FTCN Replay: Covering ALL Bases

In a recent episode of “From the Crows Nest,” host Ken Miller delved into the realm of electromagnetic warfare (EW) with John Knowles, Editor-in-Chief of the AOC Journal of Electromagnetic Dominance (JED). This engaging discussion explored the dynamic landscape of EW in today’s military, covering diverse topics such as defense legislation, global security challenges, and the strategic integration of EW across military branches. Miller and Knowles examined the pivotal role of centers of excellence in optimizing EW capabilities and drew insights from ongoing global conflicts, including key lessons from the conflict in Ukraine.

The Evolution of Force Design and Structure

John Knowles highlighted a significant shift in his focus over the past few months—from system-level considerations to the broader concepts of force design and structure. This shift, he explained, is driven by the increasing prominence of EW and multi-spectrum operations (MSO) in strategic conversations among NATO, INDOPACOM, and the U.S. military. The ongoing conflict in Ukraine and potential threats from Russia and China have underscored the need for robust EW capabilities.

“EW and MSO are being elevated in the conversation for NATO and INDOPACOM,” Knowles noted. “It’s not just about counter-UAS and GPS jamming. We need to think about the broader implications for global deterrence and force readiness.”

The Role of EW in Conventional Deterrence

A key theme of the discussion was the role of EW in conventional deterrence. Knowles emphasized that effective deterrence requires not just advanced technology but a comprehensive strategy that includes ready-to-deploy systems

and well-integrated force structures. He pointed out the importance of creating a credible deterrent that makes potential adversaries like China and Russia reconsider the risks of aggressive actions.

“You need a conventional deterrent that increases the risk of failure for them,” Knowles said. “For example, Russia needs to believe that any aggressive move in Europe would be too politically expensive and likely to fail.”

Lessons from Global Conflicts

The conversation turned to lessons from current and recent conflicts, particularly in Ukraine. Knowles observed that neither side in the Ukraine conflict has been able to establish air superiority, highlighting the critical role of integrated air defense systems (IADS). He stressed that NATO needs to be prepared to counter similar threats by investing in both airborne and ground-based EW capabilities.

“In Ukraine, it’s an air defense system war. Neither side can just dominate the airspace,” Knowles explained. “NATO doesn’t know how to fight without air superiority, and that’s a major lesson we need to learn.”

Knowles also explained that while drones are a significant threat, especially inexpensive commercial ones, the military’s response should balance between non-kinetic and kinetic measures. He emphasized the importance of affordable and effective countermeasures to maintain control over the electromagnetic spectrum and prevent adversaries from exploiting low-cost technologies.

Miller raised a concern about potentially overinvesting in advanced technologies for counter-UAS, considering the relatively low-cost nature of the threat in Ukraine. Knowles responded by underscoring the necessity of this investment, arguing that basic spectrum control measures are essential to prevent adversaries from gaining maneuver space. He cautioned

against underestimating the impact of drones, which can significantly disrupt operations if not adequately countered.

Challenges in Naval Warfare

The conversation shifted to the challenges faced by the Navy, particularly in the Red Sea, where multi-vector saturation attacks pose significant threats. Knowles described the difficulty of defending against various threats, including anti-ship ballistic missiles and aerial drones, especially when they target assets beyond the immediate protective bubble of a fleet. He advocated for integrating counter-UAS capabilities onto ships or deploying off-board systems to enhance defense.

The Importance of EW Centers of Excellence

One of the more intriguing points raised by Knowles was the potential establishment of an Army Electronic Warfare Center of Excellence. He argued that such a center could provide the necessary organizational focus to integrate EW across various mission areas, from aviation to intelligence and cyber operations.

“A Center of Excellence allows the Army to consolidate its EW efforts and create synergies across different mission areas,” Knowles said. “It’s about having a dedicated structure that ensures EW is a priority and not just a peripheral concern.”

Ken Miller noted that each military branch has its unique methods for handling EW, often resulting in inconsistent outcomes. He referenced an issue brief by analyst Matt Thompson, emphasizing that while there have been promising developments, achieving substantial results demands more extensive and realistic service participation and training. Miller questioned whether the establishment of a center of excellence could be a pivotal step in addressing these challenges.

Legislative Developments and Funding

The discussion also touched on recent legislative developments, particularly the National Defense Authorization Act (NDAA). Knowles noted that while the 2024 NDAA includes important provisions for EW, the real impact will be seen in future cycles as reports and recommendations from this year's bill are acted upon.

"Last year's NDAA had a lot of language on EW, but now we're waiting for those reports," Knowles explained. "Next year, we might see more concrete actions and funding allocations based on those findings."

Conclusion

The conversation between Ken Miller and John Knowles provided deep insights into the evolving role of electronic warfare (EW) in modern military strategy. Their discussion highlighted the critical need for structured coordination across military services, emphasizing the importance of establishing centers of excellence. They also underscored the necessity of a balanced approach to counter-UAS strategies and the effective integration of various aircraft generations. As global threats and modern conflicts evolve, so must the strategies and technologies underpinning national and international security. These discussions underscore the imperative for continuous adaptation, investment, and strategic thinking to maintain a strategic edge in electromagnetic dominance.

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