CSBA: Layered Defense, Mix of Weapons Needed to Fend Off "Salvo" Attacks

WASHINGTON – Despite decades of investing in missile systems to defend the homeland and forward-deployed forces, the military is not prepared to protect its overseas bases against the "salvo" attacks with multiple types of precision weapons that Russia and China could throw at them.

"Despite these investments, the U.S. military still lacks the ability to defeat large numbers of ballistic missiles, cruise missiles, unmanned aircraft and other emerging guided weapons threats. Indeed, tangible progress toward fielding high-capacity air and missile defenses has been, to date, barely noticeable," the Center for Strategic and Budgetary Assessment (CSBA) said in a new study released Nov. 14.

That dangerous condition has to change because the U.S. military must be able to operate forward to reassure and defend its allies and partners, which puts its airfields, seaports and land bases in the western Pacific and Europe within range of swarms of Russian and Chinese guided munitions, many of which are relatively cheap, the CSBA report warned.

Attempting to counter those "salvo" attacks with the current defensive missile systems, such as the Army's land-based Patriot and Terminal High Altitude Area Defense (THAAD) and the Navy's Aegis Weapon System/Standard Missile, is impractical due to the limited numbers and high cost per shot of those kinetic weapons, the report said.

The CSBA study shows "that salvo attacks cannot be defeated by kinetic weapons alone," said Mark Gunzinger, co-author of the report with Carl Rehberg.

Both are retired Air Force colonels with years of additional service in Pentagon offices.

Instead, they recommend a layered defense using a mix of kinetic and non-kinetic weapons with an emphasis on high-energy solid-state lasers and high-powered microwave devices, which can produce virtually unlimited shots at a tiny fraction of the cost per shot of defensive missiles.

Because those directed-energy weapons have relatively short effective range, the study recommended they be put on manned and unmanned aircraft in the outer defensive ring, along with ground-to-air and air-to-air missiles. They also would be part of the close-in defenses and, because they are comparatively mobile, could be a valuable part of the Marine Corps' and Air Force's plans to distribute their forces over a number of smaller expeditionary bases to complicate the enemy's strike planning and reduce the risk of a debilitating strike.

Those weapons would be particularly useful against unmanned aerial vehicles, cruise missiles and smaller air-launched munitions, they said.

That focus on directed-energy systems was echoed by Michael Griffin, the undersecretary of defense for research and engineering, in a Nov. 13 speech. Griffin said "usable" laser weapons could be fielded "in no more than a few years," although lasers powerful enough for ballistic missile defense would take longer.

Effectively defending forward bases would require an integrated, extended-range network of sensors, which would include space-based assets, manned and unmanned aircraft and forward-deployed Navy warships. It also would require an integrated command and control (C2) network to link the early warning and defensive systems.

The CSBA authors suggested that in the Pacific the C2 network could be built around the already operational Naval Integrated

Fire Control-Counter Air system.

Although the Navy's growing fleet of missile-defense capable cruisers and destroyers could be part of the defensive shield for forward-based facilities, Gunzinger said tying down those warships for that purpose would not be a good use of those multimission, mobile platforms.

Navy Super Hornet Crashes in Philippine Sea; Crew Rescued

PHILIPPINE SEA – A Carrier Air Wing 5 (CVW-5) F/A-18F experienced a mechanical issue that resulted in the crew ejecting while conducting routine operations in the Philippine Sea Nov. 12, Task Force 70 public affairs said in a release.

"The crew was immediately and safely recovered by USS Ronald Reagan search-and-rescue aircraft and brought back to the ship for evaluation by medical personnel, the release said. "Both aviators are in good condition."

The F/A-18F was flown by Strike Fighter Squadron 102, one of four Super Hornet squadrons assigned to Carrier Air Wing Five.

Two other CVW-5 aircraft have been lost in mishaps over the past year. On Nov. 22, 2018, a C-2A Greyhound assigned to Fleet Logistics Support Squadron 30 Detachment Five crashed into the Philippine Sea while en route to Ronald Reagan, killing three Sailors. On Oct. 19, an MH-60R Seahawk assigned to Helicopter Maritime Strike Squadron 77 crashed on the flight deck of the carrier, injuring 12 persons.

CVW-5 is embarked onboard Ronald Reagan and is currently

underway in the U.S. 7th Fleet area of operations in support of security and stability in the Indo-Pacific region.

Ronald Reagan has resumed normal operations and the crash is under investigation.

Austal USA Christens Future USNS Puerto Rico

MOBILE, Ala. – Austal celebrated the christening of expeditionary fast transport (EPF) the future USNS Puerto Rico (EPF 11) with a ceremony at its state-of-the-art shipbuilding facility Nov. 10, the company said in a release. Puerto Rico is the 11th of 12 EPFs Austal has under contract with the U.S. Navy with a combined value of over $1.9 billion.

“Austal is excited to christen another amazing ship,” said Austal USA President Craig Perciavalle. “Puerto Rico is one step closer to joining her sister ships in supporting important missions across the globe.”

Nine Spearhead-class EPFs have been delivered and are serving as an affordable solution to fulfilling the Military Sealift Command’s requirements worldwide. The future USNS Burlington is scheduled for delivery to the Navy later this month and two more EPFs, including EPF 11, are under construction at Austal’s Mobile shipyard. Austal also received instruction from the Navy to order long lead-time materials for EPF 13 in October.

“Congratulations to the incredible Navy – Industry team for achieving this important milestone,” Perciavalle said. “You should be proud of the important service you’re providing our

country.”

In addition to being in full-rate production for the EPF program, Austal is also the Navy’s prime contractor for the Independence-variant of the littoral combat ship (LCS) program. Austal has delivered nine LCSs, while an additional six are in various stages of construction.

Coast Guard Repatriates 86 Haitian Migrants

MIAMI – The Coast Guard Cutter Thetis crew repatriated 86 Haitian migrants Nov. 11 to Cap-Haïtien, Haiti, the 7th Coast Guard District said in a release.

While on routine patrol, a Coast Guard Air Station Clearwater MH-60 Jayhawk helicopter crew, forward deployed to Great Inagua, Bahamas, located an overlaed 40-foot sail freighter 26 nautical miles north of Punta Maisi, Cuba. Thetis was diverted, arrived on scene and safely embarked the migrants for safety of life at sea concerns.

The Jayhawk helicopter crew provided overhead support while embarkation was conducted due to deteriorating weather in the area.

“This illegal migrant venture and vessel were ill-equipped to carry its passengers and dangerously overloaded,” said Cmdr. Luis Rodriguez, deputy chief of enforcement. “If it had capsized before we arrived on scene, this situation could have ended differently as we have tragically seen before.”

Once aboard Coast Guard cutters, all migrants receive food,

water, shelter and medical attention.

Approximately 221 Haitian migrants have attempted to illegally migrate to the U.S. via the maritime environment since Oct. 1 compared to 2,488 Haitian migrants in fiscal year 2018. These numbers represent the total number of at-sea interdictions, landings and disruptions in the Florida Straits, the Caribbean and Atlantic.

Thetis is a 270-foot medium-endurance cutter homeported in Key West, Florida.

MBDA to Develop the Next Generation of the MICA missile

PARIS – The French Defence Procurement Agency DGA (Direction Générale de l'Armement) has awarded MBDA the contract for the MICA NG (Missile d'Interception et de Combat Aérien Nouvelle Génération) program to develop the next generation of the MICA missile. With deliveries scheduled to begin in 2026, MICA NG will be available to arm the current and future versions of the Rafale combat aircraft.

MICA NG is intended as the replacement for the MICA missiles currently in operational service with the French armed forces and exported to 14 countries worldwide. The NG program includes an extensive redesign of the current MICA family while keeping the same aerodynamics, mass and center of gravity. This is done to minimize the amount of adaptation required to operate the new system with existing platforms and launchers. The unique concept that has ensured the ongoing

success of MICA for two decades remains: the option of two different seekers (infrared and radio frequency) and two launch modes (rail and ejection) in a single missile casing.

The technological step changes will provide the capability to counter future threats. This includes targets with reduced infrared and electromagnetic signatures, atypical targets (unmanned aerial vehicles and small aircraft), as well as the threats normally countered by air-to-air missiles (combat aircraft and helicopters).

More specifically, the infrared seeker will use a matrix sensor providing greater sensitivity. Meanwhile the radio frequency seeker will use an AESA (Active Electronically Scanned Antenna), enabling smart detection strategies.

The reduced volume of electronic components within MICA NG will allow it to carry a larger quantity of propellant, thereby significantly extending the range of the missile. Utilizing a new double-pulse rocket motor will also provide additional energy to the missile at the end of its flight to improve maneuverability and the ability to intercept long-range targets. Lastly, the addition of internal sensors will allow the monitoring of the status of the weapon throughout its life (including during storage and transport), contributing to significantly reduced maintenance requirements and cost of ownership.

“We are proud of the work completed with the DGA to achieve maximum technical and financial optimization,” said Antoine Bouvier, MBDA chief executive at the program launch. “The fact that we have reached this stage is thanks to the vision that we were able to share with our French customer to address its operational challenges, as well as our own long-term commercial challenges. The upgrading of the MICA family will enable us to support the armed forces throughout the remaining operational life of the Rafale.”

Navy Awards SAIC Contract for C5ISR

MCLEAN, Va. – The U.S. Navy has awarded Science Applications International Corp. (SAIC) an indefinite-delivery, indefinite-quantity contract for the production and delivery of integrated command, control, communications, computers, computers, intelligence, surveillance and reconnaissance (C5ISR) systems, networks and support equipment in support of the Space and Naval Warfare Systems Center (SSC) Atlantic, the company said in a Nov. 8 release. The single-award contract has a five-year period of performance worth approximately $597 million.

The contract has an additional two-year award term that, if earned, would increase its potential value to approximately $861 million. Delivery/task orders awarded under the contract will include procuring, fabricating, assembling, integrating, testing, inspecting and delivering a highly diverse range of systems that include various complex designs provided by Navy program offices in the form of technical data packages.

Systems vary in complexity, but generally include the integration of engineered cable assemblies, mounting kit assemblies, hardware, and software/security applications necessary to provide the warfighter with the capability to communicate, maintain situational awareness and achieve information dominance. Work will be performed in Charleston, South Carolina, and Norfolk, Virginia.

“We are proud to continue to help SSC Atlantic streamline their system production services and provide warfighters with the latest technology available,” said Jim Scanlon, SAIC

senior vice president and general manager of the Defense Systems Customer Group. “For this contract, SAIC enables shared resources across the command, resulting in cost savings; as we provide complex electronic systems to the Navy.”

HM-15, Lewis B. Puller Team Up for Training

MANAMA, Bahrain – An MH-53E Sea Dragon assigned to the “Blackhawks” of Helicopter Mine Countermeasures Squadron (HM) 15 embarked the expeditionary sea base ship USS Lewis B. Puller (ESB 3) for the first time in the U.S. 5th Fleet area of operations for interoperability training Oct. 28-Nov. 7.

The training focused on improving airborne mine countermeasures (MCM) capability and interoperability in the U.S. Central Command area of responsibility (AOR). Lewis B. Puller is capable of supporting a wide variety of missions including crisis response, counter-piracy operations, maritime security operations and humanitarian aid/disaster relief. By embarking HM 15, the will add the airborne MCM mission to its expanding repertoire.

U.S. 5th Fleet’s Task Force 52 deputy commander, Capt. Andy Lamb of the U.K. Royal Navy, visited the Puller to observe the training.

“Ensuring maritime access for the free flow of trade is what mine countermeasures is about,” said Lamb. “The integration of HM-15 with Puller is a key component of this and demonstrates first-class versatility and readiness.”

The airborne aspect of MCM is one of the three areas that support the MCM triad. In addition to shipboard and expeditionary MCM, airborne MCM helps ensure stability and security in the region's three critical chokepoints. Reoccurring training opportunities ensure that Task Force 52 is prepared to handle any potential threats to the free flow of commerce.

The expeditionary sea-base platform supports Naval Amphibious Force, Task Force 51, 5th Marine Expeditionary Brigade's (TF 51/5's) diverse missions that include crisis response, airborne MCM, counter-piracy operations, maritime security operations and humanitarian aid/disaster relief missions while enabling TF 51/5 to extend its expeditionary presence in the world's most volatile regions.

"Lewis B. Puller provides TF 51/5 and 5th Fleet a permanent platform that can be rapidly reconfigured to support vastly different mission sets in mere days," said Capt. Scott Hattaway, the ship's commanding officer. "Embarking the Blackhawks of HM-15 to conduct airborne MCM operations demonstrates this flexibility, especially in light of the entire equipment on load to achieve full mission-capability and actively conducting AMCM operations was accomplished in less than three days pierside."

Lewis B. Puller was commissioned as a warship after previously being classified as a "USNS" ship in August 2017. Redesignating the ship as a commissioned warship allows the Navy greater operational flexibility and provide critical support to TF 51/5's joint forces at sea, from the sea and ashore to meet potential threats in the 5th Fleet area of operations.

U.S. 5th Fleet area of operations encompasses about 2.5 million square miles of water area and includes the Arabian Gulf, Gulf of Oman, Red Sea and parts of the Indian Ocean. The expanse is comprised of 20 countries and includes three

critical choke points at the Strait of Hormuz, the Suez Canal and the Strait of Bab al Mandeb at the southern tip of Yemen.

First California-based Fast Response Cutter Commissioned in San Pedro

SAN PEDRO, Calif. – The Coast Guard commissioned the first California-based 154-foot fast response cutter (FRC) in San Pedro Nov. 8, the 11th Coast Guard District said in a release.

Forrest Rednour is the first of four Sentinel-class FRC to be homeported at Base Los Angeles-Long Beach. Three additional FRCs are scheduled to be commissioned by next summer. While these ships will be based in San Pedro, they will operate throughout the 11th District, which includes all of California and international waters off Mexico and Central America.

“This cutter is specifically designed to face today’s threats in the maritime domain,” said. Rear Adm. Peter Gautier, the 11th District commander. “This cutter is faster, goes further and can do more than any other Coast Guard patrol boat.”

FRC’s are 154-foot multimission ships designed to conduct drug and migrant interdictions; ports, waterways and coastal security operations; fisheries and environmental protection patrols; national defense missions; and search and rescue.

“This crew and I are truly honored and humbled to be assigned to serve as plank owners aboard this cutter named for a true Coast Guard hero,” said Lt. Graham Sherman, Forrest Rednour’s commanding officer.

To date, the Coast Guard has accepted delivery of 31 FRCs. Each ship is designed for a crew of 24, has a range of 2,500 miles and is equipped for patrols up to five days. The FRCs are part of the Coast Guard's overall fleet modernization initiative.

FRCs feature advanced command, control, communications, computers, intelligence, surveillance and reconnaissance equipment, as well as over-the-horizon response boat deployment capability and improved habitability for the crew. The ships can reach speeds of 28 knots and are equipped to coordinate operations with partner agencies and long-range Coast Guard assets such as the national security cutters.

Construction Begins on Future USS Patrick Gallagher

BATH, Maine – The construction of the future USS Patrick Gallagher (DDG 127) is officially underway at General Dynamics Bath Iron Works (BIW) shipyard, Naval Sea Systems Command said in a Nov. 9 release.

The milestone was marked with a ceremony held in the shipyard's fabrication shop during which U.S. Sen. Susan Collins, R-Maine, made the initial cut to the first plate of steel for the ship. The ceremony was attended by BIW shipyard workers and Navy representatives.

The ship will honor Lance Cpl. Patrick Gallagher, Marine Corps Vietnam veteran and Navy Cross recipient. Gallagher was awarded the Navy Cross for his actions on July 18, 1966, when he selflessly threw his body on an incoming grenade, shielding his fellow Marines. He quickly pitched the grenade to a nearby

river where it safely exploded out of harm's way, without injury to himself or others. Gallagher was killed in action one year later in DaLoc near Da Nang on March 30, 1967. He is one of only 30 known Irish citizens to have died in the Vietnam conflict.

"It is exciting to commence construction on what will be the 77th ship of the Arleigh Burke class" said Capt. Casey Moton, DDG 51-class program manager, Program Executive Office Ships. "Not only will this ship continue the legacy of enduring warfighting capability, it will carry with it the strength and courage demonstrated by its namesake."

DDG 127 will be the last Flight IIA configuration destroyer built by BIW. The ship will incorporate the AEGIS Baseline 9 Combat System which includes Integrated Air and Missile Defense capability. This system delivers quick reaction time, high firepower, and increased electronic countermeasures capability for anti-air Warfare.

BIW is currently in production on the future Arleigh Burke-class destroyers Daniel Inouye (DDG 118), Carl M. Levin (DDG 120), John Basilone (DDG 122) and Harvey C. Barnum Jr. (DDG 124), as well as the Zumwalt-class destroyer Lyndon B. Johnson (DDG 1002). BIW was also recently awarded a contract for the construction of four DDG 51 Flight III ships as part of the Navy's fiscal 2018-22 multiyear procurement.

Navy Submarine Force Boss: All Submarines to Get 3D

Printers

ARLINGTON, Va. – The Navy is moving to equip all of its submarines with additive manufacturing capability, also known as 3D printing, as part of an initiative to increase at-sea repair capability for the submarine force.

“[We’re] actively experimenting with additive manufacturing and working expediently to provide this capability to all my ships,” Vice Adm. Chas Richard, commander, Submarine Forces, said Nov. 7 at the Naval Submarine League’s symposium. “All my boats will get 3D printers in the near term.”

Richard said that the crew of the attack submarine USS Virginia “went and got their own 3D printer and, using that, built themselves apart at sea to help keep their boat on deployment. It is that type of problem-solving that happens daily across the force.”