

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2006

BUDGET ACTIVITY

3 - Advanced technology development

PE NUMBER AND TITLE

0603007A - Manpower, Personnel and Training Advanced Technolo

COST (In Thousands)	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate
Total Program Element (PE) Cost	8390	10235	6794	6336	6383	6395	6479
792 Personnel Performance & Training	7433	6687	6794	6336	6383	6395	6479
79A Personnel & Training Adv Tech Initiatives (CA)	957	3548	0	0	0	0	0

A. Mission Description and Budget Item Justification: This Program Element (PE) funds the Army's behavioral and social science advanced technology development program that provides non-materiel solutions to transform the human warfighter in concert with the technological transformations in systems, weapons, equipment, and the changes in mission requirements to meet the goals of the Future Force. The program develops, matures, and demonstrates (1) technologies to assess how Soldiers and units are impacted by mission, policy, or program changes; (2) training techniques that will enable Soldiers to take full advantage of advances in technology and systems as they evolve and that will help the Army attain its goals of embedded training in future combat systems; and (3) strategies and tools to enhance leader development so younger leaders have tactical and strategic capabilities and can easily adapt to changing mission demands. In addition, this program also exploits opportunities to enhance Current Force capabilities. This program leverages and coordinates with work in outside organizations such as the Institute for Creative Technologies (ICT), Simulation and Training Technology Center (STTC), and US Air Force Research Laboratory (USAFRL). The cited work is consistent with Strategic Planning Guidance, the Army Science and Technology Master Plan (ASTMP), the Army Modernization Plan, and the Defense Technology Area Plan (DTAP). This PE is managed by the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI).

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	FY 2005	FY 2006	FY 2007
<u>B. Program Change Summary</u>			
Previous President's Budget (FY 2006)	8070	6783	7024
Current BES/President's Budget (FY 2007)	8390	10235	6794
Total Adjustments	320	3452	-230
Congressional Program Reductions		-45	
Congressional Rescissions		-103	
Congressional Increases		3600	
Reprogrammings	320		
SBIR/STTR Transfer			
Adjustments to Budget Years			-230

Two FY06 Congressional adds totaling \$3600 were added to this PE.

FY06 Congressional adds with no R-2A (appropriated amount is shown):

(\$2100) Battle Command Team Training Program Phase II

(\$1500) Modeling and Simulation Technologies for Homeland Defense/Security Training

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BUDGET ACTIVITY 3 - Advanced technology development			PE NUMBER AND TITLE 0603007A - Manpower, Personnel and Training Advanced Technolo			PROJECT 792	
COST (In Thousands)	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate
792 Personnel Performance & Training	7433	6687	6794	6336	6383	6395	6479
<p>A. Mission Description and Budget Item Justification: The objective of this project is to develop, refine, mature and demonstrate advanced behavioral and social science technologies that enhance performance to ensure that the human warfighter keeps pace with the transformations in systems, weapons, equipment, and mission requirements to meet the goals of the Future Force. The project, where feasible, exploits opportunities to enhance Current Force capabilities. Advanced technology development efforts include: developing and demonstrating training methods and techniques that prepare battle commanders to effectively operate in digitized, networked environments and that will enable the use of embedded training technologies envisioned for the Future Combat System (FCS) and future command and control (C2) systems; devising strategies to use distributed and game-based technologies for effective multi-site training, assessment, and feedback; developing improved tools for selecting personnel for flight training; and developing tools that capitalize on the various synthetic environments that will facilitate the advancement of leader knowledge, skills, and abilities (KSAs), and that can provide "virtual mission experiences" to leaders earlier in their career development cycle to foster cognitive flexibility, adaptability, and mission readiness. In addition, this project develops techniques to determine the effects of policy changes (such as personnel stabilization) and operational changes (such as increased number and length of deployments) on unit cohesion and Soldier retention. This program leverages and coordinates with work at the Institute for Creative Technologies (ICT), Simulation and Training Technology Center (STTC), and Communication-Electronics Research Development & Engineering Center (CERDEC). Work in this PE is related to and fully coordinated with efforts funded in PE0602785. The cited work is consistent with Strategic Planning Guidance, the Army Science and Technology Master Plan (ASTMP), the Army Modernization Plan, and the Defense Technology Area Plan (DTAP). This PE is managed by the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI).</p>							
Accomplishments/Planned Program				<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	
Personnel Technology: In FY05, identified factors influencing small-unit cohesion in a stabilized personnel (unit) environment; assessed the impact of operational tempo on Soldier attitudes and retention; and developed prototype selection tools to improve the aviator selection process. In FY06, continue longitudinal (i.e., over time) data collection to assess impact of personnel stabilization and conduct trend analyses to identify most critical factors that influence small unit cohesion; develop a preliminary model of the effects of operational tempo on Soldier readiness and retention; and design new test battery to select individuals for Army flight training. In FY07, based on trend analysis of longitudinal research findings will document and provide lessons learned to DCS G-1 and HRC for improving the personnel stabilization process; will continue the analysis of factors that affect Soldier and leader attitudes and retention; will validate new tests for selecting individuals for Army flight training.				2391	2274	1087	
Training Technology: In FY05, assessed prototype training support packages for selected leader, staff, and unit C2 skills; demonstrated prototype tools to manage and adapt training for changing unit requirements; and identified and documented design variables likely to impact the training effectiveness of single-user immersive interactive simulations. In FY06, analyze performance requirements and refine training and performance support products needed in an initial technology spin out of Future Force C2 capabilities to the Current Force; and evaluate an initial learning model and assessment methods to determine the effectiveness of single-user immersive training technologies. In FY07, will refine prototype training and performance support products to support initial spin out experiments designed to accelerate the fielding of network-enabled battle command training capabilities prior to complete system fielding; and will refine and validate a learning model and the metrics used for assessing training effectiveness of multi-player immersive interactive simulations.				1917	2741	3329	
Leader Development Technology: In FY05, evaluated web-based modules for training selected critical thinking skills; developed				3125	1672	2378	

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prototype vignettes for teaching interpersonal communication skills; identified small group modifications to the "Think Like a Commander - Excellence in Leadership" (TLAC-XL) program and demonstrated preliminary computer-based coaching techniques for leader development (cooperative effort with the Institute for Creative Technologies (ICT)). In FY06, evaluate three additional critical thinking modules online; refine leader performance measurement for the Future Force; and evaluate and fine-tune Special Operations leader development products and tools for their application to conventional forces. In FY07, will refine online instruction and diagnostic tools to enhance leader self awareness in the Future Force; and will field test a package of training approaches to create agile, self-aware junior leaders.			
Total		7433	6687 6794