

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

February 2002

BUDGET ACTIVITY 3 - Advanced technology development	PE NUMBER AND TITLE 0603654A - Line-Of-Sight Technology Demonstration		PROJECT 460				
COST (In Thousands)	FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate
460 LOSAT TECHNOLOGY DEMO	50262	69859	28283	0	0	0	0

A. Mission Description and Budget Item Justification: Line-of-Sight Anti-Tank (LOSAT) and the Kinetic Energy Missile (KEM) technology provide the foundation for the Objective Force. This program focuses on the integration of the LOSAT weapon system into a light, early deployable configuration in order to help remedy the urgent need for the early entry force lethality shortfall against heavy armor in support of the Army Transformation. The LOSAT weapon system consists of a kinetic energy (KE) missile launcher mounted on a heavy High Mobility Multi-purpose Wheeled Vehicle (HMMWV) chassis. LOSAT offers a highly mobile, near-term, advanced capability for overwhelming armor destruction with a high rate of fire, increased range, and increased force survivability. LOSAT, deployed in the early entry force, will provide the decisive edge to win swiftly with minimum casualties and provides an assault support weapon capability. LOSAT is strategically and tactically deployable, giving Commanders and decision makers greater flexibility. Once in theatre, LOSAT is extremely mobile, to include air droppable and sling loading under CH-47 and UH-60L aircraft. The performance of this hypervelocity kinetic energy missile (velocity of a mile per second) is not affected by the proliferation of emerging threat active protective systems and enhanced reactive armors which are both rapidly becoming available on the global marketplace. LOSAT was initiated as a DoD-approved Advanced Concept Technology Demonstration (ACTD) program in FY 1998 to position the technology for future acquisition decisions; demonstrate subsystem capabilities in flight tests and dirty battlefield environments; evaluate the utility of the LOSAT technology for the early entry forces; demonstrate an integrated HMMWV-based LOSAT system in-flight tests and advanced warfighting experiments; and evaluate affordability issues. The ACTD program is a cost-effective means to assess the operational value of LOSAT to the early entry force through deployment with the XVIII Airborne Corps while longer-term applied research efforts continue for a small Compact Kinetic Energy Missile and an objective Future Combat System. The work in this program element is consistent with the Army Science and Technology Master Plan, and the Army Modernization Plan. In December 1999, the Army and OSD funded the LOSAT accelerated advanced development and procurement as part of the Army Transformation by adding additional design activities, reducing risk, completing system qualification testing, and adding additional Operational tests to support transition to limited production of the LOSAT Weapon System, with production funds starting in FY 2004. This ACTD Plus System Development Demonstration (SDD) effort is funded in PE0604819A and is concurrent with the ACTD contract. This system supports the Legacy to Objective Force transition path of the Transformation Campaign Plan (TCP).

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FY 2001 Accomplishments:

- 517 - Completed fabrication of one Fire Unit structural prototype for Risk Reduction Flight test.
- 2067 - Completed fabrication of missile hardware for two Risk Reduction Flight tests.
- 2280 - Conducted two Risk Reduction Flight tests.
- 30930 - Continued Fire Unit electronic and interior mechanical detail designs; and initiated fabrication (including major subcontractors).
- 9816 - Continued Missile electronic and mechanical detail designs; and initiated fabrication (including major subcontractors).
- 432 - Continued tooling design and initiated fabrication.
- 1345 - Completed Fire Unit Software requirements analysis; initiated design, code, and test.
- 500 - Supported Dismounted Battlespace Battle Lab Early Soldier Involvement exercises.
- 2375 - Continued test equipment design, initiated fabrication.

Total 50262

FY 2002 Planned Program

- 37658 - Complete Fire Unit detail designs; continue fabrication, assembly and test of twelve prototypes.
- 24047 - Complete Missile detail designs; continue fabrication, assembly and test 37 prototypes.
- 1646 - Complete tool design and fabrication.
- 1130 - Complete Virtual Prototype Simulator Upgrade.
- 1202 - Complete Training Device designs; initiate fabrication.
- 896 - Support Early Soldier involvement training, and planning for ACTD Company in 82nd Airborne Division.
- 3280 - Complete Fire Unit and update Missile software design, code and unit level test; initiate system level test.

Total 69859

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FY 2003 Planned Program

- 13880 - Complete Fire Unit fabrication, assembly, and qualification testing.
- 8100 - Complete Missile fabrication, assembly, qualification testing, and flight testing.
- 720 - Complete Fire Unit Software system level test and certification.
- 160 - Complete Missile Software system level test and certification.
- 5423 - Support system ground and flight qualification tests, safety certification, and man-rating assessment.

Total 28283

<u>B. Program Change Summary</u>	FY 2001	FY 2002	FY 2003
Previous President's Budget (FY2002 PB)	50262	57384	28350
Appropriated Value	50727	70456	0
Adjustments to Appropriated Value	0	0	0
a. Congressional General Reductions	0	-597	0
b. SBIR / STTR	0	0	0
c. Omnibus or Other Above Threshold Reduction	0	0	0
d. Below Threshold Reprogramming	0	0	0
e. Rescissions	-465	0	0
Adjustments to Budget Years Since FY2003 PB	0	0	-67
Current Budget Submit (FY 2003 PB)	50262	69859	28283

Change Summary Explanation: Funding - FY 2002 - A Congressional add was made for the LOSAT Technology Demonstration, Project 460 (\$13072). This Congressional add was a transfer from the Army Missile Procurement.