How Reliable Are Communications?

How can a commander effectively respond to a crisis

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The Maritime Prepositioning Force (MPF) gives MAGTF commanders the ability to deploy to a secure area anywhere on the globe. That commander has operational control over all MAGTF elements and, therefore, must have the ability to communicate, coordinate the actions of his subordinates, and report to higher headquarters (HHQ). The advanced party plays a critical role in creating the command and control (C^2) structure for the MAGTF and arrives ahead of the main force in order to establish that forward deployed element.[1] The rapid response kit (RRK) is the leading choice for expeditious communications to quickly deploy with the MAGTF commander's advanced party to support MPF operations.

The RRK is a recent addition to the MAGTF's crisis response capability. I MEF received four RRKs in early 2015. These were the first kits of the Marine Corps' Expeditionary Command and Control Suite (ECCS) program to be issued to I MEF. The ECCS program is designed to provide a reliable, mobile, tactical means of communications from the Marine Corps Enterprise Network and the Department of Defense Information Network. Access to these network services are provided by the consolidated base station systems via a Dynamic Multipoint Virtual Private Networks (DMVPN) connection or the Hawkeye III Lite (H3L) satellite terminal. According to the *ECCS Support Group Training Student Guide*, the RRK concept of operations is intended to support the MAGTF response to a rapidly emerging crisis or highly volatile situation, such as an operation's initial opening period or response to a natural disaster. The RRK provides an agile first responder command and control capability (via reach-back to other networks and/or data systems) to provide mission commanders with increased mission critical information alongside a forward military presence on short notice. The RRK provides a unit commander with communications connectivity for first responders or small control teams in an area of interest to gain situational awareness or conduct other limited missions.[2]

The RRK is specifically designed for crisis response to different contingencies throughout the world at a moment's notice.

Few Marines within I MEF were enrolled in the initial training to learn to install, operate, and maintain the RRK. Marines from 9th Communications Battalion (9thCommBn) formed the core of the very first class from I MEF and became the first Marines within I MEF to be formally trained on the RRK. These Marines from 9thCommBn became critical to the battalion and the entire MEF.

During Native Fury (NF16) planning, rapid and efficient communications with HHQ was the focus. Contingency Support Company (ConSuptCo), 9thCommBn was tasked to deploy with I MEF command element (CE), providing the arrival and assembly operations group (AAOG) for 5th MEB with reliable voice and data communications between an austere location and a deployed, commercial location during MPF operations in the Central Command area of responsibility (CENTCOM AOR). During NF16, the host nation presented a foreign, permissible environment for the MAGTF. The RRK was critical to communications at the beginning and the end of the exercise; however, several lessons were also learned.

Initial Communications

The start of any operation requires some form of communications in order to have effective C^2.[3] The ability to exercise C^2 is critical to the success of any logical plan. The RRK was the textbook asset to provide an initial entry C^2 capability that enabled the first echelons of Marines to communicate and accomplish their mission. 9thCommBn has a small team dedicated to the tactical employment and operation of the RRK; this team is the radio/data team (RDT). The RDT is similar to a Commanding General's communications team—small, lightweight, and specially trained for expeditionary or executive communications, depending on the requirement. The RDT is typically placed with the first echelons in order to establish initial communications and prepare the way for follow on forces.

During Exercise NF16, the RDT from ConSuptCo was selected to travel with the advanced party (ADVON) to provide the detachment's officer in charge and his staff with secure and non-secure voice and data communications. The RRK itself is specifically designed for travelling via tactical air flights or commercial air flights as checked baggage meeting Federal regulations and standards. The RDT was able to travel with the RRK totaling nine cases (four hand carry and five cargo) from March Air Reserve Base to Al Udeid Air Base, Qatar. Subsequently, the team moved from Al Udeid Air Base to its final destination and arrived with everything needed to establish voice and data communications. Once the ADVON was in place, establishing and powering the RRK commenced. Within 20 minutes, a full range of services were provided via DMVPN. These voice and data services included non-classified Internet protocol (NIPR) router network and secret Internet protocol router (SIPR) network. After establishing positive communications, the RDT focused on setting up the H3L terminal for a more reliable connection. Within two hours, the RRK was fully operational with NIPR and SIPR services available to support the detachment officer in charge and key leaders.

After the RRK was fully operational, the RDT began to set up an initial combat operations center by running wire and cables in order to provide computers and phones for the staff. By extending the Marine Corps Enterprise Network (MCEN), key personnel assigned to the ADVON had everything in place in order to execute the necessary command and control.

The MEF G-2 (intelligence) maintained up to date information and intelligence, facilitating coordination with 5th MEB and HHQ. The RRK provided the AAOG G-3 (operations) with the critical capability to coordinate with higher and subordinate headquarters while tracking cargo aircraft. These critical staff actions tracked personnel and equipment arrival times and facilitated development of a timeline to establish a fully operational AAOG. Additionally, the MEF G-4 (logistics) coordinated personnel movements that provided the AAOG officer in charge with real-time status updates during the movement phase of NF16. Additionally, it provided a tool for the camp commandant and staff to prioritize work efforts and services within the life support area to align with the reception of Navy and Marine Corps forces.

The RRK enabled the remainder of communications personnel to establish the tactical network supporting the entire AAOG. The communication's Marines used voice services provided by the RRK to coordinate, troubleshoot, verify, and establish their network with the *distant end*, in this case, the Marine Forces Central Command (MARCENT) hub node. Once the AAOG network was established, the RRK became a redundant back up to the primary source of communications. Alternatively, it could also have been used to enable C^2 for a *jump* or forward command post.

MPF Operation Requirement

Communications planning is a key-planning factor involved in MPF operations as the communications structure is integral in the success of the overall operation and is essential to exerting C^2 across the operations area. According to *MCWP 3-32/NTTP 3-02.3M*, the communications plan should

reflect the command and control requirements of the *establishing authority*, the MAGTF commander, and the Commander, Maritime Prepositioning Force (CMPF). Communications systems connect commanders, enabling them to *exercise command and control* requirements, whether commercial (host nation, United States, or multinational), military (United States or multinational), or a combination of both.[4] (emphasis added)

Establishing authority by having the MAGTF CE deploy first is an effective method;[5] however, in NF16, I MEF forces were provided to 5th MEB. *MCWP 3-32/NTTP 3-02.3M* states that the advance party is

task-organized by the MAGTF commander and consists of personnel designated to form the nucleus of the arrival and assembly organizations. Primary tasks of the advance party are to arrange for the reception of the main body and Maritime Prepositioning Ships Squadron (MPSRON) and provide force protection to the beach, port, airfield, and unit assembly areas (UAAs).[6]

During NF16, the CE of one MAGTF (5th MEB) absorbed capability from a second MAGTF (I MEF).

The RRK facilitated the communications requirements without delay. The RRK enabled the detachment officer in charge to establish authority with reliable and secure voice and data communications exercising his ability to C^2. The rapid deployment capability of the RRK clearly

demonstrated that wherever the mission arises, a commander can effectively establish a forward footprint in order to "arrange for the reception of the main body." These doctrinal principles were successfully executed utilizing the RRK during NF16.

The RRK provides high quality, expeditionary capability vital to the successful establishment of a combat operations center. The *MCWP 3-40.3* states that "The MAGTF communications system (MCS) should be reliable, secure, timely, flexible, interoperable, and survivable."[7]*MCWP 3-32/NTTP 3-02.3M* further requires that external communications include voice and data communications over the NIPR and SIPR networks.[8] Twenty minutes after the initial startup of the RRK the ADVON had positive voice and data communications on both NIPR and SIPR networks. Within two hours of initial setup, the ADVON had a full range of communications capabilities. The RRK rapidly provided the detachment OIC and staff the required C^2 capability in such a period of time as directed in the *MCWP 3-40.3*.

As MPF operation progresses, the AAOG and major subordinate element operate and communicate with a tactical network created for that specific operation. The RRK evolves into a redundant asset or a backup if the primary becomes non-operational. When the reconstitution phase of MPF operations commences, it is suggested that users, if operational security allows, are to utilize commercial phones, email, and data networks via the host-nation's communications system.[9] This is done so that MAGTF assets are released for redeployment and follow on operations while still maintaining a combat operations center until the reconstitution and redeployment phases are successfully completed.[10]*However, this is a security risk.* The RRK provides a capability that mitigates this risk while providing an impetus to revise our doctrine to close this weakness in our current understanding of MPF operations. Because the RRK is hand portable, all tactical communications equipment can be staged or embarked for redeployment. The RRK remains in place to take on the role of primary external communications and allows the commander to continue C^2. Using the RRK, the MAGTF meets another *MCWP 3-32/NTTP 3-02.3M* objective,

mobility and flexibility, allowing a quick concentration of forces in a specific area. It permits rapid deployment into secure areas where force introduction is unopposed and is expected to remain so throughout the arrival and assembly phase.[11]

During NF16, the RRK was packed up within one hour of departure, providing C^2 capability until execution of the retrograde.

Improvise Based on NF16 Experiences

The RRK was integral to the success of NF16, yet room for improvement exists. Previously, the I MEF CE used the RRK for the 1st MEB *suitcase staff*. The kit would support the 1st MEB Commanding General and the General's immediate staff with reach-back capabilities and establish that forward deployed element. With the RRK, the suitcase staff has the ability to communicate the situation back to HHQ; this capability was revealed during Exercise Pacific Horizon 2015 (PH15) and Exercise Balikatan 2015. PH15 was the first attempt to use the RDT and refine their role with the purpose of supporting the suitcase staff for Exercise Balikatan-15 with the Republic of the Philippines Western Command. [12] This plan was put in to motion with

the suitcase staff executing a forward element that had reach back capabilities.[13] The RDT was able to operate out of a hotel prior to transitioning to a field environment. During work up exercises for NF16, the RDT participated in command post exercises both in garrison and field environment.

All these exercises demonstrated a common theme—an infrastructure that had an available power source for the RRK. Without power, the RRK is useless. The RRK is best when there is a guaranteed location and power source to fall in on. In the field environment, the RRK has the ability to be powered using a QP-1800 power invertor. The QP-1800 power invertor connects to the NATO slave receptacle of a tactical vehicle. This is the best-known method of powering the RRK when in the field, before a more stable source of power can be established. However, for NF16, prior planning and coordination determined that power would be contracted out to the host nation, and the AAOG combat operations center would have generator power provided by 9thCommBn. As the first initial communications for the ADVON, the RRK was delayed because no power outlets were available. The infrastructure was in place, but power was not.

Until power was provided by the host-nation's contractors, the RRK is ineffective. Once power was established, the RRK was operational in 20 minutes. *Until the cargo arrived the RDT had to rely on host-nation power, which is not an issue unless of course the power isn't set up and operational.* Alternative power options include: a solar panel power source or a mini-generator power source. Regardless of power source, power is fundamental to operating the RRK making it into the key issue and planning requirement.

The RRK provides MCEN NIPR and SIPR network services to a forward-deployed user. The effectiveness of the RRK is built on the concept that commanders, leaders, staff, or users deploy with their *personal* workstation laptop. The RRK concept uniquely provides the user with their own MCEN laptop access bringing their office on deployment. One major drawback is that Marines do not have the administrative rights to adjust, download, or fix the MCEN laptops. So to counter this, the owning unit of the RRK supplies its own tactical laptops that are NIPR-imaged according to information assurance security requirements. These laptops provide a generic accessibility allowing the user access to Outlook web access for MCEN email, any (.mil) sites that the user may need, and to search mission essential Internet sites. These tactical laptops allow the owning unit *some* basic administrator rights. However, tactical laptops do not offer access to share drives and other features of their personal MCEN laptops.

These issues exist on both NIPR and SIPR mediums. SIPR laptops that are on the MCEN SIPR domain are best suited for user using the RRK rather than tactical, SIPR-imaged laptops. This was first noticed during Exercise Balikatan-15 using the 1st MEB Commanding General's garrison SIPR laptop. The RDT discovered that *garrison*, SIPR-imaged laptops that are registered to the MCEN SIPR domain have the abilities to view users own garrison SIPR email via Outlook, view all SIPR sites, and SIPR Outlook web access for emails. Conversely, the *tactical*, SIPR-imaged laptops could view (.smil.mil) sites and not allow users to view email thus making them useless for communications.

During NF16 the garrison, SIPR-imaged laptops worked well for user's garrison SIPR access. The I MEF G-6 (communications) helpdesk registered the owning unit's SIPR hard drives and

laptops to the garrison SIPR domain allowing users that use the RRK access to their garrison SIPR accounts using their own SIPR tokens or username and password. These SIPR laptops were provided by the owning unit. No users deployed with their own garrison image SIPR laptops. Proper planning should be conducted for transporting and safeguarding SIPR laptops and classified material for deployment.

The optimal method of employing the RRK is to have those who will be operating from the RRK bring their MCEN workstation laptops allowing specific users to operate more efficiently before the tactical network is created. For NF16, only Marines from the 9thCommBn detachment deployed with their MCEN laptops. The RDT brought four additional NIPR phones and three additional laptops with a tactical image. SIPR assets included the RDT with four phones and three garrison imaged laptops.

The RRK user capacity is five users with their own laptop and phone and two additional users with NIPR and SIPR laptops only. These voice and data assets are specifically designated for this RRK, but these assets are not associated with the RRK's stock list-level 3 (SL-3). This is only unique to the 9thCommBn RDT's RRK. 9thCommBn is a communications battalion and has the ability to facilitate its own communications gear and more. The RRK itself does not come with SL-3 voice or data assets for the owning unit to operate the kit. Units that are not heavy loaded with communications gear (i.e., air naval gunfire liaison companies, MEBs, and Commanding General communications teams) will have to source the gear from another unit or open purchase voice and data assets.

One viable solution would be for the RRK to have its own standardized gear set. This gear set would have the RRK come SL-3 with MCEN laptops and SIPR laptops that are registered with the garrison SIPR domain. These computers would be available for any authorized user with a garrison NIPR or SIPR account to access and use. It would be beneficial to have the same number of NIPR and SIPR Cisco phones that are SL-3 to that RRK. All of this of course is something that needs to be addressed, examined, and approved at Marine Corps Systems Command.

Conclusion

With proper training, understanding, and planning, the RRK is the definitive answer to that commander who must have "the versatility and flexibility to deal with a situation at any intensity across the entire spectrum of conflict."[14] According to the *CMC Planning Guidance*, we must have the ability to successfully respond, maintain a forward posture, and use the most modern and technological advanced gear available.[15] The RRK has proven these abilities in multiple exercises within I MEF both in garrison and deployed that it has the ability of providing that on scene commander with quick, reliable, and secure communications.

Notes

1. Headquarters Marine Corps, *MCWP 3-32/NTTP 3-02.3M, Maritime Prepositioning Force Operations*, (Washington, DC: 2004).

2. Headquarters Marine Corps, *Support Crew Training: An/Tsc-205(V)1 Student Guide Rapid Response Kit (Rrk) Overview,* Student Guide, (Washington DC: 2015).

3. Headquarters Marine Corps, *MCDP 6 Command and Control*, (Washington, DC: 1996), 35.

4. Department of the Navy, *MCWP 3-32/NTTP 3-02.3M: MAGTF Communications System*, (Washington, DC: 2010), 157.

5. *MCWP 3-32/NTTP 3-02.3M*, 44.

6. Ibid., 79.

7. *MCWP 3-32/NTTP 3-02.3M,* 12.

8. *MCWP 3-32/NTTP 3-02.3*, 44.

9. Ibid., 161.

10. Ibid., 162.

11. Ibid., 19.

12. 1st MEB Command Element, *Pacific Horizon 15 AAR 141103-CDR-13791*, After-Action Report, (Camp Pendleton: Marine Corps Center for Lessons Learned, 2014), slides 4 and 5, 1st MEB Command Element, Pacific Horizon 15 Hotwash 141105-CDR-13791. After-Action Report, (Camp Pendleton: Marine Corps Center for Lessons Learned, 2014), slide 7.

13. 1st MEB Command Element, *MCCLL Report Exercise BALIKATAN-2015 151103-CDR-14558*, After-Action Report, (Camp Pendleton: Marine Corps Center for Lessons Learned, 2015), 9.

14. Headquarters Marine Corps, *MCDP 1, Warfighting*, (Washington, DC: 1997), 27.

15. Gen Robert B. Neller, "FRAGO 01/2016: Advance to Contact," *CMC Planning Guidance*, (Washington, DC: 2016).

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