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The Russian Navy Is Developing a New Submarine That Can Perform One Truly Strange Trick

The SSN **USS Seahorse**, one of class of only three boats but why she is featured in this article only The National Interest will know!

Russia's Rubin design bureau is working on developing a miniature autonomous unmanned submarine that would be used to replicate the characteristics of a full-sized submarine. Called the **Surrogat**, the new underwater drone will do exactly what its name suggests—it will imitate the sound of an enemy submarine during naval exercises. "Today, combat submarines have to be involved for exercises or tests and this practice distracts them from carrying out their basic missions.

The use of an unmanned imitator will help avoid this and cut the cost of drills. Besides, a submarine without a crew reduces risks while keeping simulated scenarios realistic," Rubin chief executive officer Igor Vilnit told the Moscow-based TASS news agency. "This apparatus will be distinguished by its simplicity in operation and the low cost of its maintenance and upgrade. Now we're holding consultations with Navy representatives to make the imitator fully meet the Navy's requirements."

According to TASS, the **Surrogat** will be a modular design that will be able to replicate the acoustical characteristic of a nuclear or diesel-electric boat. The robotic sub will carry a host of towed arrays sonars and other features to help replicate a full-sized boat's acoustic and electromagnetic signature—according to the Rubin design bureau. **Surrogat** also appears to have some capability for conducting surveillance missions independent of its role of being an aggressor platform.

The **Surrogat** will measure roughly 56ft long and is expected to displace about 40 tons. The vessel is being designed with a cruising range of about 600 miles at a speed of 5 knots. With its lithium-ion battery, it is expected to have an endurance of roughly 16 hours. The Russians claim that it will have a maximum speed of over 24 knots and the maximum diving depth of nearly 2000ft.

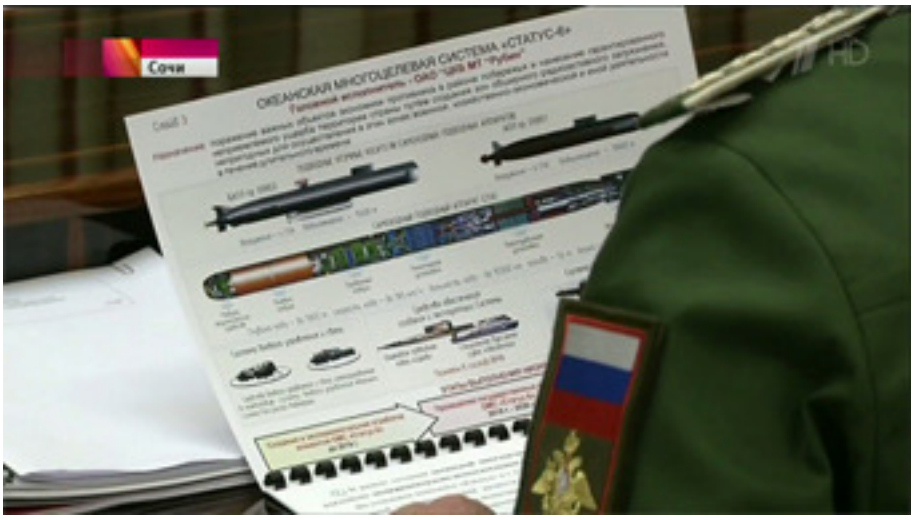
If the Russian Navy approves the **Surrogat** for full-scale development and the project is successful, it could be a very significant development in the battle for undersea dominance. The U.S. Navy is also working on unmanned underwater vehicles to augments its dwindling attack submarine fleet. A missionized version of **Surrogat** could serve in a similar role for Moscow—bolstering the capabilities of a much atrophied Russian submarine force that has only recently embarked on a revival of sort after its near collapse after the fall of the Soviet Union. **Source : The National Interest**

Pentagon Confirms Russia Has a Submarine Nuke Delivery Drone

The Pentagon has confirmed that a new Russian nuclear delivery drone is real. The undersea drone, which carries an enormous nuclear warhead to destroy coastal cities and military bases, was tested late last month. The test was leaked by unnamed sources to The Washington Free Beacon. Russia calls the system "Ocean Multipurpose System

'Status-6," and it is allegedly capable of traveling underwater to distances of to 6,200 miles. It can submerge to depths of 3,280 feet and travel at speeds of up to 56 knots.

The U.S. intelligence agencies estimate Status-6 will carry a multi-megaton thermonuclear bomb payload. For comparisons' sake the bomb dropped on Hiroshima was 16 kilotons, several orders of magnitude smaller. A one megaton bomb is the equivalent of 1,000 kilotons—one million tons of TNT. Reports from Russia indicate the bomb could be as large as 100 megatons. Status-6 is designed to attack enemy coastal cities, ports, shipyards, and naval bases. Once Status-6 arrives at its destination it detonates the bomb, causing an enormous amount of damage through blast and heat. A 100 megaton bomb would generate artificial tsunamis, carrying the destruction far inshore.



As bad as that sounds, it gets even worse. Reports from Russia indicate the bomb could be armed with a "salted bomb", or one that "salts the Earth" with the dangerous isotope Cobalt-60. Such a bomb could spread such high levels of radioactivity it would prevent anyone from using the attack zone for approximately 100 years. Depending on location and prevailing weather conditions, such an explosion would also carry vast amounts of radiation inland.

The existence of Status-6 was originally greeted with some skepticism—the weapon sounds so horrible, so devastating, and so completely over the top it is difficult to process that someone would actually want to build such a thing. Unfortunately for all of mankind, it appears that it is very real.

Russia is thought to have conceived of Status-6 as a response to America's missile defense system. Although the system is so small it cannot hope to stop a concerted Russian nuclear attack, the Russians have been looking at ways to defeat it. Status-6 skirts around the missile defense system entirely by going underwater to attack American nuclear submarine bases such as those at Kings Bay, Georgia and Kitsap, Washington. While this wouldn't stop American "boomer" missile subs already at sea, in a prolonged nuclear war it destroy submarines in port and would prevent subs at sea from going back for missile reloads.

Status-6 would be a difficult weapon to stop. Its top speed of 56 knots would be faster than the current generation of American homing torpedoes, meaning it could simply outrun its pursuers. It's alleged maximum depth would allow it to dive much deeper than American torpedoes. A faster, deeper-diving torpedo is technically possible but would have to be developed first.

According to the Free Beacon, intelligence agencies monitored a test of the drone on November 27th. The drone was accompanied by a Sarov-class weapons testing submarine. Based with Russia's Northern Fleet, **Sarov** submarine may act as a mothership to Status-6 in wartime. The drone's existence was originally revealed in 2015. The release, which was thought to have been an embarrassing mistake, stated the drone would be ready by 2019, with tests to begin in 2019-2020. This "mistake" may have been intentional to fool foreign intelligence agencies into believing the program was not as far along as it really was. **Source : The National Interest/SUBSIM**

New Details Emerge on Littoral Combat Ship Breakdowns

In a pair of congressional hearings about the Navy's embattled littoral combat ship program this month, service program managers and oversight officials fielded tough questions about unexpected increases from ship unit costs -- from $220 million to $470 million over the course of the program -- and concerns about a planned block buy of upgraded frigates based on the same design. But the panel also revealed new details about the cause and scope of a

series of engineering casualties that have sidelined five of the eight active littoral combat ships in a little more than a year.

In testimony on Thursday before the House Armed Services Committee's subcommittee on oversight and investigations, Naval Surface Forces Commander Vice Adm. Thomas Rowden revealed that the most recent casualty, damage to the **USS Montgomery** when it transited southward through the Panama Canal, was at least in part due to failure on the part of canal engineers not to follow the Navy's instructions on how to guide it through the narrow passage.

The Oct. 29 mishap was the second time an Independence-class LCS, with its wider trimaran design, had been damaged passing through the canal. The **USS Coronado** had also required repairs after a canal transit in early 2014. "When we took the first ship through and there was some damage associated with it, we sent a team down to the Panama Canal to talk about how we needed to take these ships through the canal," Rowden said.

"The modifications that needed to be made to put the lines up and pull the ship through the canal," he added. "Unfortunately with the most recent transit, that was not executed. We've gone back to them and we're going to get it squared away in the future, but we know how to get the ships through the canal safely and if we execute the procedures as we outlined them, we won't have any problems with that in the future."

Prepared testimony by Rowden and Sean Stackley, assistant secretary of the Navy for research, development and acquisition, revealed that the earlier engineering issues sustained by the **Montgomery** Sept. 13, days after its commissioning, were related to deficiencies in production as the ship sailed away from the yard. Sea water had seeped into the steering hydraulic system for one of the four waterjets, requiring a drain and flush of the system to restore it to full functionality

"The root cause assessment determined that the cooler had not failed, but rather contamination was introduced into the system most likely in conjunction with the repair of a component external to the hull in the period between delivery and sail away from the building yard," Stackley and Rowden wrote. "The shipbuilder has since implemented an improved procedure for waterborne waterjet hydraulic work."

Another casualty was related to a failure in design, they said. The **USS Milwaukee**, which broke down during an Atlantic transit last December and had to be towed 40 miles back to Joint Expeditionary Base Little Creek-Fort Story, Virginia, after the crew tried to execute an emergency stop of the gas turbine engines while all four engines were running at full power. The high-speed clutch sustained "excessive wear" in the manoeuvre, damaging both it and the combining gear. "I'll call it a mistiming in terms of software controlling the system," Stackley said Thursday. "That was not discovered until the **USS Milwaukee** was en route to her home port and we tripped over this failure, and the clutch burned out."

The shipbuilder for the **Milwaukee** and the other monohull littoral combat ships in the Freedom class, Lockheed Martin Corp., and the gear manufacturer, RENK, are testing design modifications this month to fix the problem. Stackley said the following ships in the Freedom class would receive the modifications, though the first two were made using a different gear manufacturer and are not affected.

In one other case, an LCS casualty was determined to be the result of a shipbuilding problem, according to testimony. The **USS Coronado**, an Independence-class ship that broke down at the end of August, experienced a failure of a flexible shaft coupling connecting the right-side main propulsion diesel engine reduction gear and the stern tube during a transit from Hawaii to Singapore, Stackley and Rowden wrote. Shaft misalignment was found to be a contributing factor, and the Navy made plans to replace the coupling in the **Coronado** and following ships in the class with a new design validated by Naval Sea Systems Command.

The two remaining casualties, affecting the Freedom-class ships **Freedom** and **Fort Worth**, were both found to be the result of crew error. The **Fort Worth** broke down in Singapore in January in one of the most serious casualties sustained by an LCS to date. Senate Armed Services Committee Chairman John McCain, a Republican from Arizona, told the committee Dec. 1 that the damage took 184 days and $5.6 million to fix. That, Rowden and Stackley said, was caused by improper alignment of the lube oil service system that damaged three of the five bearings in the ship's combining gear.

The other user error casualty affected the **USS Freedom** in July. "Improper corrective action" to address a failure of the **Freedom**'s main propulsion diesel engine seawater pump mechanical seal resulted in a breach, flooding the engine with sea water and causing corrosion and damage. That repair, McCain told the committee, would cost the Navy $12 million. These problems caused the Navy to conduct an engineering stand-down of all littoral combat ships in

September with a review of current training procedures and retraining for engineers. The Navy Surface Warfare Officer's School is conducting an ongoing review of LCS training to revise and update the curriculum.

Testimony on Thursday before the House by J. Michael Gilmore, the Pentagon's director of Operational Test and Evaluation, suggested the Navy should have known crew training was insufficient before the casualties occurred, citing surveys given to sailors participating in LCS full-mission testing. "'The tasking would be easier to complete if the equipment didn't constantly break … As equipment breaks, we are required to fix it without any training,'" Gilmore said. "Those are not my words, those are the words of the sailors who were doing the best they could to try to accomplish the missions we gave them in testing." "Who's accountable for that? They were not well-trained," McCain demanded in the Dec. 1 hearing.

"One of the things we found, and that I directed, was that we started to import much more of the training that we had been relying on our vendors to provide to our sailors on the ships," Rowden said. "And so given the fact that we have pulled that engineering training in, that we are moving to get the curriculum necessary, I think we're in a much better place going forward." Congress is now considering the Navy's proposal of a "block buy" of 12 frigates, which would be sturdier and offer more capability than the LCS. Proponents of the deal argue buying in bulk would save the Navy money, while detractors worry that such a buy would lock the service into purchasing ships that many still believe are not effective or reliable. **Source : Hope Hodge Seck**

German Navy's NH90 helicopter completes maiden flight

The German Navy's NH90 Sea Lion naval multi-role helicopter made its maiden flight at Airbus Helicopters' facility in Donauwörth on December 8. The NHIndustries-built helicopters will replace the old 'Sea King' which has been in service with the navy for 40 years. The navy is set to start receiving first helicopters in the second half of 2019 with all 18 units expected to be in the fleet by 2022. The NH90 Sea Lion has an increased number of sensors and improved navigation and communications equipment, which means that this military helicopter will also be able to operate in civil air space. The military friend/foe identification has also been updated to the latest standards.

Photo: Airbus Helicopters

"We need to keep to a tight schedule if we are to replace the Sea King in time. This requires all those participating in the project to coordinate quickly and efficiently to achieve this," explained Ralph Herzog, Director in the Federal Office of Bundeswehr Equipment, Information Technology and In-Service Support (BAAINBw). "By using an existing NH90 model as the basis for the Sea Lion and adding the required additional functionalities to it, we have been able to significantly reduce the delivery process. This model is also configured not only to be an adequate replacement for the Sea King but is designed so that it can be adapted to future roles."

According to Airbus Helicopters, the second NH90 Sea Lion awaiting qualification testing is currently at the final assembly stage and series production at Donauwörth will commence in the summer of 2017. In addition to its land-based use in SAR missions, the NH90 Sea Lion is also intended to operate on Type 702 (Berlin class) combat support ships. **Source : Naval Today**

Despite mishaps, futuristic Navy destroyer finally arrives in homeport

The U.S. Navy's biggest, most expensive and most technologically advanced destroyer arrived at its homeport on Thursday after a nearly four-month transit that included some hiccups, such as a high-profile breakdown in the Panama Canal. The **USS Zumwalt** arrived in San Diego to a welcoming ceremony that included the commander of

naval surface forces, Vice Adm. Tom Rowden. The ship has a crew of 147 officers and sailors, and its commanding officer is Capt. James Kirk. "We have looked forward to pulling into San Diego for a long time," Kirk said.

The **USS Zumwalt** arrived in San Diego on Thursday, Dec. 8, 2016.

The **Zumwalt** departed Maine shipbuilder Bath Iron Works in September before being commissioned into service in Baltimore in October. It made several additional port calls en route to its final destination. During the trip, the first-in-class ship was sidelined for repairs a couple of times, including after it lost propulsion in the Panama Canal, necessitating a tow and an extended stay for repairs. In San Diego, the crew and contractors will begin installation of combat systems and further testing and evaluation. **Source : CBSNEWS**

Russia to establish a permanent naval base in Syria

A Russian parliamentarian said on Wednesday that Moscow is to sign an agreement with the Syrian regime to establish a permanent naval base in Tartus province. Speaking to reporters in Moscow, the Chairman of the Federation Council Committee on Defence and Security, Viktor Ozerov, said that talks are in the "final stages". He refused to make any predictions about the possible date when the agreement will be submitted to the Russian parliament for ratification.

The Russian Defence Ministry announced in October that it will send all relevant documents regarding the naval base to parliament, where sources revealed that the term of the deal with Syria could be 49 years. Russia has had a naval presence in Tartus since the Cold War Also in October, President Vladimir Putin agreed to deploy the Russian air force in Syria "indefinitely". The Russians will use Syria's Humaimam Air Base without charge. The agreement also allows Russia to transport any weapons, ammunition or equipment to Syria without paying any fees or taxes. **Source : middleeastmonitor.**

Australia contracts Odense to develop ASC shipbuilding facilities

The Australian government has contracted Danish firm Odense Maritime Technology (OMT) to develop new shipbuilding facilities at state-owned ASC, it was announced on 7 December. Defence industry minister Christopher Pyne said the project will feature the design and construction of a new shipyard at ASC's yard in Adelaide, South Australia. The value of the project was not disclosed.

A statement from the Australian Department of Defence (DoD) said OMT would work with stakeholders including the DoD, the South Australian government, and ASC to "deliver a surface vessel shipyard that supports both the minor and major surface vessel programs now and into the future". **Source : Defence Alert**

They could hardly have made a better choice. OMT (ex CSS) has 99 years of experience in both naval and commercial shipbuilding and innovation with the Absalon class of frigate/support ships being an example of this.

Cameroon to soon receive second hand patrol boat

Cameroon's navy will soon take delivery of the ex-French patrol vessel Dipikar, which has just finished its sea trials. The vessel was put through its paces in the Mediterranean between 21 and 27 November, Cameroon's Navy said, and was visited by Chief of Staff of the Navy Rear Admiral Jean Mendoua. Further testing continued until 3 December.

The **CNS Dipikar**, formerly the French patrol vessel **Grebe**, was retired by France in 2010 and acquired by Cameroon. French company Sofema was tasked with refurbishing the vessel and delivering it to Cameroon. However, things did not go smoothly – in 2012 while being repaired in Bizerte, Tunisia, the vessel was delayed due to the turmoil caused by the Arab Spring and technical problems. Damage to its propulsion system meant further work was needed.

In November 2014 the vessel left Tunisia for south-eastern France for further refurbishment work. After sea trials, the vessel is now ready for delivery but due to unfavourable sea conditions at this time of year, the **Dipikar** will be sent to Douala by cargo ship. Delivery should take place in late December/early January. The **Dipikar** is 52 metres long, 9.8 metres wide and displaces 400 tons. It was built with a steel hull and aluminium superstructure. Crew complement is 20. The vessel can travel 4 500 miles and reach a speed of 18 knots, being powered by two SACM-RVR UD33V12 diesel engines delivering 4 800 hp.

It features a command and control system provided by Nexeya, electro-optical and other sensors, a dual 20 mm cannon, machineguns and a new 7.5 metre Sillinger rigid-hulled inflatable boat (RHIB). This can be deployed from the back of the vessel. Cameroon has strengthened its navy in recent times with additional vessels. Over the last five years this includes two P-108 patrol craft delivered from China's Poly Technologies in 2014, a second hand OPV-54 patrol craft from France in 2014, a 23 metre Aresa 2300 landing craft and two 24 metre Aresa 2400 CPV Defender patrol boats in 2013. According to the Stockholm International Peace Research Institute, two Aresa-3200 patrol craft were delivered in 2014.

Cameroon's navy is relatively well equipped in order to secure the country's oil installations and prevent maritime crime and is optimised for coastal and river patrol, especially in light of rising levels of piracy in the Gulf of Guinea. It has around 40 coastal, inshore and river patrol craft as well as several combat patrol vessels. **Source : defenceWeb**

Philippine Navy frigate Andres Bonifacio arrives home

Photo: Philippine Navy

The Philippine Navy frigate **BRP Andres Bonifacio**, a former U.S. Coast Guard cutter, arrived to Philippines on Friday. The ship made a brief stop at Joint Base Pearl Harbor-Hickam on November 15 before making the final leg of the journey to Philippines. Formerly known as **USCGC Boutwell**, **BRP Andres Bonifacio** was officially transferred to the Philippines during a July 21 ceremony at Coast Guard Base Alameda, California. **BRP Andres Bonifacio** is an $8 million grant, but the Philippine Navy invested $16 million to modernize and outfit the cutter in the U.S. as part of the transfer program.

The U.S. Coast Guard also benefited from the transfer by saving over $12 million in ship disposal costs. Under the Excess Defense Articles program, assets no longer needed and declared excess by the U.S. Armed Forces may be offered at reduced or no cost to eligible foreign recipients on an "as is, where is" basis. Andres Bonifacio is the third Hamilton class cutter in Philippine Navy service together with the **BRP Gregorio Del Pilar** (FF-15) and **BRP Ramon Alcaraz** (FF-16) which were acquired in 2011 and 2013, respectively. The three ships are now known as the Gregorio Del Pilar-class frigates. **Source : Naval Today**

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