ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

June 2001

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
2 - APPLIED RESEARCH	**0602623A - Joint Service Small Arms Program (JSSAP)**	**H21**

COST (In Thousands)	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
H21 JT SVC SA PROG (JSSAP)	5069	5365	5611	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification:

PLEASE NOTE: This administration has not addressed FY2003-2007 requirements. All FY 2003-2007 budget estimates included in this book are notional only and subject to change.

This Program Element (PE) researches key individual and crew-served weapon technologies that will enable the Army Transformation to the Objective Force by enhancing the fighting capabilities and survivability of dismounted battlefield personnel of the Services. Funded efforts include component technologies for: the Objective Crew-Served Weapon (OCSW); the Objective Individual Combat Weapon (OICW) system enhancements; Light Fighter Lethality; and Advanced Medium Machine Gun Technology. OCSW will provide the next generation crew-served weapon with improved combat effectiveness, including bursting munitions technology to provide 500%+ increase in probability of target incapacitation at extended range (to 2000 meters) with the capability to hit protected personnel targets in defilade (obscured or non-visible), and a 65-75% reduced weight over weapons it replaces. The OCSW is designed to replace selected M2 machine guns, MK19 grenade machine guns and M240 machine guns. The OICW System Enhancement efforts will rapidly develop lethality enhancing and cost reducing technologies for OICW. The Light Fighter Lethality effort provides smart munition based weapon system technologies that will dramatically reduce warfighter system weight (25-50% weapon weight reduction), provide near 100% lethality and maximize operational utility and survivability for the Objective Force. The Advanced Medium Machine Gun Technology effort provides technologies for a lighter, more effective and versatile replacement for current 7.62mm medium machineguns. The technology enhancement efforts of this PE will assure that the Objective Family of Small Arms (OFSA), the next generation of weapons systems, continues to overmatch the evolving threat and address the needs of the Objective Force. All Joint Service Small Arms Program (JSSAP) efforts are based upon the Joint Service Small Arms Master Plan (JSSAMP), Mission Needs Statements and Operational Requirements Documents of the Services. The cited work is consistent with the Army Science and Technology Master Plan (ASTMP), the Army Modernization Plan and Project Reliance. The program element contains no duplication with any effort within the Military Departments. This program is primarily managed by the U.S. Army Armament Research, Development and Engineering Center (ARDEC), Picatinny Arsenal, New Jersey. Work in this PE is related to, and fully coordinated with, efforts in PE 0602624A (Weapons and Munitions Technology), and PE 0603607A (Joint Service Small Arms Program). Transition paths have been established in coordination with Product Manager (PM) Small Arms, USMC Director Ground Weapons and US Special Operations Command (SOCOM). This program supports the Objective Force transition path of the Transformation Campaign Plan (TCP).

FY 2000 Accomplishments

- 3388 Researched and investigated robust, alternative OCSW fuze design for enhanced reliability and sustainability.
- 800 Conducted micro electro-mechanical systems (MEMS) based safe and arming device design activities for OICW System Enhancement for potential reduced fuze cost, weight and volume.

FY 2000 Accomplishments (Continued)

- 881 Completed preliminary error budget and feasibility analysis for Light Fighter Lethality smart munition program.

Total 5069

FY 2001 Planned Program

- 2811 Complete research and investigation into airburst, point-detonation and self-destruct functions for OCSW fuze; conduct firing demonstration tests of fully integrated OCSW fuze from 800 out to 2000 meters; build OCSW full solution fire control test hardware; research and investigate OCSW thermal module capability, leveraging OICW and other applicable technologies, leading to Early Operational Assessment.
- 1415 Test and evaluate breadboard MEMS safe and arming design employing Micro Energetic Initiation (MEI) for OICW System Enhancement to confirm feasibility of reduced fuze cost, weight and volume in preparation for technology insertion to OICW development.
- 997 Conceptualize preliminary individual system designs addressing substantial lethality increases for Light Fighter Lethality.
- 142 Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Programs.

Total 5365

FY 2002 Planned Program

- 2216 Conduct Early Operational Assessment/User testing of OCSW.
- 3395 Complete design and verification of Light Fighter Lethality critical sub-system designs through constructive simulation, individual and force on force empirical performance, leading to final design selection and fabrication of test hardware.

Total 5611

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B. Program Change Summary	FY 2000	FY 2001	FY 2002	FY 2003
Previous President's Budget (FY2001 PB)	5161	5415	5589	0
Appropriated Value	5187	5415	0	0
Adjustments to Appropriated Value	0	0	0	0
a. Congressional General Reductions	0	0	0	0
b. SBIR / STTR	-92	0	0	0
c. Omnibus or Other Above Threshold Reduction	-14	0	0	0
d. Below Threshold Reprogramming	0	0	0	0
e. Rescissions	-12	-50	0	0
Adjustments to Budget Years Since FY2001 PB	0	0	22	0
Current Budget Submit (FY 2002/2003 PB)	5069	5365	5611	0