PEO MS Upgrades Missile Technologies to Meet Emerging Requirements

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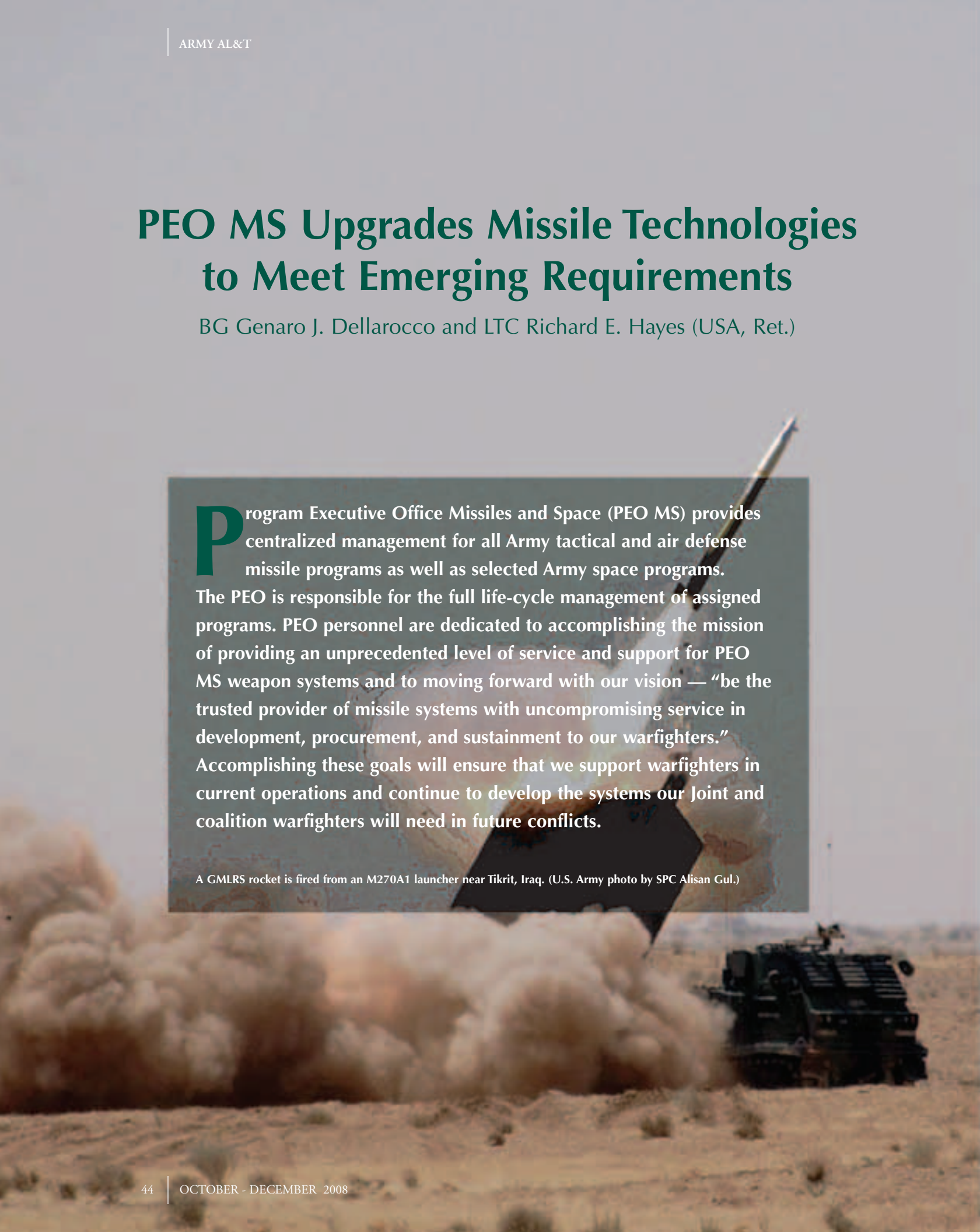

Program Executive Office Missiles and Space (PEO MS) provides centralized management for all Army tactical and air defense missile programs as well as selected Army space programs. The PEO is responsible for the full life-cycle management of assigned programs. PEO personnel are dedicated to accomplishing the mission of providing an unprecedented level of service and support for PEO MS weapon systems and to moving forward with our vision — "be the trusted provider of missile systems with uncompromising service in development, procurement, and sustainment to our warfighters." Accomplishing these goals will ensure that we support warfighters in current operations and continue to develop the systems our Joint and coalition warfighters will need in future conflicts.

A GMLRS rocket is fired from an M270A1 launcher near Tikrit, Iraq. (U.S. Army photo by SPC Alisan Gul.)

To better facilitate accomplishing the PEO's mission, the organization is evolving to a new structure, and further changes are expected for FY10.

Upgrading Current Systems

PEO MS systems are being used every day in *Operations Enduring* and *Iraqi Freedom*. Many of these systems were developed long before the current conflicts, but are being upgraded with new technologies to meet emerging requirements. These include the Javelin; Tube-launched, Optically-tracked, Wire-guided (TOW) missile; Hellfire; 2.7″ Hydra 70 Rockets; Multiple Launch Rocket System (MLRS); and Army Tactical Missile System (ATACMS).

An example of the extent of these upgrades is the Guided MLRS (GMLRS) rocket with a unitary warhead. The GMLRS rocket has an extended range of approximately 70 kilometers (km) and a guidance system that allows our warfighters to deploy it against point targets with such great accuracy that it is often referred to as the "70-km sniper rifle." This unprecedented accuracy not only enhances our warfighters' effectiveness, but it also greatly reduces collateral damage when used in urban operations.

In response to an urgent operational requirement, a new Hellfire missile variant, known as the K2A, was developed and fielded. This variant incorporates a fragmentation sleeve that dramatically increases the Hellfire's effectiveness against soft and lightly armored targets. The K2A has become the preferred weapon for employment in the counter-improvised explosive device, light armor, and nontraditional target engagement roles because of its lethality, precision, reliability, and ability to engage the full spectrum of targets at maximum standoff ranges.

While nothing is more important than supporting the current operations, PEO MS is looking to the future. Older systems will be upgraded with new capabilities, existing systems will be replaced, and new systems with capabilities that do not exist today will be fielded.

The Viper Strike, a semiactive laser-guided munition based on a submunition from the ATACMS program, is a recently developed and deployed unmanned aerial vehicle (UAV)-delivered weapon that is bringing a new capability to the fight. Dropped from a UAV, the Viper Strike can destroy moving and stationary targets ranging from armored vehicles to thin-skinned targets, with minimal collateral damage.

Delivery systems, as well as missiles and rockets, are being improved. The High Mobility Artillery Rocket System is a new delivery system for MLRS rockets and ATACMS missiles. It is a truck-mounted system that provides the same accurate delivery as the tracked MLRS M270A1 launcher, but with improved mobility for maneuver forces.

Future System Capabilities

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We are continuing to improve on Patriot, the only combat-proven hit-to-kill air defense system in the world. PEO MS is working to "pure fleet" all Patriot battalions to Configuration-3, capable of firing all Patriot missile versions. The Patriot Advance Capability-3 (PAC-3) missile is also being improved through the Missile Segment Enhancement (MSE) program. The MSE provides greater range and increased maneuverability. The U.S., Germany, and Italy are partners in jointly developing the Medium-Range Extended Air Defense System (MEADS) that ultimately will replace Patriot. The PAC-3 MSE missile now being developed for Patriot will be the primary missile for MEADS.

In the area of cruise missile defense, both sensor platforms and weapon systems are in development. The Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) will provide elevated, persistent, over-the-horizon surveillance and fire control quality data to protect critical geopolitical assets from attack from a large number of threats, including cruise missiles. JLENS will extend the engagement ranges of our air and missile defense weapon systems by providing high quality track data on targets that may be terrain masked from surface-based sensor systems.

The Surface Launched Medium-Range Air-to-Air Missile (SLAMRAAM) System, to be fielded in FY11, is one of the systems that will take advantage of the capabilities JLENS adds to the Joint forces. SLAMRAAM is a mobile beyond-line-of-sight (BLOS) system that employs the U.S. Air Force/U.S.

JLENS, a tethered aerostat, can stay aloft up to 30 days providing 24-hour radar coverage for long-range surveillance and fire control sensor capabilities. Here, JLENS is attached to the ground station. (Artist rendering courtesy of PEO MS.)

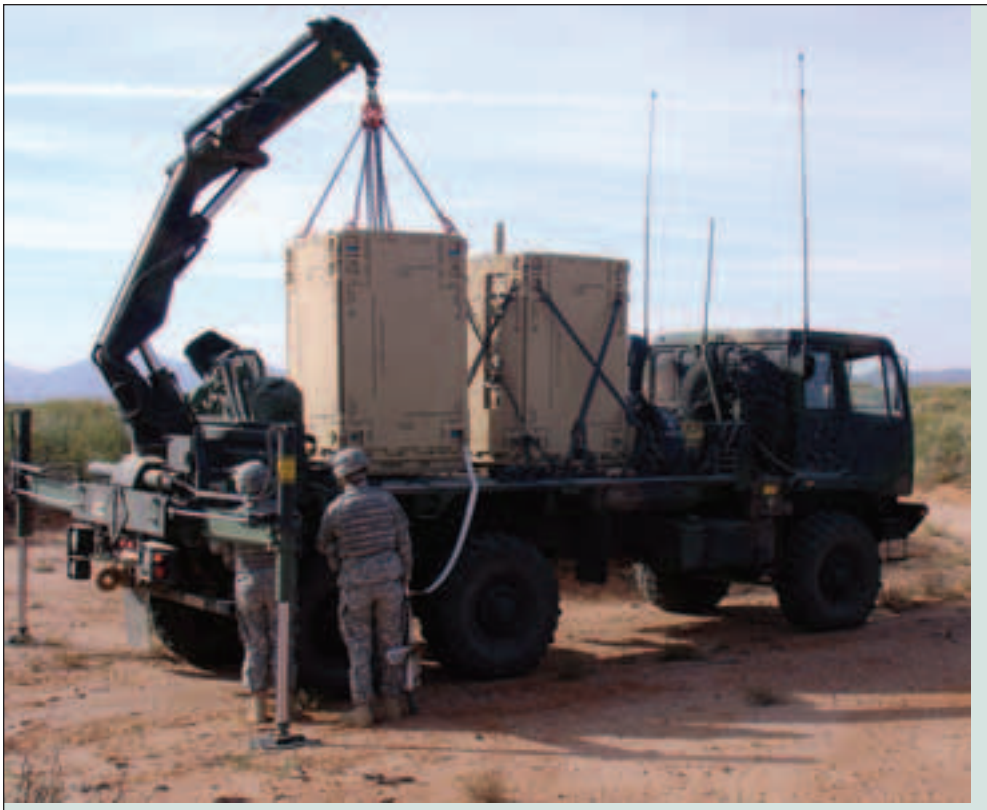
Navy active seeker AIM-120C Advanced Medium-Range Air-to-Air missile. SLAMRAAM provides a critical BLOS overmatch capability against rapidly evolving threats.

The Integrated Air and Missile Defense (IAMD) program will enhance the effectiveness of all of our current and future air and missile defense systems. Unlike traditional acquisition programs that focus primarily on the development of a single system or platform, the IAMD program is structured to enable the development of an overarching system-of-systems capability with all participating air and missile defense components functioning interdependently to provide total operational capabilities not achievable by the individual systems. The IAMD program achieves this objective by establishing the incremental IAMD architecture and providing the common IAMD Battle Management Command, Control, Communications, Computers, and Intelligence capability and the Integrated Fire Control network capability to provide fire control connectivity and enable distributed operations among the interdependent, networked elements.

Maneuver and Aviation Systems

We also have great systems under development in our maneuver and aviation mission areas. One of these is the Non-Line-of-Sight Launch System (NLOS-LS). NLOS-LS, a core Future Combat Systems system, consists of a family of platform-independent guided munitions that are vertically launched directly from a container that is optimized for network-centric operations, logistics, deployability, and lethality. The NLOS-LS is capable of unattended/unmanned operations under all weather conditions. The initial configuration is armed with 15 Precision Attack Missiles and is capable of engaging a variety of target types on the current and future battlefields. Additional missile types with enhanced capabilities will be developed and fielded in the future. The NLOS-LS is one of the premier lethality systems for network-centric operations and warfare in the Future Force including deployment on the U.S. Navy's Littoral Combat Ship. It will bring revolutionary capabilities to the warfighters while reducing their exposure to enemy actions.

The newest major program in PEO MS is the Joint Air-to-Ground Missile (JAGM). The JAGM will be a common air-to-ground precision-guided missile for use by Joint service manned and unmanned aircraft to destroy high-value stationary, moving, and relocatable land and naval targets. JAGM will be a common, multimode



Soldiers set up the Container Launch Units for the NLOS-LS demonstration held at Fort Bliss this past January. (U.S. Army photo courtesy of Future Combat Systems (Brigade Combat Team).)

weapon capable of providing both current and future aviation platforms with reactive targeting capabilities satisfying the sum of needs across the Joint platforms. It will eliminate the requirement for separate upgrades to multiple existing missile systems. JAGM will replace Hellfire, air-launched TOW, and the Maverick families of missiles. The JAGM is a Joint program with the U.S. Navy and U.S. Marine Corps. It will employ a multimode seeker to acquire and destroy high-value threats from standoff ranges in day, night, adverse weather, and obscured battlefield conditions. The multipurpose warhead and Health Monitoring Unit will enable JAGM to engage multiple target sets while ensuring enhanced supportability and increased reliability.

Among the services, the Army is the largest user of space products. We have a major interest in what systems are being developed for deployment in space, what information these systems will collect, and how that information will get to the user. The Responsive Space Operations Project Office (provisional) has been established within PEO MS to ensure the Army's requirements are known to the developers and that the Army's interests are addressed. The goal is to provide timely space-derived information to the warfighter in a usable format.

PEO MS has also recently established a Missile Defense Strategic Capabilities (MDSC) Project Office (provisional). The MDSC's mission is to transition elements of designated programs or capabilities from the Missile Defense Agency to the Army. These elements include the Terminal High-Altitude Area Defense, the AN/TPY-2 radar, and Ground-Based Midcourse Defense system components. Execution of the transitions and future capabilities in this mission area will become a major new effort within PEO MS.

The value of PEO MS weapon systems is reflected in the growing interest that other nations were expressing in acquiring these systems. Our Foreign Military Sales (FMS) were expected to grow from about $1 billion in FY07 to an estimated $8 billion in FY08. This growth in FMS will help the U.S. military by increasing production quantities, which will reduce the cost of each unit we buy. It will also address another issue — our industrial base. The increased production will keep our production lines open and allow us to retain the special skills of our production base that would otherwise be lost.

PEO MS is continuing to support the Joint and coalition warfighter in today's battle while fielding new systems, upgrading older systems with new capabilities, and developing the systems for the future.

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