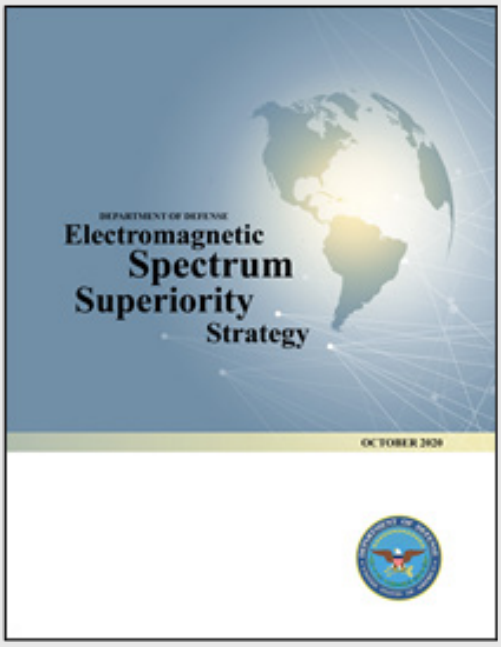
AOC ADVOCACY

ASSOCIATION OF OLD CROWS
ADVOCACY NEWSLETTER
November 16, 2020

DoD Releases Long-Awaited EMS Superiority Strategy



Last month, the Department of Defense (DoD) released its new Electromagnetic Spectrum (EMS) Superiority Strategy (EMSSS). The strategy is the crowning achievement of the Electromagnetic Spectrum Operations Cross Functional Team (EMSO CFT). The EMSSS represents both progress and frustrations for the importance of EW, spectrum management and related capabilities and disciplines. The vision of the EMSSS states that, "Freedom of action in the electromagnetic spectrum is a *required* precursor to the successful conduct of operations in all domains. Forces in 2030 and beyond will be ready to fight and win through the deliberate, institutional *pursuit* of EMS Superiority [emphasis added]."

Arguably the most important part of this strategy is that it defines the EMS as a maneuver space. This debate has divided our community for years. "The EMS is not a separate domain of military operations because the EMS is inseparable from the domains established in joint doctrine (p. 3)." Instead, the EMS is described as a maneuver space defined as "the movement in three-dimensional positioning, time, and EMS operating parameters (e.g., frequency, power, modulation) to gain an advantage over the enemy." EMS maneuver includes all actions in the EMS and is fundamental to gaining and securing an advantage over the enemy.

AOC accepts the starting point of the EMSSS that the EMS is a maneuver space and the alignment of Service and Joint Doctrine with the Strategy. This is progress in the right direction. **Read a more in-depth analysis of the EMSSS released by AOC**. The EMSSS now moves toward developing an implementation plan and roadmap within 180 days, which means we will have a clearer picture in the April 2021 timeframe. In the meantime, DoD, Congress, and defense industry must grapple with several important issues, most notably on workforce and governance, that will significantly define how we strengthen the DoD's EMS enterprise and enable US forces to achieve EMS Superiority in future conflicts – working toward a 2030 target.

USAF Moves Spectrum Management to Air Staff

On October 23, the US Air Force officially moved its electromagnetic spectrum management office from Air Combat Command (ACC) to the Headquarters Air Force (HAF) staff, within the Cyberspace Operations and Warfighter Communications Directorate and beneath the deputy chief of staff for intelligence, surveillance, reconnaissance, and cyber effects operations, or A2/6. This is an important and revealing reform about USAF perspectives on EMS Superiority.

In 2019, the USAF announced findings from its completed Electromagnetic Spectrum Superiority Enterprise Capability Collaboration Team (ECCT). The results reinforced many of the gaps and recommendations from previous EMS studies, both service-oriented and DoD-wide. A key recommendation to come from the ECCT was the establishment of A5L, the EMS Superiority Directorate. In January 2019, remarks, then-Brig Gen David Gaedecke, director, Cyberspace Operations and Warfighter Communications, said, “In order to execute the Air Force’s five core missions, the Air Force should deliberately refocus efforts on electronic warfare and the EMS as a whole.”

The establishment of A5L was basically the expansion of USAF A5RE, the Electronic Warfare requirements office. Unlike other service approaches, A5RE was the primary advocate for all USAF

Questions for USAF on EMSO

1. What is the USAF pathway to advancing EMS Superiority if the service maintains the separation from an advocacy perspective between spectrum management and EW?

2. Is there a plan to find a better “home” for the operational aspects of USAF EW, currently under A5L, and formerly a requirements office, within HAF? If so, what becomes of the mission of A5L?

3. Is A5L a better “home” for spectrum management, and if so, what additional resources and authorities are necessary for A5L to carry out this mission?

4. Is A2/6 equipped to advocate spectrum management for service-wide EMS Superiority beyond the confines of cyber operations?

5. The USAF has created the new 16th Air Force (Cyber) under Air Combat Command, which will include the new 350th Spectrum Warfare Wing (transitioning from the 53rd EW Group). How will this Wing coordinate with both A2/6 and A5L to advance EMSO throughout the service?

USAF Moves Spectrum Management to Air Staff (cont.)

EW programs and capabilities. The elevation to A5L provided senior leadership to USAF EMS Superiority matters, but it has not yet resulted in greater authorities and resources necessary to advance additional reforms. Now, with the reorganization of spectrum management under A2/6, the USAF has maintained a separation of EW and spectrum management, which on the surface appears to be out of sync with the progression toward EMSO under Joint Doctrine.

To be clear, the reorganization is not necessarily negative, but it raises questions about how the USAF views EMSO in relation to its goal of achieving EMS superiority. Other reforms, including the establishment of the 16th Air Force (Cyber) and consolidation of program element (PE) accounts for research and development, also play a significant role in understanding the USAF's path and signal that more reforms are on the horizon. The AOC will continue to monitor developments to ensure the USAF makes meaningful and sustainable progress on EMS-related matters.

CRS Updates Report on DoD Use of the EMS

Last month, the Congressional Research Service updated its comprehensive overview of DoD use of the EMS, **here**. Of note, the report covers the private sector's efforts to acquire access to spectrum traditionally reserved for military use, the emergence of spectrum sharing technologies, and future spectrum needs for both commercial and military use (6G). A recent development captured in the report was a Request for Information (RFI) released by Defense Information Services Agency (DISA) on "innovative solutions and alternative approaches" to enable Dynamic Spectrum Sharing (DSS) to accelerate spectrum sharing and 5G deployment.

The RFI included questions on how DoD can "own and operate" 5G networks for domestic operations, the national security concerns with DoD sharing with commercial 5G, and the different perspectives on DoD leasing spectrum as an alternative to reallocation. The RFI, which closed on October 19, highlighted the multi-faceted challenge that the US faces to develop and deploy a 5G network that meets user demand in both commercial and defense sectors. The expansion of 5G networks by Huawei, a Chinese-owned company, shows how the US is at risk of falling behind technologically because of antiquated spectrum management policy and compliance processes.

It should be noted that Directive 3610.01, which establishes EMS Enterprise policy, was released on September 4, 2020, two weeks before the above RFI. Directive 3610 calls for the DoD CIO to provide executive governance of EMS-related activities and DISA to support DoD

CRS Updates Report on DoD Use of the EMS, continued

with “engineering, planning, policy, technology assessment, capability development, and support for operations in the EMS.” The RFI in context of recent developments in joint doctrine, policy and strategy, and in light of the surprise decision by the FCC in April to award a spectrum license to Ligado, show consolidation of EMS Enterprise development around the DoD management and use of 5G and eventually 6G networks.

According to the CRS report, the recent developments in 5G raise several questions, many of which DoD can expect Congress to engage upon in the coming months.

• What actions can Congress or DoD take to ensure that mission-critical systems that operate in various segments of the electromagnetic spectrum (both domestically and abroad) are interoperable?

• What changes, if any, should the DoD make in programs or investments to maintain a technological edge in the use of the electromagnetic spectrum over US competitors?

• Does the US government’s plan for spectrum allocation sufficiently balance DoD requirements with the requirements of commercial applications? If so, how?
• What measures, if any, could accelerate spectrum repurposing, relocation, or sharing?

• Is DoD using the spectrum it has efficiently? How can DOD improve its spectrum efficiency? Is DoD adequately leveraging the spectrum to enable future concepts like Multi-Domain Operations, Distributed Maritime Operations, and JADC2? If so, how?

• As DOD relinquishes certain spectrum segments to commercial or shared use, how is it planning to ensure continued command and challenges in implementing 5G communications?

Business Alerts

USAF Awards Contracts for JADC2

According to Bloomberg Government, on November 4, the USAF awarded $950 million in contracts to 24 companies for JADC2, including development and operation of systems as a unified force across all domains (air, land, sea, space, cyber and electromagnetic spectrum) in an open architecture family of systems that enables capabilities via multiple integrated platforms.

PEO IEW&S Announces Industry on November 24.

On November 5, PEO IEW&S announced its second monthly ALT Industry Day Session to be held on November 24. Topics will include the following: (1) Contract Opportunities Overview to include major milestone dates on the critical path to contract award; (2) Special Topic Discussion on the PEO Integration Directorate; and (3) Q&A between industry and the PEO/PMs and ACC. Due to COVID-19 the Industry Day will be conducted virtually. Interested participants must register by November 20.

Business Opportunities

Air Force Life Cycle Management Center (AFLCMC) releases RFI on Counter Unmanned Aerial Systems (C-UAS) Capabilities.

On October 16, AFLCMC released an RFI for the purpose of conducting market research of C-UAS capabilities related to rapidly evolving and emerging requirements. AFLCMC/XA seeks to better characterize the technological, manufacturing, and performance capabilities of the industrial base to develop and produce upgrades to DE prototypes and related C-UAS subsystems, and enabling relevant engineering efforts. The value of this RFI is up to $1 million. Responses are due November 17, 2020.

DISA releases RFP for Spectrum Sharing Test and Demonstration (SSTD) Long Term Evolution (LTE) and DoD Receiver (RCVR) Working Groups (WG) Technical Support.

DISA, Defense Spectrum Organization (DSO), is seeking information for potential sources for the FLAGSHIP Requirement. The Flagship Program is intended to provide increased spectrum access to the commercial carriers operating in the 1755- to 1850-MHz band prior to the period of time where DoD transitions certain systems out of the band; demonstrate the potential for permanent sharing in the band where certain DoD systems will remain; and generate evidence that operational restrictions can be minimized for all operators in the band. Results from this program may both result in increased access by AWS-3 Licensees into the 1755- to 1780-MHz band and establish spectrum-sharing concepts that can be applied to other bands where applicable. The scope of this work will be in the areas of Research Emerging Spectrum

Technology and Spectrum Relocation Services. The value of this opportunity is between $12.3-$20.2 million. Responses are due November 30.

Business Opportunity: Air Launched Effects (ALE) UAS Configuration Trades and Analyses - Request For Information (RFI)

On November 5, US Army Combat Capabilities Development Command (CCDC), Aviation and Missile Center (AvMC), Technology Development Directorate - Aviation (TDD-A), released an RFI to explore the development of advanced technologies to inform Air Launched Effects (ALE) Unmanned Aerial Systems (UAS) investment decisions. According the RFI, Army aircraft lack adequate reconnaissance, targeting and weapon options to engage and defeat threat targets at stand-off distances across the full range of engagement profiles and can no longer achieve overmatch due to limitations in locating, identifying, targeting, and options for precision and non-precision munitions. The future multi-domain operational environment will present a highly lethal and complex set of traditional and non-traditional targets that will include networked and mobile air defense systems with extended ranges, and long and mid-range fires systems that will deny freedom of maneuver. Response is due by December 7, 2020. The value of the RFI is up to $1 million.

For questions, comments, or additional information on any of the above topics, please contact Ken Miller, AOC Director of Advocacy and Outreach, at ***kmiller@crows.org.***