Every Platform A Sensor- Integrated ISR capabilities are essential to a forward-deployed Navy

(SEAPower Magazine Feb 2012) ... Rick Burgess

As director of the Intelligence, Surveillance and Reconnaissance (ISR) Capabilities Division in the Office of Chief of Naval Operations, Rear Adm. (select) DeWolfe "Chip" Miller sees no slowdown in the nation's demand for the Navy's ISR capabilities.

After a decade of warfare against elusive enemies, the Navy has refined and sharpened its ISR capabilities and increased its capacity to collect, analyze and disseminate information, and produce actionable intelligence for warfighters. As an experienced warfighter and consumer of intelligence, Miller now oversees the Navy's ISR requirements and allocates resources to sustain and enhance those capabilities. Miller is a naval aviator who has served in four carrier-based attack and strike fighter squadrons, commanding Strike Fighter Squadron 34, and subsequently served as executive officer of the aircraft carrier USS Carl Vinson, commanding officer of the amphibious transport dock ship USS Nashville and as the first commanding officer of the Navy's newest aircraft carrier, USS George H.W. Bush. Miller also accrued a substantial amount of tactical, technical and programmatic expertise in his shore assignments.

Miller discussed the Navy's ISR requirements with Managing Editor Richard R. Burgess. Excerpts follow:

How has the Defense Department's emphasis on building ISR capabilities affected the Navy's role in ISR?

Miller: The Navy is a warfighting force and one of [Chief of Naval Operations Adm. Jonathan Greenert's] messages to us in his sailing directions was "warfighting first," so ISR is critical in every phase of operation. The Navy is, and will remain, a deployed force operating forward. As such, our force's readiness requires a continuous picture of the environment in which we operate. The term we use is "information dominance," a combination of sensing, transporting and evaluating the sensed information, turning information into knowledge and getting that knowledge to decision-makers so they can take actions. As a globally deployed force, that knowledge is critical to our forward-deployed operations.

The Navy views information dominance as an integral warfighting capability, not merely something that supports other warfighting forces. A quote I heard awhile ago said, "We build a navy for war, but we operate it to preserve the peace." So, as budgets come down, as we've pulled out of Iraq and draw down in Afghanistan, the need for a forward-deployed Navy with ISR capabilities is critical for that preservation of peace.

How can the P-8 maritime patrol aircraft and MQ-4C Broad-Area Maritime Surveillance (BAMS) unmanned aerial system improve the Navy's ISR capabilities?

Miller: The P-8A Poseidon is going to launch on the Navy's broad area anti-submarine warfare [ASW] capability resident in our current fleet of P-3C Orions. In addition to its primary ASW mission, the P-8A is a multimission aircraft, which will also provide the Navy with a significant armed antisurface warfare and ISR capability.

The BAMS demonstrator currently deployed in the U.S. Central Command area of responsibility has performed admirably. We sent it over there as a demonstration and it has yet to come back, not because it has had any problems, [but] because the commanders out there love it and value it [for] bringing enhanced situational awareness. The BAMS is only going to build upon that.

The BAMS provides persistence: continuous maritime ISR capability up to 24 hours per day operating anywhere within a 2,000-nauticalmile radius. BAMS is going to be deployed worldwide and it's going to be a game-changer. It's going to generate an unprecedented level of ISR to build and maintain a wide area maritime picture.

Will the Navy have the numbers of P-8s and BAMS needed to cover the world's oceans?

Miller: Yes. P-8's primary mission is going to remain ASW, but one of the tenets we use is that every platform is a sensor and every sensor is networked. The P-3s are primarily for ASW, and the EP-3 [electronic reconnaissance aircraft] and SPA [special projects aircraft] are high-demand, low-density special assets. The P-8 is going to be able to do both. So, we're increasing the ability of ISR and then, on top of that, the capability the BAMS brings. So we're actually putting that theory into practice.

What can you say at this point about the Navy's plan to replace the EP-3 and the P-3 SPA?

Miller: We're going to leverage on what I'll call a "family of systems" - several platforms, both manned and unmanned, so everything from BAMS to the UCLASS [Unmanned Carrier-Launched Airborne Surveillance and Strike] system to our VTUAV [Vertical Takeoff Unmanned Air Vehicle] - which, right now, is Fire Scout - our P-8s, MH-60s, E-2Ds are going to be equipped with sensors and they all will contribute to a mission that is currently produced with an EP-3. We're basically transitioning from an individual platform focused [strategy] to more of a sensor-based, multiple platform strategy. The same for the SPA.

There were several studies with the EP-3 and SPA to determine what capabilities those platforms currently bring and, as we migrate those capabilities onto our family of systems, we need to know not only the capabilities but also the capacity that we need, to make sure that we, in fact, do migrate onto our other systems that are on there.

Congress, through its National Defense Authorization Act, requires us to annually certify our plan to maintain the capability of those platforms. We report back to Congress through our budgetary process on how we are meeting that requirement.

What will the UCLASS give the fleet in terms of ISR?

Miller: Right now, there is a longstanding gap in persistent ISR coverage organic to our aircraft carriers. UCLASS basically fills that gap. It is going to provide the fleet with multi-intelligence, long endurance and, most importantly, carrier-based ISR&T. I add the "T," which is the targeting piece of the ISR.

With that come all the benefits of being carrier-based, not needing host nation support. It will also have the capability to conduct precision strike as well.

What is your assessment of MQ-8B Fire Scout's deployment record so far?

Miller: Fire Scout is operating both ashore and at sea. Ashore, it is in Afghanistan and [the operators] couldn't be happier with its performance. They've actually requested additional Fire Scouts and greater flying hours for the Fire Scouts operating there. It is providing critical tactical ISR support to U.S. and allied ground forces in remote areas with limited access to ISR support from fixed-wing aircraft.

At sea, so far, it's a work in progress. We deployed Fire Scout early, prior to it going through the complete testing phase and before its official [initial operational capability]. Additionally, Fire Scout was envisioned for our [Littoral Combat Ship] fleet and, by doing it early, we put Fire Scout onto frigates so we could learn and develop tactics and integrate that Fire Scout into the missions we were doing afloat.

Each deployment has gotten better. We've made great improvements in the way we train the operators. We've identified and corrected deficiencies in the system itself. The next deployment is going to be in the next couple of months on the frigate USS Simpson. Fire Scout is going to be a key component of our surface Navy for many years.

Is the Navy upgrading the Fire Scout and considering it for the Medium-Range Maritime Unmanned Aerial System (MRMUAS)?

Miller: We would like to move to an upgraded airframe for Fire Scout. [Going from] the MQ-8B to the MQ-8C is kind of like going from the Hornet to the Super Hornet. It's a little larger airframe that will provide greater payload [and] greater endurance, and is going to be able to handle radar and weapons [without taking] a large penalty by adding that extra weight and shrinking its endurance.

We think that the MQ-8C will provide room for growth that is going to provide the capability that we need in the future. The MQ-8C gets us closer to the "warfighting first," so ISR is critical in every phase of operation. The Navy is, and will remain, a deployed force operating forward.

How will the MQ-8C be different from the MQ-8B?

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What are the current challenges in ISR?

Miller: As we use more ISR platforms, the flood of information continues and will only increase. The way we task, collect, process, exploit and disseminate that information is going to be key. What will help that is more autonomy within the sensors. We need to make our sensors smarter, be able to do a lot of analysis on the platform, which will reduce the manning footprint of that processing and exploitation piece as well as shorten the timeline associated with collection of data and delivering that knowledge to the warfighters.

We need a common control system for our platforms and sensors. That doesn't mean each system is operating off the exact same control system, but it does mean the interfaces and standards that are used are all common such that industry, whether it's building a STUAS or a ScanEagle or a Fire Scout, understands what those interfaces are, such that I can be sitting on a destroyer or being a Marine on the ground and not only control the sensors, but take advantage of the information that is out there.

Our systems need to be able to be interoperable and they need to integrate together. I'll give you an example of a manned H-60 and an unmanned Fire Scout. The information the sensors on the unmanned system are receiving needs to be transported to the manned aircraft so that it has the situational awareness of what is happening tactically at the scene. In a boarding operation, where an unmanned aircraft is overhead a ship that is being boarded, the information seen by the unmanned aircraft is simultaneously being observed by a manned helicopter and by the ship's commanding officer or senior leaders in the ship itself.

As to dealing with the flood of information from ISR sensors and platforms, there still comes analysis from the manned side. Some information is critical. We need to get that information quickly to the warfighters. Other information may be something analysts can do over time. We're working to establish an enterprise-wide tasking collection process, exploitation, and dissemination architecture manned by the Information Dominance Corps.