

# Fires supporting maneuver

## The need for an update

By 1st Lt. David Brister

With current technologies, artillery units cannot effectively defend against any future near-peer adversary with their outdated assets. Dave Majumdar, who wrote “The U.S. Military Isn’t Ready for a War with Russia or China,” quoted Gen. Mark Milley saying “While the United States would ultimately prevail in a hypothetical high-end war, Washington would pay a high price in blood and treasure.”

The current possibility of war with North Korea, China or Russia has the United States re-evaluating its assets to combat these possible scenarios. According to Sydney J. Freedburg in his article, “Army Races to Rebuild Short-Range Air Defense: New

Lasers, Vehicles, Units,” the Army wants artillery to play a more significant role in future conflicts. However, artillery units will struggle with adapting to updated technologies as they have primarily been conducting counter-insurgency operations for over 17 years. In order to succeed in a near-peer conflict, many variables must be re-examined. From technologies, to training operations with foreign allies, artillery units are in need of an update to meet the demands of the Army.

Since Operation Enduring Freedom was launched Oct. 7, 2001, the United States Army has primarily focused on counter-insurgency operations. During that time, ar-

tillery units were issued the M109A6 Paladin. Its ability to lay itself and move with any maneuver element assisted greatly in Afghanistan and Iraq. In addition, its ability to carry its own ammunition, travel up to 60 mph, and defend itself with a crew-served weapon increased its lethality as a weapon system. The Paladin proved to be a favorite for many Soldiers on the ground due to its ability to provide accurate and responsive Fires. It is able to displace in less than three minutes and occupy a firing point in less than five minutes, however, all machines have their faults. The M109A6 consumes a significant amount of fuel. The armor plating was reduced to make it

*An M109 Paladin gun crew with B Battery, 4th Battalion, 1st Field Artillery Regiment, Division Artillery at Fort Bliss, Texas, fires into the mountains of Oro Grande Range Complex, N.M. 4-1 FA conducted a combined live fire exercise with 2nd Squadron, 13th Cavalry Regiment, 1st Armored Division to maintain combat readiness. (Spc. Gabrielle Weaver/U.S. Army)*



lighter for movement, but subsequently left it vulnerable to armor piercing 7.62 mm. It also limits the crew's and chief's movements due to its compact space.

After considering all these problems, the U.S. developed the M109A7. It is currently being evaluated to see how it meets the demands of Soldiers and chiefs. It comes with the Paladin Integrated Management system, a 600 horsepower engine, provides extra room to maneuver inside, holds additional rounds and is heavier in order to reduce the recoil. Many countries have similar capabilities of the Paladin, but none are able to operate with its effectiveness. The M109A7 upgrade will provide artillery units the ability to effectively combat any enemy force.

Other systems that are being updated to combat near-peer adversaries is the Multiple Launch Rocket System (MLRS). It can effectively range any target within a 60 kilometer radius and provide effects that gave it the nickname "The Grid Square Removal System." Its guided munitions proved true to its name during the Afghanistan and Iraq wars. They gave lethal effects with limited collateral damage. However, the need for Short Range Air Defense (SHORAD) and missile defense has peaked the Army's need to conduct further testing with MLRS. Some MLRS units will be modified in order to be converted into a Integrated Fire Protection Capability (IFPC) to fire the AIM-9X missile. The AIM-9X has the ability to destroy a low-flying cruise missile from the ground. In addition the IFPC will operate off a new command and control network, the Integrated Air and Missile Defense Battle Control System (IBCS). Freedburg said this network will work off a wide array of radars to provide targeting data.

The IFPC and IBCS will go into service in 2020 and will potentially receive updates to fire lasers to combat ballistic missile threats. Since the IFPC will mirror MLRS control systems, artillery units can limit the need to change established tactics, techniques and procedures (TTP) for operating the IFPC.

The IFPC will greatly benefit the Army as a whole as it serves as a cheaper alternative to firing a Patriot missile in the event of a combat ballistic missile threat.

Besides howitzer and MLRS units, SHORAD units are also about to receive an update that will shape the outcome of potential conflicts. The United States has discovered that unmanned aerial systems (UASs) are a severe problem to maneuver units due to their ability to observe unit

locations. This was demonstrated during the ongoing conflict between Russia and Ukraine. The Russian MLRS destroyed many battalions due to UAS flying over Ukrainian units and sending the location to Russian command centers. These effects raised awareness of the lethality of UAS not only in Europe, but how it can eliminate U.S. maneuver units as well.

Currently, the U.S. Army has no means to combat UAS other than using the Avenger system or Patriot missiles. There are two active SHORAD battalions in the active Army and only seven in the National Guard. This is mainly due to the Army's decision to cut funding to SHORAD during counter-insurgency operations. The Army is now refunding SHORAD battalions as Russia and China's current capabilities grow and possibly outmatch the U.S.

The United States Army reached out to Boeing for assistance in developing a cheaper alternative to the Avenger system to combat this problem. The alternative in question is a laser that is positioned on top of a Stryker that fires up to five kilowatts of power to shoot down any UAS. It has proven effective while also maintaining the ability to carry up to nine Soldiers inside the Stryker. This platform will still allow for transportation of Soldiers while providing them with more effective defensive capabilities. With further development, these lasers could be attached to artillery unit's prime movers in order to combat UAS and counter-battery threats.

At the Fort Sill Fires Conference in 2017 Milley said, "Currently, if you are in a position longer than three hours, you're dead," in response to how the U.S. would fare in a near-peer conflict.

According to Milley, U.S. radar systems will need to be upgraded to not only combat counter battery, but small UASs as well. This is in direct response to North Korea's and Russia's military capabilities as they have increased the use of their radar units. With the capability to combat UASs and counter battery, artillery and SHORAD battalions will be able to push more lethal effects at any near-peer adversary.

Although the U.S. is more than capable of maneuvering artillery units in war, operations with allied nations will need to be reassessed. Relations with other nations have been engraved in our nation's history since the Revolutionary War. Since North Korea has developed a nuclear program, joint operations have become more frequent. In a show of force, operations such

as War Fighter simulations with the U.S. and South Korean Army are held. These simulations have demonstrated an increase of cohesion between both countries to defeat a simulation against North Korea. Other examples include when the 2nd Brigade, 4th Infantry Division deployed to Eastern Europe to conduct presence patrols to deter the Russian Army from invading. NATO forces alongside U.S. personnel conducted large-scale transportation exercises, infantry maneuvers and war simulations. With further joint operations, near-peer conflicts can end more quickly due to the cohesion between allied nations.

In conclusion, technologies that are in development for artillery units will greatly benefit the U.S. in a potential near-peer war. However, there is still room for improvement as a potential high-end war will bring more issues to light. Many adversaries are prepared and waiting for a chance to go to war with the U.S. The past 17 years have allowed them the time to combat our current abilities and develop their own methods for combating our TTPs. Artillery units must rely on updating their technologies in order to combat air threats and support maneuver. The U.S. has granted the field artillery more funding for its 2019 budget allocating for further advancements and training operations. Corresponding with these greatly needed updates and additional training opportunities, the U.S. military will surpass any adversary for years to come.

*1st Lt. David Brister is the 1st Platoon leader in B Battery, 2nd Battalion, 11th Field Artillery Regiment stationed at Schofield Barracks, Hawaii. Brister trains Soldiers to be proficient in their gun line tasks and ensures they are prepared to take on any mission. He commissioned as a field artillery officer in May 2016 after graduating with a Bachelors in Industrial Technology from Tarleton State University in Stephenville, Texas.*

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