FTCN Replay: Closing the Gap Between Spectrum and Information Operations

As artificial intelligence speeds up military decisions, a retired Air Force colonel warns that overconfidence in the technology could cost commanders the deterrence they are trying to build.

A recent episode of **From the Crows' Nest** examined how military planners can better integrate electromagnetic spectrum operations and information operations, a theme that ran through **INFOPAC 2026**.

AOC Director of Advocacy & Outreach and host Ken Miller recorded the episode at the event, which the **AOC Diamond Head Chapter** hosted in support of the Information Warfare Directorate at US Indo-Pacific Command. He spoke with three guests about a shared question: How can the force keep its spectrum advantage when delivering information effects?

Orientation Comes First

Retired Air Force Col. Dr. William "Dollar" Young, the first Commander of the 350th Spectrum Warfare Wing and now president and CEO of Security Concepts and Strategic Design, built his INFOPAC presentation around fog, friction, and false certainty.

Young said the event's focus on deterrence makes orientation critical. "If we lose orientation, and that's from the collective coalition all the way down to individual commanders, if we lose orientation, nothing else matters," he said.

He described two kinds of learning. A tactical debrief checks

performance against set objectives, which he called single-loop learning. “Did I do things right? That’s single-loop learning,” Young said. Double-loop learning asks a harder question: “Did I do the right things?”

Young said the distinction matters because a mission can succeed on paper and still fail strategically. A crew can jam a signal exactly as planned and still lose the aircraft it meant to protect.

The Risk of False Certainty

Young warned that AI can make leaders overconfident. He described a hypothetical scenario drawn from real incidents in the AI Incident Database. “Every system was healthy, every operator followed procedure, every AI command was authentic and within its authority, and we still lost deterrence,” he said.

In that scenario, an AI system reported 82% confidence that continuing a jamming operation was low risk. The figure matched its training data but not the changed battlefield. “No one has data about the future, period,” Young said.

Technology will not remove that uncertainty, he said. “Leaders have to do what leaders have always done. That is make decisions under conditions of uncertainty.”

Planning Together Earlier

Young said information operators and spectrum operators must plan together from the start because the spectrum shapes both what an AI system can see and what a commander can order. “The observations are by and large increasingly a function of the spectrum,” he said.

His advice was to build a theory of victory, then ask what would have to be true in the spectrum for it to work. Planners should try to refute those assumptions, not confirm them. “I have added nothing that’s not in existing joint doctrine,”

Young said.

He also pointed to the Integrated Decision Engine for EMSO Assessment, or IDEA, a prototype developed with the Georgia Tech Research Institute. Young said it gathers evidence from thousands of data elements but leaves the analysis to people. “It does not do the thinking for you,” he said.

Deterrence Through the Spectrum

Scott “Sherm” Oliver, an AOC Board of Directors member and Chair of its Advocacy Committee, said the two disciplines work in different arenas but overlap in deterrence. “One is talking about changing decisions in the cognitive domain,” Oliver said. “And when we’re in spectrum operations, we’re talking about physics.”

He offered an example: Communications jamming each time an adversary crosses a certain line could create a safety-of-flight problem. That is an electromagnetic attack, he said, but it also deters.

Oliver said events like INFOPAC help by bringing industry, academia, the military and other government agencies together. He added that events should open with the threat, because intelligence often supplies the reason behind operations.

Looking beyond deterrence, Oliver said investment now can lower risk later. “Success in all domains cannot be assumed without involving electromagnetic spectrum operations,” he said, calling the spectrum the one thing that ties air, land, sea and space together. “You can’t turn it off.”

He also urged more exercises and experiments, with subject-matter experts involved in their design.

Industry Needs Speed and Scale

Jarod Patton, Director in Booz Allen Hamilton’s Defense Technology Group, pointed to the war in Ukraine as evidence of

the spectrum’s importance. He said that during a previous job with a commercial drone company, Ukrainian officials told him they needed inexpensive drones they could afford to lose.

“That is not an IO problem. That is an MSO problem,” Patton said. “They were just being denied command and control. They’re being denied navigation.”

Patton said industry must move faster. Booz Allen is working with the Air Force on rapid reprogramming so that updates can reach aircraft “from one sortie to the next.” He said the company also supports an EW app pipeline, which uses modeling and simulation to move ideas from research to real systems more quickly.

Scale is another challenge, Patton said, as operations shift to many-versus-many engagements in which radio-frequency physics grows complicated fast.

He also said AI for the spectrum faces a data problem. “RF data is harder to train on and create data sets for compared to imagery,” Patton said. Oliver suggested the military work more closely with telecommunications companies, which manage radio-frequency environments commercially.