Supporting the Division in the Next War

Closing critical gaps

by the Staffs of 2dMarDiv G-4 and CLR 2

In November 2019, over 10,000 Marines, Sailors, and NATO forces conducted the Marine Corps' first division-level, unscripted, force-on-force exercise in more than 30 years. MAGTF Warfighting Exercise 1-20, or MWX 1-20, occurred at Twentynine Palms, CA, and was designed to test the full scope of 2dMarDiv's warfighting capabilities against a peer or near-peer adversary. While all functions of the Division's warfighting capabilities were tested, the logistical requirements of MWX provided a critical evaluation of Division and Combat Logistics Regiment 2's (CLR-2's) capabilities and limitations in a multi-domain combat environment. MWX 1-20 was the most logistically involved exercise that 2dMarDiv has seen in more than three decades, requiring a cross-country movement of forces and equipment, as well as the overcoming of the complex logistical intricacies that arise in a near-peer battlespace. From this training, we identified four major Service-level logistics capability gaps, including: command and control (C2), signature management, distribution, and the structure and supportability of Role 2 medical facilities. Examining these capability gaps and implementing realistic changes to the way 2dMarDiv is supported in combat will ultimately lead to a stronger, more lethal force.

C2 of Logistics in a Communications Denied Environment

In order to support a division, commanders within the LCE need the abil-

CLR-2 Marines prior to the beginning of MWX 1-20. (Photo by LCpl Jesse Carterpowell.)

ity to effectively C2 subordinate units operating in the battlespace. At MWX 1-20, there were a variety of communications mediums used for C2, including the SIPRnet-based chat application, Transverse, Blue Force Tracker, and HF radio. During the exercise, the use of these C2 mediums was often unavailable because of a combination of enemy electronic warfare (EW) capabilities and internal resourcing gaps. Ultimately, MWX provided three valuable lessons pertaining to the C2 of logistics in a communications-denied environment. First, each unit requires all the communications equipment necessary to tie in with higher and subordinate commands. Next, the format of the infor-

mation passed between units must be scaled appropriately in order to fit the limited communications pathways that exist in the modern operating environment. Finally, an understanding of the enemy's EW capabilities and how they impact friendly communications assets must exist at all levels.

Resourcing

Mobility continues to become a more crucial aspect of the modern battlefield. Currently, the CLBs do not possess the communications assets needed to enable optimal mobility for their C2 centers. As 2dMarDiv continues to rely heavily on the chat application Transverse, a way must exist for the CLBs to access

the SIPRnet while remaining expeditionary. The only means available for CLBs to access data services in a tactical environment are very small aperture terminals, Wireless Point-to-Point Link Version Ds, and MRC 142Bs. These assets require an abundance of equipment, including generators, TEAMS antennas, vehicles to tow and store equipment, and personnel to operate and maintain the assets. These added equipment requirements make the use of data services impractical for a unit that requires mobility. The addition of on-the-move data assets, such as a networking-on-the-move (known as NOTM) vehicle, to the direct support CLB's communications architecture would allow seamless integration into the architecture of both the direct support CLR and the Division. This addition would increase the ability of commanders in both the LCE and GCE to make decisions based on the most up-to-date information possible.

Scaling Logistics Information

On the battlefields of the recent past, LCE commanders benefited from access to a seemingly unlimited flow of information. However, in an environment where communications is limited only to Blue Force Tracker or HF TacChat, logistics reports must be scaled, and the information needs to be presented in a concise and efficient manner. This ensures that the transmission is simple enough to be sent over Joint Battle Command-Platform or HF TacChat, but also contains enough pertinent detail to enable the commander to make an informed decision. The impact of the enemy's electronic warfare capabilities goes beyond simply the use of specific communications assets. Also impacted is the format in which mission-critical information is exchanged.

EW Education

At MWX, it was evident that the most effective mitigation for the EW threat was the ability to communicate. Through continuous integrated training with the GCE, and detailed planning in the LCE, leaders made informed assumptions about supported units' consumption rates, ultimately leading

to the effective sustainment of units maneuvering in the battlespace. The ability to implicitly communicate with ground units comes from trust built over an extended period of time, and MWX demonstrated that the sustainment of these relationships is crucial for future mission success.

Distribution

The increased capabilities of the near-peer threat directly impact the LCE's distribution network. During Operations ENDURING FREEDOM and IRAQI FREEDOM, large resupply convoys moved with more than 100 vehicles over multiple days. However, the new operating environment forces leaders to reevaluate convoy tactics, techniques, and procedures in order to reduce the

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likelihood of enemy detection. Now, convoys must be smaller in overall size and are limited to only moving under the cover of darkness.

Not only is the distribution network impacted from the perspective of the LCE, the capabilities of a near-peer threat impact the supported units' network as well. For example, when a supported unit receives a resupply, it must push the supplies out to its own subordinate elements in order to trigger further resupply actions. This conditions-based method of distribution implies a freedom of movement that may not exist against a peer threat. Going forward, the enemy's capabilities, and the risks they impose on our forces, must drive distribution. This leads to resupply convoys leaving earlier than previously necessary in order to avoid

potentially missing resupply opportunities because of the enemy threat, since large convoy signatures possess the potential to unmask an entire division. The distribution network goes a step further than mere resupply convoys. For example, the movement of killed-in-action and wounded-in-action takes up a large portion of the LCE's transportation capability and also increases concerns about signature management.

At MWX, although units fired live rounds and blank rounds, Class V distribution was entirely notional. Had Class V distribution not been notional, the logistics entities would have been woefully deficient in meeting their distribution requirements. Adding Class V to the transportation requirements, on top of Class I, III, and personnel, forces commanders to decide between moving sustenance, fuel, or ammunition, which ultimately impacts 2dMarDiv's operational reach and scheme of maneuver.

To mitigate the overload of the ground transportation capability, the use of aerial delivery and helicopter support teams becomes significant. While an out-of-play air delivery was executed during MWX, it was not fully integrated into the concept of support. Implementing aerial delivery, specifically the use of the Joint Precision Airdrop System, to enable resupply in the vicinity of the forward line of troops, allows caches of supplies to be prepositioned with minimal risk to ground units. Air delivery, more specifically the Joint Precision Airdrop System 10k system, brings an advanced capability to the future operating environment, and future Service-level training iterations across the Marine Corps must incorporate this force-multiplying capability.

Signature Management

When discussing large-scale training operations like MWX, the concept of the iron mountain is often used to describe the vast signature that a large distribution network produces in the area of operations. However, it often seems impossible to reduce the signature of the iron mountain while still remaining responsive to the needs of an entire division. At MWX, units took deliberate measures to mitigate

the footprint of the distribution network as much as possible. Examples of these measures include camouflaging the forward combat service support area (CSSA) and attempting to eliminate the thermal signatures emitted by utilities equipment with thermal blankets.

While camouflaging the forward CSSA mitigated enemy detection, it was not completely undetectable to enemy observation. Placement of CSSA nodes, relative to the enemy's detection and targeting capabilities, is a decision that commanders must make in the face of a peer adversary.

Initial attempts to mask the signature of heat-emitting utilities equipment included placing insulated all-weather blankets over generators. However, these methods proved ineffective overall. Testing is ongoing at the Marine Corps Warfighting Laboratory, with the intent being to design a prototype to mask the thermal signatures of utility equipment.

Another issue involving signature management resulted from the enormous amount of trash created by consumable products. During the exercise, one pallet of MREs sent forward into the battlespace returned as two pallets of trash. This overwhelmed the trash collection points aboard the CSSA and created a sizeable backhaul requirement in addition to a large trash signature. Planners must take this unforeseen requirement into account when planning future exercises and certainly in a peer fight.

Medical

The employment of Role 2 medical capabilities at MWX 1-20 proved our current medical capacity is not designed for a peer adversary nor a high-casualty environment. These shortfalls are highlighted when examining the size of these Role 2 facilities, and how the size impacts their ability to provide effective health service support in the future operating environment. A single Role 2 Forward Resuscitative Surgery System/Shock Trauma Platoon (FRSS/STP) consists of approximately 80 medical personnel, each of whom contributes to the force's surgical, trauma, X-Ray, and ambulatory capabilities. On top of those 80 personnel, the FRSS/STP pos-

MWX 1-20 proved our current medical capacity is not designed for a peer adversary nor a high-casualty environment. (Photo by Cpl Scott Jenkins.)

sesses sizeable amounts of materiel and equipment, including medical supplies, tents, fuel, power, and transportation. At MWX 1-20, the total lift requirement for both equipment and passengers was twelve twenty-foot equivalent units. This requirement overwhelmed CLR's transportation assets, consuming fifteen percent of the CLR's total lift capacity. Ultimately, this limited CLR's overall support to 2dMarDiv. Such a large equipment requirement greatly impacts the mobility of an FRSS/STP. The establishment of an STP capability takes one hour, according to doctrinal estimates; however, this timeline does not take into account the establishment of the FRSS nor the time that it takes to offload the equipment required for requisite support. At MWX 1-20, medical personnel spent six hours preparing the FRSS/STP for full functionality. This timeline left the FRSS/STP stagnant in the battlespace and, ultimately, a target for enemy reconnaissance, surveillance, and indirect fire, all before it ever became capable of effectively responding to casualties. These shortfalls uncover the glaring need for a scalable Role 2 capability that can be distributed across the battlespace, with increased survivability—all while maintaining its surgical and resuscitative services.

Closing: The Way Forward

MWX 1-20 allowed 2dMarDiv to move more than 10,000 personnel, along with all of their equipment, across the United States for a training evolution that provided the quality training Marines need in order to become more effective in combat. The exercise was also beneficial in providing lessons learned to leaders at both the strategic and tactical levels, as well as challenging SOPs within units across the MAGTF. There is a need for us to reevaluate C2, signature management, distribution, and the structure and supportability of Role 2 medical facilities, as these now serve as the force's most glaring capability gaps. MWXs should be continued! We can only identify these issues by training at scale. The Service must address these capability gaps in order to effectively fight a peer threat. Going forward, improvements to doctrine, training, resourcing, and to table of organization and equipment requests will ensure that these shortfalls are not present on the near-peer battlefield of the future.

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