



Malcolm Baldrige
National
Quality
Award
2007 Award
Recipient

Joint Service Small Arms Synchronization Team (JSSAST) Update



TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

Presented
By

**COL Scott Flynn
JSSAST Chairman**



TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.¹

- ▲ JSSAST Mission
- ▲ JSSAST Membership
- ▲ JSSAST Themes
- ▲ Awareness Campaign
- ▲ Current Programs
- ▲ What's Next?



**A Chartered Joint-Centric Activity
Providing Small Arms Technology
&
Requirements Harmonization
For All the Armed Services**

Focus on the
Warfighter
Always!

Charter Updated and Approved
by ASA (ALT) Hon Claude Bolton
31 Aug 04

\$14-17M
Annual
Budget



- Intensive Management of the DoD Small Arms Tech Base
- Harmonization of Requirement
- Transition to PM's for System Development and Demonstration
- Long Range Plans and Strategies
- Influence of International Small Arms Activities

...for the Joint Service Small Arms Synchronization Team



Chairman

COL Scott Flynn (Commander, ESIC)

Principals:

- Army:** LTC T. Henthorn (USAIC)
- Marines:** Col A. Bianca (MCSC)
- Air Force:** Col P. Lopardi (HQ AFSFC)
- Navy:** CAPT P. Sullivan (PEO LMW)
- Coast Guard:** CAPT S. Genovese (HQ USCG)
- SOCOM:** COL K. Noonan (PEO SOF Warrior)

**Meets
Semiannually**

Associates:

- Army PMSW:** COL D. Tamilio (PEO Soldier)
- JNLWD:** Mr. K. Swenson (JNLWD)



FY08-10

JSSAP Awareness Campaign:

- ➔ - Continue meeting with Service Members and HQ's
- ➔ - Extend to the Office of the Secretary of Defense.

Lightweight Small Arms Technologies (LSAT)

- ➔ - Establishment of a Joint Requirement and Transition Strategy
 - Build a jointly funded program for the SDD and Production Phases of Acquisition.

Requirements Harmonization

- Harmonize the various on-going Service capabilities assessments/requirements.
- Update current Joint Small Arms Capabilities Assessment
- ➔ - Create Catalog of Service Requirements

Joint Service Small Arms Master Plan (JSSAMP)

- ✓ - Complete Departmental approvals of current document,
- ➔ - Update JSSAMP in FY09



Completed

- ✓ PEO SOF Warrior, US SOCOM
- ✓ PM Infantry Weapon Systems, USMC
- ✓ Director, Combat Arms and Training, USAF
- ✓ OSD Acquisition, Logistics and Technology
- ✓ Air Force Requirements Review Board
- ✓ HQDA Office of Director of Technology

Planned

- ▲ Asst Comdt Counterterrorism, Special Missions, USCG
- ▲ PEO Littoral and Maritime Warfare, NAVSEASYS COM
- ▲ Joint Non Lethal Weapons Directorate, USMC
- ▲ All Service Higher Headquarters
- ▲ OSD Defense Research and Engineering





Cased Telescoped LMG: Caseless LMG



Cased Telescoped Rifle: Caseless Rifle:

	M855	Spiral 2 Loose Fill	Spiral 3 Compressed @ 1.45 g/cc	Caseless
Volume (cu in)	0.247	0.262	.195	0.152
Percent Volume Reduction	----	-6%	21%	38%
Weight (grains) Including link	220	141.2	130.6	105.1
Percent Weight Reduction	----	36%	41%	52%

Schedule (R&D)

TRL 6 Cased Telescope Light Machinegun (LMG) FY08
 Rifle Design FY09
 Initial Capabilities FY09
 Document Draft

Cost and Affordability:

High commonality of design and function, some action component differences

- Ammunition cost comparable
- Industrialization under study

	M249	Goal	Caseless/CTA
Weapon	17.5 lb	11.3 lb	9.8/10.8 lb
Ammo (600 Rds)	20.8 lb	12.5 lb	10.1/13.6 lb
System (Wpn +Ammo)	38.3 lb	23.8 lb	19.9/24.4 lb



Purpose

To demonstrate advanced fire control component technology determining correct range to [moving targets and further power sharing within weapon](#) for current and future warfighters.



Challenges

- Moving targets prior to their seeking cover
- Unsupported firing position.
- Inaccurate ranging limits precision
- Weight near muzzle leads to poor aiming
- Multiple batteries reduces accessory availability



How do we solve this problem

- Technologies for [automatic target detection](#)
- [Laser steering](#) to increase the soldier's ability to accurately determine range to non cooperative moving targets.
- [Improved lethality](#) in direct and indirect fire situations for [unsupported](#) firing positions.
- Develop range determination to [overcoming wobble](#) associated in an unsupported firing position

Payoff

TRL 4 (Breadboard) [component](#) technologies [integrated](#) to establish that they will work together

This is relatively "low fidelity" but [shows we are getting there!!](#)



Purpose:

To demonstrate advanced lethal armament component technology for [providing improved munition effectiveness to targets.](#)

Challenges:

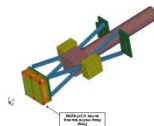
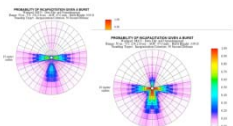
- Incapacitation of defilade threat targets
 - Behind objects
 - Under cover
- Incapacitation is limited by:
 - Small payload volume
 - Lack of directionality
- Co-development of eight reduction and recoil reduction

How do we solve this problem

- Improvements to [small fragmenting payloads](#) through directionality and materials for increased effectiveness
- [Proximity fuze small size application](#)
- [Low weight recoil attenuation](#) coupled with other weight reduction to deliver more effective payloads

Payoff:

- Multiple critical technology demonstrations enabling maturity measurement coupled with cross integration analysis [fulfilling broad small arms capability gaps](#) for spiral transition



- ▲ **Continue Operational Awareness Campaign**
- ▲ **Continue Development of LSAT Transition Strategy**
- ▲ **Update Joint Service Small Arms Master Plan**
- ▲ **Update Joint Small Arms Capabilities Assessment**
- ▲ **Next JSSAST Meeting in November 2009**

