

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY		PE NUMBER AND TITLE					
3 - Advanced technology development		0603607A - JOINT SERVICE SMALL ARMS PROGRAM					
COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
Total Program Element (PE) Cost	11788	10629	8809	9085	9341	8667	8592
627 JT SVC SA PROG (JSSAP)	10820	8045	8809	9085	9341	8667	8592
62D SMALL ARMS ADVANCED TECHNOLOGY DEV (CA)	968	2584					

A. Mission Description and Budget Item Justification: This program element (PE) matures and demonstrates advanced technologies that integrate into individual and crew served weapons for all Services to provide greater lethality, utility, and range at a significantly reduced weight for the Future Force and, where feasible, exploits opportunities to enhance Current Force capabilities. The main efforts under this PE are the Lightweight Small Arms Technologies (LSAT) and the Lightweight Small Arms Systems (LSAS). The LSAT is a group of technologies that offer significantly reduced weight over the currently fielded weapons and ammunition. LSAS takes the technologies that were successfully demonstrated during LSAT and applies them to specific weapon systems and missions to determine their utility. All Joint Service Small Arms Program (JSSAP) efforts follow the Joint Service Small Arms Master Plan (JSSAMP), the Joint Capabilities Integration Development System (JCIDS) Small Arms Analysis, and the resulting Capabilities Development Documents. The cited work is consistent with the Department of Defense Research and Engineering Strategic Plan, the Army Science and Technology Master Plan, the Army Modernization Strategy, and the Army Posture Statement. Work is performed by the US Army Armament Research, Development, and Engineering Center, Picatinny Arsenal, NJ. Work in this PE is related to and fully integrated with the efforts funded in PE 0602623A (Joint Service Small Arms Program) and PE 0602624A (Weapons and Munitions Technology). Transition paths have been established in coordination with Program Executive Officer (PEO) Soldier, Project Manager Soldier Weapons, Product Manager (PM) Crew Served Weapons, PM Individual Weapons, United States Marine Corps (USMC) PM Infantry Weapons; and PEO Special Programs, US Special Operations Command (SOCOM). Project 62D contains congressional adds only.

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<u>B. Program Change Summary</u>	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	8112	8097	8856
Current BES/President's Budget (FY 2009)	11788	10629	8809
Total Adjustments	3676	2532	-47
Congressional Program Reductions		-68	
Congressional Rescissions			
Congressional Increases		2600	
Reprogrammings	3876		
SBIR/STTR Transfer	-200		
Adjustments to Budget Years			-47
<p>FY07 funds were increased to support HEAB.</p> <p>Two FY08 congressional adds totaling \$2600 were added to this PE.</p> <p>(\$1000) Modular Individual Weapon Sight and Low Cost Remote Weapon Station (\$1600) Polymer Small Arms Technologies, Transfer from PA,A line 2</p>			

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February 2008

BUDGET ACTIVITY 3 - Advanced technology development	PE NUMBER AND TITLE 0603607A - JOINT SERVICE SMALL ARMS PROGRAM					PROJECT 627	
COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
627 JT SVC SA PROG (JSSAP)	10820	8045	8809	9085	9341	8667	8592

A. Mission Description and Budget Item Justification: This project matures and demonstrates advanced technologies that integrate into individual and crew-served weapons and ammunition for all Services to provide greater lethality, utility, and range at a significantly reduced weight for the Future Force and, where feasible, exploits opportunities to enhance Current Force capabilities. The main efforts are the Lightweight Small Arms Technologies (LSAT), the Lightweight Small Arms Systems (LSAS), and the High Explosive Air Burst (HEAB) ammunition and weapon system. The LSAT is a group of technologies that offer significantly reduced weight over the currently fielded weapons and ammunition. These technologies lighten the Soldier's load, provide improved battlefield mobility, and reduce logistics burden to maximize operational utility and survivability, while maintaining or improving current levels of performance. LSAS takes the technologies that were successfully demonstrated during LSAT and applies them to specific weapon systems and missions to determine their utility. The HEAB increases Soldier survivability, standoff and versatility by providing an increased probability to defeat point, area, and defilade targets out to 700 meters. All Joint Service Small Arms Program (JSSAP) efforts follow the Joint Service Small Arms Master Plan (JSSAMP), the Joint Capabilities Integration Development System (JCIDS) Small Arms Analysis, and the resulting Capabilities Development Documents. The cited work is consistent with the Department of Defense Research and Engineering Strategic Plan, the Army Science and Technology Master Plan, the Army Modernization Strategy, and the Army Posture Statement. Work is performed by the US Army Armament Research, Development, and Engineering Center and PM Soldier Weapons, Picatinny Arsenal, NJ. Work in this PE is related to and fully integrated with the efforts funded in PE 0602623A (Joint Service Small Arms Program) and PE 0602624A (Weapons and Munitions Technology). Transition paths are established in coordination with Program Executive Officer (PEO) Soldier, Project Manager Soldier Weapons, Product Manager (PM) Crew Served Weapons, PM Individual Weapons, United States Marine Corps (USMC) PM Infantry Weapons; and PEO Special Programs, US Special Operations Command (SOCOM).

<u>Accomplishments/Planned Program:</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Lightweight Small Arms Technologies (LSAT): In FY07 integrated and demonstrated lethality and reliability of the lightweight weapons and ammunition in a light machine gun configuration with caseless and case telescoped ammunition; identified and matured prototype alternate weapon configurations and performed trade studies to determine best application(s) for lightweight technologies; continued refinement and maturation of both cased telescoped and caseless ammunition and weapon designs to achieve maximum weight reduction with maximum lethality and reliability.	6951		
Lightweight Small Arms Systems (LSAS): In FY08, mature and demonstrate high payoff technologies from LSAT that are technically successful, affordable, and manufacturable. Identify and complete design and development of selected ammunition and weapon configurations including cased telescoped and caseless ammunition, light machine guns and rifles/carbines. In FY09, will further develop and fabricate small quantities of ammunition and weapons prototypes in order to conduct and additional testing of hardware and to validate design and analyses.		7137	7432
Small Arms Technology Assessment and Effectiveness Modeling: In FY08, begin system integration planning and develop additional scenarios to assess utility of existing and potential future weapon concepts utilizing current simulation systems. In FY09, will further mature higher order simulations to assess the utility of complimentary programs in PE/project 622623A/H21.		713	1377
High Explosive Air Burst (HEAB) Ammunition and Weapon System: In FY07, completed design of next generation of HEAB	3869		

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3 - Advanced technology development	0603607A - JOINT SERVICE SMALL ARMS PROGRAM	627	
ammunition and weapons systems; built and tested prototypes.			
Small Business Innovative Research/Small Business Technology Transfer Programs		195	
Total		10820	8809