NSWC Crane Experts Participate in AOC's Annual EW Conference

By Sarah K. Miller, NSWC Crane Corporate Communications

CRANE, Ind. – Naval Surface Warfare Center, Crane Division (NSWC Crane) Electromagnetic Warfare (EW) experts participated in the Association of Old Crows (AOC) EW Capability Gaps and Enabling Technologies 2022 Conference, which took place in WestGate@Crane Technology Park on May 10-11.

The conference brought together EW professionals from the military, government, industry, and academic fields to discuss issues related to achieving Force Level EW and Electromagnetic Spectrum Operations (EMSO) capabilities across the Services. Force Level EW was the 2022 conference theme and included technical panels and speakers addressing EW and EMSO requirements and emerging technologies necessary to support joint warfighting and achieve an enduring advantage in the electromagnetic spectrum.

Stacey Mervyn, the Chief Strategist for Spectrum Warfare Systems Department at NSWC Crane, is the AOC Conference chair. Mervyn says the event provides a forum for critical topics to be shared and discussed with the EW community.

"Through this venue, we raised the awareness of EW challenges and capabilities gaps across the services," says Mervyn. "We brought together senior-level leaders from across the Department of Defense and private industry to discuss EW warfighting needs. Bringing the right people together creates a collaborative forum to help us think about where EW needs to go and innovative solutions we need to pursue to achieve Force Level EW."

Government and military leaders across the Department of Defense discussed the essential role of EW and EMSO in Joint All-Domain Command and Control (JADC2), Joint Long-Range Fires, Information Advantage, and how innovative technologies such as Artificial Intelligence and Machine Learning are needed to advance collaborative and agile solutions to persistent gaps in our joint warfighting capabilities.

Vice Admiral Sean Buck, the Superintendent of the United States Naval Academy (USNA), was a keynote speaker at the conference. Vice Adm. Buck discussed how midshipmen are learning critical concepts to meet future fleet needs.

“I’m thrilled to have had the opportunity to speak to a community of practitioners and experts on how we’re preparing the next generation of naval officers for the challenges and opportunities presented by EMSO and EW,” says Vice Adm. Buck. “At the U.S. Naval Academy, through classroom instruction and project based learning, our midshipmen are learning how the electromagnetic spectrum touches every aspect of warfare today so that they can leverage the spectrum for dominance in any battlespace in the future.”

Brian Hinkley, the President-elect of AOC, says Vice Admiral Sean Buck spoke to the importance of the future Navy leadership development.

“VADM Sean Buck’s opening keynote address set the perfect stage to advocate for a strong EW and Cyber capability,” says Hinkley. “VADM Buck gave us an encouraging look at what the U. S. Naval Academy is doing through rigorous engineering curriculum to prepare our next generation of naval leaders. VADM Buck detailed how the curriculum allows midshipmen to fully comprehend the physics of the new EMS battlespace and to ultimately fight and win in increasingly complex electromagnetic spectrum operating environments (EMOE).”

Hinkley says the conference was a success.

“The AOC and NSWC Crane EW Capability Gaps and Enabling Technologies conference proved once again how critical it is to follow NSWC Crane’s Spectrum Warfare Department’s motto, ‘Control the Spectrum, Control the Fight,’” says Hinkley. “As evident in current world events, the ability to conduct effective EMSO is a game changer to the outcome of the battle.”

The Chief of Naval Operations Navigation Plan states the importance of the electromagnetic spectrum to ensure American security, including how the Navy is allocating more resources to EW systems that improve defensive strength. It states, “For the first time in a generation, the seas are contested. We must stand ready to control them at the time and place of our choosing. Sea control provides the Joint Force freedom to maneuver and strike, protects friendly shipping, and denies use of the sea to our adversaries. In our digital age, it also means fighting our adversaries in space, cyberspace, and along the electromagnetic (EM) spectrum. Successful modern sea control demands the all-domain power of our Navy and the Joint Force.”

Mervyn says the conference creates a unique opportunity to discuss rapid EW solutions for the warfighter.

“What is unique about this conference is not only the expertise we bring in from industry, military, and government, but we hold the event at the classified level,” says Mervyn. “NSWC Crane is a recognized leader in EW and the conference provides the opportunity to have discussions at the necessary levels to better understand the EW capability gaps, have meaningful discussions, and have collaborative discussions around rapidly evolving challenges.”

Hinkley says the AOC is a growing organization addressing the needs of the evolving EW environment.

“The AOC, the premier professional EW organization, continues

to grow national and international membership as more people begin to understand the imperative of decisive advantage in the electromagnetic spectrum for both commercial and military applications," says Hinkley. "The International AOC is extremely proud of our close supporting relationships with key EW stakeholders across the world, and specifically of collaborating with NSWC Crane to deliver one of our most highly anticipated EW conferences year after year for over a decade now."

Mervyn says meeting future threats requires spectrum expertise.

"As we see in the CNO's NAVPLAN guidance, National Defense Strategy, and the EMS Superiority Strategy, the Electromagnetic Spectrum is paramount to successful military operations and to ensure Electromagnetic Spectrum Superiority and Dominance," says Mervyn. "Force Level EW is focused on the integration of EW and EMSO capabilities across the armed services platforms and systems in all domains and integrated with kinetic and non-kinetic capabilities. It is imperative that the US Navy's EW capability is integrated and interoperable with the other services to achieve Joint Warfighting Concepts such as Joint All-Domain Command and Control (JADC2), Joint Long Range Fires and Information Advantage. This year's conference was designed around these central themes. The speakers did an outstanding job conveying to the audience the challenges that need to be addressed and enabling technologies that we need to leverage more rapidly. It is incumbent upon all of us, as leaders in EW, to work together and solve the hard EW and Electromagnetic Spectrum Operations problems and to put the best capabilities into the hands of the young men and women who serve our nation."

About NSWC Crane

NSWC Crane is a naval laboratory and a field activity of Naval Sea Systems Command (NAVSEA) with mission areas in

Expeditionary Warfare, Strategic Missions and Electronic Warfare. The warfare center is responsible for multi-domain, multi- spectral, full life cycle support of technologies and systems enhancing capability to today’s Warfighter.