Boeing, Navy Complete First Super Hornet IRST Block II Flight

An F/A-18 Super Hornet equipped with a Block II Infrared Search & Track prepares for its first flight with the long-range sensor. The passive sensor, which provides aircrew with enhanced targeting, will be delivered with Super Hornet Block III aircraft. U.S. Navy

ST. LOUIS – For the first time, Boeing and the U.S. Navy flew an F/A-18 Super Hornet equipped with an Infrared Search & Track (IRST) Block II pod in late 2019, the company said in a release.

IRST Block II is a critical component of the Block III Super Hornet. The Block III conversion includes enhanced network capability, longer range with conformal fuel tanks, an advanced cockpit system, signature improvements and an enhanced communication system. The updates are expected to keep the F/A-18 in active service for decades to come.

IRST is a passive, long-range sensor incorporating infrared and other sensor technologies for highly accurate targeting.

“The IRST Block II gives the F/A-18 improved optics and processing power, significantly improving pilot situational awareness of the entire battle space,” said Jennifer Tebo, Boeing’s director of F/A-18 development.

Currently in the risk reduction phase of development, IRST Block II flights on the Super Hornet allow Boeing and the Navy to collect valuable data on the system before deployment to the fleet. The Block II variant will be delivered to the Navy in 2021, reaching initial operational capability shortly thereafter.

“The IRST Block II sensor gives Navy fighters extended range and increasing survivability. This technology will help the Navy maintain its advantage over potential adversaries for many years,” said Kenen Nelson, Lockheed Martin director of fixed wing programs, supplier of the IRST sensor.

Blackjack UAS Fielding Complete for Navy, Marine Corps

Marines lift an RQ-21A Blackjack UAS onto a launcher before flight operations aboard the amphibious transport dock ship USS John P. Murtha. The fielding of the UAS achieved full operational capability last year. U.S. Marine Corps/Cpl. Adam Dublinske

ARLINGTON, Va. – The fielding of the RQ-21A Blackjack unmanned aerial system achieved full operational capability in 2019, Navy’s program manager said.

Col. John Neville, the Blackjack’s program manager for the Program Executive Office-Unmanned and Strike Weapons, told *Seapower* at the Surface Navy Association gathering here that all 21 systems for the Marine Corps and 10 for the Navy have been delivered to fleet and training units.

The Blackjack, built by Boeing’s Insitu, is a twin-boom, single-

engine, small tactical unmanned aerial vehicle that carries modular payloads mostly for surveillance. It is pneumatically launched and is recovered using a skyhook arrestment system. A single Blackjack system includes five UAVs, two ground control stations, various payloads and a set of launch and recovery systems.

The Blackjack now equips four Marine UAV squadrons plus a fleet replacement detachment. The Marine Corps deploys the Blackjack with its Marine expeditionary units onboard amphibious warfare ships. The 10 systems for the Navy have been delivered to Navy Special Warfare Command and made two deployments in 2019.

Neville said the Blackjack has demonstrated “great reliability.”

He said that with fielding complete, his office is concentrating on sustainment of the Blackjack and also on Foreign Military Sales. Two nations, Canada and Poland, have procured the Blackjack and Neville said there are more possible sales “on the horizon.”

Foreign sales will help to bring down the cost of the Blackjack, he said.

Navy Carriers to Receive Unmanned Aviation Warfare Centers

Boeing conducts a MQ-25 deck-handling demonstration in 2018 at its facility in St. Louis, Missouri. Unmanned Aviation Warfare Centers are being installed to operate the unmanned aerial tanker and any UAVs that the Navy plans to operate from its carriers. The Boeing Co.

ARLINGTON, Va. – The U.S. Navy is installing control centers for unmanned aerial vehicles on its aircraft carriers as the ships go through overhauls and maintenance periods, a Navy official said.

Capt. Chuck Ehnes, the Navy's program manager for in-service aircraft carriers, speaking Jan.16 at the Surface Navy Association gathering here, said the Unmanned Aviation Warfare Centers (UAWCs) are being installed to operate the MQ-25A Stingray unmanned aerial tanker and any follow-on UAVs the Navy plans to operate from its aircraft carriers.

Ehnes said the UAWC is one of several phased modernizations being conducted on the carriers in service to upgrade their warfighting capabilities.

Over time, carriers are receiving numerous modifications to prepare to operate the F-35C Lightning II strike fighter, the CMV-22B Osprey tilt-rotor carrier onboard

delivery aircraft and the MQ-25. The carriers also are receiving additive
manufacturing labs and upgraded cybersecurity.

Ehnes said the carriers also are receiving the Distance Communication and Maintenance System (DCoMs), a remote conferencing system that will enable Sailors to discuss maintenance issues with technical experts ashore. He compared the new DCoMs to a telemedicine system will be a "potential game-changer" in reducing the need for tech assist visits and the dispatching of repair teams.

USS Gerald R. Ford Set for 11 At-Sea Periods for Tests and Trials

The aircraft crash and salvage crane aboard the aircraft carrier USS Gerald R. Ford lifts an F/A-18 Hornet training shell during a general quarters training evolution on the ship's flight deck. U.S. Navy/Mass Communication Specialist Seaman Zack Guth

ARLINGTON,
Va. – The U.S. Navy's newest aircraft carrier will go through a rigorous period
of tests and trials over the rest of fiscal 2020, a Navy official said.

Speaking Jan.
16 at the Surface Navy Association gathering here, Capt. Ron Rutan, the Navy's
program manager for the USS Gerald R. Ford, lead ship of its

class, said the ship gets underway “11 times over 220 days” starting Jan. 16, continuing 18 months of post-delivery testing and trials, which will run into through the second quarter of fiscal 2021.

Rutan said the ship will have contractor personnel on board continuing work while the ship is at sea. The Navy plans to complete work on the seven Advanced Weapon Elevators that have not yet been certified. He said that four others already have been certified and they have been put through more than 5,000 cycles, including runs while the carrier has been put through high-speed turns that simulated Sea State 5.

One of the 11 events this quarter of the fiscal year will be used to certify the ship’s flight deck.

The carrier is scheduled for full-ship shock trials during the third or fourth quarters of fiscal 2021.

Navy Studying Single-Phased Delivery for JFK

The hull of the USS John F. Kennedy, decorated for its Dec. 7 christening at Huntington Ingalls Industries’ Newport News Shipbuilding in Newport News, Virginia. U.S. Navy/Mass Communication Specialist Seaman Cory J. Daut

ARLINGTON, Va. – The U.S. Navy's program manager for the next three aircraft carriers said the sea service is considering the business case for a single-phased delivery of the future USS John F. Kennedy (CVN 79).

Speaking Jan. 16 at the Surface Navy Association's symposium here, Capt. Philip Malone, the program manager for CVN 79, CVN 80 and CVN 81, said the Navy is looking at the possibility of delivering JFK with a single-phased approach. The current plan with a dual-phased approach includes delivering with some navigation and aviation capability followed by a second phase in which combat systems would be installed.

One advantage of a two-phased delivery is that the most recent mission systems can be installed before final delivery, avoiding an obsolescence that can occur in the long timeline of a carrier's construction. An advantage of the traditional practice of a single-phased delivery is having a completed ship at commissioning.

Malone said he is working with the Navy secretariat to determine the effects of a single-phased delivery on cost and build time.

James F. Geurts, assistant Navy secretary for research, development and acquisition, told reporters Jan. 17 that the discussion of a single-phased construction included "looking at a new version of a radar, combat systems, the people and making sure we have the right balance. Delivering an integrated ship with all its functions is an

attractive model to look at hard."

Geurts said the decision on the single-phased delivery would be made "in the next 30 to 45 days."

"Mr. Geurts is aggressively pursuing integrating lessons learned on CVN 78 to improve efficiencies and affordability for the rest of the Ford class," said Capt. Danny Hernandez, Navy acquisition spokesman. "Delivery approach is one of the items that Mr. Geurts has the team looking at."

A major difference between CVN 78, the USS Gerald R. Ford, and CVN 79 is that the dual-band radar on CVN 78 will be replaced on CVN 79 by the SPY-6(V)3 Enterprise Air Search Radar.

CVNs 79, 80 and 81 are scheduled for delivery in 2024, 2028 and 2032, respectively. The Navy expects the total ownership cost savings of $4 billion for each ship over their 50-year service lives, as compared to the Nimitz class.

Malone said the construction of USS John F. Kennedy is incorporating more than 60,000 lessons learned from the construction of the Gerald R. Ford.

He also said JFK will receive modifications to operate the F-35C strike fighter after its post-shakedown availability. The modification involves changes in the squadron ready room and the flight deck's jet-blast deflectors, among others. He said

his office is evaluating the impact of the installations on the carrier's schedule.

Lockheed Gains $13.9 Million for Navy Advanced Electronic Warfare Systems Work

SYRACUSE, N.Y. – Lockheed Martin will continue supporting engineering and fielding efforts for the Surface Electronic Warfare Improvement Program (SEWIP) AN/SLQ-32(V)6 under a $13.9 million engineering services contract awarded by the U.S. Navy, the company said in a Jan. 13 release.

Services include engineering efforts to perform analysis and design, document engineering baselines and modification of systems, subsystems and components for test and evaluation.

"We are proud to continue providing the U.S. Navy with ongoing engineering services for the SEWIP program. Our partnership and commitment to the Navy and to keeping our warfighters safe is our No. 1 priority," said Hamid Salim, vice president of advanced product solutions for Lockheed Martin Rotary and Mission Systems. "The SEWIP system enables electromagnetic spectrum dominance for our naval fleet."

AN/SLQ-32(V)6
incorporates electronic support receiver, antenna and combat system interface
upgrades as well as adding the high gain/high sensitivity adjunct sensor, the specific
emitter identification adjunct sensor, the AN/SLA-10D blanker and a liquid conditioning
unit.

This
award is part of a five-year contract totaling $75 million if all options are
exercised. Work will be performed at the corporation's electronic warfare
center of excellence in Syracuse, New York.

'Great Power Competition' Drives Navy, Marines to Integrate Beyond Joint Operations, Berger Tells SNA

Marine Commandant Gen. David H. Berger speaks Jan. 15 at the Surface Navy Association's annual symposium.
ARLINGTON,
Va. — The strategy behind the integration of the Navy and Marine Corps is being
driven by China's emergence as a sea power, according to the commandant of the U.S.
Marine Corps.

“The thing that has driven us to where we are right now is the paradigm shift by China moving to sea,” after years of building up its defensive forces and weaponry, Gen. David H. Berger said Jan. 15 at the Surface Navy Association’s annual symposium here.

“We can no longer afford for the Navy and Marine Corps not to be integrated,” he said, adding “It’s a must-do. Our naval force is unbalanced.”

In an era of global terrorism and asymmetric warfare, both services had different tasks to do that strayed from traditional fleet operations. However, for the next 20 to 40 years, with a rising China and a resurgent Russia creating a new ‘great power competition,’ the tasks and the challenges have changed.

https://www.youtube.com/watch?v=fIyzZhQ8X9g&feature=youtu.be
A Sept. 6, 2019, memo signed by Chief of Naval Operations Adm. Michael Gilday and Berger stated the services will work on a “comprehensive naval force architecture” and an integrated force-structure assessment.

The Navy has largely been a big ship, standoff force with long-range precision weapons. The Marines have handled a number of tasks such as counter-insurgency, infantry patrolling and urban and mountain warfare in Iraq and Afghanistan. It’s been

years since most Marines have logged sea duty aboard ship.

Berger said he and Gilday are developing a force structure that provides depth "all the way forward and all the way back." A standoff force won't provide the deterrence needed in the future, he maintained. "The farther you back away from China, they will move toward you," Berger said, adding that any forward projecting force must be able to switch to offense if deterrence fails. "We will not be given the chance to swap out that [deterrent] force for another force. A great power competitor will not allow us to do that," he noted.

Deterrence is the underpinning of the National Defense Strategy, Berger told *Seapower* when asked how units like the 700 Marines rotating through training tours in Norway since 2017 fit into the new strategy.

"The forces that we have in Europe, and specifically in Norway, are part of U.S. deterrence against Russia or anyone else doing bad behavior. If that doesn't work out on some future date, the forces that are in Norway and Europe have to be ready to fight immediately. They have to have the equipment; they have to have the training. They have to be ready."

Asked about the focus on China, Berger said, "I think the read of the National Defense Strategy is pretty straightforward. What the primary focus is, in the primary theater is not exclusive, of course, but it does prioritize. That's where we take our lead from."

Navy Ready to Accept First Block V Tomahawk from Raytheon

ARLINGTON, Va. — Raytheon Co. has completed the first recertificated Tomahawk cruise missile, one that it modified to the Block V configuration, a Navy official said.

The missile is one of the first five Block VI Tactical Tomahawk missiles that have been inducted into the recertification process, which takes missiles at the midlife 15-year mark for overhaul and modernization.

Capt. John Red, the Navy's Tomahawk program manager, speaking to reporters Jan. 15 at the Surface Navy Association symposium here, said that all Block IVs will be converted into Block Vs.

All Block Vs will feature a new data-link radio and antennas and navigation system. The Block Va version also will feature a new seeker kit to hit moving targets and will be called the Maritime Strike Tomahawk (MST). The Block Vb version will

feature the Joint Multi-Effects Warhead System.

Red was not at liberty to discuss the MST's seeker in detail but described it as a "multimode seeker with the ability to discriminate targets."

The Tomahawk missile first entered combat in January 1991 in Operation Desert Storm. More than 2,000 have been fired at hostile targets over three decades.

Red said the remaining Block III Tomahawks, which first entered service in 1994, are being withdrawn from use and are being "demilitarized."

Program Manager: Navy Examining Conventional Prompt Strike Capability for Zumwalt-Class Destroyer

The guided-missile destroyer USS Zumwalt, pierside in Pearl Harbor, Hawaii, during a port visit during routine operations in the eastern Pacific. U.S. Navy/Mass Communications Specialist 2nd Class Jonathan Jiang

ARLINGTON, Va. – The U.S. Navy's program manager for the Zumwalt-class guided-missile destroyer praised the capability being built into the ship as it transforms into an offensive

surface strike platform from a land-attack ship, possibly to include a new missile strike capability.

The Zumwalt is being lauded “as the premier strike platform for the U.S. Navy,” said Capt. Kevin Smith, the Navy’s Zumwalt program manager, speaking Jan. 15 at the Surface Navy Association convention here, noting that the ship was “designed to be stealthy and designed to carry the fight to the enemy.”

Smith said the Navy is looking at the Zumwalt as a platform for a conventional prompt strike capability. He also said the Navy is looking at adding Tomahawk Block V – the Maritime Strike Tomahawk – to the Zumwalt’s arsenal. Under the current plan, the Block IV Tactical Tomahawk missile will be arming the Zumwalt.

Smith noted that the Zumwalt will be equipped with the Standard SM-6 Block 1A multipurpose missile, the Standard SM-2 missile and the SPY-3 radar.

He also said the two Advanced Gun Systems on the ship are still in lay-up pending the development of a replacement projectile.

The current commanding officer of the USS Zumwalt, Capt. Drew Carlson, also spoke about the Zumwalt’s at-sea periods in 2019, when the ship operated in the eastern Pacific and made port calls in Victoria, British Columbia; Ketchikan, Alaska; Pearl Harbor, Hawaii; and San Francisco. The ship operated in Sea State 6 in the Gulf of Alaska.

“I’d rather be in heavy seas on this ship than on any other I have been on,” Carlson said, noting that the ship now is 60% to 70% complete with hydrodynamic testing.

“This ship is very stable,” he said, noting that experience should quiet the anxiety about the stability of the Zumwalt’s tumblehome hull form.

Carlson said that some of the criticism of the Zumwalt is the constant comparison with the Arleigh Burke-class DDG. He said it is important to think of it as a new type of ship.

“Maybe DDG is not the right [term] for it,” he said, musing that maybe it could be a cruiser or some other type. “It’s not the Arleigh Burke destroyer.”

Smith said the combat systems activation of the Zumwalt should be completed by March 2020 – pending concurrence of the chief of naval operations – and is scheduled to achieve initial operational capability in September 2021.

In 2020, the Zumwalt will be engaged in live-fire trials, operational concept development and tactical development.

He said the USS Michael Monsoor is 93% complete and will complete its combat systems availability during the second quarter of 2020. It will begin its combat systems activation sometime in 2020.

The third and final Zumwalt-class ship, USS Lyndon B. Johnson, is at Bath Iron Works shipyard in Maine and is 90% complete with its hull, mechanical and electrical phase. Delivery to the Navy for its combat systems installation is scheduled for December.

Navy Laying Groundwork for New Special-Purpose Auxiliary Ships

Military Sealift Command’s oceanographic survey ship USNS

Maury pulls into Naval Station Norfolk. U.S. Navy/Bill Mesta ARLINGTON, Va. – The U.S. Navy is proceeding with studies and concept development for three special-mission ships to replace existing ships in the Military Sealift Command.

Speaking Jan. 15 at the Surface Navy Association symposium here, Matt Sermon, the executive director for Amphibious, Auxiliary and Sealift Office, Program Executive Office-Ships, said the Navy plans to build new ocean surveillance ships (T-AGOS), a new cable-laying ship (T-ARC) and a new oceanographic survey ship (T-AGS).

The Navy expects to issue during the second quarter of fiscal 2020 a request for proposal for industry studies for the new T-AGOS, which will be a SWATH (small waterplane, twin-hull) ship, as are the current T-AGOSs. A contract award for the Industries Studies Request for Proposals is expected in the third quarter of the year.

A new T-ARC is needed to replace the USNS Zeus, a one-of-a-kind cable laying ship, which has been in service since 1984. The 2020 budget has authorized research, development, test and evaluation funds for the program. T-AGS-67 will be a follow-on Pathfinder-class ship that will be similar to T-AGS-66, the USNS Maury, which introduced a “moon pool” for launch and recovery of unmanned underwater vehicles.