

UNCLASSIFIED

<b>ARMY RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)</b>								DATE <b>February 1999</b>		
BUDGET ACTIVITY <b>2 - Applied Research</b>				PE NUMBER AND TITLE <b>0602785A Manpower/Personnel/Training Technology</b>				PROJECT <b>A790</b>		
COST <i>(In Thousands)</i>	FY1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
A790 Personnel Performance and Training Technology	10736	8533	12071	11904	11957	11034	9736	10280	Continuing	Continuing
<p><b>A. <u>Mission Description and Budget Item Justification:</u></b> The objectives of this program are to provide the scientific basis to improve the selection and classification procedures to ensure the right person is placed in the right job, to determine leader skills and requirements for the future, to evaluate the impact of deployments on personnel issues (e.g., career commitment, retention, etc), and to provide the behavioral technologies required for the development of effective individual and collective (unit) training strategies including simulation-based synthetic environments. Research topics include training strategies for the digitized battlefield, training strategies in simulated environments, optimum designs of simulators and training devices to achieve maximum learning at minimum cost, and modernization of the selection and classification system to maintain warfighting capabilities in a downsized Army. Research in this PE is consistent with the Army Science and Technology Master Plan, the Army Modernization Plan, and Project Reliance and supports the Human Systems – Personnel Performance and Training – Defense Technology Area. This PE is managed by the U.S. Army Research Institute (ARI) for the Behavioral and Social Sciences (ARI).</p> <p><b>FY 1998 Accomplishments:</b></p> <ul style="list-style-type: none"> <li>• 10736 - Designed prototype training methods and performance assessment instruments for Force XXI.             <ul style="list-style-type: none"> <li>- Developed language tutor and authoring system containing continuous speech recognition to sustain highly perishable foreign language skills.</li> <li>- Developed methodology for measuring battle commander performance.</li> <li>- Established baseline measures to assess the effects of stabilizing the assignments (for 24 months) of key battalion staff members (Commander, Command Sergeant Major, Executive Officer, S3).</li> <li>- Identified factors that determine the effective mix of simulator and actual flight time for Initial Entry Rotary Wing (IERW) training to produce proficient aviators at minimal cost.</li> <li>- Developed recommendations for enhancing the effectiveness of virtual environments for soldier training.</li> </ul> </li> </ul> <p>Total 10736</p> <p><b>FY 1999 Planned Program:</b></p> <ul style="list-style-type: none"> <li>• 8385 - Develop and evaluate prototype training and performance assessment methods for Force XXI.             <ul style="list-style-type: none"> <li>- Develop, demonstrate and evaluate instructional modules for versatile thinking skills required by brigade staff.</li> <li>- Develop performance measures of small infantry unit situation awareness linked to combat effectiveness.</li> <li>- Develop model of PERSTEMPO impacts on soldier commitment, morale and retention.</li> <li>- Assess data for longitudinal effects of stabilizing the assignments for key battalion staff members</li> <li>- Assess the impact of Land Warrior Systems on institutional training.</li> </ul> </li> </ul>										
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<p><b>FY 1999 Planned Program: (continued)</b></p> <ul style="list-style-type: none"> <li>- Implement and evaluate model IERW simulator-centered training program.</li> <li>- Identify representative 21<sup>st</sup> century NCO performance requirements and attributes needed for effective performance.</li> </ul> <p>Develop and implement preliminary version of a small unit leader trainer using an immersive virtual environment a testbed</p> <ul style="list-style-type: none"> <li>• 148 Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Programs</li> </ul> <p>Total 8533</p> <p><b>FY 2000 Planned Program:</b></p> <ul style="list-style-type: none"> <li>• 12071 - Develop training strategies on how to increase a workstation operator's capability to filter, sort, and process information derived from a complete array of data and displays.</li> <li>- Define characteristics of virtual environments for realistic portrayal of conditions in the dismounted soldier's environment.</li> <li>- Refine model of PERSTEMPO impacts on retention intentions/behavior and other human resource outcomes, based on research findings.</li> <li>- Complete longitudinal assessment of the effects of stabilizing the assignments for key battalion staff members.</li> <li>- Implement and evaluate model simulator-based advanced aircraft qualification program.</li> <li>- Implement and evaluate instructional feature and training strategy enhancements to the MOUT/contingency operations trainer.</li> <li>- Determine information display requirements to support exercise control and feedback at battalion level for the digitized battlefield.</li> </ul> <p>Total 12071</p> <p><b>FY 2001 Planned Program:</b></p> <ul style="list-style-type: none"> <li>• 11904 - Develop, demonstrate and evaluate instructional modules for versatile thinking skills required by division staff.</li> <li>- Document lessons learned on cognitive skill enrichment for command and staff.</li> <li>- Develop alternative training methods for ensuring effective performance using Land Warrior Systems.</li> <li>- Assess effectiveness of virtual environment (VE) interface improvements for training and mission rehearsal.</li> <li>- Develop preliminary training methods to enhance the processing and integration of visual, aural, and digital battlefield information by Infantry small unit leaders.</li> <li>- Examine simulator training task requirements for future Army aircraft.</li> <li>- Show relationships between 21<sup>st</sup> Century NCO attributes and performance measures.</li> <li>- Incorporate prototype system for computer recognition of human gestures into VE for dismounted soldier training and mission rehearsal.</li> <li>- Identify and define elements of human cognition and computer cognition that constitute realistic computer generated forces command entity behavior.</li> </ul>		
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Total 11904

<b>B. Program Change Summary</b>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
Previous President's Budget (FY 1999 PB)	8736	8602	9114	9159
Appropriated Value	9014	8602		
Adjustments to Appropriated Value				
a. Congressional General Reductions	-278	-69		
b. SBIR / STTR				
c. Omnibus or Other Above Threshold Reductions				
d. Below Threshold Reprogramming				
e. Rescissions				
f. Transferred from USD(HA)	+2000			
Adjustments to Budget Years Since <u>FY 1999 PB</u>			+2957	+2745
Current Budget Submit (FY 2000 / 2001 PB)	10736	8533	12071	11904

Change Summary Explanation: Funding: FY98 – Congressional special interest funds appropriated in the Defense Health Program were internally reprogrammed by DOD to this PE for proper program execution (+ 2000).  
 FY00 and FY01: 6.1 Rebaseline funding added for AAN-focused STO's: Maximizing 21<sup>st</sup> Century Soldier & Leader Performance.

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