American Submariners Inc. 4370 Twain Ave. San Diego, CA 92120-3404



The Silent Sentinel
MARCH 2010

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Our Creed

To perpetuate the memory of our shipmates who gave their lives in the pursuit of their duties while serving their country. That their dedication, deeds, and supreme sacrifice be a constant source of motivation towards greater accomplishment and patriotism to the United States of America and its Constitution.

From Page 16

Jack Kurrus, who served with Charette on the Nautilus, said he is at odds with a lot of his shipmates because he doesn't "envision the massive problem that everybody else does."

"As far as women and men serving together, it's difficult on a submarine, but I don't think there should be any reason to say it's impossible," said Kurrus, who lives in Mystic. "We ought to spend less time flapping about it and verbalizing on it, and just do it. If it doesn't work out, just stop and say it doesn't work."

Kurrus said women should have the same opportunity he had, and if they want to live on a submarine then "God bless them"

Ray Woolrich, president of the Naval Submarine League Nautilus chapter, called it "fundamentally a very good idea."

"It's inevitable," said Woolrich, a retired Navy captain who nonetheless was concerned that a woman would go on a deployment unaware that she was pregnant and have to leave the ship and her responsibilities, which would then put more of a burden on the rest of the crew.

Sen. Joe Lieberman, D-Conn., said Tuesday that female sailors have shown they can serve and excel alongside men on surface ships, and U.S. Rep. Joe Courtney, D-2nd District, is looking forward to reviewing the Navy's proposal, according to his office.

Sen. Chris Dodd, D-Conn., said he applauded the move to repeal the ban, since women play "a pivotal role in keeping our country safe."

"I have no doubt that their presence will only strengthen what is already the world's finest submarine force," Dodd said. A defense official told The Associated Press that numerous physical changes to submarines would have to be made, but that cadets who graduate from the Naval Academy this year could be among the first Navy women to take submarine posts.

The change was first reported by ABC News.

Army Chief of Staff Gen. George Casey told Congress on Tuesday that he supports a reconsideration of women's combat roles.

"I believe it's time that we take a look at what women are actually doing in Iraq and Afghanistan. And then we take a look at our policies," Casey told the Senate Armed Services Committee. While no organized effort is under way, "I think it's time," he added.

An Associated Press report was included in this story.

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The Silent Sentinel via Email

To all of my Shipmates and families who currently receive our Great newsletter via the mail who would like it sent via email or continue to receive it via mail, please fill out the form and mail it to the base or myself. We are trying to cut the cost of the newsletter down from \$3700 to about \$1900 a year. By receiving the Silent Sentinel via email will cut down the printing and mailing cost. The other plus to receiving it via email is you can save it on your computer and not have the paper lying around the house.

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Robert Bissonnette 1525 Walbollen St. Spring Valley, CA 91977-3748 USSVI Base Commander c/o VFW Post 3787 4370 Twain Ave. San Diego, CA 92120-3404 DUE TO LOGISTICS CONSTRAINTS, ALL INPUTS FOR THE SILENT SENTINEL MUST BE IN MY HAND NO LATER THAN **ONE WEEK** AFTER THE MONTHLY MEETING. IF I DO NOT RECEIVE IT BY THIS TIME, THE ITEM WILL NOT GET IN. NO EXCEPTIONS! MIKE

MARCH Meeting

Our monthly meetings are held on the second Tuesday of the month at VFW Post 3787, 4370 Twain Ave., San Diego. Our March meeting will be on 9 March 2010. The post is located one-half block West of Mission Gorge Road, just north of I-8. The meeting begins at 7 p.m. The E-Board meets one hour earlier at 6 p.m.

Check us out on the World Wide Web www.ussvisandiego.org

BINNACLE LIST

CJ Glassford Mike Hyman Chuck George

Submitted by Mike Hyman

Submarine Losses in MarchSubmitted by C J Glassford



BARBEL (SS 316) - 81 Men on Board:

Sunk, on 4 February 1945, by Japanese Naval Aircraft, In South China Sea, Palawan Passage:

"ALLHANDS LOST"

SHARK #1 (SS 174) - 58 Men on Board:

Sunk, on 11 February 1942, by Japanese Destroyer, in Makassar Strait, 120 Miles East of Menado, in the Celebes

Sea: "ALL HANDS LOST"

AMBERJACK (SS 219) - 74 Men on Board:

Probably Sunk, on 14 February 1943, by Combined Efforts of a Japanese Seaplane, Torpedo Boat, and Submarine Chaser, Off Cape St. George, New Britain: "ALL HANDS LOST"

POMODON (SS486) - Duty Section on Board

Battery Explosion and Fire, on 21 February 1955, from Hydrogen Buildup during Recharging of batteries, At San Francisco Naval Shipyard: "5 MEN LOST"

GRAYBACK (SS 208) - 80 Men on Board:

Probably Succumbed, on 27 February 1944, to Damage Inflicted, by Land Based Japanese Naval Aircraft suffered the day before, in the East China Sea: "ALL HANDS LOST"

TROUT (SS 202) - 81 Men on Board:

Most likely Sunk, on 29 February 1944, by Japanese Destroyer, in the Philippine Sea Area, Off Formosa:

"ALL HANDS LOST"



Base Officer Nominations

There is only one month left to nominate your future Base officers. Nominations will be closed at our February meeting. Elections will be held at our February meeting. Newly elected officers will be installed at our March meeting.

The candidates are:

Base Commander - Bob Bissnonnette

Base Vice Commander - Bill Earl

Base Junior Vice Commander- Jim Bilka

Base Secretary - Manny Burciaga

Base Treasurer - David Ball

Charlie Marin - Nominations Chairman

Commander's Corner

March 2010

Hello to all my shipmates and Happy New Year!!!!! Sorry I haven't written anything in a while, but work has kept me pretty busy and out of town. Thanks to all who helped out in the Christmas Party and for those who attended. It was Great having our brothers from the Scamp Base and our WWII SUBVET Heroes together for that special dinner. And we can't forget about the Ladies Aux from the VFW Post who did all the cooking (Linda). Now things for this year to come...

We, the E-Board, decided to hold off on the election of new officers until this month so more members could vote. The last meeting only had 23 people in attendance due to the weather and we didn't think we had enough people to hold the election. So we will hold it this month!! Other things coming soon is the parade in Riverside in April. The Old Timers lunch on 16 April and the Submarine Birthday Ball on 17 April. Hopefully I will be getting fliers on both events soon and will have them posted in the Sentinel. I'm looking forward to this Summer for the Annual Picnic at Sub Base. So far it's been a Great turn out. Lots of food and drinks and lots & lots of fun for the day.

Now on a sad note...I have attended 2 funnels in the last few months for our shipmates who went on "Eternal Patrol". And the families are struggling with matters like: who do I talk to about my VA benefits, retirement pay benefits, and medical benefits (TRI-CARE Prime/for Life) and many more thing. Guys, talk to your wife, loved ones and your family to make sure they understand what you have set-up for them in case anything happens to you. I have been able to get them in the right direction, but I don't have all the answers. Believe me, I love to help out when I can, but can only do so much. A place I found to help is a web site called Military handbooks.com. You can download several books on Retirement Benefits, Health Care, Space A directory and a few other books. The best thing about it is that it is FREE!! and have yearly updates (new books). The point is...make sure your family is Taken Care of when you're gone. With any luck, I'm looking forward to serving as the Base Commander for another term and I hope I can do as good of a job as I have been doing. Take care and God Bless.

Your Base Commander, Bob Bissonnette

HOLLAND CLUB MEMBERS

The following is a list of all the New (overdue) Holland Club Members who will recieve their Certificate, Card and Patch at this meeting (if you can not attend and would like your Holland Club package mail to you, please call me or email me at 619-251-7095 or rbisson250@aol.com):

Art Davis
Paul Adams
George Conro
James Kuezkowski
Steve Ramos
Thomas Rudd
Leland White

Charles Andricci Ramon Cabalona Alan Cabot Daniel Castro Joel Eikam Richard Fullen Chester Huffman John Jenkins Jr. Edward Mohler IV John Owens Daniel Thompson

Jack Sadler

There is another group that was submitted for this years Holland Club. When Ron or I recieve the certificates, we will present them at the following meeting.

New Airlock Mini-Sub For US Navy SEAL 'Operations'

May Not Be Compatible With Nuclear Stingray Motherships By Lewis Page, The Register (UK), February 11, 2010

The US Navy SEALs, America's secretive frogman-commando elite, are to get a new and enlarged pocket submarine which will allow them to travel most of the way to an objective inside in the dry and then exit through an airlock before swimming on for their final approach.

The SEALs and comparable elite forces such as the British SBS have long used "wet" Swimmer Delivery Vehicles (SDVs) to approach an objective below the waves, allowing them to move faster and further than an unaided frogman can. With a normal SDV, the frog-trooper isn't inside a pressure hull - he is immersed in the surrounding water. This can be a problem, as hours spent unmoving in cold water can sap the strength of even the steeliest underwater warrior. Hence the desire for a mini-sub with a proper pressure hull and an airlock, allowing attacking frogmen to travel dry.

For many years, the SEALs were known to be working on this via the so-called Advanced Swimmer Delivery System (ASDS). But the prototype ASDS was dogged by technical snags and never reached an acceptable standard of performance. It was sternly criticised by the US Government Accountability Office.

The coup de grace for the unfortunate ASDS was administered when it caught fire while stored ashore and was gutted. This left the SEALs reliant on their trusty 1970s-vintage open-water Mark 8 SDVs. (There was also a Mark 9, capable of firing torpedoes, but this was retired in the 1990s*).

Following the ASDS disaster it appeared that the US special-ops community would henceforth content itself with a new replacement open-to-the-sea SDV, somewhat modernised, under the name Shallow Water Combat Submersible.

However, this week brings an announcement by the US Special Operations Command that they intend next month to lease an S301 submersible from Virginia company Submergence Group, which also offers a two-man research sub. The S301 is to be delivered to the SEAL units at Pearl Harbour in Hawaii, formerly the home of the ill-fated ASDS, and will "be used by field units for doctrinal, operational, and organizational purposes" - with "operational" being the most interesting word.

Will it be able to dock with the nuclear-powered underwater SEAL motherships?

Submergence Group themselves are fairly tight-lipped about their S301's performance, but they do specify that it can carry two pilots and 6 swimmers - or underwater robots, inflatable boats etc. The SEALs also state that in their opinion the S301 is a "lock out" boat capable of unloading the six passengers in a single airlock cycle. They also believe that it can cruise at better than 5 knots and travel at least 10 nautical miles on a single li-ion battery charge.

One of the most critical factors affecting the design of the SDVs and then ASDS was the fact that the short-ranging battery minisubs are carried into range of their objectives aboard full-size US Navy nuclear submarines. With the SDV, a large "Dry Deck Shelter" airlock hangar is fitted to the sub's hull to hold the minisub and allow its crew of SEALs to board.

The ASDS was too large to fit into a cramped hangar, and was intended to dock with the sub directly: it was this which proved its downfall, as it tended to suffer serious damage if the carrying sub went at all fast.

Whether the S301 is intended to operate from a mothership is unclear. It seems to be significantly bigger than an SDV, so dry-hangar operations are probably out: on the other hand there's no indication of its being able to mate with a full-size sub's escape hatch.

It seems likely that the S301 will move over long distances by other means, probably using a surface support ship. The US Navy's SSGN underwater special-ops motherships - Ohio class ICBM subs stripped of their nukes following arms-reduction treaties, and refitted with conventional cruise missiles plus accommodation for a force of frogman-commandos - will probably have to rub along with SDVs for a while yet.

Underestimating China

By Adm. James A. Lyons, Washington Times, February 12, 2010

On a recent visit to Australia, Secretary of the Navy Ray Mabus downplayed the threat posed by China's rapid modernization of its military forces, highlighted in Australia's 2009 Defense White Paper. With no discernable threat, China's unprecedented force modernization program has grown at a double-digit rate for the past 10 years.

Though China professes that the modernization of its military forces threatens no one and is only for defensive purposes, it is classic Chinese subterfuge. Every new weapons system it has acquired or developed is designed specifically to target or intimidate U.S. military forces. For example, China's development of an anti-ship ballistic missile is designed to target U.S. aircraft carriers - not some commercial container ship. It has purchased from Russia the Supersonic SS-N-22 Sunburn anti-ship cruise missile, which was designed specifically to strike our Aegis cruisers and destroyers. It has tripled to 36 the number of surface combatants carrying anti-ship cruise missiles.

China's strategic modernization program is no less impressive. Its four new nuclear missiles - some probably with multiple warheads - coupled with its recently demonstrated anti-ballistic-missile and anti-satellite intercept capability cannot be ignored. Nor can its development of a new strategic bomber and a fifth-generation fighter.

The building of underground submarine pens on Hainan Island, which can house both strategic and nuclear-attack submarines, cannot go unnoticed. By this year, China could have 60 attack submarines. Hainan Island's strategic location provides quick access to the critical sea lines of communication that lead to northeastern Asia and Australia, plus ready access to the broad reaches of the Western Pacific. This facility, coupled with China's illegal action to claim the entire South China Sea as part of its "historic waters," should be a wake-up call. Further, its unilateral claim of sovereignty over disputed islands in the South China Sea, including the Paracels, Spratlys, Senkaku and Taiwan, provides substance to China's goal of dominating an island chain that includes Taiwan. Taiwan is the key to extending that dominance out to a second island chain that includes Guam.

The Australian Defense White Paper properly recognizes the threat posed by China to Australia's national security and also highlights the adverse impact it could have on U.S. naval and Marine forces in the Western Pacific. Australia places its security not only on its own self-reliant military forces, but on the strategic underpinnings provided by its most important ally, the United States. In that sense, Australia is concerned about the reduction in U.S. strategic forces and the lack of a modernization program. The extension of the U.S. strategic umbrella is critical to Australia, as it is to our other friends and allies in the region, including Japan and South Korea.

According to reports, Mr. Mabus stated that the immediate challenges to stability across the Pacific did not stem from China's growing naval power, but the threat from pirates, terrorists and illegal fishing. This view obviously reflects the Obama administration's new strategy of not preparing for major conflicts, which is a formula for disaster. Further, it plays into the China propaganda line that its modernization is only for defensive purposes. China goes on to state that it has never committed aggression against anyone. This propaganda is repeated by pro-China supporters, plus a line

attributed to Henry Kissinger that "military imperialism is not China's style." Then China's aggression in Tibet, Vietnam, India, Russia and the South China Sea must have been aberrations.

How much further will Chinese imperialism reach, when, by the end of this decade, it could have multiple aircraft carriers, a growing large-ship amphibious navy, near nuclear parity should the president succeed with further U.S. nuclear warhead reductions, and growing numbers of fifth-generation fighters? It's not just this picture that worries some of our Australian allies, but also the refusal of the Obama administration to see how it may be accelerating a growing threat.

I agree with Mr. Mabus that our commitment to the Western Pacific region must remain absolute. Many of the programs that need to be supported to enhance that commitment go beyond the Navy's budget.

Our recently announced sale of the Patriot defensive weapon system to Taiwan was a good start, but more needs to be done. Taiwan also needs F-16 fighters now, then fifth-generation F-35s later this decade, and submarines. We should never let Chinese bluster - like its threat to cease its mostly useless "assistance" to end Iran's and North Korea's nuclear programs - interrupt American aid to democratic Taiwan. The Navy budget needs to include funding for a 12th aircraft carrier, plus funding for a core surface naval force that is imbedded with the capabilities of a Zumwalt-class destroyer to counter known and future threats.

Unlike Mr. Mabus, I can see clearly that China is a real and growing threat to U.S. naval forces in Asia, to U.S. allies and friends such as Taiwan and to freedom of navigation in the maritime and outer-space realms. Denying these facts will not make China go away and will not impress our allies.

(Retired Navy Adm. James A. Lyons was commander in chief of the U.S. Pacific Fleet and senior U.S. military representative to the United Nations.)

At \$7 Billion, New Strategic Sub Threatens Conventional Fleet Funding

By Jason Sherman, Inside the Navy, February 15, 2010

The Navy's new shipbuilding plan affixes a price tag of as much as \$7 billion for each new submarine purchased to modernize the undersea leg of the nation's nuclear triad, the first publicly disclosed estimate and one large enough to significantly encroach on funding for conventional shipbuilding within a decade.

The Navy's new five-year investment plan — from fiscal years 2011 to 2015 — includes a down payment to begin work on an Ohio-class submarine (SSBN) replacement, a 12-boat buy that must begin in earnest by FY-19 and could cost between \$72 billion and \$84 billion, according to the Navy's new 30-year shipbuilding plan delivered to Congress along with the FY-11 budget request.

The "need to fund SSBN recapitalization will result in some risk to the Navy's shipbuilding plan" beyond the Pentagon's current five-year spending plan, the report states. Still, Navy officials drafting an FY-12 to FY-17 investment plan this spring must grapple what ships the service can afford to buy while modernizing its strategic deterrent capability.

"Assuming a unit cost of about \$6-\$7 billion per ship (consistent with the cost of the Ohio-class SSBN), it is critical to understand the impact of these ships on the remaining recapitalization plan," states the Navy's "Report to Congress on Annual Long-Range Plan for Construction of Naval Vessels for FY-11," dated February 2010.

The Navy plans to continue using a \$6 billion to \$7 billion range for a new SSBN(X) "until a definitive cost estimate is complete," the report states. "The estimated cost should be refined and reported in a subsequent report to Congress."

The Navy's FY-11 budget request includes \$609 million in research and development funding for SSBN(X). The shipbuilding report outlines for the first time how the Ohio-class replacement procurement threatens to compete with resourcing for other ships the Navy wants to buy at the same time.

The SSBN(X) subs "require significant resource commitments during the period when they are being procured," the report states. "The timing of the replacements for these important strategic assets is inextricably linked to legacy retirements. The latest start for the lead SSBN(X) is FY-19 and the replacements must start reaching the operational force by FY-29. There is no leeway in their plan to allow a later start or any delay in the procurement plan."

Part of the challenge for the Navy is this: at the same time new SSBN(X) subs are being purchased, the service will be facing "wholesale end-of-service-life retirements" of its Los Angeles-class attack submarine fleet; its CG-47 Ticonderoga class guided missile cruisers; DDG-51 Arleigh Burke class guided missile destroyers; and LSD 41- and LSD 49-class dock landing ships.

"While the SSBN(X) is being procured, the Navy will be limited in its ability to procure other ship classes," states the report. "This slowdown in procurement will occur when the Navy needs to be procuring at least 10 ships per year to maintain its force level against the anticipated ship retirements from the 1980s and 1990s."

The 30-year shipbuilding plan estimates the Navy would require on average \$15.9 billion annually. However, in the near term — between FY-11 and FY-15 — the Navy needs \$14.5 billion per year.

The Pentagon, according to the report, recognizes that spending on new ships during the period between FY-21 and FY-30 "will exceed this limit, averaging about \$17.9 billion per year over that period. Executing the procurement of the SSBN program and sustaining minimum levels of acquisition in our remaining critical programs precludes funding this period at a level below that currently projected."

In a draft version of the Navy shipbuilding plan, first reported by sister publication Inside the Pentagon on Dec. 7, the Navy presented an alternative, long-range inventory that would squeeze dozens of conventional warships from its force if the service were required to pay for the SSBN(X) modernization from its own budget, including: 19 DDG-51 destroyers, 15 Littoral Combat Ships, four attack subs, two LPD-17 amphibious ships, one LH(X) amphibious ship, seven T-AO oilers, two sub tenders and six Joint High Speed Vessels.

The final version of the report to Congress does not indicate that the Navy has received any new authority to plan on higher annual allocations. However, the number of conventional ships procured while the SSBN(X) subs are purchased does not plummet as suggested in the draft report.

US Admits Salvaging Sunken Soviet Submarine

By Tom Leonard, Daily Telegraph, February 14, 2010

The American government has finally revealed details of a secret mission to raise a sunken Soviet submarine.

The admission ends more than 30 years of silence over one of the most elaborate and expensive projects of the Cold War.

The CIA has always refused to confirm even the barest details of Project Azorian, a daring 1974 exercise that was backed by the industrialist Howard Hughes and estimated to have cost £1 billion in today's money.

However, following an application to declassify the information under the US Freedom of Information Act, the CIA has released an internal account of the mission, albeit with some of the biggest mysteries still unanswered.

In the 50-page article published in 1985 in the agency's in-house journal, the CIA details how President Nixon went against the advice of his senior military chiefs in the hope of gaining crucial intelligence from the nuclear missiles being carried by the sub.

The Soviet Golf-II sub, the K-129, sank in 1968 in the Pacific, northwest of Hawaii, in circumstances that have never been explained.

It was carrying three ballistic missiles armed with nuclear warheads. According to the newly-released papers, despite the difficulties of reaching the vessel some three miles down, Richard Nixon ordered the creation of a task force to bring it to the surface.

The project was nearly cancelled due to soaring costs and concern that it might damage improving US-Soviet relations.

However, a portion of the sub was eventually winched to the surface by the Hughes Glomar Explorer, a specially-designed salvage ship using a unique lifting cradle.

Mr Hughes lent his name to the project to give the ship cover as a deep-sea mining vessel but the CIA papers reveal that she was continually dogged by Soviet ships.

Fearing the Russians might even try to storm the ship, the Americans blocked up its helicopter landing pad with crates.

The Americans buried six lost Soviet mariners at sea, after retrieving their bodies in the wreckage.

Exactly what the operation managed to salvage remains unclear as portions of the CIA text have been redacted, but historians and journalists have concluded that the most sensitive Soviet equipment was never recovered The CIA article – obtained by the National Security Archive, an independent watchdog – mentions only "intangibly beneficial" results such as the morale boost it gave to US intelligence and advances in maritime heavy-lifting technology.

Nuclear Submarines Delayed Because Of Lack Of Personnel

Barents Observer, February 12, 2010

Construction of new Russian nuclear submarines is delayed because Sevmash shippard in Severodvinsk lacks qualified workers, says shippard Director Nikolay Kalistratov.- Our workforce faces serious tasks, therefore we have to use every effort in order to carry out projected plans and deliver orders in time, Kalistratov said according to a press release from Sevmash. – We need to employ another 500 qualified workers as soon as possible, he said.

The information about the delays came up at a meeting at Sevmash where member of the Russian Government's Commission for the Defense Industry Vladimir Pospelov and Deputy Commander of the Russian Navy Nikolay Borisov took part.

Sevmash shipyard in Severodvinsk outside Arkhangelsk is working on several large strategic important orders at the same time: The shipyard is currently building nuclear powered submarines of the new Borey-class. The first one submarine, "Yury Dolgoruky", is currently being tested in Russian Arctic waters. "Aleksander Nevsky" and "Vladimir Monomakh" are under construction, while the keel of "Svyatitel Nikolay" was laid in December 2009, as BarentsObserver reported.

In addition to this, Sevmash is about to finish construction of Russia's newest nuclear powered attack submarine "Severodvinsk" and continues work on "Kazan" of the Graney-class, BarentsObserver reported.

Thousands of workers are involved in construction of the ice-strengthened platform Prirazlomnaya for Gazprom and modernization of the Russian aircraft carrier "Admiral Gorshkov" for the Indian Navy. Sevmash shipyard in 2008 had 25 000 workers according to Wikipedia.

The Chinese Threat Below

Defence Industry News, February 12, 2010

Recently, the Taiwanese Navy detected an unidentified submarine outside one of its major naval bases. Ships and helicopters pursued the contact, but the suspected submarine left the area. A Chinese boat was suspected, mainly because for the last decade, Chinese subs have increasingly been showing up close to Japan and South Korea as well.

Two years ago, Japan increased anti-submarine patrols in international waters, just outside Japanese territorial waters. Chinese submarines were apparently exercising there more frequently, looking for Japanese, South Korean and American warships to play tag with. The U.S. has also redirected more of its space based naval search capabilities to assist the Japanese.

Chinese Song class diesel electric and Han class nuclear powered boats have been detected and tracked with increasing frequency over the last few years. In that time, one of each of these was spotted stalking the American carrier USS George Washington, as it headed to South Korea for a visit.

China is rapidly acquiring advanced submarine building capabilities, and providing money (for fuel and spare parts) to send its subs to sea more often. Moreover, new classes of boats are constantly appearing. The new Type 39A, or Yuan class, looks just like the Russian Kilo class. In the late 1990s, the Chinese began ordering Russian Kilo class subs, then one of the latest diesel-electric design available.

Russia was selling new Kilos for about \$200 million each, which is about half the price other Western nations sell similar boats for. The Kilos weigh 2,300 tons (surface displacement), have six torpedo tubes and a crew of 57. They are quiet, and can travel about 700 kilometers under water at a quiet speed of about five kilometers an hour. Kilos carry 18 torpedoes or SS-N-27 anti-ship missiles (with a range of 300 kilometers and launched underwater from the torpedo tubes.) The combination of quietness and cruise missiles makes Kilo very dangerous to American carriers. North Korea and Iran have also bought Kilos.

The Chinese have already built two Yuans, the second one an improvement on the first. These two boats have been at sea to try out the technology that was pilfered from the Russians. A third Yuan is under construction, and it also appears to

be a bit different from the first two. The first Yuan appeared to be a copy of the early model Kilo (the model 877), while the second Yuan (referred to as a Type 39B) appeared to copy the late Kilos (model 636). The third Yuan may end up being a further evolution, or Type 39C.

Preceding the Yuans was the Type 39, or Song class. This was the first Chinese sub to have the teardrop shaped hull, and was based on the predecessor of the Kilo, the Romeo class. The Type 39A was thought to be just an improved Song, but on closer examination, especially by the Russians, it looked like a clone of the Kilos. The Yuan class also have AIP (Air Independent Propulsion), which allows non-nuclear boats to stay underwater for days at a time. China currently has 13 Song class, 12 Kilo class, two Yuan class and 25 Romeo class boats. There are only three Han class SSNs, as the Chinese are still having a lot of problems with nuclear power in subs. Despite that, the Hans are going to sea, even though they are noisy and easily detected by Western sensors.

China Cites 'Major Security Breach'

United Press International, February 12, 2010

BEIJING — China was the victim of a "major security breach" by an unnamed foreign intelligence agency, a Community Party-backed newspaper says.

According to the Global Times, a foreign agency spirited away top-secret information on Chinese submarines by implanting a secret code in a greeting card it sent to a researcher at a military engineering institute, The New York Times reported Friday.

The Chinese newspaper quoted one government official who complained such attacks were "ubiquitous" in China.

Even though the story could not be confirmed, the Times says it is a sign that China is worried about the threat the Internet poses to its security and political stability.

Political analysts and technology experts in the United States say China's attempt to tighten its grip on Internet use is partly driven by a belief that the West is using the malware to weaken China militarily and stir dissent internally.

Navy's Acquisition Methods Slow Down Deployment Of Undersea Robots

By Sandra I. Erwin, National Defense Magazine, March 2010

The Navy recently experienced sticker shock when estimates for a robotic mine-hunting vehicle came in at more than \$12 million apiece, or 51 percent higher than expected.

The troubled "remote mine-hunting system" once again has drawn attention to the Navy's difficulties in developing and deploying robotic systems from ships. Several programs during the past two decades were launched and then sputtered as a result of either unaffordable prices or simply inadequate technologies that weren't suited to the demands of the fleet.

Chief of Naval Operations Adm. Gary Roughead in recent months has directed Navy planners to boost funding and to speed up the design and production of unmanned systems. But he cautioned against pouring money into technological pipedreams that the Navy can't afford. His pitch is backed by recommendations of the Naval War College's strategic studies group, which concluded that the Navy needs to do a better job equipping ships at sea with robotic systems to help automate tasks currently done by sailors, and to improve ships' capabilities to detect mines and other threats.

One of the problems with earlier attempts to build unmanned vehicles was that they did not interact well with existing ships and communications systems, Roughed said in a speech at the Brookings Institution last fall.

Every ship in the fleet today will be in service at least through 2020, so the Navy does not have the luxury to design unmanned vehicles that can't be deployed from older ships, Roughead said.

A huge obstacle to deploying more robots in the Navy - and partly the reason why the remote mine-hunting system ran into budget problems - is the acquisition bureaucracy, Roughead said. "We have some inertia to overcome because of the way that we work on things in the Pentagon, the procurement system. : If we don't break out of those old ways and think about new deployment concepts, I'm not sure that the investments that we make will move us that much faster into the future." The speed at which technology moves means the Navy must change the way it determines system requirements so it doesn't end up with obsolete technology by the time an unmanned vehicle enters service, Roughead said.

The next hurdle the Navy must overcome is often the lack of interoperability between robotic systems and the rest of the fleet. "I am often struck that as we talk about unmanned systems we've really become enamored with the vehicle itself and there has been very, very little discussion and arguably little work on: the network and the architecture of the network, how the information will be moved, what are the redundancies that you would have in place, and what are the common protocols that are going to be required," he said.

In the area of autonomous underwater vehicles, Roughead said, the Navy is not taking advantage of existing technology because its "operational concepts" are not flexible enough to allow the adoption of new systems. "I'm very interested in trying to move forward with autonomous underwater vehicles," he said. "We are farther ahead technically on some of the underwater systems than we are operationally."

In late 2009, the Navy published a solicitation for the development and production of two lightweight autonomous underwater vehicles that would be used for search and surveillance. Industry proposals are being evaluated this summer.

Vice Chief of Naval Operations Adm. Jonathan W. Greenert, echoed Roughead's call for greater use of unmanned underwater systems for surveillance and patrolling. "The role of unmanned systems is evolving to the point where we are now surveying our country's harbors. : So I think that when you look at expeditionary warfare and mine warfare, that is where unmanned systems can play an extremely significant role," Greenert said at the NDIA Expeditionary Warfare conference in Panama City, Fla.

Manufacturers of robotic systems, meanwhile, are hopeful that Roughhead's rhetoric will translate into actual purchases of new hardware.

"It's helpful that the CNO is saying the right things, and that these discussions are being elevated," said Edison Hudson, a senior executive at iRobot's underwater vehicles research division.

The company is working on low-cost smart robots that can find and destroy mines underwater, said Hudson. One of the most successful is the "Sea Glider," which can stay out at sea for up to nine months. The Navy's oceanographer has purchased 11 vehicles for research and to collect climate and oceanographic data.

The company also is working on 30- to 60-pound "expeditionary" underwater robots that could be deployed by a single operator or a squad of Navy SEALs.

Previous generations of these underwater surveillance systems were much larger and more complex, said Hudson. "We're looking at how these small systems can be integrated into other unmanned systems or traditional vessels." Small robots also could be launched from sonobuoys, he said. These are relatively small expendable sonar systems that are dropped from aircraft or ejected from ships.

The Sea Glider, which weighs 110 pounds, can be launched from inflatable rafts or fishing boats, he said.

The next phase is to develop expendable vehicles, said Hudson. But it may take a long time for the Navy to rewrite its operations manual to accommodate such vehicles.

"The challenge is to develop concepts of operations and to get 'buy-in' from programs," he said.

The Navy would greatly benefit from autonomous robots that could destroy mines, Hudson said. Currently the process is highly labor intensive. A human operator guides the neutralizer from a helicopter that has to hover above the mine. "We foresee this being replaced by autonomous systems that can take cues from a survey ship," he said. The robot could survey an area, identify the location, mark it, and then pull away and request a neutralizer. "We have demonstrated this to the Navy, but they have not followed up in the acquisition yet."

At iRobot, engineers believe these countermine vehicles can be made at relatively affordable prices, Hudson said. "We'll be able to take advantage of general-purpose designs. : Instead of \$1 million systems, we're talking about \$100,000 systems."

The company has built several man-portable unmanned underwater vehicles that could soon be ready for real-world use, he said.

Miniaturization and digital technology are far more advanced than when the Navy purchased its current unmanned underwater vehicles in the 1990s, Hudson said. "Just by using modern electronics you get a size and power advantage. : A lot has been done in imaging sonar to make high-resolution sonars that are compact."

With vehicles as small as four to five inches in diameter, "We can do things that are quite extraordinary," he said. "Battery technology is not improving at the rate that computing power is, but it is improving."

Details on the long-term outlook for naval underwater robots are expected in the Navy's updated master plan for unmanned underwater vehicles, which has not yet been released.

Deputy Assistant Secretary of the Navy for Budget Rear Adm. Joseph Mulloy, said the Pentagon requested \$99 million in fiscal year 2011 to study energy sources and unmanned control technologies for new systems. "We're actually looking at a plan that lays out [technology requirements] in both our air vehicles and our undersea vehicles."

Arihant To Be Armed With Ballistic Missiles

By Rahul Singh, Hindustan Times, February 17, 2010

The man steering India's highly classified nuclear-powered submarine programme has acknowledged for the first time that the warship will be armed with ballistic missiles.

Vice-Admiral D.P.S. Varma (retd), Director General, Advanced Technology Vehicle (ATV) project, told HT at DEFEXPO-2010, "The K-15 submarine-launched ballistic missiles jolly well be there on INS Arihant when it is inducted into the Navy. The N-sub should hopefully be with the Navy by the end of 2011."

The K-15 missile, a closely guarded DRDO secret, is capable of delivering a nuclear warhead up to 700 km. With 12 ballistic missiles in its arsenal, the Arihant will complete the sea-leg of India's nuclear triad and give it enduring nuclear strike and counter-strike capabilities. India can carry out nuclear strikes with fighter planes and land-launched missiles.

Asked how work on Arihant was shaping up, Varma said, "We are on track. But the proof of the pudding lies in the eating. So we will know when the Navy inducts it."

The usually tight-lipped Varma said India's submarine fleet should have five to six nuclear-powered ballistic missile submarines. He said plans were afoot to build two more nuclear-powered submarines to reinforce India's strategic deterrent force at sea. He said, "We have to cross a certain milestone before going into specifics."

Larsen & Toubro, which built the hull for Arihant, has fabricated the hulls for the new N-subs. The United States, Russia, the UK, France and China are the only countries that can deliver nuclear warheads from a submarine.

RAPVLA: Tracking Stealth Submarines In Deep Water

Defense Industry Daily, February 18, 2010

Submarines with improving stealth and attack capability – particularly modern diesel attack submarines – are proliferating worldwide. Locating these relatively inexpensive but extremely quiet boats presents a challenge to the US Navy, then Chief of Naval Operations Adm. Michael Mullen warned Congress in 2007 testimony.

To counter this threat, the Navy is pursuing a distributed and netted approach to anti-submarine warfare (ASW). Among the ASW programs the Navy is pursuing is the Reliable Acoustic Path Vertical Line Array (RAPVLA). The RAPVLA is a deep water, bottom-mounted, high-grain sensor system that can automatically detect, classify, localize, track and report contacts of interest, such as stealth submarines.

Lockheed Martin recently received a \$7 million order for applied research in support of the RAPVLA program... In recent years, the Navy has researched the utility of deep water acoustic sensing technologies that exploit the deep water reliable acoustic path (RAP) using vertical line arrays (VLAs).

The first RAPVLA array was large and deployed over the side of a research vessel. The measured acoustic signals were routed to a central node that served as a data recorder.

The Navy would like to develop RAPVLA systems that are smaller and deployed from tactical naval platforms using sonobuoys, torpedoes and other existing methods.

Moreover, the Navy wants future arrays to operate autonomously with persistence to support ASW applications. Data from the arrays would be transmitted to surface ships using acoustic modems or similar technology.

The long-term goal of the Navy's ASW strategy [pdf] is to have all sensors, platforms, and weapons systems linked through the FORCEnet distributed network system (DNS).

To develop and test RAPVLA technology, the Naval Sea System Command awarded in May 2009 a \$10 million contract to Lockheed Martin Information Systems & Global Services in San Diego, CA

Why US Ignores China And Sells Arms To Taiwan

By Jonathan Adams, Christian Science Monitor, February 18, 2010

Taipei, Taiwan — The latest arms package for Taiwan, cleared for sale by the White House Jan. 29, has more political than military significance, military analysts say.

With Taiwan playing catch-up to a rapidly modernizing People's Liberation Army (PLA), the deal does little to alter a military balance that has tipped in China's favor.

But the arms do send a political message.

Beijing always objects loudly to US arms sales to the self-ruled island it views as its own. But China has reacted more strongly than usual to this \$6.4 billion package, which includes 60 Blackhawk helicopters, Patriot missiles, minesweepers, Harpoon antiship missiles, and sophisticated command-and-control software. And for the first time, it has threatened sanctions against firms involved in the deal, which include Boeing and Sikorsky Aircraft.

"It's not purely a military issue, it's a symbol," says Arthur Ding, secretary-general of the Chinese Council of Advanced Policy Studies (CCAPS) in Taipei. "It signifies US support for Taiwan's democratic institutions, and for Taiwan this is very important."

Whatever the reason for China's sharper tone, it has little to do with the capabilities of the military gear offered to Taiwan, analysts say. "I don't think they're breakthrough items," says Lin Chong-pin, a professor of strategic studies at Taiwan's Tamkang University. "They're at most maintenance items."

Take the Patriots. China now has some 1,400 short-range ballistic missiles and scores of cruise missiles aimed at Taiwan. Lin said two or three Patriots are needed to knock out every Chinese missile; last week's package included 114 Patriots

"It's a continuation of what we've been asking for, but not a great stride forward for our capabilities," says Mr. Lin.

The Blackhawks may be more significant for disaster relief on the typhoon- and flood-plagued island than for military use, he says. The command-and-control software has long been requested by Taiwan, and, according to Lin, "it doesn't make a huge difference."

Wendell Minnick, Asia bureau chief for Defense News, noted that the 12 Harpoon missiles were for training only.

He says the latest sale was for "legacy" weapons held over from the Bush admin-istration; many of the others were released in 2007 and 2008. The Obama administration added nothing to the list of systems in the pipeline, he says, and left out Taiwan's more sensitive—and militarily signifi-cant—request for advanced F-16 fighters and submarines.

"There was nothing new in the release," says Mr. Minnick. "So the question is actually, 'Will the US continue to back Taiwan's defense needs?"

US weighs its response

Beijing has warned Washington not to sell the F-16s that Taiwan wants. And the submarines request has now likely been "killed," says Ding, of the CCAPS. For several decades, Taiwan's vastly outnumbered military has counted on its edge in quality over the PLA. The PLA's modernization has erased that advantage, leaving Taiwan more dependent than ever on its chief deterrent: the US Navy's Seventh Fleet.

Now, China is developing and deploying submarines, destroyers, and missiles to keep the US out of a fight.

Of particular concern to US planners: an aircraft-carrier-busting antiship ballistic missile, now believed to be in development.

Those expanding capabilities have sparked a debate among Taiwan and US security analysts on how best to respond.

Taiwan's government touts a "preventive defensive" posture that it dubs the "Hard ROC" strategy, a play on Taiwan's formal name, the Republic of China.

In a 2008 essay that was widely discussed in Taiwan's security circles, retired US naval officer William Murray argued that the island should go further, adopting a so-called "porcupine strategy" focused strictly on hunkering down and hardening facilities.

Taiwan's own deterrent

But some in Taiwan say the island needs to strengthen its own offensive deterrent.

"If China continues to modernize its military force, they'll reach a level that our defensive-oriented posture could not withstand," says Ding. He argues Taiwan should develop precision-strike cruise missiles, ballistic missiles, and unmanned aerial vehicles as a deterrent, to "make China think twice" about any attack.

Tamkang University's Lin argues that Taiwan needs F-16s and submarines. But as a last resort, it should also develop a lower-tech deterrent to dissuade China from attempting an occupation of the island.

"Taiwan needs to develop its asymmetrical capabilities, because we cannot confront the PLA head-on," he says. He envisions home-grown, perhaps US-trained "cement jungle guerrilla warfare" units, consisting of trained reserves and snipers who can operate independently and harass PLA occupiers.

"When the PLA comes, let them in – don't engage in bloody, Stalingrad-type warfare," he says. "Give them one shot today, two tomorrow, and three afterward, so they cannot conclude a war."

India-made stealth submarine to be tested next month

By Ananthakrishnan G, Times of India, February 20, 2010

THIRUVANANTHAPURAM: After the 'eye in the sky', here is a home-grown spy in the sea. India is all set to test its "Autonomous Underwater Vehicle-150" off the Chennai coast next month. Developed by the Durgapur-based Central Mechanical Engineering Research Institute (CMERI), a unit of the Council for Scientific and Industrial Research (CSIR), the unmanned vehicle, has immense civilian and military potential.

"AUV-150 will be tested for sea-floor mapping and monitoring of environmental parameters, such as current, temperature, depth and salinity," CMERI director Gautam Biswas told TOI. "Once the technology is proven, it will be customised for military applications, like mine counter-measures, coastal monitoring and reconnaissance. It will also be very useful in cable and pipeline surveys."

The project was sponsored by the ministry of earth sciences and had technical assistance from IIT-Kharagpur. "A full-scale prototype was put to freshwater test in Idukki dam in Kerala recently. All navigational parameters functioned satisfactorily," said S N Shome, group head for robotics and automation at CMERI under whose supervision the AUV took shape.

The prototype weighs 490 kg, is 4.8 metres long and has a diameter of just 50 cm. It packs a wide array of gadgets into its slender frame — depth sensor, altimeter, sonar and GPS and payload sensors — apart from a hybrid communication system that uses radio waves while on the surface and acoustic underwater.

The remote controlled vehicle uses a Lithium polymer battery and can operate up to depths of 150 metres at speeds of 2-4 knots, say sources.

The AUV will leapfrog India to a select group of nations, like the US, Australia, Germany, Russia, Korea and Japan, which are vigorously pursuing autonomous underwater technology and underwater robotics. "The institute had been working on the project since 2003, but with the stress being on indigenization, it was bound to be time consuming," said S Nandy, a scientist associated with the project.

Nuclear-Armed Cruise Missiles to be Scrapped, U.S. Says

Global Security News, February 22, 2010

A forthcoming U.S. nuclear strategy review is likely to call for elimination of the country's nuclear-tipped Tomahawk cruise missiles, Japanese officials told Kyodo News today (see GSN, July 31, 2009).

Plans to slowly phase out the missiles, unofficially communicated to Tokyo earlier this year, were prompted in part by the expense of caring for the weapons. The United States pulled the missiles from its submarines as the Cold War ended, but the weapons were maintained in case they again became necessary, U.S. nuclear experts said.

The matter is expected to be addressed in the new U.S. Nuclear Posture Review (see GSN, Jan. 6). Washington assured Tokyo that the move would not alter U.S. extended deterrence guarantees to Japan.

A policy shift ruling out the possibility of nuclear Tomahawk-equipped submarines docking in Japan could affect a probe into a secret agreement that allowed nuclear-armed U.S. military vessels and aircraft to make such stopovers, according to Kyodo News (see GSN, Jan. 29; Kyodo News/Breitbart.com, Feb. 21).

U.S. Deputy Assistant Defense Secretary Bradley Roberts met Thursday with Japanese diplomatic and defense officials to address nuclear deterrence policy, the Daily Yomiuri reported. The encounter marked the first consultation on the topic between the two powers.

The Japanese officials reportedly asked how the United States would compensate for eliminating nuclear weapons used to protect their nation. In addition, the representatives addressed the ongoing investigations of alleged secret deals between the countries.

The sides intend to prepare a report in November outlining the outcome of the discussions, Japanese officials indicated (Satoshi Ogawa, Daily Yomiuri, Feb. 21).

Women on subs stirs up debate

Navy personnel have mixed reaction to Gates' proposal By Jennifer Grogan and Chuck Potter, The Day, February 24, 2010

Defense Secretary Robert Gates' declaration to Congress Friday that the Navy plans to allow women to serve on submarines is sparking a lively debate in military circles.

In the submarine community, the debate hits close to home.

"As long as "If they are able to do the job, they will probably be accepted pretty easily," said one naval officer named James, who is assigned to a fast-attack submarine and who declined to give his last name.

"If they can't, then ... "He made a fist and extended his thumb up and over his shoulder.

James and a fellow submarine officer, Alan, chatted about the Pentagon's decision as they sipped a beer at Hanafin's Public House on State Street.

Gates notified Congress in a signed letter delivered to the Capitol on Friday. Congress has one month to weigh in on the proposed change.

Both James and Alan said they have been told that the first women on submarines would be officers and speculated that the respect commanded by officers and their management positions would lend itself to more professional conduct and ensure a smooth transition.

"Of course there will be growing pains," Alan said. "But that's true of any change. When it's all said and done, if the Secretary of Defense or the Secretary of the Navy says 'This is what's going to happen,' you do what you're told and you deal with it."

Among submarine veterans, many did not see a reason for the change, but others said it could be worth trying.

"My feeling is, as long as the Navy can man them with men, you shouldn't go looking for women to man subs," said retired Vice Adm. Kenneth Carr, the former commander of the Atlantic submarine force, who lives in Groton Long Point. "Why spend the money to make all the modifications to the submarines and create all the conversations and arguments?"

If there were too few male sailors, Carr said he would "reluctantly" accept women on board.

The Navy's plan would phase in women's service, beginning with officers aboard the larger subs that are easier to retrofit for coed quarters. Women would never serve alone.

Because of the length of time required for training, it would be more than a year before the first women joined subs, assuming Congress raises no major objections that slow the schedule.

Since the mid-1990s, many of the distinctions between who is combat and who is not have been erased.

Women are formally banned from combat posts in the Army, for instance, but routinely serve in jobs such as medics, pilots and drivers that place them shoulder to shoulder with men serving in "combat" jobs.

Al Charette, who served aboard the USS Nautilus, the world's first nuclear-powered submarine, said he worried about the impact to the culture on the submarines.

"When you get 100 guys together, things are said and done that you wouldn't normally do with females around, both on and off the ship," said Charette, of Mystic. "And I just think with females as part of the crew, the camaraderie between the guys is going to be significantly stifled. In the long term, that will impact everything the crew does."

"I'm not in favor, not in the slightest," he added.

Several wives of local submariners have said they are also not comfortable with the idea of women serving alongside their husbands.