DARPA’s Biological Technology Office Selects Northrop Grumman for Living Sensors Program

ORLANDO, Florida – Coda Octopus Group Inc. reported in an April 11 announcement that the Defense Advanced Research Projects Agency (DARPA) Biological Technology Office selected Northrop Grumman Corp. to prototype sensing capabilities using undersea organisms to assist in passively detecting and tracking undersea threats.

As part of the PALS program, Northrop Grumman will develop biological sensing hardware that has increased sensitivity for certain sensor modalities, achieving greater range. Artificial intelligence will be applied to observe patterns in the marine environment to help classify targets. Northrop Grumman is partnered with Coda Octopus, Duke University, University of Maryland, Baltimore County and the University of Memphis.

“The detection, classification and tracking of undersea objects is a critical military capability, and we are excited to work with DARPA to develop this next-generation approach,” said Mike Meaney, vice president of advanced missions for Northrop Grumman.

“We are delighted to further our partnership with Northrop Grumman on this important project for DARPA,” said Annmarie Gayle, CODA’s chairman and CEO.

Navy Orders 24 E-2D Aircraft in Multiyear Contract to Northrop Grumman

ARLINGTON, Va. – Naval Air Systems Command has awarded a $3.2 billion multiyear procurement (MYP) contract to Northrop Grumman Systems Corp. for 24 E-2D Advanced Hawkeye (AHE) carrier-based early warning aircraft.

The April 10 Defense Department contract announcement "provides for the procurement of 24 full-rate production Lots 7-11 E-2D AHE aircraft."

The new deal is the second MYP contract awarded to Northrop Grumman, the command said in a release. The Navy awarded the first in 2014 for production of 25 E-2D AHE aircraft, and Congress later increased the number to 26 aircraft.

"This is a critical element in providing the next generation of world-class command-and-control aircraft to the fleet," Capt. Keith Hash, E-2/C-2 Airborne Tactical Data Systems Program Office (PMA-231) program manager, said in the release.

"The use of the MYP contract allows a substantial savings over the use of single-year contracts and helps us fulfill our mission to increase U.S. naval power at sea by providing our fleet the information they need to accurately plan and win the fight today and tomorrow," he said.

The savings for MYP II are projected to be $410.6 million, or 11 percent, over the five years of the contract, the release said. "The first MYP contract saved $586.6 million, a 13.9% savings compared to the cost of five single-year procurement contracts," according to the release.

The E-2D is replacing the E-2C in the Navy's nine fleet carrier airborne early warning squadrons, each of which is being equipped with five aircraft, an increase of one aircraft over the four E-2Cs that equip each the squadrons yet to make the transition. The fleet E-2 aircraft are based at Naval Station Norfolk, Virginia, Naval Air Station Point Mugu, California, and Marine Corps Air Station Iwakuni, Japan.

The Navy has a requirement for 75 E-2Ds. The service plans to purchase 24 in fiscal years 2020 through 2023. The Japanese Air Self-Defense Force also has ordered several E-2Ds.

The contract work is expected to be completed by August 2026.

Navy Concerned About Retention of Experienced Aviators

WASHINGTON – The Navy's air warfare director told Congress that some of the service's experienced aviators are "ready" to leave the service, citing fewer flying opportunities and quality-of-life issues.

Rear Adm. Scott D. Conn, testifying April 10 before the Seapower subcommittee of the Senate Armed Services Committee, cited a Government Accountability Office report that said that Navy pilot shortage was 9% overall and 26% in first-tour aviators.

Conn said some of the shortages were tied to the grounding of T-45 jet trainers when the Navy was investigating oxygen

system problems.

“We’re going to have to extend people in assignments or rotate people or, as squadrons are in the maintenance or basic phase [of training], maybe we don’t push those people to them,” Conn said.

“Some of the authorities you have given us, in terms of bonuses, the department head bonus, and the increase of rates, has had some impact across most types/models/series [of aircraft communities],” he said. “We have seen no impact in the [strike-fighter] community.”

Responding to a question about aviator accession from Sen. Angus King (I-Maine), Conn said the Navy was “bringing in our goal.”

Retention is a concern, Conn noted.

“We’re seeing a lot of experienced [aviators] – some of our best – deciding to go to other things,” he said. “We’re in a competition for talent. The airlines are continuing to hire. Some of these folks are going to grad school. Some are starting their own businesses. The economy is doing well.”

He added: “It is a challenge that we have particularly at the more senior levels.”

The Navy has every departing pilot complete a survey. Conn said that three factors are the most influential in aviator departures: First, “not doing what they signed up for – they’re not flying enough, which means we need to get our readiness where it needs to be to get them in the air. Two: some quality-of-life issues, more so in our nonfleet concentration areas, [Naval Air Station] Lemoore being one of them. Three is the pay gap.”

House Committee Again Confronts Navy Leaders Over Truman's Retirement, Troubled Ship Programs, Long-Term Planning

The U.S. Navy's shipbuilding plans and programs came under attack in the House Armed Services Committee on April 10, with concerns about the accelerated development of a new large surface combatant and unmanned vessels, early retirement of the aircraft carrier USS Harry S. Truman and constant changes in long-term plans.

House Armed Services Chairman Rep. Adam Smith (D-Washington) cited numerous failed or troubled ship programs while questioning new proposals, a retired Navy officer doubted the Navy had "a long-term vision" for its fleet and other committee members voiced concerns about meeting combatant commanders' needs with a reduced carrier force.

Questions and concerns also came up about delays in building two amphibious warships, the badly aged strategic sealift fleet, the cybersecurity of the supply chain and the operational impact on the Marine Corps from the hurricane damage to two North Carolina installations.

Navy Secretary Richard V. Spencer and Chief of Naval Operations Adm. John M. Richardson said that, with the need to balance requirements and limited resources, they prioritized modernization to meet rising peer competitors and were working more with industry to match desired requirements with what is

achievable and affordable.

The plan to retire USS Truman at midlife was a “hard choice” made to allow investments in future technologies, they said. Those investments would suffer if Congress insisted on refueling Truman for another 25 years of service, which committee members indicated they would.

Challenged by Rep. Elaine Luria (D-Virginia), a retired commander, that the frequent changes in the 30-year shipbuilding plan indicated a lack of vision, Richardson said, “yes, we have a long-term vision,” but the changes are “reflective of how much the security landscape has changed.” Spencer said the revised shipbuilding program “doesn’t bother me one bit” because it was necessary to adapt to changed conditions.

Smith, in his prepared opening statement, cited a long list of troubled Navy programs, including the planned new cruiser CG(X), which was canceled, the DDG-1000, which was cut from 21 to three ships, and the littoral combat ships (LCS), which were bought in blocks without firm requirements and have yet to be deployed with a full capability.

“I’m concerned that we do not repeat the mistakes of the past,” Smith said, listing Richardson’s “arbitrary” goal of starting construction on the new surface combatant by 2023 and the plan to buy 20 large unmanned vessels “without any requirements review, understanding of the concept of operations or how to employ weapons on unmanned vessels, including the application of the law of armed conflict.” Smith’s concerns about the unmanned vessels was echoed by Rep. Joe Courtney (D-Connecticut), chairman of the Seapower subcommittee, who asked, “Are we getting ahead of our skis?”

Spencer told Courtney: “One of things you have charged us with is to go quicker, go smarter. … We think what we have is the smart way” to put the unmanned ships into the fleet, try them,

break them and learn. Richardson said the Navy leaders do have a concept for the 20 unmanned ships. But, he said, “we have to learn how to use those to go forward,” which is why the ships are in research and development.

Spencer said the Navy is determined to work closer with industry to match capabilities with what can be produced and to adopt commercial best practices. On cybersecurity, he said the Navy is good at protecting its information but is demanding that its industrial suppliers do a better job of protecting data.

Marine Corps Commandant Gen. Robert B. Neller said that despite the heavy damage inflicted by Hurricane Florence on Camp Lejeune and Marine Corps Air Station Cherry Point last year, the II Marine Expeditionary Force is operational but working in badly degraded conditions. He thanked Congress for reprograming $400 million to start repairs but warned that, without supplemental appropriations for the remaining $3 billion, readiness would suffer.

Navy Air Warfare Director: Strike Fighter Shortage Easing, Readiness Improving

WASHINGTON – The Navy and Marine Corps’ strike fighter inventory shortfall is easing even as the Navy slows its aircraft procurement to pay some bills to improve readiness, the Navy’s director of air warfare told Congress.

Rear Adm. Scott D. Conn, testifying April 10 before the

Seapower subcommittee of the Senate Armed Services Committee, responded to a question from Sen. Maize Hirono (D-Hawaii) as to why the Navy's planned strike fighter procurement over the fiscal 2020 five-year Future Years Defense Plan (FYDP) was 289, compared with 308 planned in the 2019 FYDP.

"Quite frankly, some of the reduction in aircraft [was] to pay bills," Conn said, including getting "wholeness in some weapon systems."

"F-35 C2D2 [Continuous Capability Development and Delivery strategy] Block 4 came with a bill that we had to pay," he said, regarding the next phase of F-35 development.

"In terms of strike fighter inventory management, our lowest point based on PB20 [President's Budget 2020] is about a 51-aircraft deficit in [fiscal 2020]," he said. "That decreases to single digits by FY24. That is [being accomplished] through the F/A-18 procurement in PB20, the F-35C procurement in PB20 and also the service-life modernization effort, taking those Block II [Super] Hornets, making them Block III, getting them to 10,000 hours."

Conn said the Navy finally is in a position "of buying and producing more aircraft than we are burning up every year in terms of flight hours. That's going to allow us to get out of older airplanes, provide best-of-breed opportunities for the Marine Corps, to enable us to start to strike some of our old airplanes, [such as] Block Is that will never be Block IIIs. It provides enormous opportunity in this budget request."

Conn also credited a sustainment system introduced in January in bringing the "'best of industry' to look at the various functions we do to maintain our aircraft – at the depot level, at the squadron level, how we do engineering, how we do supply – and we've seen some pretty good results from targeted focus in [Naval Air Station] Lemoore, California, and FRC [Fleet Readiness Center] Southwest [in Naval Station North Island,

California].

He said the Navy has been able to reduce planned maintenance intervals for Super Hornets from 120 days to 60 days.

“And the quality of product is better,” he said. “It’s getting on the flight schedule in a week, let alone weeks or months. We’ve been able to reduce our turnaround time 40% for some of our highest degrader list [items]: generators, interrogators and displays in cockpits. We’ve been able to drive down backlogs in servo cylinders that were keeping our aircraft down. We had a backlog of 60 of those parts in January. We got it down to zero in March. All that is allowing us to improve the mission-capable rate.”

Conn noted that in January the Navy had about 257 mission-capable Super Hornets. “Last week, we had a high – a snapshot in time – of 304. 80% would be 320 of the roughly 400 [primary mission aircraft inventory].”

IMSAR’s NSP-5 Radar Moving Into Production for RQ-21 Unmanned System

SPRINGVILLE, Utah – IMSAR’s NSP-5 radar system, configured for unmanned aircraft systems, is in production to deliver mission kits to the RQ-21A Blackjack UAS operated by the U.S. Marine Corps, the company said in a release.

The payload project, named “Split Aces,” is a synthetic aperture/ground moving target Indicator Radar Payload and has been given the prototype designation AN/DPY-2().

The NSP-5 is powered by Ku-band NanoSAR synthetic aperture radar (SAR) technology, which is housed in a pod with enclosed electronically scanned array antennas. The NSP-5 provides high-resolution SAR imagery, coherent change detection and ground moving target indication.

“IMSAR is excited to provide America’s defense with a genuinely tactical, high-performance radar solution enabling true multi-intelligence for expeditionary platforms at such a critical time,” said Ryan Smith, IMSAR’s president and CEO.

The NSP-5 delivers high-performance capabilities despite its small size, weight and power characteristics. Commercially, the NSP-5 is available in a standard pod configuration that measures 5.4 inches (13.7 centimeters) in diameter and 45.3 inches (115 centimeters) in length, weighs 16 pounds (7.3 kilograms) and consumes 150 watts of power.

Army Gen. Milley Formally Nominated to Be Next Chairman of the Joint Chiefs

ARLINGTON, Virginia — President Trump has formally nominated two generals to serve as the next chairman and vice chairman of the Joint Chiefs of Staff.

In an April 9 announcement, Acting Defense Secretary Patrick M. Shanahan said that Army Gen. Mark A. Milley had been nominated for “appointment to the rank of general and assignment as chairman of the Joint Chiefs of Staff.”

Shanahan also said that Air Force Gen. John E. Hyten had been

nominated for appointment to the rank of general and assignment as Joint Chiefs vice chairman.

Milley serves as the Army chief of staff. Hyten is commander of U.S. Strategic Command. If confirmed by the Senate, they would replace Marine Corps Gen. Joseph F. Dunford Jr. and Air Force Gen. Paul J. Selva as chairman and vice chairman, respectively.

Shanahan announced two other nominations:

Trump has nominated Marine Corps Lt. Gen. Eric M. Smith for appointment to the rank of lieutenant general and assignment as deputy commandant for Combat Development and Integration, Headquarters, U.S. Marine Corps, and commanding general, Marine Corps Combat Development Command. Smith serves as the commanding general, III Marine Expeditionary Force, and commander of U.S. Marine Corps Forces Japan, Okinawa. He would succeed Lt. Gen. David H. Berger, whose nomination to be the next commandant of the Marine Corps was announced March 27.

Air Force Maj. Gen. Eric T. Fick was nominated for appointment to the rank of lieutenant general and assignment as director, Joint Strike Fighter Program, Office of the Secretary of Defense. Fick serves as deputy director of the office. He would succeed Navy Vice Adm. Mathias W. Winter.

Civilian, Uniformed Navy Leaders Again Face Questions

About Truman's Retirement, Ford Carriers, Diversion of Funds for Border Wall

Senate Armed Services Committee members expressed concerns about the Navy's planned early retirement of the aircraft carrier Harry S. Truman and the impact of use of military funds and troops to secure the southwest border and questioned the operational status of the new Gerald R. Ford carrier.

During an April 9 hearing with the Navy Department's top civilian and uniformed leaders, the senators also questioned the delay in building two new amphibious warships and suggested moving that procurement ahead by authorizing incremental funding for the first of the Amphibious Transport Dock (LPD) Flight IIs and the next America-class Amphibious Assault (LHA) ship.

In his opening statement, Navy Secretary Richard V. Spencer announced that the three U.S. service members killed by a suicide car bombing April 8 in Afghanistan were Marines. He provided no details.

SASC Chairman Sen. James M. Inhofe (R-Oklahoma) said there was no other Navy weapon system that matches "the reach and lethality of the carrier and its air wing" and said he was "highly skeptical" of Pentagon claims that early retirement of the Truman will result in savings.

That view was echoed by other committee members.

Questioned about the Truman decision, Chief of Naval Operations Adm. John M. Richardson estimated savings of $16 billion to $17 billion if officials follow through on plans to skip the normal midlife nuclear refueling and overhaul of the carrier and retire it with 25 years of expected service life

remaining.

Richardson said the Navy is completing a new future fleet study and could reverse the Truman decision if needed.

Inhofe responded: “You may need to do that.”

The Navy has heard similar views from other influential members of Congress.

Inhofe and others also questioned progress on the Ford, the first ship in a new class of nuclear-powered carriers, which is in the shipyard three years after it was expected to be operational and billions of dollars over budget.

Spencer said all 11 of the advanced weapons elevators would be installed and the other mechanical and structural problems with the Ford would be resolved when the carrier is expected to leave the shipyard in October.

Questioned later by Sen. Tom Cotton (R-Arkansas), Spencer insisted that “the Ford will work” and noted that it will be able to produce 30% more aircraft sorties a day than the Nimitz-class carriers and do it with fewer Sailors.

“We have a much more capable, much more lethal asset,” which was “the primary factor” in moving to the new carriers, Spencer said.

Asked if Congress provided additional money to cover refueling Truman, Spencer said he “would not turn it down.”

Questioned later by Sen. Roger Wicker (R-Mississippi) on whether the Navy could purchase the LPD Flight II and the LHA-9 a year earlier than the planned 2021 and 2024 starts if Congress authorized incremental funding, Spencer said they could.

Incremental funding normally is used for the most expensive ships, including carriers.

Asked about the response to growing Russian activities in the Arctic, Richardson said the Navy is conducting more exercises there, including a planned Marine amphibious landing in September to seize an airfield on the Aleutian island of Adak to allow Navy aircraft, including P-8A patrol planes, to operate.

Several senators expressed concern about the impact of the Trump administration's plans to divert military construction funds to building the wall at the U.S.-Mexico border and the expense of sending active-duty troops there.

Spencer said he has not been given a list of Navy construction projects that would be affected by the diversion of $3.6 billion in MilCon funds but would provide his best advice on any such proposal.

Questioned about his leaked memos to Spencer about the threat to Marine readiness from several programs, Marine Corps Commandant Gen. Robert B. Neller said the border deployment was only one of the eight factors he cited and represented only 2% of the funding shortfalls. He said he knew of no exercise that was canceled because Marines were sent to the border, although the size of one was reduced, and only one unit may have suffered reduced readiness from the border deployment, while other units gained readiness from duties there.

Coast Guard Commandant: Some Cases of 'Sanctuary'

Localities Inhibiting Cooperation

WASHINGTON – The Coast Guard's top officer told Congress that there have been some cases of "sanctuary" localities failing to cooperate on a law-enforcement case, but that such events are "anomalous."

Coast Guard Commandant Adm. Karl L. Schultz testified April 9 before a joint hearing on Capitol Hill of the Transportation and Maritime Security subcommittee of the House Committee on Homeland Security.

"I have been told that some of the sanctuary state and city programs are actually inhibiting cooperation between local governments and the Coast Guard," Rep. Debbie Lesko (R-Arizona), the ranking member, said, addressing Schultz. "Have you heard any of that and can you explain it?"

"The Coast Guard absolutely exists on partnerships," Schultz replied. "We're the lead law-enforcement agency in the maritime domain and we work with state and local folks.

"There have been some examples in Southern California," Schulz said. "I would say they're anomalous, not day to day. Day to day, we continue to work well, but I've talked to field commanders in recent visits who tell me we don't have 100% predictability that a local sheriff or a local police marine unit is going to launch on a case to the degree that we had yesteryear. But we're working across those things It's not something that I think is a big inhibitor to our mission, but I have heard some of those stories."

Certifiable Ground Control Station Controls First End-to-End Flight

SAN DIEGO – The Certifiable Ground Control Station (CGCS) from General Atomics Aeronautical Systems Inc. (GA-ASI) was used to control the complete flight of an MQ-9B SkyGuardian – including takeoff and landing – on March 12, the company said in a release. This is the first time the CGCS has been used to control an entire end-to-end flight of a remotely piloted aircraft (RPA).

“Controlling takeoff and landing was the last step in a progression of flight milestones for the CGCS,” said David R. Alexander, president of GA-ASI. “Our vision is that MQ-9B will be the first RPA certified to fly in national and international airspace. To achieve that goal, our GCS needs to be type-certified as well. Completing an end-to end flight was an important step in achieving that ultimate goal.”

The flight originated from the Yuma Proving Grounds in Yuma, Arizona. The CGCS features a Pro Line Fusion integrated avionics system from Collins Aerospace, the Abaco FORCE2 flight computer, as well as all the weapons and payload controls for MQ-9B.

The CGCS architecture provides separation between flight and mission critical functions. Flight critical functions are performed using off-the-shelf avionics and flight computers running GA-ASI’s certifiable DAL B software. The mission critical functions are separated and run alongside GA-ASI’s proven Advanced Cockpit payload and weapons equipment.