BAE Systems to Study New Amphibious Combat Vehicle Variant

BAE Systems will study incorporating a C4/UAS payload on the Amphibious Combat Vehicle. *BAE SYSTEMS*

STAFFORD, Va. – BAE Systems has received task instructions from the U.S. Marine Corps to complete a study of incorporating Advanced Reconnaissance Vehicle-Command, Control, Communication and Computers/Unmanned Aerial Systems mission payload on an Amphibious Combat Vehicle (ACV) variant, the company said April 7.

Pending the results of the phase 1 study, the Marine Corps may pursue modification of an ACV to install the C4/UAS payload. This C4/UAS variant will provide the transformational technology Marines need to observe their surroundings, collect and integrate information, and sense new targets over the horizon.

The ACV C4/UAS will feature a state-of-the-art battle

management system and advanced sensing capabilities. Offering a substantial level of commonality with other ACV variants, BAE Systems will work toward a fully open-architecture approach, allowing for rapid technology refresh and upgrades, including seamless integration of future technologies and capabilities. This has the potential to provide the Marine Corps significant economies of scale in development and life-cycle management costs.

“BAE Systems is dedicated to offering innovative combat system solutions to meet the multi-domain needs of the U.S. Marine Corps’ modernization efforts,” said John Swift, vice president of amphibious programs at BAE Systems. “Adding the C4/UAS variant to the ACV family of vehicles may offer development and life cycle cost savings. We look forward to continuing our commitment to the Marines’ ability to be unmatched on the battlefield.”

The ACV is a highly mobile and proven solution capable of conducting rapid ship-to-objective maneuver, delivering enhanced combat power to the Fleet Marine Forces. The ACV was developed with teammate IVECO Defence Vehicles.

BAE Systems has received two full-rate production contracts since the Marine Corps declared initial operational capability for the ACV family of vehicles program, which includes the ACV personnel variant (ACV-P) and the ACV command variant (ACV-C). The company is currently under contract to design and develop a 30mm cannon variant (ACV-30) and a recovery variant (ACV-R).

ACV C4/UAS engineering, integration, and fabrication is taking place at BAE Systems locations in Stafford, Virginia.; San Jose, California; Sterling Heights, Michigan; and York, Pennsylvania.

Sea Services Reach Tipping Point in Maintaining Readiness While Recapitalizing Forces

A Boeing unmanned MQ-25 aircraft is given operating directions on the flight deck aboard the aircraft carrier USS George H.W. Bush (CVN 77) in late 2021. *U.S. NAVY / Mass Communication Specialist 3rd Class Hillary Becke*

NATIONAL HARBOR, Md. — This year's Sea/Air/Space conference occurred at a critical time for the sea services as they confront strategic rivals in multiple geographic areas and warfare domains.

Aging force structure in all three sea services makes in harder to deter aggression. New technologies and concepts offer the naval services tools to improve their ability to deter and to defend and defeat opponents as needed. In addition, the Navy faces significant financial hurdles in recapitalizing the undersea component of the nuclear deterrent in the Columbia-class ballistic missile submarine while at the same time trying to build a new force for 21st century missions.

The challenge is to maintain the readiness of existing, legacy forces while both recapitalizing existing capabilities, and transitioning to future forces. These new force structure components are likely to include more unmanned units, connected within robust networks capable of fighting and winning inside opponent-imposed limitations such as anti-access/area denial bubbles.

Aging Force Structure

Many of the sea service's existing platforms and systems date from the late Cold War and the 1990s. They have seen extensive service in the first Gulf War, operations in the Balkans in the 1990s, and since 2001 in combating rogue states and violent extremists in Iraq, Afghanistan and around the globe. Limited defense budgets have forced the postponement of needed maintenance between deployments.

Like aging automobiles that do not get serviced at the dealer garage when needed, many ships, aircraft and submarines have equipment problems that prevent them from accomplishing their missions. Famous Cold War-era ship classes like Ticonderoga–class Aegis cruisers, Los Angeles–class nuclear attack submarines, many of the Navy's amphibious warfare ships and even the earlier units of the post-Cold War Arleigh Burke–class destroyers are approaching and, in some cases, have exceeded their planned service lives. Keeping these aging units on the front lines of global deterrence imposes

additional costs on the services and the taxpayers. Like the aging automobile, these costs soon come to outweigh the utility of keeping these ships in commission.

Active Adversaries

Across the period of the post-Cold War era (1991 to the present) U.S. adversaries have not been idle in analyzing U.S. capabilities and fielding platforms and payloads to combat them. Both the People's Republic of China and Russian Federation have watched and learned from U.S. joint force operations of the last 30 years. The PRC remains the "pacing threat" and now fields a fleet of over 350 combatants, along with numerous coastal and maritime militia forces. The PRC also has an extensive force of land-based cruise and ballistic missiles, aircraft and sensors that threaten U.S. forces thousands of miles from the Chinese coast.

The Russian Federation has been unable to modernize its forces as planned ands suffers from severe planning and logistics shortfalls as evidenced by its botched and bogged-down invasion of Ukraine. The Russian navy submarine force, however, while much smaller than its Cold War Soviet equivalent contains a new generation of very quiet submarines including the Borei–class SSBN, the Yasen–class guided missile submarine armed with Kaliber cruise missiles and several special purpose submersibles that could cut seabed cables and otherwise harm underwater infrastructure.

Like a submersible version of the German World War II battleship Bismarck, Russian submarines like the Yasencan threaten multiple targets at sea and ashore. In addition to China and Russia, North Korea continues to menace its neighbors with both conventional and now nuclear weapons while Iran contributes to instability in the Middle East with its regime's Revolutionary Guard Corps that harasses shipping, fires random missiles and threatens mine laying operations in the key Strait of Hormuz through which most Middle East oil

moves to global customers.

Violent extremists, while beaten back in many areas, remain a threat and like the Houthis in Yemen field increasingly effective weapons, including cruise missiles. The overall threat environment to the U.S. sea services is likely higher than at any point since the end of the Cold War.

Path to the Future

The U.S. sea services have equally done hard thinking on current and future threats and are building a path to future joint force far more capable than present, legacy platforms. Unmanned systems technology is spiral developing at a dizzying rate with both small and medium unmanned surface and small unmanned underwater units now available for intelligence, surveillance and reconnaissance missions. The Navy will soon field the MQ-25A Stingray unmanned tanker aircraft, substantially improving the range of carrier-based aircraft.

The Marine Corps plans to use many unmanned systems in support of its new littoral regiments and the Coast Guard also plans to use more unmanned systems. These and new manned ships including the Constellation-class frigates, DDG-X, light amphibious warship and others provide a path toward a larger, 500-ship Navy with both manned and unmanned units to better deter and if necessary, defeat opponents in multiple warfare domains.

Team Effort

The move to a future force of capable manned and unmanned naval forces requires a team effort of civilian policy officials, military officers and industry to reach the goals articulated by Navy Chief of Naval Operations Adm. Mike Gilday, Marine Corps Commandant Gen. David Berger and Coast Guard Commandant Adm. Karl Schultz for their respective services and for the joint force overall.

The sea services must move from current, costly legacy forces toward a new combination of manned and unmanned surface, subsurface, air and expeditionary units capable of meeting the challenges of the 21st century.

Coast Guard is Upping its Game on Cyber, Human Resources and Equipment, Panelists Say

Capt. Laura D. Collins, acting director of civilian human resources at the Diversity and Leadership Directorate, discusses Coast Guard advances in training while Capt. Russell E. “Rusty” Dash, the C51 Service Center commanding officer,

looks on. *BRETT DAVIS*

NATIONAL HARBOR, Md. — In his last Sea-Air-Space visit in uniform, U.S. Coast Guard Commandant Karl Schultz led a panel discussion about the service, which is rapidly seeking to upgrade its equipment, software and human resources to keep up in a competitive world.

“The demand for Coast Guard services, at home and abroad, has never been higher,” Schultz said.

He introduced his nominated successor, Adm. Linda Fagan, the current vice commandant, and her nominated vice commandant, Vice Adm. Steven D. Poulin.

“I will sleep well at night,” Schultz said. “They are rock stars and we are in good hands.”

Schultz guided the panel through a discussion of how the service is upping its game when it comes to connectivity, human resources and equipment, including ships to replace or augment an aging fleet.

Capt. Russell E. “Rusty” Dash, the C51 Service Center commanding officer, said under Shultz’s direction the Coast Guard kicked off a “tech revolution” in March 2020, to try to get away from the service’s reputation of delivering “yesterday’s technology tomorrow.

“The tech revolution is about empowering the people of the Coast Guard with reliable, mobile and integrated capabilities so they can better do their job,” he said, noting that most Coast Guard work doesn’t take place behind a desk.

It’s a mobile-first approach that gives Coasties the hardware and apps they need to “do their work wherever they do their work,” and includes beefing up cutter connectivity as well as on-shore networks.

The service is also getting ready to turn on a “software

factory," based on the Air Force software factory model, to promote "software developed by Coasties for Coasties in a standard way," Dash said.

Capt. Laura D. Collins, acting director of civilian human resources at the Diversity and Leadership Directorate, said the service is taking a similar approach with its people.

"We want a best-in-class workforce for a best-in-class Coast Guard," she said, building on a document called Ready Workforce 2030, which calls for modernized learning and training tailored to the individual.

"In order to be the employer of choice, we've got to train to retain," she said, including on-demand e-learning not just training at dedicated centers.

Navy League CEO Mike Stevens, left, and National President David Reilly, right, present Coast Guard Commandant Adm. Karl Schultz with the Navy League Scroll of Honor. *BRETT DAVIS*

Rear Adm. Douglas Schofield, assistant commandant for acquisition and chief acquisition officer, highlighted new

ships coming on line, include the offshore patrol cutter and a new icebreaker.

The offshore patrol cutter joins new national security cutters and fast response cutters, and will complement them through its presence in exclusive economic zones and beyond.

“It is critical for that multi-mission presence that you always talk about, sir,” and has “outstanding human system integration,” including common boat launch systems and helicopter accommodations.

Schultz noted there is significant conversations about how many ships the U.S. Navy has, but the question of how many ships the Coast Guard has tends to fall under the radar.

“We’re going to have a fleet of 100 new ships here. When you roll in these 11 national security cutters … 64, now 66, fast response cutters, 25 OPCs, that is a fleet of 100 very capable ships … I think that 100 is going to continue to up our game.”

At the end of the breakfast, Schultz was presented with the Navy League Scroll of Honor by National President David Reilly and CEO Mike Stevens.

Early Days in the Sea Services Helped Focus Their Careers, Women Leaders Say

Rear Adm. Megan Dean, director of government and public affairs at the Coast Guard, makes a point during the Women's Leadership session. *LISA NIPP*

NATIONAL HARBOR, Md. – Senior-level women from across the sea services shared personal and professional insights and anecdotes about their earliest days in the military, and what helped guide them to the tops of their fields, in a panel discussion on Women's Leadership on April 5 at Sea-Air-Space 2022.

U.S. Navy Capt. Emily Bassett, serving as moderator of the panel, also hosted the event on behalf of the Sea Service Leadership Association. Bassett is president of SSLA, the only nonprofit, national, volunteer-driven organization dedicated to the promotion, advancement and mentorship of women in the U.S. Navy, Marine Corps, Coast Guard, and National Oceanic and Atmospheric Association.

"Today's event is a women's panel, but really it's about people," Bassett said. "It's not just about diversity of gender, it's about diversity of thought and it's about

bringing our whole selves to the table. Today's focus will be women leaders … who have made it to the top of their teams [and] who are willing to share their story."

Maj. Gen. Bobbi Shea is the legislative assistant to the Commandant of U.S. Marine Corps. Shea described herself as a "distracted youth" when she was a child growing up.

"I spent a lot less time in high school than … I should have," Shea said. "So, I enlisted in the Marine Corps really not knowing what I was getting into. But I will tell you when I put my feet on those yellow footprints in Paris Island, I tell people it was like coming home. Coming home to place that I had never been before. The discipline, the challenges, the rigor, the teamwork – all of these standard, base concepts quite frankly were foreign to me growing up."

Shea said what she learned early on at boot camp was that meeting the challenges and standards was not so much about personal ambition, but "what you could bring to the team." She said this thinking, more than personal ambition, drove her behavior and informed how hard she worked and how hard she tried.

Rear Adm. Megan Dean, director of government and public affairs for U.S. Coast Guard, said she wasn't sure she was a good fit for the Coast Guard when she attended the U.S. Coast Guard Academy. Her feelings changed shortly after she graduated.

"I will tell you, I graduated, I got my commission. I showed up to my first unit, which was a 210-foot Coast Guard Cutter," Dean said. "Our mission was mainly search and rescue and law enforcement all up and down the East Coast to the Caribbean, and I will tell you that I felt like I fit – that my talents matched those of my chosen profession."

Northrop Grumman Looks to Expand Fire Scout Missions

Sailors attached to Helicopter Sea Combat Squadron (HSC) 23, assigned to the Independence-variant littoral combat ship USS Jackson (LCS 6) and Naval Engineering Technology (NET) technicians perform ground turns on an MQ-8C Fire Scout on the flight deck of Jackson. *U.S. NAVY / Mass Communication Specialist 3rd Class Andrew Langholf*

NATIONAL HARBOR, Md. – With all 36 planned MQ-8C Fire Scout unmanned helicopters delivered to the Navy, the manufacturer, Northrop Grumman, is looking at expanding the range of missions the Fire Scout could provide.

Scott Weinpel, Northrop Grumman's business development official for the Fire Scout program, said the company will continue to support MQ-8C deployments on littoral combat ships. He also is looking forward to the MQ-8C's deployment on the Constellation-class guided-missile frigates; operation of

the MQ-8C is included in the Capability Development Document for the frigate.

Weinpel also said the Fire Scout may have a role in operating from shore sites under the Expeditionary Advance Base Operations concept, including in a logistics cargo role.

Potential future roles for the MQ-8C include mine countermeasures and anti-submarine warfare. The Coastal Battlefield Reconnaissance and Analysis Block II, is the next-generation MCM sensor for the MQ-8C (the Block I is flown on the older MQ-8B version.

A Bell 407 helicopter, acting as a surrogate for the MQ-8C, has demonstrated the capability to drop ASW G-size sonobuoys. Weinpel said the MQ-8C could be modified to carry an ASW torpedo, although carriage would result in some loss of endurance of the MQ-8C. The UAV also could monitor a sonobuoy field as an RF signal relay.

The MQ-8C currently flies with the Brite Stat II electro-optical/infrared sensor turret, the ZPY-8 radar, and the Automatic Information System.

Weinpel said the Navy so far has not indicated any plans to arm the MQ-8C, which has been tested to fire Advanced Precision Kill Weapon System rockets.

Corporate Cybersecurity Expert Says Think Like an

Attacker to Improve Information Security

“You’ve got to be able to take a punch in this environment,” said Lt. Gen. Matthew Glavy, the Marine Corps Deputy Commandant for Information. *LISA NIPP*

NATIONAL HARBOR, Md. — The U.S. government, military and private sector need to change the way they perceive cybersecurity and look at it from the attacker’s point of view, the global head of IBM’s X-Force said.

“I think that we will look back at 2022 as a tipping point for information security and the way we work with each other: private sector, public sector. Really, all of these silos which we’ve built up are meaningless for attackers,” Charles Henderson said April 5 during a panel discussion on maritime cybersecurity at Sea-Air-Space 2022.

“They care about their rules, not yours,” he continued. “All

too often in information security, whether it's public sector, private sector or somewhere in between, we tend to think of our own goals and not the goals of the attacker. I think if we're going to be successful, we need to turn that on its head and start looking at everything through the eyes of an attacker."

All of the panelists agreed that keeping information secure is essential to maintaining an advantage over adversaries and keeping them from gaining an advantage.

Navy Rear Adm. John Okon, the head of the Warfare Integration Directorate (N2/N6F) in the Office of the Chief of Naval Operations, said "Cybersecurity is really about warfighting. It's important that we get cybersecurity right, up front, if we're going to be a lethal, agile and ready force." To underscore its importance, Okon called cybersecurity "commanders' business," but he added that "everyone that puts their fingers on a keyboard has a role in responsibility and accountability for cybersecurity."

Okon said the Navy Department needed to shift its culture from compliance to readiness. "Expect what you inspect. That's walking the deck plates every day, looking at your network every day." Making sure that the speed from when a vulnerability is identified to a patch is in place comes not in weeks, "but minutes or seconds."

Lt. Gen. Matthew Glavy, the Marine Corps Deputy Commandant for Information, said the side that is able to maintain the information advantage "has an edge." That edge could be system overmatch, a good prevailing narrative of "trusted, competent, delivered with trade craft," or resiliency. "You've got to be able to take a punch in this environment," Glavy said "and the side that can take that punch and either counterpunch or begin anew, creates an edge."

The Marines are in the final stage of crafting a new

information doctrine, Marine Corps Doctrinal Publication 8 Information “all founded on our warfighting construct of maneuver warfare.”

“Protecting your own backyard, you’ve got to have a good defensive perimeter and terrain that you can defend to ensure your capabilities are available where and when you need them. That’s job one for us,” said Rear Adm. Mike Ryan, commander of Coast Guard Cyber. He said the Coast Guard was following the lead of U.S. Cyber Command, generating forces that allow the agency to provide the entire spectrum of capabilities to protect the homeland, ensure mariner safety and secure the $5.4 trillion economic activity that arrives on U.S. shores by maritime commerce.

Marine Corps CH-53K Set for Initial Operational Capability in 2022

The CH-53K King Stallion. *LOCKHEED MARTIN SIKORSKY*

NATIONAL HARBOR, Md. — The Marine Corps expects the CH-53K King Stallion heavy-lift helicopter to reach initial operational capability “in several months,” the Navy program manager said.

Marine Col. Jack Perrin, the program manager, said that the first fleet CH-53K squadron, HMH-461, will have four CH-53Ks by the end of April, the minimum number needed to reach IOC and the number needed for a detachment to deploy with a Marine Expeditionary Unit.

The first deployment of the CH-53K is set for 2024. The Corps plans to field 5.25 fleet HMH squadrons with CH-53Ks. Perrin said the ".25" is an extra four aircraft for one of the squadrons, with each of the other four squadrons to be equipped with 16 helicopters. Other CH-53Ks will be assigned to a fleet replacement squadron and test squadrons, while others will be in process through the maintenance pipeline.

The Marine Corps' eight HMH squadrons equipped with the older CH-53E in recent years have operated with only 12 helicopters instead of 16 because of attrition over the years. Three of these squadrons will be de-activated in the course of the commandant's Force Design 2030 plan.

The Marine Corps has a requirement for 200 CH-53Ks. Full-rate production is planned for 2023. Full operational capability is scheduled for 2029.

In addition to the two low-rate initial production CH-53Ks delivered in October and February, there are seven in the Lockheed Martin Sikorsky production line in Stratford, Connecticut. Currently 46 aircraft ae under contract, including four for Israel. Long-lead materials are on order for another 14 CH-53Ks. Deliveries in 2022 will total four, followed by eight in 2023 and 16 in 2024. The production rate will reach two per month for the Marine Corps, plus one per month for foreign customers as needed.

Israel is the only foreign customer for the King Stallion so far. Potential customers include Germany, the Republic of Korea, and Switzerland, plus others who have expressed interest. Germany plans to run a competition that is expected

to occur in 2022.

Perrin, who has flown more than 30 different types of aircraft, said the CH-53K, with its digital flight controls, is the easiest aircraft to fly in his experience. The stability afforded by the flight controls enables the CH-53K to easily land in a degraded visual environment such as dust cloud. It also makes aerial refueling more stable and reduces swaying of an external load.

Assistant Commandant: Marines Must Be Ready to Fight China, Other Adversaries Directly

Sgt. Maj. Troy E. Black speaks during a panel discussion at

the Marine Corps Force Design session. *SOLARES PHOTOGRAPHY*
NATIONAL HARBOR, Md. – The assistant commandant of the Marine Corps said the service must always be prepared for a direct war with China or any other adversaries during a panel discussion at the Navy League's Sea-Air-Space symposium here on Tuesday.

In initial comments while moderating a panel including three other top service officials on the subject of Marine Corps force design, Gen. Eric Smith said it is not wise to assume the United States won't go to war with China.

"The pacing threat is China," Smith said. "People will say, 'Well, you're not going to fight China.' Hey, that's not for you to say. That's not for me to say. There's a plan required to fight the adversaries who may threaten this country – North Korea, China, Russia, violent extremists. We don't get to say, 'Hey, we didn't think that was going to happen, so we didn't build a plan.' You always pace off the fastest runner even if you don't think that's who you're going to beat in the final match. You pace off the faster runner and then you pivot to the runners who may not be that fast, and then you're good."

Smith said it is vital the Marines continue to be the nation's naval expeditionary force. "We are still America's crisis response force," he said. "We will seize or defend advance naval bases and conduct land campaigns in the furtherance of fleet operations."

A naval expeditionary force is vital to provide an alternative to deterrence besides nuclear weapons, Smith argued.

"Our part of the joint warfighting concept [is] we deter," he said. "When you're talking about a nuclear-armed peer adversary, you don't want nuclear deterrence to be your only deterrence. … You want to deter forward [and] thwart every nefarious action that's happening. You want to thwart it from its infancy. You have to be forward deployed from a naval

expeditionary force to do that.”

CMS Breakfast Speakers: New Strategy, Posture Focus on Integrated Deterrence

Dr. Mara E. Karlin (middle), Assistant Secretary of Defense for Strategy, Plans and Capabilities, speaks during a panel discussion at the CMS breakfast. *SOLARES PHOTOGRAPHY*

NATIONAL HARBOR, Md. — An essential aspect of the recently released National Defense Strategy is that it was developed in conjunction with the Nuclear Posture Review, which creates a focus on “integrated deterrence,” a top Defense Department official said April 5 at the Center for Maritime Strategy breakfast.

“So, when you think about the national security challenge, you also think about the nuclear challenge. It seems so obvious,” said Mara Karlin, assistant secretary of defense for strategy, plans and capabilities.

That scenario forces a more rigorous and integrated process, which also includes cyber and can apply to our pacing challenge of China and the threat of Russia, Karlin said. That leads to an “integrated deterrence” that can bring together actions that can work across all these challenges.”

Retired Adm. James Foggo, session moderator and dean of the Center for Maritime Strategy think tank, which hosted the breakfast, said he did not agree with the strategy’s description of Russia as an “acute” challenge.

Karlin explained that “China poses a geopolitical challenge and Russia does not.” Although the Pentagon is focused on Russia’s invasion of Ukraine and its actions in other regions, “that does not pose a geopolitical challenge in the same way as China.”

Also speaking at the session, Adm. Samuel Paparo, commander of the U.S. Pacific Fleet, said his first year in that command has been a “very dynamic” time. Much of the fleet is now operating in the Pacific, after the withdrawal from Afghanistan allowed it to refocusing it effort on the U.S. Central Command region to the Pacific, where it deals with the challenge from both China and Russia.

Paparo stressed how Pacific Fleet is part of a joint naval force that includes extensive involvement of Navy, Marine Corps and Coast Guard elements.

“The morale of the naval forces is high, and it is operating on a high operational level,” he said.

Paparo noted that a Russian naval group operated in the Hawaiian area last year, which warranted a “very robust U.S.

response.” But asked about China as the “pacing threat,” the admiral said the fleet “operates every day as if the PRC [Peoples Republic of China] is going to attack Taiwan.”

Along with the other U.S. forces, the fleet operates in a way that “any potential adversary would look out and say, “today is not the day,” to take aggressive action.

Lt. Gen. Karsten Heckl, commanding general Marine Corps Combat Development Command, echoed Karlin’s and Paparo’s statements, calling for a “tri-service” naval force and for more integration of the national deterrence strategy.

“Everything hinges on the national defense strategy and the integration piece, [which] I think is critical,” Heckl said. “I think we need to do a better job of integrating” so it has real applicant to day-to-day operations.

JADC2 Panelists Express Fears of ‘No Joint Process’

Rear Adm. Susan BryerJoyner said as the Navy continues its move to distributed naval operations and cannot mass its ships together, it further complicates command and control. *LISA NIPP*

NATIONAL HARBOR, Md. — The biggest problem with the effort to develop a joint all-domain command and control system that would integrate all the sensors and communication devices of the U.S. armed forces and our allies and partners may be that there really is no joint process. That was the situation described by a panel of experts at the Navy League's Sea-Air-Space expo on April 5.

The challenge for the Navy alone was how do the forces operate beyond line of sight when they know they will not have uncontested communications, "how does the Navy do that when we have a proliferation of sensors" and how do they leverage the sensors on one platform with those on another "in order to get the effects that we need," said Rear Adm. Susan BryerJoyner, director of the Naval Cyber Security Division. And as the Navy

continues its move to distributed naval operations and cannot mass its ships together, it further complicates command and control, she said. The Navy needs to do more exercises to begin testing solutions to those problems, she advised.

Andrew Mara, executive vice president of the Center for Naval Analysis, asked how with the aggregation of different sensors does anyone achieve effects, and how do they assure the logistical needs are met. “All of those pieces will have to come together,” he said.

And Todd Harrison, Director of the Aerospace Security Project at the Center for International and Strategic Studies, noted that the issue becomes more complex when you try to bring together allies and partners in the desired coalition operations, when each of them have their own unique systems.

Harrison suggested adopting the model of the F-35 Joint Program Office that has allied users of the F-35 included from the beginning of discussions.

Harrison warned, “This is not the first time we tried to do this,” listing a host of supposed joint programs that failed to produce compatible communication systems among the U.S. forces. “It didn’t work. I fear it won’t again.”

BreyerJoyner shared Harrison’s concern about the allies. Asking how would the Navy be able to fight as a joint and coalition force, which would be needed against China or Russia. “How would we share targeting information to get weapons on targets?”

Margaret Calomino, senior director of Strategy at L3Harris, one of the contractors that provide electronic systems to the U.S. and allied militaries, said it “would be good” if all the services would come together to determine what they needed. She also called for exercises to develop solutions.