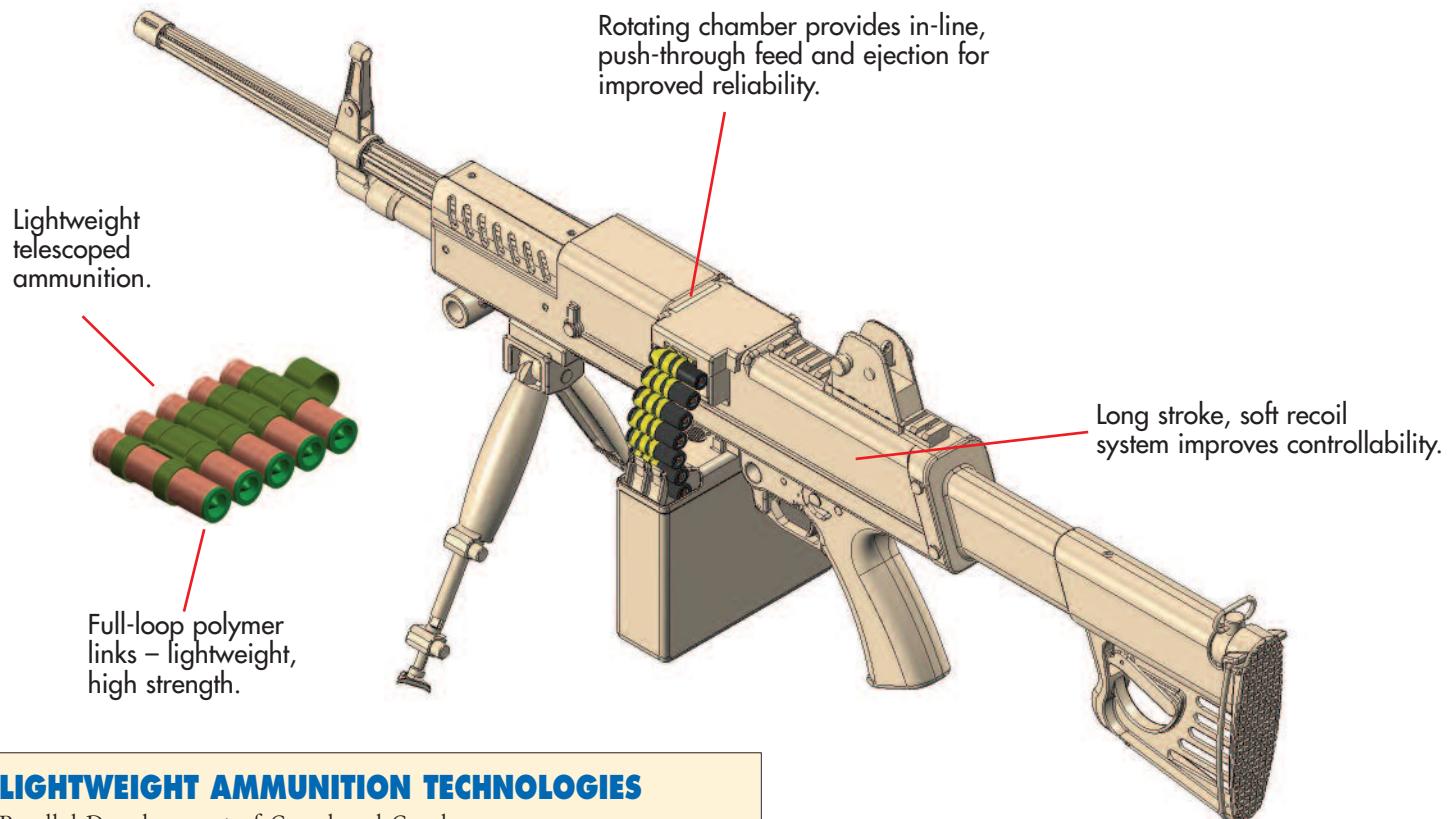


LIGHTWEIGHT SMALL ARMS TECHNOLOGIES

AAI is developing a next-generation family of high-performance, lightweight weapons and advanced technology ammunition as part of the U.S. Army's Lightweight Small Arms Technologies (LSAT) program. LSAT is an Army Technology Objective and a Defense Technology Objective initiated in fiscal 2004. Key design considerations include scalability of the ammunition caliber and applicability to a family of weapons, as well as affordability of weapons and ammunition.



LIGHTWEIGHT AMMUNITION TECHNOLOGIES

Parallel Development of Cased and Caseless Telescoped Ammunition

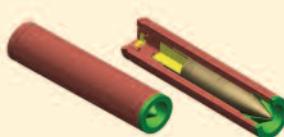
Cased Telescoped Ammunition

- Full polymer cartridge.
- Up to 35% weight reduction vs. conventional ammo.



Caseless Telescoped Ammunition

- High ignition temperature propellant.
- Fully consumed upon firing – no case to eject.
- Up to 50% weight reduction.
- Up to 40% volume reduction.



ADDITIONAL WEAPON TECHNOLOGIES

- Improved operator interfaces.
- Improved supportability.
- Improved thermal management technologies for caseless ammunition.
- Lightweight materials and structural design reduce weapon weight and size.



LIGHTWEIGHT SMALL ARMS TECHNOLOGIES (LSAT)

The Lightweight Small Arms Technologies program is an Army Technology Objective and a Defense Technology Objective initiated in fiscal 2004. LSAT is managed through the Joint Service Small Arms Program at the U.S. Army's Armament Research, Development and Engineering Center in Picatinny, New Jersey.

Key objectives of the LSAT program are to:

- Reduce weight of weapons carried by infantrymen by 35 percent.
- Lessen weight of ammunition by more than 40 percent.
- Maintain or improve lethality and reliability over current systems.
- Improve ergonomics.
- Reduce training and maintenance time.
- Ensure compatibility with the Future Force Warrior (FFW) Soldier System.

AN EXPERIENCED TEAM

AAI has a long and successful history in armament and ammunition technologies and has been involved in many U.S. Army small arms development programs over the past 50 years.

For LSAT, AAI has assembled an experienced team of companies, including ARES of Port Clinton, Ohio; Alliant Techsystems (ATK) of Independence, Mo.; Battelle Memorial Institute of Columbus, Ohio; Omega Training Group of Columbus, Ga.; and General Dynamics' St. Marks Powder of St. Marks, Fla.

In addition, a government/contractor Integrated Product Team is in place, working together cooperatively to ensure program success.

THREE PROGRAM PHASES

Phase I was completed in January 2005. It was a nine-month system design and trade-off effort that used virtual prototyping to develop recommended ammunition and weapon concepts.

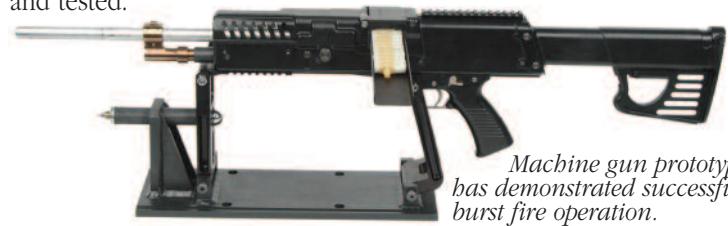
Phase II is a 28-month prototype fabrication and testing phase currently in progress. Prototype lightweight weapons and ammunition are being assembled and tested to demonstrate concepts and validate design trade-offs.

Phase III will encompass all final subsystem and system integration testing to advance the system to TRL 6, prepare for a Milestone B decision, and transition to the Product Manager Soldier Weapons (PMSW) at the end of fiscal 2010.

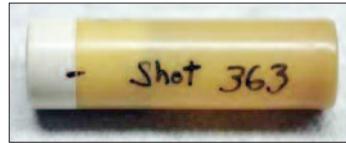
Contact information: Paul Shipley 410-628-3462 or shipley@aaicorp.com and Chris Yaniger 410-628-3447 or yanige@aaicorp.com.

PROMISING TECHNOLOGIES

Since its inception in fiscal 2004, the LSAT program has made tremendous progress, including a fully functioning dynamic model of the weapon system, a working weapon prototype, and more than 700 cased telescoped rounds fired to date. The caseless ammunition development is also progressing well – the high ignition temperature propellant (HITP) formulation has been established and demonstrated to provide the required interior ballistics characteristics. Integrated caseless cartridge testing is scheduled to begin in the third quarter of fiscal year 2006. These promising LSAT technologies will continue to be matured and tested.



Machine gun prototype
has demonstrated successful
burst fire operation.



More than 700 cased
telescoped rounds have
been fired to date.

ACHIEVING WEIGHT REDUCTION

A key to achieving overall weight reduction is innovative lightweight ammunition. AAI has chosen parallel concepts — polymer cased telescoped ammunition (CT) and caseless telescoped ammunition (CL). CT is a lower risk approach that can reach weight reductions of 35 to 40 percent. CL, while higher risk, can achieve a 50 percent weight reduction along with 40 percent less volume. The use of HITP in the caseless ammunition allows the complete elimination of the cartridge case.



The weight of the current M249 weapon and 600 rounds of ammunition is a combined 38.3 lbs. The LSAT program goal is to reduce the weapon/ammo system weight to 23.8 lbs., representing a 38% reduction. Both the cased and caseless design concepts exceed the goal, lowering total system weight to 22.9 lbs. with cased ammunition and to 19.1 lbs. (a 50% reduction) using caseless ammunition.



INNOVATION THAT WORKS.

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