Emerging Capabilities Like Unmanned and AI Can Aid Cyber Threat

Capt. Jeff Morganthaler, Maritime Operations Center director at the Navy Expeditionary Combat Command, speaks at The Future of Naval Expeditionary Warfare in All-Domain Operations panel. *NAVY LEAGUE / Lisa Nipp*

NATIONAL HARBOR, Md. – The challenge for naval expeditionary forces in the emerging threat environment is how to integrate all the elements operating in a distributed role when they may not be able to control the communications domain, a panel of experts said Tuesday. All the challenges of mobility, survivability and combat effectiveness in distributed expeditionary operations are aggravated by the threat of cyberspace interference, the panel told a Navy League Sea-Air-Space forum.

"We've been talking about distributed ops for a long time," but doing that in a large geographic area "introduces serious challenges to our architecture on how we knit that together, particularly in a distributed environment where we may not control the spectrum. … We may not control the cyberspace environment," said Gregory Breazile, a retired Marine colonel, now CEO of Breazile Cyber & C4I Solutions. "We want to dominate, but we have to work through that competitive space," and it becomes more complicated, Breazile said.

But industry is working to bring capabilities, including artificial intelligence, that can help overcome those challenges, Breazile said. The good news, he said, "is that AI is making it able to bring things together. … All these AI capabilities are there."

Navy Capt. Jeff Morganthaler, Maritime Operations Center

director at the Navy Expeditionary Combat Command (NECC), and Col. David Odom, director Expeditionary Warfare on the Navy staff, also cited the emerging capabilities, including artificial intelligence and unmanned systems, that can ensure the integrated, multi-domain operations they are working to achieve.

Morganthaler listed the ability to supply integrated information and communications systems among the capabilities that NECC brings to the integrated expeditionary operations. In talking about assured command and control, “I’m confident of what we have today.” But for the future, “I don’t need it bigger. I need it smaller and more capable.” He described a proposed communications and intelligence system that could be flown in on a MV-22 Osprey and mounted on an unmanned vehicle.

Among the other advances the expeditionary forces need, Odom mentioned bringing the fifth-generation F-35 capabilities to the big-deck amphibious ships, the less expensive but capable LPD Flight II amphibs and the proposed light amphibious ships. The challenge for the smaller amphibs, he said, is to make them “affordable, so we can get as many as possible. We are working with industry to bring what we need.”