

The HIMARS-UGV

Emerging fires technology in support of expeditionary advanced base operations

by Capt M. P. Magyar

The *Marine Operating Concept* (MOC) provides the framework for how the Navy and Marine Corps team will organize, train, fight, and win in future conflicts. Nested within the MOC are subordinate operating concepts that represent critical areas that the MAGTF has been tasked to address and be prepared to answer. The focus of this article is the subordinate operating concept of expeditionary advanced base operations (EABO). For the joint force to be successful within this concept, it requires the MAGTF to provide innovative solutions to conduct surface-to-surface fires that enable power projection within the maritime domain. Moreover, this article recommends the emerging technology of the HIMARS-unmanned ground vehicle (HIMARS-UGV) that will enable the MAGTF, as part of the naval force, to provide long-range precision fires that enable power projection in support of EABO.

Current Technology

The HIMARS is a MEF-level asset designed to provide long-range, all-weather, precision rocket and missile fires. The *high mobility* aspect allows the six-wheeled, five-ton chassis to be air-inserted via C-130 or C-17 to maximize fire support well in front of maneuver elements across the MAGTF's area of operations. HIMARS batteries deploy with a significant footprint of 6 M142 HIMARS launchers, 12 ammunition resupply systems and trailers, a fire direction center for command, control, technical fire direction, and about 100 Marines and Sailors. HIMARS can fire

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all MLRS/HIMARS Family of Munitions (MFOM) to include the Guided Multiple Launch Rocket System rockets and Army Tactical Missile System. Because of the enemy's lack of counter battery and uncontested airspaces, these capabilities made HIMARS the ideal artillery weapons system during the counterinsurgency fight of the past seventeen years.

Emerging Technology

The HIMARS-UGV would main-

tain the ability to support the MAGTF with long-range, precision rocket and missile fires in addition to increases in mobility, survivability, deployability, and lethality. Improvements in mobility include placing the launcher module portion of the M142 HIMARS and inserting it on a lighter, more rugged wheeled chassis. This results in a significant reduction in overall weight, increase in mobility, and an increase in deployability by allowing the system to be vertically inserted via CH-53. In comparison to the current HIMARS system, which is limited to locations that support C-130 runways, this is a huge leap in capability. One of the significant differences between the current HIMARS and the emerging technology includes physically removing Marines



A HIMARS-UGV would provide long-range precision fires. (Photo by LCpl William Chockey.)

from inside the vehicle which turns the system into a UGV. Marines would remotely operate the system from offset locations which increases survivability by placing personnel outside of the enemy's threat ring, significantly reducing the potential of friendly casualties. Moreover, by removing Marines from the HIMARS, batteries would be able to decrease manpower while increasing the number of HIMARS systems that could be fire capable at one time since several UGVs could be controlled and operated remotely by the same crew. Eliminating the one-to-one ratio of operator to system, the MAGTF could essentially saturate the battle space with these assets, extending the joint force's area of influence. In addition, the HIMARS-UGV would sustain the ability to fire all MFOM to include new capabilities of anti-air and anti-ship missiles which is an increase in lethality and capability necessary to support the joint force.

EABO: Opportunities

The decades of uncontested air and maritime domains created a false sense of security for the joint force and artillery community. In what is currently being projected, the *next fight* will include peer adversaries with offensive and defensive assets that mirror our own. Within EABO, these considerations are taken into account as "Expeditionary

Advanced Bases are designed to operate *within* the arc of enemy capabilities (i.e., long-range fires and sensors)."¹ Within this context, the joint force needs to reconsider the tenets of mobility, survivability, deployability, and lethality to counter such threats.

The EABO concept requires MAGTF surface-based long-range precision fires in support of the joint force. Specifically, Marines support this concept by employing EABs for offensive actions in support of sea control. They reinforce and defend EABs with manned and unmanned long-range strike, anti-ship, anti-air, and C2-extending systems to transform a site into a sea-denial outpost.²

The HIMARS-UGV meets this requirement as a force multiplier that enables the joint force to carry out its mission within anti-access, aerial denial (A2/AD) environments. The opportunity is to employ multitudes of HIMARS-UGVs that are vertically inserted, well dispersed, offer a small signature for targeting, require less manpower to operate, offer large volumes of fires, and decrease the loss of life by being remotely operated if fired upon. This capability frees limited, manned joint assets the ability to achieve decisive actions while the enemy ties up its own limited intelligence, surveillance, and reconnaissance platforms to honor

the threat of land-based, anti-ship fires. Highly mobile, small in physical footprints, and integrated into the naval campaign, the HIMARS-UGV buys time and space necessary for the joint force to maneuver into advantageous positions deep within the enemy's operational area.

Conclusion

The emerging technology that will most affect the MAGTF, as part of the naval force, is the HIMARS-UGV. By retaining the functionality of the current HIMARS, but increasing capability in regard to mobility, survivability, deployability, and lethality, the HIMARS-UGV is a force fires multiplier that enables the joint force to operate unimpeded within what was previously considered A2/AD environments.

Notes

1. Col Art Corbett, "Expeditionary Advanced Base Operations: Considerations for Force Development," (Quantico, VA: Marine Corps Warfighting Lab, 2017).
2. Headquarters Marine Corps, *Marine Corps Operating Concept (MOC), How an Expeditionary Force Operates in the 21st Century* (Washington, DC: September 2016).

