NWSC Crane, AOC Co-Host Annual EW Conference

By Sarah K. Miller, NSWC Crane Corporate Communications

Naval Surface Warfare Center, Crane Division (NSWC Crane) co-hosted the annual Association of Old Crows (AOC) Electromagnetic Warfare Capability Gaps and Enabling Technologies Conference May 16-18.

Patrick Flannagan, a Customer Advocate at NSWC Crane, was the Conference Chair this year. Flannagan said the conference focused on Force Level EW (FLEW) and Electromagnetic Spectrum Operations (EMSO) capabilities across the Services.

“This event brings together military, government labs, industry and academia in a question-and-answer format to discuss strategic focus for FLEW,” said Flannagan. “It’s a really awesome opportunity to generate and share ideas, build partnerships and strengthen professional relationships for the benefit of the warfighter. With established relationships, remote communications work better and technological innovations happen faster.”

The conference included technical panels and speakers that addressed EW requirements, emerging technologies necessary to support joint warfighting, and achieving an enduring advantage in EW and EMSO capabilities. Government and military leaders across the Department of Defense (DOD) presented the critical 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 for joint warfighting capabilities.

One keynote speaker was Steven Aguiar, the Deputy Assistant Secretary of the Navy (DASN) Enterprise Digital Battlespace (EDB) Design Lead.

“Coming from an acoustic background, I found the AOC conference very informative regarding new Force Level EW and EMSO concepts and was impressed with the breadth of knowledge represented,” said Aguiar. “From the perspective of DASN for Research, Development, Test and Evaluation (RDT&E) and the EDB initiative that I presented, it is important to network and talk to folks about the priorities and objectives and about some of the work that is happening in ASN Research, Development and Acquisition (RDA) and DASN RDT&E relative to

System Engineering, Digital Engineering and Modeling & Simulation. All of these topics are enablers to delivering capability to the fleet and are important vectors in DASN RDT&E's portfolio. It continues to be important for all of us to think about what work we are doing to support the NAVPLAN Implementation Framework (NIF) and in general how we are delivering capability at the speed of relevance and need."

Dennis Monahan, Mid-Atlantic Director at AOC, attended the conference.

"AOC is really proud to partner with NSWC Crane on this conference and to help advance electromagnetic warfare and operations," said Monahan. "The breadth of the conference was wonderful and it was great that NSWC Crane was able to host it as a classified conference. Events like these help DOD, government and industry understand the needs and move forward."

Monahan is a veteran with Airborne EW experience. He said his relationship with Crane began when he was in the service.

"I have a longstanding relationship with Crane since '92," said Monahan. "It's great to get together and reengage with people like Dr. James Stewart who presented for NSWC Crane. As a service member I worked with Dr. Stewart while conducting operations designed to provide counters to adversary use of improvised explosive devices (IED) in Iraq and Afghanistan. This conference was my first time at NSWC Crane and I had a blast."

For AOC, the conference was a way to engage its community of EMS professionals.

"Our more than 14,000 international members come from a wide range of interests to include Electronic Warfare (EW), Electromagnetic Spectrum Management Operations, Cyber Electromagnetic Activities (CEMA), Information Operations (IO) and other information related capabilities," said Monahan. "We advocate, provide networking opportunities for, and offer educational resources for our community across a wide range of channels – like hosting conferences and speakers to provide access to like-minded professionals. During the conference, I was also able to recognize NSWC Crane employee, Ryan Loehrlein, with his AOC Future 5 Award among his peers. Ryan is doing great things and advancing capabilities in data and modeling and simulation."

AOC recognizes five young professionals in its Future 5 program whom, according to its website, "actively innovate and strive for excellence as they build their careers in the EMS/EW/IO industry." You can watch Loehrlein's 2022 AOC Future 5 acceptance speech here.

Stacey Mervyn, the Distinguished Engineer for Advanced EW for Spectrum Warfare Systems Department at NSWC Crane said EW is a capability that is present across several military platforms and is used by all the services. She adds Force Level EW is a

crucial to mission success.

“Controlling the spectrum through EW and EMSO provides the decisive advantage in mission operations,” said Mervyn. “Warfighting missions all rely on the electromagnetic spectrum to conduct operations in all domains: air, ground, surface, sub-surface, space. The EMS provides the freedom to maneuver and gain the competitive advantage.”

NSWC Crane has been co-hosting the AOC Electromagnetic Warfare Capability Gaps and Enabling Technologies Conference since 2008.

“In the beginning, we came together as an EW community to find solutions to close warfighting gaps through enabling technologies,” said Mervyn. “Over the past decade the conference theme has evolved, focusing on integrated EW and EMSO capabilities across services, platforms and all domains. Instead of chasing threats, we are looking at force level EW needs and asking ‘how can we work together to bring innovative approaches and capabilities to enable FLEW and leap-frog our adversaries’ capabilities?’ Force level EW is extremely important. There is an urgent need for collaboration to achieve rapid innovation and transition of Joint EMSO solutions to the warfighter.”

Flannagan said that NSWC Crane’s expertise is why they co-host and bring experts together for the conference.

“NSWC Crane has the largest Department of Defense civilian EW workforce dedicated to EW across expeditionary, surface and air domains,” said Flannagan. “We’re engaged from warfighter level to the Office of the Secretary of Defense to solve hard problems in partnership with academia and industry.”

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.

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