Plans: FY 2011 Base						
OCO FY 2011 Plans: FY 2011 OCO						
	Accomplishments/Planned Programs Subtotals	3.769	5.852	7.380	0.000	7.380

Exhibit R-2A, PB 2011 Army RDT&E Project Justification		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603015A: Next Generation Training & Simulation Systems	PROJECT S29: MODELING & SIMULATION - Adv Tech Dev
C. Other Program Funding Summary (\$ in Millions) N/A		
D. Acquisition Strategy N/A		
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.

DATE: Fobruary 2010

Exhibit R-2A, PD 2011 Affily RD1&1	L Project Jus	uncation							DATE: Febi	uary 2010	
APPROPRIATION/BUDGET ACTI 2040: Research, Development, Test & I BA 3: Advanced Technology Developm	R-1 ITEM NOMENCLATURE PE 0603015A: Next Generation Training & Simulation Systems			PROJECT S31: Modelin Technology	ng and Simulo	ution Infrastru	acture				
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	Base FY 2011 Estimate	OCO FY 2011 Estimate	Total FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
S31: Modeling and Simulation Infrastructure Technology	9.794	10.460	4.900	0.000	4.900	4.901	10.483	10.515	10.637	Continuing	Continuing

A. Mission Description and Budget Item Justification

Exhibit D 2A DR 2011 Army DDT&E Project Justification

Efforts in this project mature and demonstrate a distributed modeling and simulation (M&S) environment referred to as the Modeling Architecture for Technology, Research, and Experimentation (MATREX). MATREX develops a robust Modeling and Simulation (M&S) environment and Distributed Virtual Laboratory (DVL) wherein a collection of multifidelity models, simulations and tools can be integrated and mapped to an evolving architecture for conducting multi-scale (time and spatial resolution) M&S activities to provide M&S data and information to multiple users. MATREX provides a unifying M&S architecture, supporting tools and infrastructure that synchronize and integrate multi-resolution (time and space) modeling applications such as Live, Virtual, and Constructive training applications, operational studies of Network-Centric Warfare (NCW) concepts and technologies, or the modeling of Battle Command operations with elements of advanced communications, information flow, data fusion, decision-making, and information warfare. MATREX also works to address M&S issues of modeling scalability, network design, enterprise services, and third party software compatibility issues. The cited work is consistent with the Director, Defense Research and Engineering Strategic Plan, the Army Modernization Strategy, and the Army Science and Technology Master Plan. Work in this project is led by the Research, Development, and Engineering Command (RDECOM), Simulation and Training Technology Center (STTC), Orlando, FL, and executed across the Command.

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

	FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
Program #1	9.794	10.167	0.000	0.000	0.000
MATREX: This effort matures and demonstrates modeling and simulation technologies and techniques that support Army experimentation and test events to assess and improve the decision-making through the use of multi-fidelity models, simulations and tools. In FY09, investigated and developed methodologies (e.g., Distributed Data Management (DDM) and Run-Time Infrastructure (RTI) distribution strategies) to increase MATREX scalability for modeling a future force Brigade Combat Team and enabled accurate assessments of command and control concepts; matured and demonstrated technologies and techniques to shorten M&S event setup time in support of Army experimentation and test events; integrated and implemented data collection and analysis tools to assess consistency of analysis results throughout an acquisition life cycle; connected additional Army sites into the MATREX DVL to expand the Army's ability to conduct geographically-distributed M&S					

Exhibit R-2A, PB 2011 Army RDT&E Project Justification			DATE: February 2010					
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603015A: Next Generation Trainin Simulation Systems	PROJECT S31: Modeli Technology	ng and Simul	ation Infrastrı	ıcture			
B. Accomplishments/Planned Program (\$ in Millions)								
		FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011		
efforts; conducted initial study of Internet Protocol version 6 (IPv6) and DVL network. In FY10, mature a multi-organization Army laboratory technology readiness level demonstrations and to enable consistent data organization use throughout the development/design cycle; assess and i integrated acquisition support capability for Army decision making; im terrain, chemical-biological-radiological-nuclear effects, human behavisensor fusion; improve M&S support architectures for cross-domain M live fire testing, Soldier and hardware-in-the-loop experiments, and sof FY 2009 Accomplishments: FY 2010 Plans: FY 2010 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO	data collection process to support Army a structure/interoperability for multimprove current analysis tools to provide an prove simulation for modeling of weather, or, human decision-making and networked &S environment interoperability to include							
Program #2		0.000	0.000	4.900	0.000	4.900		
MATREX (Cont.): In FY11, will demonstrate cross-command data collacquisition support capability; will mature integrated M&S representation network planning, pre-operation checkout, and integration with tactical integrate M&S support architectures for cross-domain M&S environment resolution capabilities for modeling weather, terrain, chemical-biologic decision-making, networked sensor fusion, and tactical network to mee	on of Battle Command (future force command and control devices); will ent interoperability; and will fuse multial effects and human behavior/human							

UNCLASSIFIED

R-1 Line Item #38 Page 13 of 20 1348 of 1536

Exhibit R-2A, PB 2011 Army RDT&E Project Justification				DATE: February 2010					
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE		PROJECT						
2040: Research, Development, Test & Evaluation, Army	PE 0603015A: Next Generation Trainin				S31: Modeling and Simulation Infrastructure				
BA 3: Advanced Technology Development (ATD)	Simulation Systems		Technology						
B. Accomplishments/Planned Program (\$ in Millions)									
				Base FY	OCO	Total			
		FY 2009	FY 2010	2011	FY 2011	FY 2011			
FY 2009 Accomplishments:									
FY 2009									
FY 2010 Plans:									
FY 2010 Flans. FY 2010									
Base FY 2011 Plans:									
FY 2011 Base									
OCO FY 2011 Plans:									
FY 2011 OCO									
Program #3		0.000	0.293	0.000	0.000	0.000			
Small Business Innovative Research/Small Business Technology Tra	ansfer Programs								
FY 2009 Accomplishments:									
FY 2009									
FY 2010 Plans:									
FY 2010 Plans: FY 2010									
Base FY 2011 Plans:									
FY 2011 Base									
OCO FY 2011 Plans:									
FY 2011 OCO									
	Accomplishments/Planned Programs Subtotals	9.794	10.460	4.900	0.000	4.900			
			I.	L					

Exhibit R-2A, PB 2011 Army RDT&E Project Justification		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army	R-1 ITEM NOMENCLATURE PE 0603015A: Next Generation Training &	PROJECT S31: Modeling and Simulation Infrastructure
BA 3: Advanced Technology Development (ATD)	Simulation Systems	Technology
C. Other Program Funding Summary (\$ in Millions)		
N/A		
D. Acquisition Strategy		
N/A		
E. Performance Metrics Performance metrics used in the preparation of this justification material may	be found in the FY 2010 Army Performance Budget Ju	stification Book, dated May 2010.
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Exhibit R-2A, PB 2011 Army RDT&E Project Justification								DATE: February 2010			
2040: Research, Development, Test & E	PPROPRIATION/BUDGET ACTIVITY 040: Research, Development, Test & Evaluation, Army A 3: Advanced Technology Development (ATD) R-1 ITEM NOMENCLATURE PE 0603015A: Next Generation Training & S33: TRAINING AND SIMULATION SYSTEM Simulation Systems								YSTEMS		
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	Base FY 2011 Estimate	OCO FY 2011 Estimate	Total FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
S33: TRAINING AND SIMULATION SYSTEMS INITIATIVES (CA)	4.485	4.059	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

Congressional Interest Item funding for Training and Simulation Systems advanced technology development.

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

	FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
Program #1	1.595	0.000	0.000	0.000	0.000
Vigilant Auto-ID and Access Control System. In FY09, this Congressional Interest Item developed a person-borne improvised explosives device integrated countermeasure.					
FY 2009 Accomplishments: FY 2009					
FY 2010 Plans: FY 2010					
Base FY 2011 Plans: FY 2011 Base					
OCO FY 2011 Plans: FY 2011 OCO					
Program #2	0.498	0.000	0.000	0.000	0.000

DATE: February 2010

Exhibit R-2A, PB 2011 Army RDT&E Project Justification

APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603015A: Next Generation Training Simulation Systems	PE 0603015A: Next Generation Training &		ING AND SIM S (CA)	IULATION S	YSTEMS
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
Experiential Technologies for Urban Warfare and Disaster Respective developed crowd and digital human modeling technologies.	ponse. In FY09, this Congressional Interest Item					
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
Base FY 2011 Plans: FY 2011 Base						
OCO FY 2011 Plans: FY 2011 OCO						
Program #3		1.595	1.273	0.000	0.000	0.00
Joint Medical Simulation Technology Research & Developmen Congressional Interest Item started development of an immersiv sick call & preliminary physical exam procedures, an adaptive i procedures, a card game to train combat medics & combat lifest	ve environment with virtual patients to train instructional tutoring system to train sick call					
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						

Exhibit R-2A, PB 2011 Army RDT&E Project Justification				DATE: Febr	uary 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603015A: Next Generation Training & Simulation Systems	£	PROJECT S33: TRAINING AND SIMULATION SYSTE. INITIATIVES (CA)			YSTEMS
B. Accomplishments/Planned Program (\$ in Millions)			1			
	1	FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
Base FY 2011 Plans: FY 2011 Base						
OCO FY 2011 Plans: FY 2011 OCO						
Program #4		0.797	0.000	0.000	0.000	0.000
Mobile Medic Training Program. In FY09, this Congressional Inte of Combat Life Saver (CLS) applications on mobile devices.	erest Item continued research and development					
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
Base FY 2011 Plans: FY 2011 Base						
OCO FY 2011 Plans: FY 2011 OCO						
Program #5		0.000	0.796	0.000	0.000	0.000
HapMed Combat Medic Trainer. This is a Congressional Interest I	tem.					
FY 2009 Accomplishments:						

Exhibit R-2A, PB 2011 Army RDT&E Project Justification			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603015A: Next Generation Training & Simulation Systems		PROJECT S33: TRAINING AND SIMULATION SYSTEMS INITIATIVES (CA)			
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
FY 2010 Plans: FY 2010						
Base FY 2011 Plans: FY 2011 Base						
OCO FY 2011 Plans: FY 2011 OCO						
Program #6		0.000	1.990	0.000	0.000	0.00
Combat Medic Trainer. This is a Congressional Interest Item.						
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
Base FY 2011 Plans: FY 2011 Base						
OCO FY 2011 Plans: FY 2011 OCO						
	Accomplishments/Planned Programs Subtotals	4.485	4.059	0.000	0.000	0.00

Exhibit R-2A, PB 2011 Army RDT&E Project Justification		DATE: February 2010					
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603015A: Next Generation Training & Simulation Systems	PROJECT S33: TRAINING AND SIMULATION SYSTEMS INITIATIVES (CA)					
C. Other Program Funding Summary (\$ in Millions) N/A							
D. Acquisition Strategy N/A							
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.							