NAVY NEWS WEEK 29-5

Izumo-class helicopter destroyer of the Japan Maritime Self-Defense Force (JMSDF) moored in Kure **Photo : Bram Belder** ©
The Japanese Liberal Democrat Party, which as of 2018 holds power in Japan, announced in May 2018 that it favours converting the Izumo to operate fixed-wing aircraft. The Izumo class measures a Displacement off 19,500 long tons (19,800 t) standard; and is having a length of 248 m (814 ft) and beam of Beam: 38 m (125 ft) and is powered by 4 × GE/IHI LM2500IEC gas turbines driving 2 shafts for a top speed of more than 30 knots (35 mph; 56 km/h) and is having a Complement of 970 including crew and troops.
Sensors and processing systems: OYQ-12 combat direction system, FCS-3 fire control system, OPS-50 AESA radar, OPS-28 surface-search radar, and OQQ-23 bow sonar.
Electronic warfare & decoys: NOLQ-3D-1 EW suite Mark 36 SRBOC Anti-torpedo mobile decoy (MOD) Floating acoustic jammer (FAJ).
Armament:3 × Phalanx CIWS 2 × SeaRAM CIWS.
Aircraft carried:7 ASW helicopters and 2 SAR helicopters 28 aircraft maximum.   **Source: Maasmond Maritime**

The American Arleigh Burke Flight Two destroyer **DDG 78 *Porter*** has arrived in the Ukrainian port of Odessa to spend three weeks in the Black Sea on **Operation Sea Breeze 2018**. Personnel from seventeen countries will take part in these exercises.
Photo : Raymond Wergan, Newton Ferrers ©

Prosecution Unaware Of Estimated Value Of Navy Ship That Ran Aground
by : FONUA TALEI
The Prosecution in the General Court Martial against four Fijian Navy Officers charged with neglecting to perform a duty said yesterday they were unaware of the estimated value of the **RFNS *Kiro***, which ran aground on Belcher Rock on July 14, 2016. Prosecutor, Captain Aisea Paka, was questioned by Judge Advocate Lieutenant-Colonel Jiten Singh during proceedings yesterday about the value of the ship to which he responded saying there was no mention of its value when the summary of evidence was conducted.Captain Paka was then informed by the second accused, 29962 Lieutenant Samuela Cikaitoga, that the vessel was given through aid from Australia.Lieutenant Cikaitoga is charged alongside 28726 Lieutenant-Commander Saula Tuilevuka, 30594 Lieutenant Ben Salacakau and 33305 Ensign Mike Brown.They all pleaded guilty to charges of neglecting to perform their duty, which led to the running aground of the vessel at 5:45am near Makuluva Island and Nukulau Island.Labelled as "*a total loss*" to the Fijian Navy, the ship has since been unsalvageable and is no longer operational. While presenting sentencing submissions in Court, Captain Paka invited the President of the Court Martial, Commander Netani Sukanaivalu, Judge Advocate Lieutenant-Colonel Singh, and panel members Lieutenant-Commander

Enele Ma'afu, Lieutenant-Commander Jeke Vakararawa, Major Valu Raumakita and Lieutenant-Colonel Jone Tavainavesi to consider the Sentencing and Penalties Act of 2009 along with Section 71 of the Army Act of 1955. Captain Paka said the charges were novel to sentencing Courts in Fiji and precedence was yet to be set. He quoted Section 71 of the Army Act and invited the Court to consider the following penalties when deciding an appropriate sentence. The penalties range from the death penalty (which is not available in Fiji under the Constitution), imprisonment not exceeding two years, dismissal with disgrace from the Republic of Fiji Military Forces, dismissal from service, detention for a term not exceeding two years, forfeiture of seniority, reduction to rank or any less reduction in rank, fine, severe reprimand, reprimand, in the case of an offence which has occasioned any expense, loss or damage, stoppages, and such minor punishments as may from time to time be authorised by the Defence counsel. Captain Paka told the Court Martial that as a general principle of sentencing, a Court may not impose a more serious sentence unless it is satisfied that a lesser or alternative sentence will not meet the objectives of sentencing. He said sentences of imprisonment should be regarded as the sanction of last resort taking into account all other matters. He encouraged the court to consider the nature and gravity of the offence, the degree of culpability and the accused's conduct during trial which indicated remorse or a lack of remorse on their part. Furthermore, he cited a United Kingdom case which saw four Navy Officers charged with neglecting a Navy Ship called the **HMS Nottingham**, which ran aground on July 7, 2002, on Wolf Rock near Lord Howe Island, off the coast of Australia. All four Officers in the **HMS *Nottingham*** case pleaded guilty to the offence and were given penalties ranging from reprimand, severe reprimand and dismissal from ship. Captain Paka submitted to the Court to consider other alternative penalties, since there was no provision for dismissal from ship and discharge to shore postings in the Fijian jurisdiction. He said the men in the HMS Nottingham case were not given prison terms because they had taken a progressive approach and pleaded guilty at the earliest opportunity. The aggravating factors of the case were that as senior officers, Lieutenant-Commander Tuilevuka, Lieutenant Cikaitoga and Lieutenant Salacakau should have known better at the time of the incident and their lives as well as the lives of the men on board the **RFNS *Kiro*** on July 14, 2016, were put at risk. Prosecution submitted that fortunately no injuries were noted and there were no deaths recorded. On the issue of fines, Captain Paka said the Court Martial could not impose a fine of more than 28 days' worth of the accused's salary. The accused men will be sentenced tomorrow at the Court House at Queen Elizabeth Barracks in Nabua.   **Source : Fijisun online Edited by Jonathan Bryce**

Danish support ship HDMS *Esbern Snare* becomes new SNMG1 flagship

Royal Danish Navy support ship **HDMS *Esbern Snare*** became the new flagship of NATO's Standing Maritime Group 1 (SNMG1), taking over from fellow Danish warship **HDMS *Niels Juel***. The change of command ceremony took place in Frederikshavn, Denmark, on July 10 and further saw Commodore Carsten Fjord-Larsen assume command of Standing

NATO Maritime Group One (SNMG1) from Commodore Søren Thinggaard Larsen.

Frigate **HDMS *Niels Juel* (F363)** sails together with other SNMG1 and US Navy units during **BALTOPS 2018**. **Photo: US Navy**

SNMG1 has been under Danish command since January 2018.

During this period, Denmark has provided staff officers and flagship for the group in addition to this key leadership function. For the first semester, **HDMS *Niels Juel*** served as the flagship, and on July 10 **HDMS *Esbern Snare*** relieved her and will serve as flagship during the second semester. "*I feel privileged and honoured for having commanded one of NATO's standing maritime groups. To stay strong and sharp, you have to train, and that is exactly what we have been doing since our formation and departure from Bergen, Norway back in January*" said Commodore Thinggaard Larsen. "*Together, we have executed an incredible diverse and rewarding program. Our actions during the recent 6 months clearly demonstrates that we, NATO are: Stronger Together*."   In the first 6 months of 2018, the group conducted maritime activities from the North Atlantic to the west coast of Africa, participating in four major NATO and international exercises, enhancing interoperability among Alliance naval forces.   The group also exercised with NATO partners Finland and Morocco and has patrolled the North Atlantic, the Baltic Sea and the North Sea in support of Maritime Situational Awareness.   "*It's an honour for me to take command of SNMG1. My international staff and I are prepared and ready for the tasks ahead. I am looking forward to carrying on, the excellent work done by Commodore Thinggaard Larsen and his staff. My units, my staff and I will continue training and exercising, and thereby maintaining SNMG1 capabilities and readiness*" said Commodore Fjord-Larsen. "*We will deliver visible and credible presence and show that NATO is ready and standing as one*".

Source: Naval Today

Dock landing ship USS *Gunston Hall* on Southern Seas 2018 deployment

US Navy's Whidbey Island-class amphibious dock landing ship **USS Gunston Hall** (LSD 44) departed Virginia in late June to start the Southern Seas 2018 deployment which will see the ship and its crew operate in Latin America and the

Caribbean. The ship got underway from Joint Expeditionary Base Little Creek-Fort Story in Virginia on June 18, embarking the Destroyer Squadron Four Zero on July 1.

USS *Gunston Hall* **(LSD 44)** gets underway on June 18 for Southern Seas in Central and South America.

Gunston Hall is hosting a multinational staff consisting of representatives from Argentina, Brazil, Colombia, and the United States throughout the deployment. The team will focus on operating in a multinational environment, while ready to deal with unconventional threats such as illicit trafficking, improving training levels in a variety of mission areas, and responding to humanitarian crises. "*This deployment provides a unique opportunity for US and partner nations to increase our interoperability by working together as a multi-national staff for a prolonged period of time*," said DESRON 40 Commodore Capt. Brian Diebold. "*The multi-national staff will execute a variety of missions over the coming months that will include integrating and conducting operations with the US Marine Corps, US Coast Guard and 13 partner nations*." *Gunston Hall* will make a variety of port visits designed to promote goodwill and friendship with nations in the region. Formerly known as the Partnership of the Americas deployment, Southern Seas gives a distinct name to one of the United States' marquee deployments. This will be the first deployment for *Gunston Hall* since 2014. *Gunston Hall* was commissioned April 22, 1989 and has been involved in numerous deployments to USSOUTHCOM in her 29 years of service to the fleet.

Source: Naval Today

US Command Ship, Destroyer in Black Sea for Annual Sea Breeze Exercise

Two U.S. Navy ships are among the naval forces in the Black Sea this week to participate in an international military exercise co-hosted by the U.S. and Ukraine. Command ship **USS *Mount Whitney* (LCC-20)** and guided-missile destroyer **USS *Porter* (DDG-78)** entered the Black Sea over the weekend, crossing through the Bosporus Strait into the Black Sea in support of the Sea Breeze 2018 exercise, U.S. 6th Fleet announced on Monday. "*This year's **Sea Breeze** is the first time we will take the staff to sea and embark the U.S. 6th Fleet flagship, USS Mount Whitney*," Matthew Lehman, commodore of Task Force 65, said in a Navy news release. "*We will be operating our flagship alongside our NATO allies and partner nations in the Black Sea. The maritime portion will incorporate all warfare areas to continue to build on last year's successes*

while pushing the exercise to become more advanced to adhere to the ever-changing operational environment."

USS *Mount Whitey* **(LCC-20)** entering the Black Sea. **Photo: Yörük Işık**

This is the 18th iteration of **Sea Breeze**, which is meant to build regional security through practicing multiple warfare areas, including air defense, antisubmarine warfare, amphibious operations, maritime interdictions, damage control and search and rescue. Lehman said the exercise "*has enhanced our interoperability and capabilities among participating forces*" and builds "*combined capability and capacity to ensure regional security and foster trust among participating nations*." 6th Fleet lists 17 nations as participating this year: Bulgaria, Canada, Denmark, Estonia, Georgia, Greece, Italy, Lithuania, Moldova, Norway, Poland, Romania, Sweden, Turkey, Ukraine, United Kingdom and the U.S. According to a Ukrainian state news report, 29 ships, 25 aircraft and a submarine will participate, including a Turkish submarine that will play the role of an adversary force. Last year the U.S. Navy sent a cruiser and a destroyer to the exercise. This year, in addition to *Mount Whitney* and *Porter*, U.S. assets include a P-8A Poseidon maritime patrol aircraft from Patrol Squadron (VP) 10; Marines from Echo Company, 2nd Battalion, 25th Marine Regiment; Navy Underwater Construction Team 1 divers; and members of the U.S. Naval Forces Europe-Africa and U.S. 6th Fleet staff. USNI News has previously noted that Russia had protested the **Sea Breeze** exercise series since its 2014 annexation of Crimea. The Russian Ministry of Defense has not issued any formal statements yet this year, but Vice Adm. Ihor Voronchenko, commander of the Ukrainian Navy, made it clear that Russia was very much on the minds of those involved in the exercise. Voronchenko said at the exercise's opening ceremony in Odessa that the exercise planners "*took into account the fact that we have another, tenser situation in the basin of the Black and Azov Seas compared to the one*

that was a year ago," and that "*the Black and Azov Seas are not internal lakes of the Russian Federation, and they should not dictate the conditions to us.*"

A Quick Fix for U.S. Navy Surveillance Gaps In Asia

Even before China began building military bases in the South China Sea and taking over commercial ports in Asia, the U.S. Navy was facing a nearly impossible task in trying to police the Indo-Pacific region.   The U.S. Seventh Fleet headquartered in Japan and the U.S. Fifth Fleet headquartered in Bahrain have barely a hundred warships and a few hundred aircraft to cover ocean areas stretching from the Horn of Africa to the Korean Peninsula. That is a significant portion of the Earth's entire surface; within it the two fleets must be prepared to prosecute surface warfare, undersea warfare, counter-mine warfare and expeditionary warfare in concert with the Marines.   Unlike the various adversaries they might encounter in the region, U.S. naval forces are operating many thousands of miles from home. A casual observer could easily conclude that America's Navy simply doesn't have sufficient resources to enforce the peace in so vast a region. And yet, the Indo-Pacific littoral is where a majority of the world's population and its most dynamic economies are located. So the Navy has to try.

The Navy's P-8A Poseidon derivative of the Boeing 737 commercial transport is an obvious candidate for carrying the MS-177A sensor in the Western Pacific and Indian Ocean.

President Trump has advanced a plan to increase the size of the Navy to 350 warships from fewer than 300 today, but building more warships will take many years. New threats might arise in the Persian Gulf, or in Southeast Asia, or on the Korean Peninsula, long before the U.S. naval presence there grows. So the Navy needs to think about near-term solutions to whatever operational shortfalls it faces in the area -- solutions that materially improve capabilities without draining money from other vital missions (like sustaining nuclear deterrence).   It seems the biggest gap in capabilities concerns intelligence, surveillance and reconnaissance -- in other words, achieving the kind of situational awareness necessary so that scarce naval assets can be deployed in the most effective fashion across vast expanses of ocean. The Navy gets some help from airborne and orbital assets operated by the Air Force. It also gets help from allied military forces in the region. But even with the ongoing deployment of the new P-8A Poseidon maritime patrol aircraft in the region, there are yawning gaps in Navy intelligence, surveillance and recon. For instance, the Navy has great difficulty discerning friendly forces from hostile ones at long distances, particularly when weather conditions don't cooperate. Whether those forces are distant warships or military units operating under a jungle canopy, it is often hard to determine what is a threat and what isn't. The Fifth Fleet and the Seventh Fleet have both identified this challenge as a major concern in their respective areas of responsibility. So here's a solution that would fix the problem for an amount of money equal to maybe two or three hours' worth of federal spending. The Air Force's U-2 spy plane has long hosted a multi-spectral infrared sensor capable of detecting and assessing remote targets in haze, precipitation or the dead of night. In recent years the sensor has been adapted for use on the Air Force's Global Hawk unmanned aerial system -- the same airframe the Navy has modified to serve as its own Triton long-endurance drone.   It thus would not be difficult to carry the sensor, officially designated as the MS-177A system, on the Navy drone. It could also be installed on manned maritime patrol aircraft such as the Poseidon. I should note that the sensor in question is manufactured by United Technologies Aerospace Systems, a modest contributor to my think tank. That's the same part of United Technologies that will soon be merged together with Rockwell Collins to form Collins Aerospace. But let's stay on the fiscal and operational challenges the Navy is facing in the Fifth and Seventh Fleet areas of responsibility. The fiscal appeal of adapting an Air Force sensor to Navy needs is obvious: the Navy benefits from all the money the Air Force has spent to get the sensor to its current state, and doesn't need to devote years to developing a new system. Near as I can tell, no other system in the joint arsenal comes close to filling the gap in Navy recon needs. Beyond that, the fact that the MS-177A is a passive infrared device means it does not generate the kind of beacon effect that a radar would, potentially guiding enemy munitions to U.S. warfighters. The sensor provides high-resolution target identification from far enough away that in most cases enemies won't even know they are being watched. That not only minimizes the danger to U.S. warfighters, but maximizes the element of surprise if they should elect to act on the information the sensor has provided. The latest version of the sensor scrutinizes targets in ten separate bands of the infrared spectrum. With so many different readings of the same target, it isn't likely that weather conditions or deliberate attempts at camouflage could conceal its nature.   If the target is hostile, the sensor will be able to determine that from far away, and identify what kind of threat it represents. If the target can be approached more closely, the sensor can detect fine features such as the movement of people on a ship deck. Decades of improvement have made the MS-177A a uniquely capable system for figuring out

when danger is near.   However, that doesn't mean the Navy should launch a crash program to install the sensors on its aircraft in the Pacific. What it needs to do is buy one and test it in realistic conditions -- conditions that mimic the operational environment of the Indo-Pacific and Persian Gulf regions. I gather that the Navy is more than willing to do that if Congress provides funding.   Military reformers often talk about saving money and speeding operational enhancements by sharing technology across different services. This seems like a case where that approach to equipping the force might work well. The MS-177A sensor should be given an opportunity to demonstrate what it can do for our over-committed forces in Asia**.**

Source: Forbes

JOINT BASE PEARL HARBOR-HICKAM (July 9, 2018) A rainbow forms over the USS Missouri Battleship Memorial as it sits moored at Ford Island during Rim of the Pacific (**RIMPAC**) exercise 2018. Twenty-five nations, 46 ships, five submarines, about 200 aircraft, and 25,000 personnel are participating in **RIMPAC** from June 27 to Aug. 2 in and around the Hawaiian Islands and Southern California. The world's largest international maritime exercise, **RIMPAC** provides a unique training opportunity while fostering and sustaining cooperative relationships among participants critical to ensuring the safety of sea lanes and security of the world's oceans. RIMPAC 2018 is the 26th exercise in the series that began in 1971. (U.S. Navy photo by Mass Communication Specialist 2nd Class Justin R. Pacheco/Released)

Former USS *Fitzgerald* Commanding Officer Pleads Not Guilty to Charges

July 10, 2018 by gCaptain

The Arleigh Burke-class guided-missile destroyer **USS *Fitzgerald* (DDG 62)** returns to Fleet Activities (FLEACT) Yokosuka following a collision with a merchant vessel while operating southwest of Yokosuka, Japan, June 17, 2017. U.S. Navy Photo

The former Commanding Officer of the **USS *Fitzgerald*** pleaded not guilty to charges related to last year's collision of the U.S. Navy destroyer with a merchant ship off the coast of Japan. Cmdr. Bryce Benson is now set to face a general court-martial on charges of negligence and hazarding a vessel, reports USNI News. The trial has been set for January 28, 2019. Seven U.S. Navy sailors were killed when the Arleigh Burke-class guided missile destroyer **USS *Fitzgerald*** collided with the merchant vessel **ACX *Crystal*** on June 17, 2017, while operating about 64 miles southwest of Yokosuka, Japan. The ***Fitzgerald*** was able to return to its home port at Yokosuka under its own power, but the destroyer suffered extensive damage and flooding. Cmdr. Benson was in his cabin at the time of the collision and became trapped as a result. He was later transferred to U.S. Naval Hospital Yokosuka via helicopter. In August, Cmdr Benson was relieved of duty "*due to a loss of confidence in his ability to lead*," the Seventh Fleet said. Cmdr. Benson originally faced charges including negligent homicide, however that charge was later dropped.   **Source: http://gcaptain.com**

China 'Quietly' Conducts Electronic Warfare Tests in South China Sea

Weeks after delivering military equipment to the South China Sea's disputed Spratly Islands, China has begun to conduct tests on its tech-jamming weaponry, it was revealed Thursday.

Sources aware of the tests told CNBC that recent intelligence assessments of the region detailed the "*first known use of the equipment*" since the technology was initially deployed to the area earlier this year. The report noted that Beijing is now "*quietly testing*" its assets. This comes after a US Navy pilot told GMA News that their EA-18G Growler had encountered

Chinese jamming technology when traveling through the South China Sea in April. "*The mere fact that some of your equipment is not working is already an indication that someone is trying to jam you,*" the pilot told GMA News on April 14, adding that "*we have an answer to that*." As Sputnik previously reported, the Growler is a carrier-based, electronic warfare variant of the F/A-18 Super Hornet. Along with the jammers, the Wall Street Journal reported on April 9 that China had also delivered surface-to-air and anti-ship cruise missiles to the islands. The Spratly Islands are a disputed group of islands, islets, cays and reefs, many of which are not above sea level at high tide. Countries including China, Taiwan, Malaysia, the Philippines and Vietnam have claimed them as part of their territory. In recent years, China has devoted extensive resources to reclaiming many of these reefs from the sea, forming artificial islands that only fuel the debate about sovereignty over the region. The South China Sea, where the Spratly Islands are located, is a crucial sea gateway through which some $3.4 trillion of trade passes annually, CNBC reported.   **Source: Sputnik News**

HMS *St Albans* F 83 Type 23 Frigate Royal Navy, arrived 9 July 2018 in Gibraltar for an operational visit prior to entering the Mediterranean.
Photo: Francis Ferro

PHILIPPINE SEA (July 11, 2018) A MK38 machine gun systems fires during a live-fire exercise on the flight deck of the Navy's forward-deployed aircraft carrier, **USS *Ronald Reagan* (CVN 76).** The ship is the flagship of Carrier Strike Group 5, which provides a combat-ready force that protects and defends the collective maritime interests of its allies and partners in the Indo-Pacific region. (U.S. Navy photo by Mass Communication Specialist 2nd Class Kenneth Abbate/Released)

The MK 38 machine gun was the topic of an article in a recent newsletter.

Has the US Navy thought this new frigate through? New report raises questions.

Lockheed Martin's version of the FFG(X) debuted at Surface Navy Association's National Symposium. **Photo: Michael Rote**

WASHINGTON — The U.S. Navy is rapidly moving toward procuring the first hull in its new class of frigate in 2020, but a new report is raising questions about whether the Navy has done detailed analysis about what it needs out of the ship before barging ahead. The Navy may not have done an adequate job of analysing gaps and capabilities shortfalls before it set itself on a fast-track to buying the so-called

FFG(X) as an adaptation from a parent design, said influential Navy analyst Ron O'Rourke in a new Congressional Research Service report. In essence, the CRS report questions whether the Navy looked at what capabilities the service already has in the fleet, what capabilities it's missing and whether the FFG(X) is the optimal solution to address any identified shortfalls. O'Rourke suggests Congress push the Navy on "*whether procuring a new class of FFGs is the best or most promising general approach for addressing the identified capability gaps and mission needs, and whether the Navy has performed a formal, rigorous analysis of this issue, as opposed to relying solely on subjective judgments of Navy or [Defense Department] leaders.*" "*"Subjective judgments, though helpful, can overlook counter-intuitive results regarding the best or most promising general approach,*" the report reads. "*Potential alternative general approaches for addressing identified capability gaps and mission needs in this instance include (to cite a few possibilities) modified LCSs, FFs, destroyers, aircraft, unmanned vehicles, or some combination of these platforms.*" The Navy is looking to adapt its FFG(X) from an existing design such as Fincantieri's FREMM, one of the two existing littoral combat ships or the Coast Guard's national security cutter as a means of getting updated capabilities into a small surface combatant and into the fleet quickly. A better approach, O'Rourke suggests, would be to make a formal, rigorous analysis of alternatives to its current course. Failure to do so has led to a series of setbacks with the Navy's current small surface combatant program, the LCS.

"*The Navy did not perform a formal, rigorous analysis of this kind prior to announcing the start of the LCS program in November 2001, and this can be viewed as a root cause of much of the debate and controversy that attended the LCS*

program, and of the program's ultimate restructurings in February 2014 and December 2015," O'Rourke writes.

The Italian FREMM *Alpino* pier side in Baltimore. Fincantieri's FREMM is a leading contender to become the Navy's parent design for FFG(X). **Photo: David B. Larter**

O'Rourke further suggests the Navy is relying too much on subjective opinions of Navy and Defense Department leaders, instead of a legitimate analysis. And indeed, the Navy has made rapid acquisition of the new ship the hallmark of the program. "*Subjective judgments can be helpful, particularly in terms of capturing knowledge and experience that is not easily reduced to numbers, in taking advantage of the 'wisdom of the crowd,' and in coming to conclusions and making decisions quickly,*" O'Rourke argues. "*On the other hand, a process that relies heavily on subjective judgments can be vulnerable to group-think, can overlook counter-intuitive results regarding capability gaps and mission needs, and, depending on the leaders involved, can emphasize those leaders' understanding of the Navy's needs.*"

Source: Defence Times

New Tunisian offshore patrol vessel arrives
Written by defenceWeb, Monday, 09 April 2018

The Tunisian Navy has received the first of its four new Multi Service Offshore Patrol Vessels (MSOPVs) from Damen Shipyards in Romania. Steel for the MSOPV 1400s *Jugurtha* **(P610)** and *Syphax* **(P611)** was cut during a ceremony in December 2016 at the Damen yard in Galati, Romania. According to AIS ship tracking data, the lead vessel *Jugurtha* left Galati on 3 March and arrived at Tunisia's Bizerte naval base on 9 March. *Syphax* is undergoing sea trials – according to ship tracking data, it undertook several short voyages off the coast of Romania at the end of March. By 6 April *Syphax* was back at Galati. Construction of the other two vessels, *Hannon* and *Sophonisbe*, is believed to be underway, with deliveries of all four vessels scheduled for the end of this year. The MSOPV is Damen's second generation offshore patrol vessel design and was revealed several years ago. It incorporates Damen's Sea Axe hull shape for superior seakeeping - since the hull is designed to reduce water resistance, the new OPV is fuel efficient and capable of speeds up to 25/26 knots, Damen said. A Multi-Mission Bay can be equipped with dedicated mission modules (e.g. mission containers) for missions such as counter piracy, counter-drug operations, anti-mining warfare (AMW), search-and-rescue (SAR) etc. The Multi-Mission Bay is also equipped with a nine metre RHIB (rigid-hulled inflatable boat), which can be launched over a dedicated

slipway through the rear of the vessel while the OPV is sailing. The command-and-control centre is located directly behind the bridge. Damen calls this development their Multi-Mission Bridge. Both spaces can be separated by means of a blinded sliding wall. The Multi-Mission Hangar is capable of storing an 11-tonne NH-90 helicopter and an unmanned aerial vehicle (UAV) such as the Boeing ScanEagle. The hangar has been designed so that the OPV crew can deploy either the helicopter or the UAV without having to move either one. The second generation Damen offshore patrol vessel is available as a standard in four sizes: 75 meter (1400 tonnes), 85 meter (1800 tonnes), 95 meter (2400 tonnes) and 103 meter (2600 tonnes).   **Source: http://www.defenceweb.co.za**

Plans for India's second indigenous aircraft carrier continue to stall

Rahul Bedi, Delhi - Jane's Navy International
09 July 2018

INS *Vikramaditya* (foreground) pictured in company with **INS** *Viraat* in early 2014. Viraat was formally decommissioned in March 2017, leaving the IN with just one carrier in operation. Source: Indian Navy

The Indian Navy's (IN's) longstanding plan to build and commission its second indigenous aircraft carrier (IAC-2) into service by 2030–32 has been further postponed due to steadily declining budgets, technological hurdles, and, above all, enduring delays by the Ministry of Defence (MoD) in approving the programme. The proposed 65,000–70,000 tonne conventionally powered '*flat top*' carrier – tentatively named *Vishal* (Grand) – capable of embarking 50–60 fixed- and rotary-wing platforms, attaining speeds of up to 30 kt, and projected to cost INR800–900 billion (USD11.65–13 billion) – is part of the IN's Maritime Capability Perspective Plan (MCCP). First announced in 2005 and later updated for the 15-year period until 2027, the MCPP envisages the IN fielding three carrier battle groups (CBGs): one for each seaboard and one in reserve. For the IN, CBGs incorporate its '*sea control'* approach to regional power projection, helping shape the regional security environment and countering Chinese plans of fielding 5–6 carriers in the strategically vital Indian Ocean Region (IOR). "*The government needs to urgently take a call on approving the IAC-2, as that will determine whether or not China dominates India in the IOR*," former IN chief of staff Admiral Arun Prakash told *Jane's.* If not, India will end up playing a subsidiary role in this region, he added. The IN currently has just one aircraft carrier in operation: the 44,000-tonne refurbished Kiev-class carrier **INS** *Vikramaditya* (ex- *Admiral Gorshkov*), with its MiG-29K/KuB (Fulcrum-D) fighter group. **INS** *Viraat* (ex-**HMS** *Hermes*), the service's second 23,900-tonne Centaur-class carrier, was decommissioned in March 2017 following 30 years of service. By 2018–19, *Vikramaditya* was to have been supplemented by **INS** *Vikrant,* the 37,000-tonne Project 71 carrier with a short take-off but arrested recovery (STOBAR) configuration that has been under construction since 2009 at Cochin Shipyard Limited, southern India.   **Source: http://www.janes.com**

Harnessing Tech Innovation from Blockchain to Kill Chain

July 11, 2018 Guest Author
By Jimmy Drennan

ORLANDO, Fla. (August 12, 2014) Sailors train on a new diesel generator simulator during a project review at Naval Air Warfare Center Training Systems Division in Orlando, Fla. (U.S. Navy photo by Darrell Conley/Released)

With all of the hype surrounding bitcoin and other cryptocurrencies, it can be difficult to sort through the noise and it might seem trendy to ask the question "*How can this technology benefit my organization?"* After all, a cryptocurrency started as a joke in honor of dog memes recently achieved a $2B valuation. Still, the underlying technological innovation behind Bitcoin, the blockchain, has real, concrete advantages that can impact numerous industries, from banking to logistics. Applications in maritime operations are no exception. Blockchain is essentially a distributed database that incentivizes network consensus to make it extremely difficult to alter

recorded data. Think of it this way: blockchain is like a museum that offers free entry, but heavily secures each exhibit with anti-tamper systems such that they can only be observed, not stolen or defaced. That so-called "*immutability property*" makes blockchain useful any time data integrity (i.e. preservation of data) is more important than data security (i.e. privacy of data). Ideas are already being formulated by the Secretary of the Navy's Innovation Advisory Council on how blockchain can improve additive manufacturing. Perhaps the most intriguing example of how blockchain can assist naval operations lies in ensuring an accurate recognized maritime picture (RMP). In naval warfare, nothing is more important when forming a kill chain than ensuring one has properly identified the target. RMP is even more critical when relying on networks, and the U.S. Navy has invested heavily for decades to become the world's preeminent networked force. Blockchain has the potential to solve two of the Navy's biggest problems associated with building RMP: ambiguity and manipulation. In fact, the broader maritime industry can also benefit from the use of blockchain due to inherent security flaws in the widely used automatic identification system (AIS).

What is a Blockchain?

A brief primer on how blockchains work will help to illustrate how they can impact naval operations. A blockchain used to record financial transactions, called "*cryptocurrency*," is perhaps the best example to use. It is a distributed ledger that keeps track of every transaction ever conducted. Bitcoin, the original and most well-known cryptocurrency, relies upon a large network of independent users to prevent "*double spending*." Since cryptocurrency is just data, and not something tangible that is traded for goods or services, it would normally be easy for someone to spend it twice and delegitimize the entire system. Bitcoin's unique process solved the double spending problem by calling upon its network users to work together to verify each transaction. Bitcoin conducts "*consensus building*" by offering a prize (currently 12.5 bitcoin) to a randomly selected user helping to verify the latest transaction. Once consensus is built and a transaction is verified, a new 12.5 bitcoin is awarded (i.e. mined) and the transaction is recorded to the blockchain. Each subsequent transaction is built upon the last, making it very difficult to retroactively manipulate data on the blockchain. In fact, the only way for a nefarious actor to alter a previous transaction or record an invalid transaction would be to achieve 51 percent of the computing power on the bitcoin network. For reference, today the world's most powerful supercomputer, China's Sunway Taihulight, would comprise just 0.6 percent of the bitcoin network's computing power, which is growing exponentially.

Recognized Maritime Picture

U.S. and coalition navies rely on secure tactical data networks to share information from a variety of sensors to build RMP. Since RMP is built from the input of numerous, widely distributed users in these networks, they are susceptible to errors like "*dual tracks*" (i.e. a single ship or aircraft being broadcast to the network as two contacts) or faulty navigational data causing a ship to misreport its own course and speed. These errors can lead to ambiguity in RMP that could lead to critical delays in successfully identifying a threat. Tactical data networks are also susceptible to intrusion and manipulation, no matter how secure they are. Like any cybersecurity system designed to keep unauthorized users out, navies constantly strive to make their tactical data networks more secure against ever more determined adversaries. Blockchain technology can help navies mitigate the problems of ambiguity and manipulation in building RMP. By building tactical data networks on a blockchain foundation, ambiguity will be resolved naturally as "*consensus*" develops around new tracks and they are distributed throughout the network. Once consensus is built around a track, blockchain's immutability property makes it very difficult for subsequent users to clutter RMP with errant data on that track. Likewise, an unauthorized user trying to manipulate RMP by infiltrating tactical data networks will be challenged to alter data on established tracks. Even if a cyber attack attempted to insert new false tracks into the network, specialized blockchain features could be developed to override track data that is not corroborated by friendly sensors. A blockchain that utilizes special features and operates on secure networks is an example of a private blockchain. Going back to the museum example, a private blockchain is like a museum that employs robust anti-tamper systems on the exhibits, but also restricts entry to museum members only. A disadvantage of a private blockchain is the reduction in available computing power, due to limited users, to ensure data integrity. The cost of rebuilding U.S. and coalition navy tactical data networks from the ground up utilizing blockchain will likely be significant; however, the advantages in data integrity by mitigating ambiguity and manipulation are worth analyzing. Much as U.S. and coalition navies could benefit from private blockchain, the maritime industry at large could benefit from public blockchain to improve its RMP. Worldwide, mariners use AIS – an open network of ship position, course, and speed data – as a primary tool for building RMP. Implemented in the early 2000s, AIS has been critical to improving safety of navigation. Still, AIS has inherent flaws that blockchain could be used to fix. Because it is open source, AIS data can easily be manipulated to make a ship appear in a different location, report false course and speed, or even mimic another ship's identity. As Glenn Hayes explains in the Maritime Electronics Journal, AIS "*is vulnerable to malicious transmissions and runs the risk of being manipulated by individuals seeking to deceive the system*." Illegal fishing, piracy, and smuggling are just a few of the reasons one might seek to deceive AIS. As use of AIS spreads, potential security issues will only increase. The data manipulation that AIS is susceptible to is *exactly* the type of vulnerability that blockchain was developed to address. With targeted funding and industry-wide effort, blockchain can provide data integrity to AIS to improve maritime safety and deter illegal activity at sea.

Countering Maritime Smuggling

Another potential application of blockchain in maritime operations could be in supply chain improvements to counter maritime smuggling of drugs, weapons, or any illicit cargo. Lieutenant Junior Grade Henry Bond wrote an insightful article for U.S. Naval Institute *Proceedings* on the potential for blockchain to protect the DoD supply chain. Lieutenant Bond's analysis

can be expanded to include the global shipping industry. Specifically, smugglers often exploit the inherent difficulties in conducting cargo inspections on container ships by concealing contraband within legitimate cargo in innocuous, unmarked containers. Economic and operational constraints do not often allow for the time it would take to open and inspect hundreds of containers pierside, and physical constraints usually prohibit at-sea inspection. So, to counter maritime smuggling via container ships, navies and law enforcement agencies must focus on deterring the use of containers vice locating illicit cargo in transit. Blockchain portends to act as a potential deterrent by openly and irrevocably recording the status of every container in the supply chain. Essentially, each container could be treated like a "*transaction*" in the blockchain, so that once it is loaded as part of a legitimate shipment, its status relative to all other nearby containers is "*locked down*," making it very difficult to mix in an illegitimate container at a later point. Events like the opening or repositioning of a container could also be recorded as "transactions" to further complicate smugglers' to conceal illicit cargo. Ideas like those of Lieutenant Bond or the SECNAV Innovation Board are sound, but they require further development because blockchain is still a nascent technology. DoD, and the maritime industry at large, would do well to assign additional research funding to pursue ideas for applying blockchain in national defense and maritime safety.

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Modest results to date for blue economy component of Operation Phakisa
Written by defenceWeb, Wednesday, 11 July 2018

Respected South African think-tank, the Institute for Security Studies (ISS), maintains South Africa's ambitious blue economy initiative has "*so far achieved only modest results*". Timothy Walker writes in "*Securing a sustainable oceans economy – South Africa's approach*" that the country embarked on an ambitious course to align implementation of domestic and foreign policy goals regarding maritime security, development and governance. "*To successfully grow this oceans economy will also require the country to undertake maritime security operations and engage in chairing and reviving important international organisations*." One of Walker's seven key findings notes: "*The inclusion of the **Operation Phakisa** oceans economy as one of the nine point plans for implementing the National Development Plan (NDP) was crucial but the initiative has so far only achieved modest results*". Another finding points out that "South Africa's geographic 'gateway' location places unique demands on it to provide maritime safety, security and governance for itself and others. This 'gateway' role requires the design and implementation of well-crafted domestic and foreign policy frameworks and plans". Also germane to the role the SA National Defence Force (SANDF) plays and will play in the blue economy is Walker's finding that South Africa considers piracy to be a major threat and conducts a naval patrol in the Mozambique Channel despite a drastic decline in piracy incidents since 2012. The SA Navy to a large extent is seen as the leading SANDF service in Phakisa as regards the safety and security of maritime assets with the SA Air Force (SAAF) also a player. The maritime service has to protect assets such as fish stocks, offshore gas and oil deposits. This duty is currently assigned to its Valour Class frigates, Heroine Class submarines and converted strikecraft until such time as its new patrol vessels are taken into service. Here the Navy will also be hamstrung as its original plan to acquire six patrol vessels – three inshore and three offshore – has been cut back by half with only the inshore vessels going to be built. The SAAF is arguably in a worse situation as regards maritime patrol aircraft with the tasking assigned to 35 Squadron at AFB Ysterplaat. There are currently eight C-47TPs on strength but not all are necessarily airworthy. Five of the aircraft are configured for maritime patrol, two for transport and one for electronic warfare. There is no indication of when they will be replaced and by what types.   **Source: http://www.defenceweb.co.za**