



Executive Summary

Trends in Army and Marine Corps EW

Following a successful briefing to the congressional EW Working Group on trends in Airborne Electronic Attack (AEA), the AOC returned to Capitol Hill last week to discuss developments in Army and Marine Corps (USMC) EW. This was the second in a series of educational briefings to raise awareness about the critical and enabling role that EW plays in all military operations.

United States and coalition operations over the past decade have raised awareness about the need to improve ground EW capabilities. From the successful counter-radio-controlled improvised explosive device (RCIED) mission in Iraq and Afghanistan to the need for EW support and electromagnetic spectrum control in urban combat environments, ground EW is quickly becoming a critical capability that every soldier must have access to and utilize effectively to complete a mission. The Army, specifically, has made significant progress in re-establishing Army EW across the service, but material capabilities are still limited. The USMC on the other hand continues to pave the way on EW Battle Management and is proceeding resolutely following recent reviews of its Marine Air-Ground Task Force EW (MAGTF-EW) coordination, training and capabilities development, which revolves around integrated, networked EW.



The Army and the USMC each face a unique set of pressures in the employment of ground EW assets and capabilities. For the Army, the Service is rediscovering EW after years of neglect and narrowly defining EW as signals intelligence. EW knowledge and skills significantly deteriorated and the Army did not adequately maintain its limited EW materiel. Unfortunately, in Iraq and Afghanistan, U.S. ground forces were rattled by insurgents' use of cheap, easily available RCIEDs. This threat spurred vast amounts spending on development and fielding of EW equipment to suppress and counter these devices. The EW response, which saved numerous lives and had a dramatic effect on insurgent tactics, came in three primary forms: AEA from U.S. Air Force EC-130 Compass Call aircraft, Navy and USMC EA-6B Prowlers and a flood of Counter-RCIED EW (CREW) devices to provide passing protection for troops and convoys.

The renewed emphasis on Army EW spurred three key endeavors to rebuild an organic EW capability. First, in addition to CREW devices, the Army rapidly fielded other EW solutions to protect outposts and jam enemy communications. The Army also began to push for man-portable EW solutions to protect soldiers conducting patrols, raids or manning entry control points outside of vehicles. Moving forward, the Army must now break the Quick Reaction Capability (QRC) acquisition cycle and sustain investment in critical EW materiel. The "wait to buy it until we need it" QRC model does not adequately provide the necessary integration and sustainment that future EW capability requires. Furthermore, threat advancement and technology development, driven by commercial off-the-shelf (COTS) technology, is moving at a much faster pace, which is challenging the ability of the U.S. to responsively field EW systems. In future combat, the Army cannot wait for the conflict to start before it develops and fields a response to enemy tactics and technology.

A second endeavor is the rapid reconstruction of a new EW career force. The Army successfully stood up the EW 29 Series Military Occupational Specialty (MOS) and a schoolhouse to train a new generation of Army EW operators (EWOs). Additionally, the Army wrote new EW doctrine, developed Concept Capability Plans, and conducted an assessment of future Army EW needs. These very positive developments in DOTMLPF must continue, but the Army must guard against historical inclinations to house its EW mission under a command that may too narrowly define capabilities, planning and management.

Finally, the Army should be commended for its early investment in next generation EW. The Army is planning for the Integrated EW System (IEWS) to be a family of systems that includes multi-function EW (MFEW) for coordinated EA, the EW Planning and Management Tool (EWPMT) to integrate EW activities, and defensive EA to protect personnel, platforms and systems. IEWS is designed to provide comprehensive EW capabilities to the Army and Joint Force Commander. However, the unfavorable budget outlook for defense will push the Army to continuously reprioritize investment dollars. The Army cannot afford to overlook the critical need for EW in the future fight.



The USMC is facing a different set of challenges, but it has a strong track record of success when it comes to the employment of EW assets and capabilities. Marine EW assets, which encompass both ground and airborne capabilities, are integral to the MAGTF, a combined arms capability that consists of a balanced team of ground, air, and logistics assets under a central command. Therefore, the USMC is expanding its EW mission beyond traditional operational constructs and developing a System of Systems approach required to generate and exploit opportunities across the Information Environment, Cyberspace, and the EMS.

An important topic at the AOC briefing was the future of USMC AEA, specifically the plans for its EA-6B Prowler fleet. The USMC currently operates four Prowler squadrons, which they will begin retiring in 2016. While the Navy and the USMC Prowler mission has been critical to joint operations, the reality is that the Prowler is not the ideal platform for USMC EW. With the Prowler, a platform

designed for carrier strike missions, USMC EW is too concentrated in one asset. For MAGTF-EW to succeed, the USMC needs a persistent and distributed capability that supports the commander on the ground without interruption. The challenge for the USMC will be to transition to a next-generation capability without experiencing a capability gap. The USMC believes its plans for the ALQ-231 Intrepid Tiger communications jammer, EA pods on unmanned systems, and a host of other air and ground systems will provide the comprehensive EW capability they need for the future fight. This capability will expand if plans for an EA-variant of the Joint Strike Fighter come to fruition. With the growing capability to deliver EW support directly controlled by the MAGTF commander and the additional number of Navy EA-18Gs to support the joint AEA mission, the expectation

MAGTF EW will be comprised of both manned and unmanned surface, air, and space based assets, fully networked to provide the MAGTF commander the ability to dominate the EM spectrum at the time and place of his choosing.
--MAGTF EW 2020

is that there will be no capability gap, but capability growth, following the retirement of the Prowler.

The USMC is also becoming the leader in EW battle management. Historically, USMC EW, signals intelligence, AEA, and force protection resources have not been coordinated or integrated to focus on the explicit needs of the MAGTF commander. The USMC will remedy this concern through the Collaborative Online Reconnaissance Provider / Operationally Responsive Attack Link (CORPORAL) program, which will enable the USMC to gain, maintain, and exploit a military advantage without sacrificing operational tempo.

Combined with the previous briefing on AEA, the AOC was able to share with the EWWG key issues facing each of the military services that Congress should take the lead in addressing in the coming months. The AOC will continue to engage the EWWG and other Members of Congress and Senators who are in a position to ensure that the Defense Department and the military services continue to advance EW and electromagnetic spectrum (EM) operations through improved leadership, sustained investment, and proficient training.

