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The Silent Sentinel

FEBRUARY 2010

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

was pooled, spanning a busy maritime area that links 25 countries and 80 ports, from Georgia in the east, the Atlantic in the west and the Arabian Gulf to the south via the Suez Canal.

Data inputs on vessels leaving or entering ports or those identified at sea, supplied by port authorities and navies, contain the vessel's name, tonnage, call sign, owner, origin, destination and possibly cargo. By January 2007, soon after launch, about 2,000 movements were passing weekly through the system's main server here.

Today, the V-RMTC is supplied with data by navies within the Wider Mediterranean Community (WMC), which includes the United States, Germany, the United Kingdom, the Netherlands and Senegal, in addition to Mediterranean navies. U.S. Navy vessels in the Mediterranean provide radio data received from merchant vessels' Automatic Identification Systems. Russia is not a member.

The '5+5' Network

In a parallel but separately handled network, five of the European partner navies - Italy, France, Malta, Spain and Portugal - are swapping data with five North African countries - Algeria, Libya, Mauritania, Morocco and Tunisia. The "5+5" network posts 30,000 movements a week. The mainV-RMTC network posts 40,000, said the source. With the five North African nations and Lebanon, which has established a bilateral arrangement with Italy, the nations involved now total 29.

"A new community is also currently being developed to connect eight European navies with six gulf navies within an '8+6' Initiative," said the naval source.

The source said the United States had not yet adhered to the new T-RMN global initiative, but if it did, it would likely input its Mediterranean data only.

"Navies are increasingly involved in patrol work in the Mediterranean to counter criminal activity and immigration, which has a high profile, even if numbers are small," said Stefano Silvestri, president of the Istituto Affari Internazionali, a think tank here partly funded by the Italian Foreign Ministry. "All of which means an extra focus on controlling maritime space," he added.

"The big themes now are drugs, arms, terrorism and immigration," a second analyst said, "meaning better awareness of asymmetric threats through improved radars and information control. The advantage of the V-RMTC is that it is all based on commercial technology and is not exclusive."

The Italian navy is meanwhile investing in naval hardware as well as software, starting with its two Horizon-class frigates, the Andrea Doria and Caio Dullio, as well as its new aircraft carrier, the Cavour, all of which are expected in service by 2011.

Analysts said the threat from hostile submarines is once again being considered by navies in the region.

"The new, quieter Air Independent Propulsion submarines are possibly more dangerous than nuclear subs, and this capacity is likely to pass to a large enough number of states to make it a threat in the medium term," the Italian analyst said.

Italy's military chief of staff, Gen Vincenzo Camporini, has said Italy will maintain its anti-submarine readiness for this reason, as well as to "maintain interoperability with partners, keep up training and continue dialogue with other maritime nations in order to pre-empt any dangerous tendencies on their part."

Analyst Silvestri said another evolution in Mediterranean naval security could also be in the cards.

"If the U.S. sends Aegis vessels to the Mediterranean as part of the new missile defense setup, it could have an influence on both European and Russian navies."

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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.

A subscription to the Silent Sentinel newsletter will be available to surviving family members via internet email, at no charge, upon notification of the Membership Chairman. If a printed hard-copy is preferred, via US Post Office delivery, an annual donation of $5.00 will be requested to cover costs.

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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*

FEBRUARY Meeting

Our monthly meetings are held on the second Tuesday of the month at VFW Post 3787, 4370 Twain Ave., San Diego. Our February meeting will be on 9 February 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
Matt Baumann
Bob Bissonnette
Mike Hyman
Chuck George

Submitted by Mike Hyman

Submarine Losses in January

Submitted by C J Glassford

STURGEON [BELL }(SS25) - Duty Section on Board
Battery Explosion, on 15 Jan 1916, In New York Navy Yard:
" 4 MEN LOST "

S – 34 { BELL }(SS139) - 43 Men on Board
Accidental Signal Cartridge Explosion, on 11 Jan 1934:
" 1 MAN LOST "

S – 26 { BELL }(SS131) - 46 Men on Board
Sunk, on 24 Jan 1942, After Collision with USS (PC460),
In the Gulf of Panama:
" 43 MEN LOST, 3 SURVIVORS "

ARGONAUT { BELL }(SS166) - 105 Men on Board
Sunk, on 10 Jan 1943, By Japanese Aircraft and Destroyers, Southeast of New Britain, in Solomon Sea:
" ALL HANDS LOST "

S – 36 { BELL }(SS141) - 45 Men on Board
Scuttled, on 20 Jan 1943, After running aground, In Makassar Straits: " NO LOSS OF LIFE "

SCORPION (SS278) - 76 Men on Board:
Probably Sunk, on 15 Janauary 1944, by Japanese Mine, in the Yellow or East China Sea: " ALL HANDS LOST "

SWORDFISH (SS 193) – 89 Men on Board:
Possibly Sunk, on 9 Jan1945, by Japanese Coastal Defense Vessel or Mine, Off Okinawa :
" ALL HANDS LOST "

SAN FRANCISCO (SSN 711) - 127 Men on Board:
Struck a Sea Mount, on 8 Jan 2005, while Traveling Submerged at High Speed, South of Guam :
" 1 MAN LOST " – " 23 MEN INJURED "

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

Membership Report for January '2010

New Members: Welcome Aboard to our newest members: Kurt Greiner, of Santee, who qualified on USS Nathanael Green (SSBN 636) in 1977, and 'Rocky' Rockers, qualified on USS Sea Owl (SS-405) in 1956 (who adds the San Diego to his previous list of 8 Base memberships!)

Eternal Patrol: Our base has lost two more of our WWII heroes: 12/26/2009 - ENC(SS) Ed Block who put on his dolphins aboard USS S-34, (SS-139) in 1943, and on 1/4/2010 - Cdr. Avery Willis, who qualified on USS Tunny in 1942. Their memory lives behind our dolphins.

Dues Status: 350 members, however as of 1/18/10, there are still 25 men who owe both Base and National dues, 7 owing Base dues only, and 6 who owe only National dues. Dues for 2010 were payable BEFORE 1/31/2010. Reinstatement after that will result in broken service for longevity purposes (Holland Club, etc.)

Member Notes: All Hands: 1. If you know of any financial difficulty or communications problems regarding any of our men, particularly those who have not paid their dues, please call me. We'll work something out. 2. If you have any suggestions about how I can do a better job of reminding our members to pay dues, don't hesitate to pass them on to me. BOLD RED on the mailing label seems to prevent a few delinquencies, but we need to do better….
Fraternally,
RonG

*NTINS: Growl Tiger

The Sabalo had been on Northern Patrol for 36 days; not a record run, but long enough for Big Ed to develop a hearty thirst to match his size. Upon mooring, the ship' log read; *0800: Moored starboard side to Berth 1, Yokosuka Naval Facility, Yokosuka, Japan. Present are various units of the U.S. Pacific Fleet and the Japanese Maritime Self Defense Force.*

Ed sprinted across the brow and jumped into the first taxi in the long line of base cabs awaiting 302's arrival. He was shouting, "Hiako, hiako," to the driver before the mooring lines were even doubled-up, and was in the Starlight Club by 8:45. It was almost noon before enough men had arrived to fill the barstools.

Soon, everyone but the serious drinkers had a gal on his lap or alongside. These were beautiful women, in western dress like bobby soxers back home, or else in full- dress kimonos. They would have been breathtaking — all of them — even if the crew hadn't spent two months smelling diesel fumes and each other's armpits. Big Ed's regular, Mioko, sat adjacent to the bar on a bench and pouted. He was doing some dead-serious drinking, and she realized that, tonight, her "big teddy bear" would not be promising to marry her and take her back to Podunk. She glared at the Seagram's bottle, which he was stroking with the tenderness that would be hers once he'd drank his fill.

Submariners were eating squid on a stick, drinking Saki, Jack Daniels, San Miguel and anything else available while they smooched, smoked cigars and discussed staying put or moving over to the White Hat Bar (where most men had another bottle on hold). Suddenly, every face turned toward a commotion at the bar. Ed was half standing, with the left cheek of his butt on the bar stool, leaning on his elbows toward Papa San across the bar. It was starting!

"Yeashhh, I'll flip ya fer the juke box..."

Ed slammed a hundred yen piece on the bar, and with the back of his other hand cleared the stool next to him because a shipmate, now on the floor, had pleaded, "No, Babe, no. Please don't do it."

Everyone calmed down though, because Ed flipped Heads and lost the toss. He put a hundred yen in the machine, played She Ain't Got No Yo Yo, and a couple of other tunes.

"All yours." he said to Papa San, and took another swig.

A bottle of beer at the Starlight was about a dollar, or 360 yen, and a bottle of tax-free Ten-High, JW Red, or Smirnoff also cost $1 at the Navy Enlisted Men's Club. Papa San labeled the bottles with a crewmember's name and stowed them while Sabalo was out on patrol or local ops. He then charged a hundred yen, 28¢, for a glass of mix and ice, and poured a very generous shot. Most men drank hard stuff because of the price difference. Only hard-core drinkers drank beer. The real expense was Cherry Drinks for the girls, usually 400 yen a pop, but when someone had an eye on one of the more popular girls; it could go to five- or six-hundred yen. B-girls could drink a torpedo-tube dry if anyone had the cash, so Ed had an arrangement: he always gave Mioko-San all of his money, and she simply waited around for him to soften up enough for her to mold into a Teddy Bear.

About the time six-hundred yen was starting to look cheap to the crew, and the noise level had gone beyond uproar, just about sunset, Big Ed was back at it again. He'd won the coin toss!

Ed slipped getting off the bar stool but regained his balance; he staggered over to the wall behind the Juke Box and yanked the cord out of the wall.
Dean Martin was singing, "At's amo'raaae . . ." and his voice whined down to dead silence as if he'd suddenly been shoved down #2 periscope well.

Big Ed put his shoulder behind the Wurlitzer and began pushing it toward the door. Papa San vaulted the bar in one jump, and yelling in Japanese, tried to curtail Big Ed's progress. Papa San was about five feet tall, so nobody could see him on the other side of the music box; Ed towered over them both.Ed brushed off shipmates, like flies, while bellowing, "Flipped him for the so-bishh, 'n I wun hit."

Papa San was shouting Japanese profanities, and leaving flip-flop skid marks on the cement threshold. Ed's eyes were glazed over so much that he was navigating in darkness like a sub at three hundred feet, but he had little trouble getting the Juke Box out the Starlight's door and into the alley, which was lined with drinking establishments. He pushed it in Sabalo's direction with vividly colored neon reflections shimmering on its curved glass face, and its little wheels clacking on the cobblestone. Papa San disappeared down Submarine Alley, screaming bloody murder and apparently looking for help.

Knowing that the police or the Shore Patrol would soon be on the way, several shipmates, like monkeys hopping around a giant organ grinder, tried to talk Big Ed into putting the machine back, but he was concentrating too hard on overcoming the added weight of a couple of guys riding on top of the machine.

The crewmembers were hoping, with snickering desperation, that he would pass out so they could just find a skip loader or something to get him back home, and in fact, he was starting to look a little drowsy when the Shore Patrol showed up. Everyone was relieved to see him submit meekly to the authorities. He even helped them, as best he could, by moving one foot in front of the other now and again, as the four military police dragged him by the armpits to the SP wagon.
"You're in a lot of trouble," one of them said as if Big Ed could understand English any better than Japanese.

"Take my t' me bunk. I'mn tafer 'pedo room," he slurred softly.

"You're goin' to the brig, big fella; you can't get away with that kinda crap around here."

The crew was trying to help: they offered a twenty-five pound can of coffee and a case of steaks for Ed's freedom. Fortunately, Ed was keeping them too busy to contemplate attempted bribery charges. He liked the idea, and started mumbling that they ought to let him go, so the SP's nasty mood got worse, and they roughly manhandled Big Ed into the back of the wagon, slammed the expanded-metal gate shut with a loud clang, and snapped the padlock. Ed sat down, slumped his shoulders, and became a teddy bear again. The crowd was just turning away when they heard the biggest of the SP's banging the side of the metal cage with his nightstick and bellowing, "Now, le'me hear ya' growl, tiger."

That turned out to be a mistake. Big Ed woke up and tried to find the source of the voice through his glazed eyes. He shook his head once and backed up until his butt was against the pick-up's cab. Then he bent down like a spring compressing, and roared as he slammed forward toward the locked door.

The door held . . . but the entire rear wall of the cage—onto which the door was hinged—flew fifteen feet into the street. Ed landed on his knees between the twisted metal and the pick up. He got up very slowly, with the SP's trying to hold him: one was swinging his baton, and another was sprinting for the radio in the truck. Big Ed dragged his knuckles over to the pick up, roared, grabbed it under the driver's door, and heaved it over onto its side. A rear view mirror went flying; little gems of broken window glass spread out in a fan across the asphalt, sparking beautifully in the neon lights; it sounded like a dumpster had fallen out of a third story window.

Shipmates were screaming, the Japanese audience was screaming and the SP's were screaming. Only Ed was quiet. Three of the SP's were hauling the fourth out of the pick-up cab's window; he was holding the radio mike with its frayed cable dangling beneath. The Japanese were shouting louder now, yanking on the SP's sleeves and pointing to the puddle of liquid which was spreading under the truck. Several sailors slipped around a corner bar onto the main street, with Big Ed in tow, and just missed being run over by a cab. He Who looks after stray dogs and drunken sailors had provided a Base Taxi.

Ed was hoisted into his bunk in the After Torpedo Room with very little trouble—since he was getting tired and pretty malleable by that time. There's was the last vehicle to get on base before the gate guards locked up everything and started searching incoming cabs. Phone exchanges were tied up all night with the complaints of those held up at the main gate for hours. Sabalo sailors chuckled, but the rest of the Navy was not amused.

The wrath of the Base Commander and of SubGroup7 homed in on SS-302; the Skipper had to ensure his bosses that the villain would be severely reprimanded and punished.

Captain's Mast was held two days out at sea when Sabalo departed Yoko for thirty days of local ops; Big Ed was reduced to Engineman 3rd Class—suspended for a month.

Most will say that there was never an engine out of commission when Big Ed was aboard, neither on Sabalo nor any other boat he was assigned to. Some foolishly said that the Fairbanks-Morse Diesels were afraid to make Ed mad, but insiders had seen him actually cuddling the 1600- horsepower monsters, and softly wiping oil from every surface like a mother tending a newborn kid's butt. At sea, he hovered over them, a mother hen, checking for steady heartbeat, whooping cough, or anything that might affect their rhythmic thunder. In port, before heading ashore for liberty, he always patted them gently on his way to the After Torpedo Room escape hatch.

No one ever actually saw Big Ed kiss an engine, but he had been caught smooching Mioko once, so it's not improbable.

Sworn to by RonG Fine Print: *names have been changed to protect the guilty.*
SABALO Newsletter, 23 Nov 09

2009 Expenses, 2010 Budget, and Montly Checking Account Data

The 2009 Expense Report, 2010 Budget, and Monthly Checking Account data are maintained in spreadsheet format. The data is quite detailed--as it should be--and meticulously maintained by the Base Treasurer, Dave Ball. Consequently, it would take up a great deal of physical space in this publication. Were I to print it here--and leave room for other material--the type size of the financial data would be so exceedingly small, no one would be able to read it. Therefore, I am left with the choice to print the data in the Sentinel--albeit the physical limitations of the publication--keeing within the guidelines of our Bylaws--or to make it available via other means and to still have a viable archival record. Consequently, I have decided as Editor that it will be available in it's orginal form, an Excel spreadsheet, **to any San Diego Base member in good standing** requesting it (for a copy, just email me at stamps@fortunesofwar.com). Paper copies of the latest data will be available at the General Meeting. Please again note that this is decision is solely mine as Editor--no one else's. I am the one that has to create the rag you are now reading, trying to make everything fit within the available space--and though I consider myself reasonably creative, I am still not Doctor Who; and I unfotunately do not own a TARDIS (Time and Relative Dimension in Space) machine. I am, of course, open to suggestions.

Mike Hyman
Editor

A Submariner

Only a submariner realizes to what great extent an entire ship depends on him as an individual. To a landsman this is not understandable, and sometimes it is even difficult for us to comprehend, but it is so!

A submarine at sea is a different world in herself, and in consideration of the protracted and distant operations of submarines, the Navy must place responsibility and trust in the hands of those who take such trips to sea.

In each submarine there are men who, in the hour of emergency or peril at sea, can turn to each other. The men are ultimately responsible to themselves and each other for all aspects of operation of their submarine. They are the crew. They are the ship.

This is perhaps the most difficult and demanding assignment in the Navy. There is not an instant during his tour as a submariner that he can escape the grasp of responsibility. His privileges in view of his obligations are almost ludicrously small, nevertheless, it is the spur which has given the Navy its greatest mariners - the men of the Submarine Service.

It is a duty which most richly deserves the proud and time-honored title of.... Submariner.

Submitted by Fred Fomby

Navy Solicits Two Lightweight Autonomous Underwater Vehicles

By Cid Standifer, Inside Defense, Jan. 5, 2010

The Navy has announced that it plans to issue a solicitation for the development and delivery of two lightweight autonomous underwater vehicles.

According to technical specifications posted on the Federal Business Opportunities Web site, the vehicles would be used for search and rapid environmental assessment. They would be designed for one-man deployment, should be capable of carrying out missions along the coast, and would be retrieved afloat or ashore. The Navy is looking for vehicles that are under 60 pounds in weight, including all components, that can operate at a depth of 60 meters, and can travel at two knots of speed for up to eight hours.

In addition to the vehicles themselves, the solicitation will include software development and integration, hardware development and integration, services and documentation, according to an FedBizOps posting.

The statement of work requires that the AUV be equipped with a dual-frequency side scan sonar that can perform bottom-object imaging up to 100 meters below the surface of the ocean, an Imagenex Delta T multi-beam sonar, two-way Iridium satellite communications, an acoustic doppler current profiler or doppler velocity log navigator, an attitude heading and reference system, and a Neil Brown conductivity and temperature sensor.

The AUVs will also be required to have mission planning and review software, as well as on-screen data visualization.
The company that wins the contract will be required to carry out a mid-project demonstration of its work by March 1, 2010, to demonstrate that all of the included software and hardware functions during multiple data-collection and image-gathering missions. A pre-delivery operational evaluation will be start on June 23, 2010 to verify that the vehicles are fully operational, and final delivery of the hardware, software and documentation is expected by Sept. 30.

U.S. Navy Leaves eBay For Best Buy

Strategy Page, Jan. 5, 2010

The U.S. Navy has completed a program to upgrade the sonar systems on all of its nuclear submarines. The A-RCI (Acoustic Rapid COTS Insertion) program involved more than installing faster computers and more memory. That's because COTS stands for "Commercial off-The-Shelf". That means the sonar gear was modified so that it can more easily take advantage of new processors and memory developments. Since these items have been doubling in power, every 18-24 months, for over 40 years, it's about time. In the past, submarines often had sonar systems powered by decade old CPUs, and memory chips that were no longer manufactured. Fortunately, the navy is not alone in running ancient gear, so there were suppliers who bought up old CPUs and memory SIMMs, and sold the stuff to the navy. Sometimes, however, particularly old components could only be found on eBay.

The navy began the A-RCI program in 1998, but it has taken over a decade to debug the system and get the gear into 44 subs, as such major modifications could only be done when the boats came in for refueling (usually halfway through their careers) or for some other major repairs or maintenance. The new Virginia class boats have A-RCI built in.
Sonar, particularly the passive (just listening) type, depends heavily on computer processing power to detect and identify anything out there.

Tell us: Renaming the Navy Department

By Lance M. Bacon, Navy Times, Jan. 5, 2010

Rep. Walter Jones, R-N.C., is continuing with his decade-long effort to rename the Department of the Navy.

And this time, he may pull it off.

The resolution, H.R. 24, would redesignate the Department of the Navy as "Department of the Navy and Marine Corps" and change the title of Secretary of the Navy to "Secretary of the Navy and Marine Corps." Jones says the effort is to ensure the Marine Corps receives equal recognition as a military branch.

The measure has died in committee in previous years. But Jones said Rep. Ike Skelton, chairman of the House Armed Services Committee, told him the measure had a good chance of circumventing committee and being brought to the floor if Jones could find 350 cosponsors by Christmas.

Jones has 362 cosponsors to date. It's the second-highest number of any bill or resolution introduced this year.

What do you think? Is this name change long overdue, or much ado about nothing? Send responses to staff writer Lance Bacon.

A False Nuclear Start

Wall Street Journal, Jan. 5, 2010

The Obama Administration continues to negotiate with the Russians over a new Strategic Arms Reduction Treaty (Start), but one big question is whether it can get the result through the U.S. Senate. A group of Senators is telling the White House that it will have little or no chance of success unless it also moves ahead with nuclear-warhead modernization.

The warning comes in a recent letter from 40 Republican Senators and Independent-Democrat Joe Lieberman reminding the President of his legal responsibility under the National Defense Authorization Act of 2010 to present budget estimates for modernizing U.S. nuclear forces along with any new Start pact.

The Senators are following the suggestions of the important, but too little publicized, recommendations of last year's Perry-Schlesinger commission on the safety and operations of the U.S. nuclear arsenal. The bipartisan report noted, among other things, that the U.S. needs new warheads and nuclear research facilities. President Obama, in his utopian antinuclear mode, has opposed a new warhead despite widespread support for it at the Pentagon, from Defense Secretary Robert Gates on down.

Mr. Obama would be wise to take the warning seriously because he'll need 67 Senate votes to approve any arms-control treaty. Without modernization, it's unlikely that Senators will vote for the significant and probably unwise reductions in U.S. nuclear delivery vehicles that Mr. Obama is negotiating with the Russians.

However, we're not surprised to hear that the President is getting contrary political advice from his Vice President, Joe Biden, who is arguing that the White House should try to get the 67 votes on Start's merits alone. He wants to delay any nuclear modernization decision, holding it out as a carrot to offer Senators in return for ratifying the separate Comprehensive Test Ban Treaty. The Senate rejected the test ban pact when Bill Clinton submitted it in 1999, but Mr. Obama hopes to do better with 60 Senate Democrats backed by his global disarmament agenda.

This wouldn't be the first time Mr. Biden has misjudged a vital security issue – recall his proposal to split Iraq into three parts. The deteriorating U.S. nuclear arsenal is emerging as a big security problem, and Start won't be an easy sell even with the money for warhead upgrades. Mr. Obama could have simply renewed the 1991 Start treaty and pocketed an early diplomatic victory. Instead, he has sought something more ambitious in support of his larger disarmament dreams, and the Russians are demanding a hard bargain in return.

The U.S. has already agreed to steep cuts in its military arsenal, even before the Administration has come out with its Nuclear Posture Review and weapons modernization plan. Last week, Russian strongman Vladimir Putin raised the ante by saying he now wants the U.S. to abandon missile defenses as part of a new Start pact. The Obama Administration's decision to downsize missile defense sites in Poland and the Czech Republic seems to have only emboldened the Russians to push for bigger concessions.

Another issue is verification. With Start's expiration December 5, Russia has pulled inspectors from a factory that's building the next generation of Russian ICBMs and scaled back electronic monitoring – called telemetry – of missile production and movements. The U.S. is trying to undo some of this in negotiations, but Senators will want to make sure that any fix isn't merely cosmetic. If the U.S. is going to reduce its missile and warhead numbers, we need to know what the Russians have in their arsenal.

The stakes here aren't merely whether Mr. Obama can get his treaties ratified; they concern the credibility of the U.S. nuclear umbrella. Mr. Obama says he wants to stop nuclear proliferation but he will only encourage it if our allies begin to believe that the U.S. arsenal is either too small or too unreliable to protect them. Japan has already raised concerns, and with Mr. Obama unable or unwilling to stop either North Korean or Iranian nuclear ambitions, such worry will only spread.

Grand speeches about a world without nuclear weapons are crowd-pleasers at the U.N., but the U.S. Senate has an obligation to inspect the fine print before it ratifies any reduction in U.S. defenses. Senators shouldn't begin to consider a smaller arsenal until the Obama Administration takes the steps to ensure that our remaining weapons will work if we need them.

Women May Be Allowed On Submarines

Plymouth Herald (UK), Jan. 4, 2010

Women could be allowed to serve on British submarines following a review of the current ban.

The Ministry of Defence said the review had been completed and was now in the hands of Ministers and Chiefs of Staff for the final decision, which was expected to be announced soon.

But it was being reported yesterday by a national newspaper that an MoD source had told them: "It looks likely that women will be allowed to serve on submarines."

Pressure has grown in recent years to allow women to serve on Royal Navy submarines and a review was ordered last year, to run alongside a separate review into whether women should be permitted to serve as frontline infantry.

With both reviews concluded, the decisions are expected to be announced to parliament later this month.

The challenge to the current situation was rejected by naval chiefs eight years ago, with the main argument being the cramped living conditions on board as well as concerns over the dangers posed by fumes inside the submarine to a foetus if a woman is pregnant.

In 2002 then Armed Forces Minister Adam Ingram said medical advice had been subjected to independent review by the Defence Scientific Advisory Council and the Royal College of Obstetricians and Gynaecologists. He said both had supported the key conclusions of earlier research work regarding harmful contaminants in submarines.

In November 2008 the MoD admitted there was a shortage of submariners and recruiting female crew members was a possible solution.

New Astute attack submarines could be adapted to accommodate women and the design of the new Trident nuclear boats could also be changed.

The Norweigian, Danish, Swedish, Australian and Canadian navies already allow women on submarines. US defence chiefs have said they no longer see any reason for subs to remain all-male.

If approved, only mine-clearance diving units and the Royal Marines would remain closed to women.

A spokesman for the Ministry of Defence said: "The main body of work for this review is now complete and with Ministers and Chiefs of Staff.

"A decision will be made and announced in due course."

Geoff Hoon, who as defence secretary from 1999 to 2005 tried to push through more measures to allow women on the front line, said change had to come.

He said: "The starting point must be in principle, in the modern world, that women should be free to do the same jobs as men."

Pentagon: Obama's Nuke Strategy Delayed

By Josh Rogin, The Cable, Jan. 6, 2010

The Obama administration's rollout of its new nuclear strategy will be delayed until March, the Pentagon told Congress last week.

The notification came in the form of a letter from Principal Deputy Undersecretary of Defense for Policy James Miller to Sens. Carl Levin and John McCain, chairman and ranking Republican on the Senate Armed Services committee, respectively. The letter, obtained by The Cable, said that the new strategy, known as the Nuclear Posture Review, will be delivered to Congress on March 1, not Feb. 1 as was previously planned.

The announcement comes amid reports that the NPR is mired in an internal administration debate over some key issues, such as whether or not to abandon a "first use" policy, how many nuclear weapons are needed for whatever missions the NPR identifies as crucial, and how far the review will go toward advancing President Obama's stated goal of a future world free of nuclear weapons.

But arms-control advocates see the delay as not so surprising (what review isn't delayed in Washington?) and they argue that the postponement will give the administration more time to give the NPR the senior-level attention it deserves.

"It's not particularly surprising. I believe it's due to the fact that principals haven't been able to really dig in to the substantive issues of the NPR," said Daryl Kimball, executive director of the Arms Control Association.

Some who favor sharp reductions and more commitments to a nuclear drawdown see the delay as one last chance to have their views considered by the White House and the National Security Council, which may have a different take than the Pentagon on some issues. For example, the Pentagon is said to be against adopting a "no first use" policy and may still be pushing for a new class of nuclear warhead.

The Bush administration program to build a new warhead, called the Reliable Replacement Warhead, is dead, senior administration officials such as Under Secretary of State for Arms Control Ellen Tauscher have said repeatedly. But Tauscher and other have also indicated that they would present a budget in February that meets Senate Republican calls for "stockpile modernization," although there is no consensus on what that means.

"The trouble in the debate is that the term 'modernization' gets used to describe a number of things, from new weapons to improvements to the nuclear weapons complex, and other things as well," said John Isaacs, executive director at the Council for a Livable World, a nongovernmental organization that advocates for the goal of zero nuclear weapons that Obama announced in his Prague speech.

All 40 Senate Republicans and independent Sen. Joe Lieberman penned a letter to Obama in December specifically outlining several points they said must be included in the stockpile modernization program, which they are demanding in order to support the follow-on to the Strategic Arms Reduction Treaty with Russia, which is being negotiated now.

The relationship between the NPR and the START follow-on agreement is an interesting one. It would seem that the administration would have to know its overall nuclear policy before negotiating weapons levels, and yet the START agreement may come out before the NPR.

Administration officials have told The Cable that the NPR tasked out a set of weapons numbers to inform the START negotiations months ago, so there shouldn't be any problem. Besides, the NPR is setting policy for future reductions, not just those to be agreed to in this negotiation, experts point out.

But for Senate Republicans, that explanation is simply not enough.

"The key thing for senators is, they do not understand how officials are in Geneva discussing force-level reductions and meanwhile the NPR is apparently delayed," said one senior GOP senate aide, adding that the GOP was not being briefed on the NPR's progress.

Meanwhile, the aide said that the follow-on START agreement could be ratified in the Senate only if the stockpile-management aspects of the president's budget meet the demands in the letter and if there is no link between START and missile defense, despite statements from the Russian side.

"If we wanted to kill the treaty, we would just let them negotiate a bad treaty and then kill it in the Senate," the aide said. "We're trying to help them come up with a treaty that can pass muster in the Senate."

UPDATE: Lt. Col. Jonathan Withingon, spokesman for the Pentagon policy shop, e-mails in this explanation in response to our request for an explanation for the delay. "As we're nearing completion, the Department requires additional time to appropriately address the range of complex issues under consideration in the Nuclear Posture Review."

Everyone With Sneaky Needs Does It

Strategy Page, Jan. 6, 2010

In early 2009, as the Sri Lankan Army moved into territory held, for years, by the rebel LTTE (Tamil separatists), they found some surprises. One, on the northeast coast, was a submarine shipyard. Well, not exactly submarines, but close. These semi-submersible boats run mostly submerged, and are excellent at evading detection. This design was first developed by Colombian drug gangs a decade ago, and these craft are carrying most of the cocaine being moved north to the United States. Several years of effort by the U.S. Navy to improve detection methods, have not had much success. Thus the semi-submersibles are a growing problem, and it is known that criminal gangs will sell their technology to other groups. If Islamic terrorists got their hands on these subs, they would have a useful way to move people and goods, as well as for making attacks.

The Sri Lankan troops found four semi-submersibles in various states of completion. The LTTE subs were smaller than the Colombian ones, and most were apparently intended as suicide bomb boats. Recently, a semi-submersible was found in Spain, where it was to be used for smuggling drugs, from ships far offshore. The technology is definitely spreading.

In the last four years, U.S., and other navy and coast guard ships off the coast between Mexico and Colombia, have detected over 150 of these subs. Between 2000 and 2007, only 23 of these boats were spotted. But last year, over 70 were detected or captured. The numbers are up these year as well. Many of the captures are the result of intelligence information at the source, not air and naval patrols out there just looking for them. These boats are hard to spot (by aircraft or ships), which is why they are being used more often.

It's estimated that about 75 of these subs are being built in northwest Colombia each year, and sent on one way trips north. Each of these boats carries a four man crew and about seven tons of cocaine (worth nearly $200 million on the street). The loss of each boat and its cargo cost the Colombian drug cartels over $10 million in costs (of building the boat and producing the drugs). The crews are often Colombian fishermen forced to make the long voyage, because their families were being held hostage. Running these boats is considered very dangerous work, and the crews are paid well if they succeed, whether they volunteered for the work or not. Because of the risks (about ten percent are believed lost at sea), the boats are nicknamed "coffins." The crews are told to pull the plug (literally) and sink the boat (and its cargo) if spotted and about to be boarded. Even with the boarding party on the way, jumping off a sinking boat, usually at night, is dangerous. Laws have been changed so that the crews escaping from their sinking boats, can still be charged with drug smuggling (despite the loss of the evidence). The drug gangs are looking into automating the boats, so that no crew is needed at all.

These semi-submersible "submarines" have been operating off the northwest (Pacific) coast of South America for at least a decade. More than a third of the of the 800 tons of cocaine coming out of Colombia each year leaves via the Pacific coast subs, that move the drugs north. Despite increased efforts, it's believed that less than ten percent of these subs have been caught. The drug gangs still use other smuggling methods (aircraft, hidden in ship or aircraft cargo), but apparently the subs can move the most cocaine at once, with the lowest risk.

A typical Colombian "semi-submersibles" is a 60 foot long and 12 feet wide, fiberglass boats, powered by a diesel engine, with a very low freeboard, and a small "conning tower", providing the crew (usually of four), and engine, with fresh air, and permitting the crew to navigate the boat. A boat of this type is the only practical kind of submarine for drug smuggling. A real submarine, capable of carrying five tons of cocaine, would cost a lot more, and require a highly trained crew. Moreover, a conventional sub actually spends most of its time running on the surface anyway, or just beneath it using a snorkel device to obtain air for the diesel engine crew. So the drug subs get the most benefit of a real submarine (which cost about $300 million these days) at a fraction of the cost.

Local boat builders created and refined the current design. Some foreign experts have been seen in the area, apparently to help the boat builders with some technical problem. These subs cost over $700,000 to construct, and carry up to ten tons of cocaine. The boat builders are getting rich, constructing the boats in well hidden locations up the rivers that empty into the Pacific.

At one point it was thought that as many as half of the subs were captured or lost at sea. But this is apparently not the case. That's because most of these subs are built for a one way trip. This keeps down the cost of construction, and the cost of hiring a crew (who fly home). That one voyage will usually be for about a thousand kilometers, with the boat moving at a speed of 15-25 kilometers an hour. The average trip will take about two weeks, because the boats have learned to go very slowly during the day, to avoid leaving a wake that U.S. airborne sensors can detect.

In the past, some subs making long range trips were caught while being towed by a larger ship. Apparently the plan was to tow a semi-submersible, loaded with a ten ton cocaine cargo, long distances, and then be cut it loose for the final approach to the shore of California or some area in Europe or on the east coast of North America. While the subs are most frequently used from the Pacific coast of Colombia, they are showing up elsewhere as well.

These subs are not stealthy enough to avoid detection all the time, and the U.S. has been trying to tweak search radars, and other types of sensors, to more reliably detect the drug subs. The technology has already spread, with one of these boats found being built in Spain four years ago, by a local drug gang, to bring cocaine ashore from a seagoing ship far out at sea in international waters. GPS makes these kinds of operations possible.

Increased maritime patrols, and infiltration of drug gangs in Colombia, has led to a significant increase in captures of these boats. On land, Colombian soldiers and police are doing a lot of damage to cocaine production, and making boat production more difficult. All this is having an impact, with cocaine prices going up, and quality going down. Drug testing and surveys indicates that cocaine use in the United States has declined 10-20 percent as a result.

But the stealthy boats are a concern to counter-terror officials. Bombs and terrorists can be transported in these vessels, and the technology for building them can be, and perhaps already has, spread to terrorist groups. The basic principles are available on the Internet, and any skilled boat builders can construct them. The technology is improving as well. Recently captured boats had a system installed that cooled the engine exhaust, making it more difficult for infrared (heat) sensors to sport it. Thus the U.S. Navy is putting a lot of effort into improving its sensors and search techniques, for finding these boats.

Iran Unlikely To Risk Blocking Strait Of Hormuz

By Jonathan Saul and David Sheppard, Reuters, January 7, 2010

LONDON - Iran is unlikely to risk blocking or mining the Strait of Hormuz if tension with the West rises, because it stands to lose vital oil revenues from closing the strategic waterway and lacks the military capability.

Iran has threatened to close the strait a vital route for world oil supplies, if it is attacked over its nuclear ambitions.

Some Iran watchers say Tehran could opt to block the strait if more severe sanctions are imposed. Western powers suspect Iran's nuclear activities are aimed at developing atomic weapons, not generating electricity as Tehran insists.

Analysts believe the threat itself is enough to raise oil prices to well above $100 a barrel, potentially damaging a still fragile global economic recovery.

"Oil prices rose by around $12 a barrel when Israel went into Lebanon in 2006 and neither of those countries are even involved in oil production," said Paul Harris, head of natural resources risk management at Bank of Ireland.

"You'd be looking at least double that kind of jump from an event on that scale in the region."

Many analysts say Tehran cannot afford to risk a prolonged disruption of the narrow waterway, which borders Iran's coastline at the mouth of the Gulf, and through which 40 percent of all seaborne oil trade, about 17 million barrels, passes daily.

Iran itself exports around 2.4 million barrels daily — most of it via the Strait of Hormuz.

"They would cut their own throats because two-thirds of the Iranian government's budget comes from exports from the same strait," said J. Peter Pham, an adviser on strategic matters to U.S. and foreign governments.

"Iran gains more from the threat of closing the strait than actually closing it."

"FRAUGHT WITH PROBLEMS"

The strait, just 21 miles wide at its narrowest point, lies between Oman and Iran. Neighbouring oil-producing countries, including Saudi Arabia, the world's largest crude oil exporter, are dependent on its shipping lanes.

"Closing the strait would reduce Iran's leverage in the region as it would put Persian Gulf countries squarely in the camp of America," Iran analyst Meir Javedanfar said, adding that it could tempt them into financing Iranian opposition movements.

Many analysts believe that, if Iran retaliated, it would choose to mine the strait's sea lanes as it did during the Iran-Iraq war in the 1980s.

Military analysts believe Iran has three mine-laying ships and three mine-laying helicopters, plus three Russian-built Kilo class submarines.

"Military operations on the offence are fraught with problems," said Eugene Gholz, professor of national security policy at the University of Texas.

"The Iranians would have to do it over and over again every day to maintain the disruption."

Global intelligence company Stratfor said the strait's cramped, shallow waters made submarine activity difficult.

"In any event, the Iranian navy does not have enough Kilos to have any confidence in its ability to sustain submarine operations for any meaningful period after hostilities began," it said in a study.

REVOLUTIONARY GUARDS

Some analysts said double-hulled oil tankers were able to withstand damage from mines more than their single-hulled predecessors, which were targeted in the 1980s when Iran and Iraq fired on each other's vessels during the "tanker war."

John Dalby, chief executive of the maritime security company MRM which provides risk assessments and supplies former military personnel to ships in the region, said mines did not represent a real risk to tankers.

"Bearing in mind mines detonate under water, there is little risk of a spark-induced explosion," he said.

Pham said Iran would have to sink three or four very large crude carriers daily, each holding up to 2 million barrels of oil, to have a significant effect on supply.

"This is nearly impossible," he said. "They can cause a shock, they can cause psychological panic, but their actual capacity to do something is not there."

Military analysts have not ruled out Iran using speedboats to attack tanker traffic.

The U.S. Office of Naval Intelligence said in a study last year Iran's Revolutionary Guards had control of smaller and faster boats which had "serious firepower" including torpedoes and the Iranian-made Kowsar anti-ship cruise missiles.

However, few believe Iran will take that course because of fears of severe retaliation by the West, given that the U.S. Fifth Fleet is based in the region.

"That would be far too provocative. It would unleash hell," MRM's Dalby said.

China And The Indian Ocean Carrier Fleet

Strategy Page, January 7, 2010

There's a major feud going on in the Chinese Navy. On one side, you have admirals who want to put most construction effort into nuclear submarines (both SSN attack boats, and SSBNs carrying ballistic missiles) and new surface ships.

This is for a strategic fleet. The SSNs and surface ships would be for keeping hostile fleets away from China, while the SSBNs can put the fear of China into the United States, as there are currently no Chinese ballistic missiles that can hit all of the United States.

The other group of admirals, who appear to be getting their way, want to build aircraft carriers. These would be used to control distant waters, like the long sea routes that bring China raw materials (especially oil) and allow exports to reach world markets. The most critical route passes through the Indian Ocean, on the way to the Persian Gulf and Africa. China and India have not always been on the best of terms, and a fleet of carriers is seen as the only way of confronting India with something short of nuclear weapons. In the long term, this carrier fleet could eventually challenge that of the United States.

The United States prefers the Chinese carrier strategy, as it takes a long time to build carriers and train the ship and air crews to a useful level of competency. By building carriers, China will spend less money on building more and better submarines. That suits the United States just fine.

China isn't looking for a war with anyone, especially the United States. What keeps the Chinese people happy right now is a thriving economy. That requires good relations with the United States, but not a whole lot from India. But since so much of China's seaborne trade goes through India's back yard, something must be done to insure the security of that route.

Navy Attack Submarine Procurement: Maintaining Submarine Design and Engineering Base

Congress and Law, January 10, 2010

Navy and industry officials earlier in this decade appeared to agree that preserving the submarine design and engineering base over the next several years would require funding substantial submarine design and engineering work in the near term. The Navy plans to address the issue by accelerating into the near term the start of design work on the next-generation SSBN. Given the ages of the Navy's 14 current SSBNs, work on a replacement SSBN design would normally not need to start for another few years. The Navy, however, is accelerating the start of this project into FY2010, with an eye toward carrying out the project as a steady-state effort over several years, rather than as a more-concentrated effort starting several years from now. The Navy's plan will provide a significant amount of submarine design and engineering work for several years, and engage a wide range of submarine design and engineering skills.

The Navy asked RAND to study the question of sustaining the submarine design and engineering base. The RAND study, which was published in 2007, states that, based on RAND's analysis, we reach the following recommendations:

—Seriously consider starting the design of the next submarine class by 2009, to run 20 years, taking into account the substantial advantages and disadvantages involved. If the 20-year-design alternative survives further evaluation, the issue of a gap in submarine design is resolved, and no further actions need be taken.

If that alternative is judged too risky, we recommend the following:

—Thoroughly and critically evaluate the degree to which options such as the spiral development of the Virginia class or design without construction will be able to substitute for new-submarine design in allowing design professionals to retain their skills.

If options to sustain design personnel in excess of demand are judged on balance to offer clear advantages over letting the workforce erode, then the Navy should take the following actions:

—Request sufficient funding to sustain excess design workforces at the shipyards large enough to permit substantial savings in time and money later.

—Taking into account trends affecting the evolution of critical skills, continue efforts to determine which shipyard skills need action to preserve them within the sustained design core.

—Conduct a comprehensive analysis of vendors to the shipyards to determine which require intervention to preserve critical skills.

—Invest $30 million to $35 million annually in the NSWC's Carderock Division submarine design workforce in excess of reimbursable demand to sustain skills that might otherwise be lost.42

Endnotes

42 John F. Schank, et al, Sustaining U.S. Submarine Design Capabilities, RAND, Santa Monica (CA), 2007. pp. xxvii-xxviii. (Pre-publication copy posted on the Internet by RAND)

Scientists Clarify 'Mini-Sub' Role At Pearl Harbor

By Judith Snyderman, American Forces Press Service, January 8, 2010

WASHINGTON – Scientists who have been studying wreckage from Japanese mini-submarines that were part of an advance strike force on Pearl Harbor on Dec. 7, 1941, say a new television show is informative, but could leave viewers with misunderstandings.

For one thing, they say, the show — part of PBS's "NOVA" series — reveals no new discoveries.

"It's basically a synopsis of the work that we performed up through 2000," Navy Capt. John A. Rodgaard said during a "DoDLive" bloggers roundtable Jan. 6. Rodgaard was joined by Peter Hsu, a scientist who analyzes forensic shock effects of underwater explosions, and Robert Neyland of the Naval History and Heritage Command, which studies shipwrecks and sunken aircraft.

These experts say there's no dispute that hours before the main air attack on Pearl Harbor, the Japanese navy launched five mini-subs armed with torpedoes from larger submarines. U.S. Navy ships sank the mini-subs, and the first pieces of wreckage were identified by the Hawaiian underwater research lab called HURL in 1992.

Another key piece of evidence is an aerial photograph of one of the mini-subs that was taken by a Japanese aircraft.

In 1994, Rodgaard used that evidence to correct earlier beliefs that only one of the five submarines that had been launched made it into the harbor, and that it failed in its attack.

"What we demonstrated initially was that a second one had actually entered and also was successful in its attack," he said.

The mini-sub pictured in the aerial photograph is the one featured in the television documentary, Rodgaard explained. But the show implies the wreckage is a new find, he added, when it actually was well known for years, though it wasn't identified as one of the five Pearl Harbor attack mini-subs until recently.

Neyland said the timeline presented by the program incorrectly suggests the sub was the last of the five launched. "We consider that the No. 1 submarine, based on the Japanese records of the release times," he said.

One other problem, Rodgaard said, is the documentary's assertion that a mini-sub torpedo struck the USS Arizona and did not detonate.

"I don't know about you, but I don't think an object such as a torpedo that winds up being a dud, striking an object at [42] knots, is going to remain intact," he said. Hsu theorized that, based on weight analyses, the unexploded torpedo depicted on the show may have been dropped from an aircraft.

Despite these concerns, the experts agreed that the story of the Pearl Harbor mini-subs is a fascinating piece of history that deserves ongoing research. One mystery is the location of the wreckage in a 1,000-foot-deep debris field outside Pearl Harbor. Neyland said it's clear the mini-sub must have been salvaged after the war ended, but that leaves unanswered questions, such as why it is where it is, why it is disassembled, and why no record exists of it having been found and salvaged out of Pearl Harbor.

Rodgaard added that a 15-foot section of the mini-sub is missing, and he hopes it will be found. Each piece of evidence is a time capsule of history, he said.

Scientific techniques such as bio-corrosion studies on bolts and studies of the origins of microorganisms attached to parts may solve some of these mysteries. "I would say our journey continues," he said. "There are quite a few things that we could still do."

A Taiwan Lesson

Obama sells arms to an ally.
Wall Street Journal, January 9, 2010

President Obama did right by Taiwan this week, allowing the sale—over Beijing's loud protests—of sophisticated antimissile batteries to the island democracy. We'll take that as a sign that there's a limit to how far the Administration is willing to go to improve relations with China at the expense of America's democratic allies.

The Bush Administration originally proposed the sale of an advanced Patriot ballistic missile interceptor system, or PAC-3, in 2001, as part of a package that included helicopters, submarines and technology upgrades. But Taiwan was eventually only offered about half of the deal, thanks to political bickering in Washington and Taipei. The formal request to Congress for the sale was only submitted in October 2008.

Meantime, the People's Liberation Army has more than 1,000 missiles pointed at Taiwan's 23 million people, and the Pentagon says it is adding about 100 missiles every year. Then there are the over 60 submarines China has patrolling the waters, plus its development of cyberwarfare capabilities and other asymmetrical threats. Taiwan itself can't possibly win an all-out war against China, but with U.S. help it can make the costs of a Chinese attack too prohibitive to contemplate seriously.

The argument against U.S. arms sales is that it clouds prospects for better relations between Taiwan and the mainland. But as Taiwanese President Ma Ying-jeou—a vocal advocate for a rapprochement with Beijing—has argued, the arms sales help the Taiwan-China dialogue by allowing Taipei to negotiate from a position of strength. Washington's own relationship with Beijing has hardly suffered over the three decades in which the U.S. has been selling arms to Taipei under terms of the 1979 Taiwan Relations Act.

None of this has prevented China from denouncing the deal, as it has previous sales. A Chinese government spokeswoman said Thursday the PAC-3 sale would cause "serious harm." China is also worked up about Taiwan's request to buy 66 F-16s to bolster its aging air force. The latter is still outstanding, as is about $6 billion worth of items that the Bush Administration didn't put forward for sale, such as Black Hawk helicopters, minesweepers and diesel submarines.

President Obama would be wise to approve those sales. As he has learned in recent months, his overtures to China—including his refusal to meet with the Dalai Lama—haven't been reciprocated in better cooperation on North Korea, Iran and other vital U.S. interests. The sooner Beijing learns this Administration will stand up for its friends, the friendlier it will itself become.

Coping With The Great American SSN Shortage

Strategy Page, January 12, 2010

The U.S. Navy is facing a temporary SSN (nuclear attack submarine) shortage, and there is no solution that will not involve some pain. The problem is that new Virginia class subs cannot be built quickly enough to replace all the Cold War era Los Angeles class boats that have to retire. Even that will be delayed, at least for 16 Los Angeles class subs, that will get enough refurb to keep them at sea for up to two more years. Meanwhile, many of the shipyards used to build all those Los Angeles class boats, were discarded as part of the Peace Dividend for winning the Cold War.

The shortage will begin in 2022, when the number of SSNs will fall below 48. The bottom will be in 2028, when only 41 SSNs will be available, and the shortage won't end until 2034. While keeping boats at sea more than six months per cruise will insure that all current requirements (that need about ten boats at sea at any given time) are met, the navy won't be able to meet its wartime need for 35 boats. Keep in mind that a certain number of boats are always laid up for upgrades, maintenance or repairs. And some of this work can be speeded up, or even put aside, to get boats to sea in wartime, or a major crises.

Keeping existing boats at sea for longer cruises also comes with a cost. For each additional day (beyond six months) you keep a crew at sea, a certain percentage of them will not stay in the navy. Those long months at sea are hard on the families, and sailors as well. Too much of that, and more of them leave. For submarine crews, the most highly trained, with the highest standards, in the navy, this is no small problem.

There are other ways around the problem. The navy and the shipyards have found ways to built SSNs more quickly. Currently it takes 70 months to build a Virginia. But in the next few years, that will be coming down to 60 months. For the navy, the worst solution is to change war plans, and peacetime use patterns of SSNs, and adapt to a smaller number of attack boats. The navy would rather not think of this, but politicians often do, so the navy must.

Restoring the USN Submarine Fleet

By Mike Burleson, New Wars, January 11, 2010

As we've been looking at this past week, Dr. Wayne Hughes and others have authored an important document titled The New Navy Fighting Machine, detailing specific proposals to rebuild the American Navy for a new century. The Fleet he suggests is one America should have been designing all last decade, while restoring numbers to a rational point matching likely budget allocations. Here's hoping we won't repeat the same mistake and shrink further in the 2010's.

Concerning America's submarine fleet, there is no doubt it is the world's best, but it is shrinking as well, made of mainly of Los Angeles class boats designed in the 1960s. It is high doubtful we will be able to construct 50 new warships anytime soon to match those we currently have, especially with the Virginia's pricing $2 billion each. Capt. Hughes makes an excellent case for the need to keep the numbers high:

The Falklands War of 1982 is a cautionary tale of two submarine fleets having major effects on the enemy in a maritime war. Early in the war, the United Kingdom's HMS Conqueror, an SSN, sank the aged Argentine cruiser General Belgrano. Seemingly as a result, the Argentine Navy withdrew into port and took itself out of the war, thus isolating the Falklands from substantial reinforcement or resupply. On the other side, one old Argentine submarine harassed the British task force out of all proportion to its nominal combat value. Literally hundreds of ASW torpedoes were fired by the screening destroyers on contacts that proved to be false. Submarines as sea denial systems can influence enemy operations disproportionate to their numbers and cost.

A while back, I posted my own thoughts on the need to increase sub numbers:

The current fleet size has fallen to less than half its 1980s high of about 600 vessels. Again thanks to the Tomahawk the firepower of the fleet is even greater, but the amount of wear and tear on hulls as well as the great strain upon sailors suffering from numerous deployments, is an obvious sign for the need to balance quality and quantity. The Chinese record for producing conventional hulls should also be a warning to us, as Martin Sieff reveals:

In 2006 China built 14 subs — all diesel-powered. The United States built only one — a traditional nuclear-powered monolith.

Hughes is also against the notion that the submarine is the modern capital ship, displacing the carrier in this role, arguing that although the sub is a perfect sea deniar, it cannot perform sea control. I once felt differently on this idea, but now tend to agree, though I do say the attack submarine shares the role of "new battleship" with the modern guided missile destroyer, its old antagonist from the World Wars!

No doubt they are still important weapons of war, but how to keep adequate numbers deployed, when and where they are needed? If sufficient subs can't be built to contend with the rise of conventionally-powered SSKs, how will we deal with these rising threats at sea, available to almost any small to medium navy? First, we see the rationale for a bigger force of submersibles:

To counter China's growing capability to fend off American or Japanese surface warships, the best response is to create a region where—at the outset of hostilities—neither side can operate safely on the surface. We subscribe to the overt development of a strategy that demonstrably would deny China the use of the seas in the case of hostilities. We speculate that will take about 80 boats.

I completely agree with the notion that the best counter to China's enhanced fleet is the submarine. It defeated the Japanese within the extended Pacific ranges, and will certainly suffice in a future conflict, even as an effective counter to the rumored PLAN aircraft carrier. But how to reach this mythical 80 boats?

Nonnuclear submarines are at their best when they do not have to travel long distances to the scene of action. The 313-ship Navy, and its hope to respond anywhere, quite logically espouses an all-SSN force because these submarines have matchless strategic and operational mobility. Diesels make sense as a capability focused on one nation at a time. The bimodal strategy says one nation dominates attention at present, and therefore plans for basing in the Western Pacific should proceed concurrent with AIP diesel acquisition.

Hughes rightly calls for continued SSN production, and also the bold step of restarting USN conventional sub production. He is also correct in pointing out the difficulties of building SSKs in US shipyards:

To compete, the U.S. submarine community faces a steep climb out of technological and tactical ignorance. The starting point is evidently—and embarrassingly—to purchase some AIP diesels (e.g., the French Scorpene), with which to gain design and tactical experience. Meanwhile, experience gained currently with leased nonnuclear submarines will give us operational understanding, but not a design capability.

Costs-"The submarine force costs $128B to build and—at 5% per year—another $160B to operate for 25 years, or a total of $288B. Annualized costs are therefore … $11.5B for the 80-submarine force."

The proposals here are very expedient considering this recent report of a "submarine gap", via Navy Times: Sailors aboard attack submarines can expect longer deployments and service-life extensions of their boats to compensate for an expected "submarine gap" in the years to come, according to Navy documents and congressional analysts.

Under the current 30-year procurement plan, the number of attack subs will fall below the required 48 boats in 2022 and will bottom out six years later at 41 boats. The shortfall will continue until 2034…

"There are concerns with this, such as how fast they use up the [nuclear] cores and the burden [longer deployments] will place on crews and families," the congressional analyst said. "This is not palatable, politically or in the Pentagon. But there's really no way around it."

The Navy's ongoing reluctance to consider alternative platforms in this environment is astonishing. It borders on traditionalism to the extreme, but we can only hope continued pressure from reformers and well as shrinking budgets might turn things around. The suffering the sailors must endure away from home and family has been ongoing since the dramatic demise in numbers of all classes of warship since the Cold War, but the number of missions have only increased. Those who imagine new advanced hull forms can do the work of several older, cheaper vessels evidently didn't consider the human factor: sailors on excessive deployments doing the work of numerous crews, reaching a breaking-point.

China's Navy Gaining Power

By Jeffrey L. Fiedler and Dennis C. Shea, Honolulu Advertiser, January 10, 2010

On Jan. 6, China celebrated the first anniversary of its first international naval combat mission. For more than a year, China's rapidly modernizing navy has been escorting merchant ships through pirate-infested waters off the coast of Somalia. Such a mission benefits all by helping to defend international sea lanes.

But Beijing's ultimate goal in modernizing its navy does not appear to be preventing piracy around the world. Instead, as America's senior military officer, Chairman of the Joint Chiefs of Staff, Adm. Michael Mullen, pointed out in May 2009, China appears to be trying to counter the U.S. military in East Asia. A more powerful Chinese navy may hinder the U.S. military's ability to support long-standing security commitments in the region.

China's growing naval capabilities are detailed in the annual report to Congress of the U.S.-China Economic and Security Review Commission, of which we are members (uscc.gov). The commission, an official body advising Congress on economic and security issues related to China, concludes that for more than a decade, China has been aggressively modernizing its naval forces. It has launched more than 38 modern submarines and 29 surface ships. It is seeking to develop its first aircraft carrier. China has also expanded and improved its naval weapons, such as advanced antiship and land-attack cruise missiles. Seeking to ensure that these new vessels and weapons operate effectively, China has improved its command and control capabilities.

China also appears to be on the cusp of fielding the world's first antiship ballistic missile, capable of hitting moving ships far out at sea. As of right now, there is no defense against such a capability. In effect, targeted ships would be sitting ducks.

As the commission's report demonstrates, a key goal of China's naval modernization is to inhibit the U.S. military from operating in the western Pacific in the event of a crisis between the two nations. The most likely scenario would be during a conflict between China and the United States over Taiwan, an island nation that China considers a renegade province. Were the Chinese military to threaten democratic Taiwan, the United States would potentially intercede on Taiwan's behalf. It has done so before, most recently in 1996 when the U.S. deployed two carrier battle groups to the region.

An accidental clash between the U.S. and Chinese navies over freedom of navigation in the South China Sea is also possible. For example, Chinese vessels dangerously harassed U.S. surveillance ships in international waters off China's southern coast in early 2009.

In the event of an international incident, the U.S. Navy would encounter some difficulties. Chinese submarines are quieter and deadlier than ever, and their destroyers and frigates highly capable. Their antiship cruise missiles are specifically designed to penetrate U.S. naval defenses. According to the Department of Defense, Chinese land-attack cruise missiles are capable of hitting U.S. military bases in Asia, such as on Okinawa and Guam. Most alarmingly, when fully developed and deployed, their antiship ballistic missiles may be able to hit U.S. aircraft carriers—potentially knocking out the centerpiece of U.S. naval power since World War II.

Currently, the U.S. Navy in East Asia still maintains a strong lead in capabilities over the Chinese navy. However, unless the United States takes certain actions, this gap will shrink in the coming years. Ensuring that the U.S. Navy has adequate resources to counter China's growing submarine capabilities will help. So, too, would finding a way to defend our ships against China's antiship cruise and ballistic missiles.

Most importantly, Beijing needs to be more transparent about the goals of its naval modernization and the intentions for its new and improved navy. A clearer articulation of these goals and intentions would help allay some of these anxieties, prevent unintentional incidents at sea, and enhance the security of both the United States and China.

(Jeffrey L. Fiedler and Dennis C. Shea are commissioners with the U.S.-China Economic and Security Review Commission. They wrote this commentary for The Advertiser.)

Mediterranean Navies Look To Win Information War

By Tom Kington, Defense News, January 11, 2010

ROME - As it brings new frigates and an aircraft carrier into its fleet, the Italian navy is investing in one asset it considers crucial to maintaining maritime security in the crowded Mediterranean Sea: information.

Four years after linking with other regional navies to share information over the Internet on merchant vessel movements, the navy's Virtual Regional Maritime Traffic Center (V-RMTC) today links with 29 navies that together input more than 40,000 entries a week. The center is based here.

The focus reflects what analysts see as the major short-term threat in the Mediterranean - drugs and weapon smuggling, terrorist movements and clandestine migration, rather than hostile navies.

Now planners are looking to take the V-RMTC scheme global by linking it to similar schemes launched by navies on other continents through a Trans-Regional Maritime Network (T-RMN), plans for which were drafted in December 2008.

In an address to fellow naval chiefs last year, Adm. Paolo La Rosa, the Italian navy's chief of staff, said trial links had been successfully established between the V-RMTC and Brazil's SISTRAM system, Singapore's OASIS and India's MSIS.

"A technical agreement is now expected to be signed in 2010 by 26 navies," an Italian naval source said.

The V-RMTC, which was launched in October 2006, involves an online register of movements of merchant vessels of 300 metric tons or more in the Mediterranean and Black seas. Information that hitherto had been stored by individual nations and port authorities

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Defense: Navy Advocates See Rough Waters Ahead

By Otto Kreisher, Defense Journal, Jan. 13, 2010

Navy Secretary Ray Mabus, while refusing to talk about the FY11 defense budget, promised the Surface Navy Association today that he is "working to ensure that the surface Navy will have all the money it needs to fulfill its mission," and meet its training and maintenance needs.

Addressing a Navy and defense industry forum in Arlington, Va., Mabus focused on Navy efforts designed to reduce the cost of buying new ships. He promised the large number of industry representatives in the audience greater transparency and more stability in shipbuilding programs, and called on them to cut costs of the new ships.

"If costs continue to rise, we will not get the Navy we need," he said.

Speaking before Mabus, Rep. Rob Wittman, R-Va., said the defense budgets have not been adequate to meet the needs of the Navy and Marine Corps.

Wittman represents a Tidewater district heavy in Navy and shipbuilding activities. He particularly faulted the shipbuilding budget he said was half of the $25 billion a year needed to build the 313-ship fleet the Navy wants.

"It's hard to believe 313 will become a reality anytime in the near future," Wittman said. Instead, "we're looking realistically at a 270-ship Navy," he said.

A member of the House Armed Services Seapower Subcommittee, Wittman said the panel's chairman, Rep. Gene Taylor, D-Miss., has been talking about boosting the annual shipbuilding account to $20 billion. Getting that much in the tight budget environment everyone expects would take "an extraordinary effort," he conceded.

Wittman also expressed concern about rumors the Quadrennial Defense Review, which is to be released next month, perhaps a few days before the

FY11 budget, would call for cutting the Navy's aircraft carrier force "by one or two" from the current 11.

"That would not be considered lightly on the Hill," he said.

Whitman also said congressional defense committees would be unhappy if the Navy reversed the plan to start building two Virginia class attack submarines a year.

Adm. Thad Allen, Coast Guard commandant, also voiced concerns about the prospect of flat future budgets and the possible impact on his Deepwater modernization program, which is huge by Coast Guard standards.

"We can't stop recapitalization. Our cutters are too old," Allen told the audience.

Faced with a choice, Allen said the Coast Guard would prefer to curtail missions rather than cut its ship procurement program. Allen told reporters that would be an application of the risk-management process traditionally used to balance resources and needs.

Allen also repeated his warning that with the increasing activity in the Arctic due to the diminishing ice cap, the nation must make a decision soon on building icebreakers, to replace the two 30-year-old ships assigned to the job.

Our view: Electric Boat a small bright spot

Norwich Bulletin, Jan. 13, 2010

There hasn't been a lot of good economic news to report on during the past 18 months, but there was Tuesday at the annual legislative breakfast hosted by Electric Boat officials. Business is good – and the prospects for the future also look good.

That's not to say there won't be some ups and downs at the shipyard in the coming years, but not to any significant degree that threatens an upheaval in the local economy.

That news Tuesday was a stark reversal of the company's forecast of just four years ago. At the 2005 breakfast, EB President John Casey announced major layoffs and the potential of the company's 11,000 work force being cut in half by the time 2010 rolled around. Today, that work force is holding steady at around 10,000 – a remarkable achievement when one considers the impact the recession has had on the labor market during the past 18 months, and in particular higher-paying manufacturing jobs.

It's a tribute to EB's management and labor force. That kind of success just doesn't happen on its own. It's also a tribute to Connecticut and Rhode Island's congressional delegations and their continued support for the nation's submarine program.

On time, on budget

That program – of which Electric Boat is the primary source – is the most successful Department of Defense weapons program in existence. EB, and its partner, Newport News Shipbuilding in Virginia, constructs and delivers submarines to the U.S. Navy on time – if not early – and on budget. EB has reduced the costs of the Virginia-class program from its initial $2.4 billion per ship to $2 billion per ship today – and its latest ship is scheduled for delivery nearly a year ahead of schedule.

But the financial crisis at the state level in both Connecticut and Rhode Island is a major concern. Economic recovery is contingent upon jobs, protecting the ones that exist and creating new ones. Higher taxes and new, unnecessary labor law mandates can easily erase the success that has been achieved.

Chinese Buildup Of Cyber, Space Tools Worries U.S.

By John T. Bennett, Defense News, Jan. 13, 2010

Senior U.S. officials told a House panel on Jan. 13 that China continues modernizing its missile, naval and fighter aircraft arsenals at a rapid rate, but they raised new concerns about the Asian giant's efforts to develop new offensive cyber and space assets.

"U.S. military and government networks and computer systems continue to be the target of intrusions that appear to have originated from within [the Peoples' Republic of China]," Adm. Robert Willard, U.S. Pacific Command chief, told the House Armed Services Committee. "Although most intrusions focus on exfiltrating data, the skills being demonstrated would also apply to wartime computer network attacks," he said.

Beijing shows no signs of slowing what Willard described as a decade-long "aggressive program of military modernization" tailored to "achieve campaign objectives across a broad spectrum of operations."

And increasingly, that includes new tools designed to project Chinese power across greater distances, striking American information networks, and developing what the Pentagon believes are offensive space systems, according to Willard and Wallace Gregson, assistant secretary of defense for Asian and Pacific security affairs.

China's Peoples' Liberation Army is making "significant strides" in developing cyberwarfare concepts that range from defending Chinese networks to conducting "offensive operations against adversary networks," Gregson told the committee.

The latter, he said, is seen by the Pentagon as part of a broader effort by Beijing "of developing an advanced information warfare capability to establish control of an adversary's information flow and maintain dominance of the battlespace."

While the officials testifying said it remains unclear if the Chinese military was behind attacks on U.S. networks that were launched from China, Gregson called such electronic strikes "consistent with authoritative PLA military writings on the subject." Beijing also is expanding its activities beyond the Earth's atmosphere, the U.S. officials told the lawmakers.

"We are seeing China's emergence as an international space power," Gregson said. "China is investing heavily in a broad range of military and dual-use space programs, including reconnaissance, navigation and timing, and communication satellites, as well as its manned program."

The PLA also is working on tools designed to deny potential foes the ability to use their own satellites, he said, via a "a robust and multidimensional counterspace program featuring direct ascent anti-satellite weapons, directed energy weapons and satellite communication jammers."

Gregson cited China's January 2007 satellite shot-down as an example of its "growing" ability to take out space systems.

The Asian power's cyber and space efforts are part of a broader military build-up Washington and the rest of the world contends remains behind Beijing's steel curtain of secrecy.

Gregson noted China's announced 2009 defense budget topped out at $70.6 billion. Pentagon brass think the number actually comes in around $150 billion, or more, Gregson said.

Willard added: "The PRC's stated goals of a defense-oriented military capability contributing to a 'peaceful and harmonious' Asia appear incompatible with the extent of sophisticated weaponry China produces today."

According to 2009 data the Pacific Command chief presented the House committee, that weaponry includes 27 destroyers, 48 frigates, more than 70 patrol crafts armed with missiles, 55 amphibious vessels, 40 mine warfare ships and 50 support crafts.

What's more, "modernization programs have included development of sophisticated shipboard air defense systems, as well as supersonic sea-skimming anti-ship cruise missiles," Willard said.

China also possesses what he called "the largest conventional submarine force in the world, totaling more than 60 boats" to go along with "a number of" nuclear-powered fast attack and ballistic missile subs. The PLA, Willard contended, is also developing a new submarine-launched ballistic missile, the JL-2, which is "capable of reaching the West Coast of the United States."

The U.S. officials told the lawmakers China could have an operational aircraft carrier by 2012. Gregson raised concerns that "China may be interested in building multiple operational aircraft carriers by 2020."

The PLA also has a "growing number" of multimission fighter aircraft, Willard said, adding the Chinese are focused on improving pilot skills in "multiplane scenarios, including operations over water." He said China has put "considerable effort" into fielding air-to-air and anti-air systems, and has developed an anti-ship ballistic missile to target aircraft carriers.

A larger portion of the Chinese Air Force are its own F-10s and Russian-made aircraft. These fourth-generation fighters, as well as China's improved air defenses, "have reversed Taiwan's historic ability to maintain dominance of the airspace over the Taiwan Strait," Gregson said.

This reversal will be further bolstered in coming years, he said, when the PLA fields even more modern aerial combat assets, such as aerial tankers that can refuel its fighter jets.

Panel members voiced concerns about China's build-up, as well as the Pentagon's plans for combating the Asian powerhouse.

Several lawmakers questioned the executive branch officials on whether the Obama administration was taking the potential threat from China's military seriously enough.

Others sounded alarms about Beijing's recent moves to purchase control of vast amounts of the resources key to America's economic might, including rare earth minerals and oil.

The witnesses did not directly answer many of those queries, taking several, including one on rare earths, for the record.

Russian N-sub to arrive in India in second half of 2010 news

Pakistan Defence Forum, Jan. 13, 2010

Russia will lease its latest Akula-II class K-152 'Nerpa' nuclear-powered attack submarine to India for a period of ten years sometime in the second half of 2010, the official Itar-Tass news agency quoted an unnamed Russian defence ministry official as saying on Tuesday.

Akula-II class nuclear submarine "The lease of the Nerpa nuclear submarine to India for 10 years ... will take place this summer or autumn," the unidentified official told the agency.

The handing over of the 12,000 tonne submarine will take place after both countries sign an agreement of acceptance.

The submarine is to be inducted into the Indian Navy as INS Chakra - the same name as given to an earlier Charlie-II class nuclear submarine leased by India from the erstwhile Soviet Union in the period 1988-91.

The officials also said an Indian crew would visit Russia's military base near the far eastern port of Vladivostok to take the 'Nerpa' out on trial ahead of the official handover.

The handing over of the submarine to the Indian Navy was expected to take place immediately after the submarine was inducted into the Russian Navy after completion of its sea trial in December 2009. The delay is now being attributed to rectification of flaws discovered in course of the trials.

"Additional adjustments are planned for the Nerpa in February 2010 to rectify the flaws revealed during the latest tests," the official said.

Overall, the trials were said to be successful.

India reportedly paid $650 million for a 10-year lease.

Akula-II class vessels are considered the quietest and deadliest of all Russian nuclear-powered attack submarines. They are armed with conventional torpedoes and cruise missiles.

The submarine suffered a fatal accident in course of an earlier round of sea trials in November 2008 in the Sea of Japan that killed 20 people and injured 21 others on board the vessel. The submarine underwent repairs thereafter.

Malaysian Navy's 2nd Scorpene SSK to arrive at Sepanggar Submarine Base in June

Pakistan Defence Forum, Jan. 13, 2010

The country's second Scorpene submarine the KD Tun Abdul Razak is scheduled to arrive at the Sepanggar submarine base in June. The navy's Submarine Commander First Admiral Mohammad Rosland Omar said the second submarine was undergoing its second phase of trials by the manufacturer Navatia in waters off Cartanega in Spain.

He said the tests were expected to be completed by March and it will take about two months for the vessel to make its journey back to its home base."Come early June, we will have our two submarines here," he told reporters after a "Quality Day" event at the Sepanggar Bay naval base here Tuesday.The KD Tun Abdul Razak is the second submarine after the KD Tunku Abdul Rahman arrived at its home base on Sept 17 last year.

Rosland said more personnel would be trained to man submarines to meet the navy's future needs.Region II Commander for Sabah and Sarawak First Admiral Anuwi Hassan said they have already put in place operations and programmes for the two submarines to carry out in the next two years.

Israel In Talks To Buy 6th Submarine From Germany

By Dan Williams and Brian Rohan, Reuters, January 14, 2010

JERUSALEM/BERLIN - Israel has broached the idea of buying a sixth discounted submarine from Germany as part of a military buildup designed to signal strength in the face of Iranian nuclear ambitions, officials said on Thursday.

World | Germany

Israel has three of the Dolphin-class diesel submarines, with two more on order from Kiel shipyard Howaldtswerke-Deutsche Werft (HDW) and due by 2012. The vessels are widely believed to have been deployed with nuclear cruise missiles.

Israeli Defense Minister Ehud Barak, who visits Berlin with Prime Minister Benjamin Netanyahu on Monday, will ask the Merkel government to underwrite another Dolphin sale, aides said.

Dolphins cost some $700 million but those in Israel's fleet came at a deep discount from Germany, which is devoted to the security of a Jewish state founded in the wake of the Holocaust.

"We are in a dialogue about a sixth submarine, but no decision has been made yet. There are tough budgetary issues to deal with," a senior Barak aide told Reuters.

The German Economy Ministry would not say whether a Dolphin sale would be under discussion during Monday's discussions, and added that the question of state aid was not for it to decide.

A second Israeli source with knowledge of the talks said that Netanyahu, who has described the prospect of an Iranian bomb as a mortal danger, wanted to expand the submarine fleet.

The Israelis have hinted at pre-emptive strikes against Iran if diplomacy fails to curb its nuclear project, but many analysts believe the limitations of force would compel the Netanyahu government to adopt a more deterrent posture.

"Five submarines are sufficient, but of course we could use more. Our ideal number would be nine — enough to ensure we have the necessary assets at sea to cover all relevant threats and targets," the Israeli source said.

Armed with just 10 torpedo tubes — which can also be used to launch cruise missiles — the Dolphins would be of meager use for any conventional Israeli assault on Iran.

STRATEGIC DEPTH

Israel does not discuss its own nuclear capabilities. There is further speculation over whether Israeli cruise missiles would be able to reach Iranian facilities from the Mediterranean sea, where the Dolphins routinely patrol from their Haifa dock.

"I remain unconvinced — unless the Israelis have managed to replicate Tomahawk, which would be an extraordinary achievement," said Stephen Saunders, editor of Jane's Fighting Ships, referring to a U.S.-made, long-range and nuclear-capable cruise missile that Washington has refused to supply to Israel.

A bigger Dolphin fleet could allow Israel the option of basing some in its Red Sea port of Eilat, providing a short-cut to the Gulf. An Israeli submarine crossed the Suez Canal for an exercise off Eilat last July, the first such deployment.

Iran denies seeking the bomb but its leaders' Holocaust denials and vituperation against Israel have stirred war fears. While condemning the rhetoric from Tehran, Germany maintains some $5.7 billion in annual exports to Iran — to many Israelis' chagrin.

German opposition parties, including the Social Democrats (SPD), have voiced misgivings about weapons exports to crisis areas, but the last two Dolphin sales were approved while the SPD was part of a previous coalition government.

There is also domestic support for keeping production going at HDW, a branch of parent company ThyssenKrupp, given the lack of foreign clients for new diesel-powered submarines.

More Welding Problems Prompt Another Investigation On Navy Submarines

By Peter Frost, Newport News Daily Press, January 15, 2010

General Dynamics Electric Boat has launched another investigation into welds on at least one Virginia Class submarine after the company found that a shipbuilder at its Quonset Point, R.I., shipyard may not have properly evaluated the quality of the welds he was charged with inspecting.

The employee, who Electric Boat would identify only as a "trade worker," worked on at least one submarine — the recently delivered New Mexico — though the probe could expand to include other boats, officials told the Daily Press this week.

Electric Boat, which builds submarines in a partnership with Northrop Grumman Corp.'s Newport News shipyard, notified the Navy "immediately" after it uncovered the issue Dec. 1, said Robert A. Hamilton, a company spokesman.

None of the welds in question involve so-called "subsafe" portions of submarines, which include all systems exposed to sea pressure or are critical to flooding recovery, Hamilton said.

After a preliminary investigation and assessment, Electric Boat and the Navy concluded that the welds in question would not pose an immediate risk "on the ships that were underway," said Rear Adm. William H. Hilarides, the Navy's program executive officer for submarines.

"We made sure that, if all the things (the worker) did were wrong, that there would be no threat to any of the ships," Hilarides said. "That's done, and we're moving on."

Neither the Navy nor Electric Boat would say how many subs could be affected. The company is still collecting and reviewing records and expects to conclude its investigation within the next several weeks.

Patricia K. Dolan, a spokeswoman for Naval Sea Systems Command, the Navy's acquisition arm, said it is "inappropriate to provide any additional information regarding the ongoing (Electric Boat) malpractice investigation until its findings are presented to the Navy."

The latest problems sharpen the focus on quality-control processes at Electric Boat, and — at least temporarily — dim the spotlight that's been on Northrop over the last two years for similar issues.

Electric Boat's ongoing investigation has not delayed any ship schedule, officials said. The Navy is scheduled to commission the New Mexico on March 27 at Naval Station Norfolk.

The probe is limited to one worker, who is still an employee of Electric Boat but has not been in his job since the investigation began, Hamilton said.

"We are thoroughly evaluating all work performed by the individual," Hamilton said. "An important factor is that this was identified internally and fixed internally."

Because final assembly and delivery of the New Mexico was handled in Newport News, Electric Boat is coordinating weld assessments and any potential corrective actions on the boat with Northrop.

Northrop deferred all questions on the issue to Electric Boat.

Construction problems on Virginia Class subs first surfaced in late 2007, when an investigation revealed that workers in Newport News engaged in improper welding procedures that could have led to cracking in internal pipes and joints on submarines. After a 16-month investigation, the Navy determined that those problems pose no risk to sailors and submarines.

In early 2009, a Newport News weld inspector admitted to signing off on the quality of welds that he did not inspect. The inspector, Robert Ruks, was fired. The issue is still under investigation by the Naval Criminal Investigative Service.

Then last August, the Navy found that weapons-handling systems on at least four submarines were installed incorrectly by Newport News workers.

That investigation and the resulting repairs led to a delay in the delivery of the New Mexico, the sixth Virginia Class submarine that was supposed to be in the Navy's hands in August and commissioned in November.

Northrop Grumman is still working through inspections and repairs on the other affected submarines, a process the company hopes to complete by the end of March.

Despite the problems, the New Mexico was completed in 70 months, four months ahead of the contract schedule and fastest of the six subs completed so far, the Navy said.

"We had four or five quality problems on New Mexico that came to light as we delivered the ship," Hilarides said. "Each one of those was serious ... (but) each one was extremely limited in the number of things that went wrong."

Although the Navy has spent considerable time, resources and effort investigating problems on the Virginia Class subs, it has resulted in very little required repairs, Hilarides said.

"It's a bad story because we can't afford any quality problems on these ships," he said. "But ultimately, (the problems) have been relatively small and we've been able to get high quality ships aside from all that."

EB: Some Sub Welds Not Checked Properly

New Mexico allowed to proceed with sea trials as evaluation of work continues

By Jennifer Grogan, The Day, January 19, 2010

A trades worker at Electric Boat's Quonset Point manufacturing plant did not properly check the welds on at least one Virginia-class submarine, according to the company.

The New Mexico (SSN 779) went to sea after EB looked at the type of welds the employee worked on and their placement in the submarine.

The technical review was completed this month, EB spokesman Robert Hamilton said Monday. The Navy concurred with the results and allowed the New Mexico to go to sea pending a future inspection of the welds when the sub returns to the shipyard.

EB is still checking its records to determine whether the employee worked on other submarines, and when he stopped checking the welds, Hamilton said. The employee has not worked at the plant since the problem was discovered.

"We are thoroughly evaluating all work performed by this specific individual, and that evaluation is ongoing," Hamilton said. "We hope to finish this review within the next several weeks."

None of the welds involve "subsafe" systems, or systems that, if compromised, could lead to flooding, Hamilton added. The employee was the only one assigned to inspect the welds in question.

Alan Baribeau, a Navy spokesman, said the commissioning of the New Mexico, the sixth submarine of the Virginia class, will go ahead as planned on March 27 in Norfolk, Va.

On Dec. 1, EB notified the Navy that an employee tasked with padeye testing and structural-weld visual testing did not conduct those tests, Baribeau said. A padeye is a hook attached to equipment installed on a submarine that allows the equipment to be removed for repair.

Northrop Grumman Newport News in Virginia, EB's shipbuilding teammate, delivered the New Mexico to the Navy in late December. EB then conducted the technical review so the submarine could proceed with the sea trials it needs to complete before commissioning.

There have been other quality-control issues with Virginia-class submarines in recent years, but those problems originated at Newport News in Virginia.

The Navy ordered the welds on all Newport News ships checked in 2007 because workers there used improper weld-filler metal.

Last year, Newport News fired a shipyard inspector for signing off on inspections he did not perform and EB discovered a problem with the bolts Newport News installed in the torpedo rooms of four submarines, including the New Mexico.

American Spy Goof-Up: China Navy Report Posted On Web

By Ajai Shukla, Business Standard (India), January 19, 2010

A mistake by a US Navy intelligence official has given the world an unexpected peek into the secret world of China's navy. The US Office for Naval Intelligence (ONI) committed the blunder of posting, on an open website, the agency's assessment of the state of the

Chinese navy. Before the ONI could rectify this indiscretion by pulling off the report, it had been downloaded and posted on a publicly accessible website.

The 47-page report, entitled, "A modern navy with Chinese characteristics", is still posted on the website of the Federation of American Scientists, a policy advocacy body (fas.org/irp/agency/oni/pla-navy.pdf).

The ONI report analyses the capabilities and the future direction of the People's Liberation Army (Navy), or PLA(N). Interestingly, the ONI assessment differs substantially with the conventional view — widely prevalent in India and the Indian Navy — of a China racing unstoppably towards naval superpower.

CHINA'S NAVY TODAY

Platform Total number

Diesel Attack Submarines 53

Nuclear Attack Submarines 6

Nuclear Ballistic Missile Submarines 3

Destroyers 26

Frigates 48

Amphibious Ships 58

Coastal Patrol (Missile) 80+

The assessment notes China's recent deployment of Task Groups — each consisting of two warships and a replenishment vessel — for anti-piracy operations in the Gulf of Aden. This marks the first time in over 600 years that a Chinese flotilla has operated in waters beyond China's immediate vicinity.

But the report concludes, "none of these operations indicates a desire on the part of the People's Republic of China (PRC) to develop a constant global presence. Beijing's ambition appears to remain focused on the East Asian region, with an ability to protect the PRC's maritime interests in distant seas when required.

The Chinese navy last went global during the Ming rule in the early 15th century, when the great Chinese admiral Zhang He — incidentally, a eunuch — stamped the authority of the Chinese navy across the Indian Ocean, reaching to the shores of Africa. But, in 1435, China decided to focus inwards. Around 1477, the emperor ordered the burning of records of Zhang's seven great voyages, from 1405-1435. Thereafter, no further naval activity was permitted in the southern seas.

This inward focus continued through Mao's revolutionary war, which brought the communists to power. Thereafter, a coastal navy was sufficient to enforce China's claims over most of the East and South China Seas, and the need to deter Taiwan from declaring independence.

But the US Navy's dominating presence in the Asia-Pacific and need to protect China's supply lines convince Beijing of the need for greater naval power. China's Defence White Paper of 2008 calls for expanding the navy's operating range, and a greater role in international security.

The PLA(N)'s most key acquisition, says the ONI report, is a sophisticated anti-air capability, which would allow its ships to operate in "distant seas", far from land-based air-defence systems. The Luyang-I class of destroyers, already formidable, have been followed by the Luyang-II class and the Jiangkai II frigates, which are linked with an air-surveillance network as good as America's world-standard Aegis system.

Submarines, both conventional and nuclear, will be a key deterrent in the PLA(N). The ONI report says that Beijing will replace its large number of low-tech submarines with "smaller numbers of modern, high-capability boats (submarines)". But, while the number of surface ships remains constant, today's fleet of 62 submarines will increase over the next 10-15 years to 75.

In that time-frame, India's submarine fleet will be about one-third that of China's.

Most worrisome for the US Navy's pre-eminence in the region is the programme to develop the world's first Anti-Ship Ballistic Missile (ASBM), a variant of China's Dong Feng–21 missile. The ONI report reveals that the ASBM's peculiar flight path, involving a mid-course trajectory correction, will make it very difficult to intercept.

Despite the addition of high-tech platforms, US intelligence estimates that much of the PLA(N) will still remain outdated 10-15 years from now. Its surface ships will remain vulnerable to air attack, while command and control systems will still be relatively undeveloped.

Therefore, while the PLA(N) will be gradually expanding beyond the South China Sea, it will focus on what Beijing calls, "military operations other than war." These include protecting its international lines of supply, humanitarian relief, and naval diplomacy.

The Sub Shoot

By Shane Hurlbut, http://hurlbutvisuals.com/blog

Captain Randy Crites the commander of the USS Florida SSGN Ohio Class Submarine was so graceful in giving us permission to come along while they were doing covert ops just of the coast of Cuba. He let us shoot on the Bridge while his amazing, talented crew piloted her through the depths of the Atlantic. I would say "lets go back to one," and chief David Newsome the Dive Officer of the Watch would say I will be ready in two seconds let me get her stable. "No problem." This is the area where the periscope lives and where they steer and maneuver this huge impressive fortress; it's like the cockpit of an aircraft.

Customized Canon 1D hits the Sub

With all the gauges rear illuminated for night ops the Canon 1D went in and kicked butt. The sensitivity of the sensor is absolutely incredible. I shot at 3200 ISO at a 2.0 on a 21mm Primo Primes. All the gauges glowed beautifully and with a little medium blue green fill light and a red light edge you felt like you were on the Bridge of the Enterprise. I was in Man Cam mode starting high overhead looking down over the Dive Officer's shoulder onto the control panel then I wrapped around him and moved into a close up. This would be impossible with any other camera. For film this would have to be a set that the Production Designer builds, more natural resources being spent, he would engineer the ceiling so that it could be removed for camera and lighting assist. The camera would be then put on a Technocrane, more labor, more fuel being consumed, etc. We would build the control panel so that I could use movie lights to back light all the gauges. Then add the necessary fill and accent lights to bring it up to a film exposure.

Walkway between the missile tubes

We then took the Canon 1D to the Missile Launch tubes that extend 5 stories down into her hull. We shot the SEALS hauling ass through them, we lit with 12 MR-16 Par cans that we placed at the end of the walkway that flared the camera out, all the rest was available light. We photographed the SDV (SEAL Delivery Vehicle) launching from the DDS (Dry Deck Shelter), which is a huge compartment that is attached to one of the missile tubes, this has a door that swings open to release the mini-sub holding the SEALS into the open ocean.

Entering the DDS

We shot a 3-page scene in the BMC, which is the Battle Management Center; again taking advantage of the low light capabilities of the camera we were able to use their practical light, their cool monitors and screens to add to the reality of the scene. With all this said and done it would have taken about 50 build days, 4 pre-light days, 8 shooting days, a crew of over 175 people to make this happen, with resources being consumed from all over and money being spent for no apparent reason. We did this in 2 days and with five crewmembers. Gene Martin (sound mixer extraordinaire), Elite team members John Guerra: gaffer, Darin Necessary: 1st A.C., Michael McCoy the Director, and myself. Multi-tasking to the max!!!

Mouse McCoy and Shane lens the approach

This does not even include the ocean portion of the operation. Which was a recovery op. of 2 small zodiacs filled with SEALS that were ripping across the Atlantic when all of a sudden the Sub breaches in front of them, they ride the wake onto the stern of the sub, jump out and head down into a lock out chamber. We did this all with 2 boats, 2 boat drivers, 5 Navy crew members to coordinate the sub, and talk with the zodiacs on Comms, the SEALS, 44 Pelican cases filled with lights, underwater gear, cable, cameras, props, and wardrobe in one day.

Seals activate first person helmet cam

What makes this sub so amazing is that she is 560 feet long Special Operation Forces sub that delivers Navy SEALS to front line in very cool toys. The SDV is a mini sub that is a totally flooded vehicle that they load six SEALS into on re-breathers so bubbles won't give them away. The SSGN Ohio Class Submarine's propulsion system equals 15 million foot pounds of torque, over a million horse power that catapults her to speeds way over 20 knots, (the speed is classified). She's fast. Living in this community was an incredible life experience and I thank the U.S. Navy for giving me this glimpse.

Sub recovers SEALS off the Horn of Africa

So I go under the Atlantic Ocean just off the coast of Cuba for three days that expands to five because of squall conditions. We had 3 boats bobbing around the Gulf of Mexico, with boat drivers barfing their guts out; they were there to try and retrieve us. Not a chance. We starting thinking about other ways that we could get off the sub, the Navy offered because the Director was an ex-stuntman to shoot him out of one of the Torpedo tubes in an air bubble with a life raft and a light beacon, but none of them came to fruition because the seas were at 8- 10 feet.

Our bunks on board

So we had a few more days to live in this incredible self-sufficient living environment. I had no idea how awesome a nuclear sub was. So much of the world could learn how to become green from this monolith. It uses a nuclear reactor to power its engines, 2 steam generators that give her power with zero emissions for 25 years at full throttle or power up Las Vegas for 5.76 years. It has its own desalination plant on board to provide water for showers, drinking water, etc. Best water I have ever tasted. It makes its own O2 from the seawater she takes in. No plastics are brought on board. All paper and cardboards are recycled and stowed on deck till they head to port. It seems like she has it all figured out, how to live in harmony and save the environment. Plus packed with the power to defend us. Wow, what a novel concept.

Sub bathroom

Bandito Brothers, sticking with their small footprint approach, fit right into the eco-system of the sub. As we recycled our flash cards they recycled paper, as we conserved on film processing, using less lights, less crew, less fuel, less food and water being consumed on shore because of this small, nimble Canon HDSLR platform, the Submariners did the same at sea. DIVE!! DIVE!!

To view the photos from Shane Hurlbut's visit on the USS Florida, click the link below.
http://hurlbutvisuals.com/blog/2010/01/14/the-sub-shoot/

Submarine Officers Face Court Martial

Portsmout News (United Kingdom), January 18, 2010

A submarine commander and two of his officers are to face a court martial hearing today charged in connection with grounding their vessel.

Commander Steven Drysdale, Lieutenant Commander Andrew Cutler and a third man will all face the charge of neglecting to perform their duty.

The charge relates to the grounding of the nuclear-powered submarine HMS Superb on May 26 2008.

They are to attend a plea and directions hearing at the HMS Nelson court martial centre at Portsmouth Naval Base.

The vessel grounded in the Red Sea causing damage to the bow and its sonar equipment causing it to have difficulty diving. Superb, which came into service in 1976, was decommissioned in September 2008 although the MoD said the accident had not led to the submarine being taken out of service earlier than already planned.

Bulava Blueprints Blamed

Strategy Page, January 17, 2010

Russia has completed yet another investigation into repeated failures of its new Bulava SLBM (Sea Launched Ballistic Missile). The latest finding is that there was a design flaw in the third stage of the missile. Earlier investigations had found faulty missile components, the use of cheap component substitutes and poor manufacturing practices. But now the Russians believe they have identified and fixed all the flaws, and are planning several more test firings this year. So far, only five of the 13 test firings were successful. Some insiders assert that only one of the 13 tests was an unqualified success.

This is in stark contrast to the Bulava's U.S. counterpart, the much older, 58 ton, 44 foot long Trident II, which has not failed to launch successfully in over twenty years. Since 1989, none of more than 120 test launches have failed. The Trident had two failures during its 49 development test launches, but since then, it has been the most reliable SLBM to ever enter service. Each Trident II costs about $65 million, and entered service in 1990. Some of them are fired every year, to insure that the current configuration (of hardware and software) still works as it is supposed to.

In contrast, the latest Russian SLBM, the Bulava, is having an awful time in testing. While the overall (out of over 5,000 of them) failure rate for test launches of Russian rockets is eight percent (and the U.S. Trident I had a failure rate of 13 percent while in development), more than half of Bulava's development test launches have failed. The 48 ton, 56 foot long Bulava costs about the same as the Trident II. Russian leaders insist that the Bulava will eventually succeed. It must, for the future of Russian SLBM force is at stake.

Meanwhile, Russia has delayed, for at least a few months, starting construction of their fourth Borei class SSBN (ballistic missile nuclear subs, or "boomers"). Russia wants to have the new Borei class boats replace the current Delta IV class SSBNs. The first Borei is already in the service, but not yet commissioned, and two others are under construction. The problem, and unofficial reason for the delay, is the inability to make the new Bulava SLBM work. The latest Bulava test was a spectacular failure (which lit up the pre-dawn sky of northern Norway, for all to see).

Only eight of the twelve existing Russian Delta IV SSBNs are available for service. The Delta IVs are getting old, and have only about a decade of useful service left. Currently, it appears that the navy will get only eight Boreis. These new boats are expensive, and the navy wants to build some other expensive warships as well (carriers and attack subs).

The government has insisted that the Bulava will be made to work, no matter what it takes. The only alternative is to redesign the Boreis to use the existing R-29RM Sineva SLBM. Sineva is the last liquid fuel Russian SLBM in service, and is used in the current Delta class SSBNs. This would cost billions of dollars, and delay the Boreis entering service by several years. To many, switching to the older, but more reliable, Sineva missiles seems like a reasonable move. Liquid fuel missiles are more complex than solid fuel missiles, even though they use fuel that can be stored for long periods inside the missile. Unable, for a long time, to develop the technology for solid fuel rockets, Russia made the most of this, and developed some very effective "storable liquid fuel" rockets. It was only near the end of the Cold War that Russia finally mastered the solid fuel rocket construction techniques. But only one solid fuel SLBM entered service, the huge, 90 ton R-39, for the massive Typhoon SSBNs (which are being retired because they were so expensive to operate.)

Borei boats have missile tubes designed to hold the Bulava (which is 12.1 meters long and two meters in diameter.) The Sineva, is 14.8 meters long and 1.8 meters in diameter. The additional length of the Sineva would require substantial revisions in the existing Borei, and the two under construction. The existing solid fuel SLBM that works, and is carried in the larger (and being retired as too expensive to operate) Typhoon, is the R-39, and it is huge (16 meters long and 2.4 meters in diameter.) Much too large even for a rebuilt Borei.

Many Russian officials believed that the root of all these problems was the flight of so many skilled engineers and scientists from Russian defense industries after the Soviet Union collapsed (and sales promptly dropped over 90 percent). The smart people quickly found lucrative jobs in other industries, and there has been little new blood in the last two decades. The same thing happened on the manufacturing end. During the Soviet period, defense industries had the cash to attract the most skilled manufacturing staff. No more. And the dismal Bulava test performance is yet another result of this brain drain.

Asia-Pacific's Future Geopolitics

By Richard Scamehorn, Lancaster Eagle-Gazette, January 17, 2010

This past year, when the unarmed USNS Impeccable got close to China's nuclear submarine base at Hainan Island, it was surrounded by five Chinese ships.

The Chinese thought they had good reason. The Impeccable had numerous submerged listening devices, possibly attempting to record the sonic signatures of China's new nuclear submarines. The capability to identify China's submarine fleet would represent valuable military intelligence for the U.S. Two of the Chinese trawlers attempted to ensnarl the cables of the sonic devices. They failed.

China's rapidly developing nuclear submarine fleet is just one part of its overall military buildup. At this writing, China has the largest active-duty military in the world. This compares to other major military forces: China, 2,250,000; U.S., 1,452,000; India, 1,325,000; and Russia, 1,245,000.

China is attempting to develop a strategic superiority — military advantage over other major military forces — particularly in the Asia-Pacific sphere of influence. To evaluate its superiority in that sphere, consider the following: There are 2,266,000 military in all the other Asia-Pacific countries: Formosa, Japan, Laos, Malaysia, Philippines, Republic of Korea, Thailand and Vietnam. The total Asia-Pacific sphere has the same size military force as China. Japan's constitution limits its military to strictly defensive forces.

As a result, China has the power to intimidate any — and perhaps all — Asia-Pacific countries.

Consider the Spratly Islands — a grouping of more than 100 small islands and reefs located in the South China Sea, about two-thirds of the way from southern Vietnam to the southern Philippines. Their location places some parts of them close to several countries. As a result, their ownership is claimed by China, Taiwan, Vietnam, Malaysia and the Philippines. All of these countries have small military units located on several of the islands.

The islands, per se, have little tactical value because many of them are under water at high tide, but they offer great strategic value to their would be owner, because the area is:

Rich in fishing grounds.

The world's fourth-largest natural gas bed.

Shipping lanes for more than half of the world's merchant fleet.

According the 1982 United Nations convention, the owner would be allowed to claim the seas 200 miles out from even the most remote islands.

To minimize potential conflicts, all the claiming countries were signatories to the 2002 "Declaration on the Conduct of Parties in the South China Sea." These countries pledged to take no action(s) which would "heighten any tension."

In classic Chinese saber-rattling, on March 16, China sent a military patrol ship, maneuvering throughout the islands. When the other signatories objected to this action, China's only response was that it was not a warship (but, neither was the Impeccable). However, with its rapidly expanding navy and its clear intent for intimidation of these much smaller military forces, China slowly is moving forward to cement its claim of ownership of the Spratlys. The Association of South East Asian Nations Treaty countries have become paper tigers, and China reckons the association is too weak and disorganized to intervene. In addition, it is asserting its claim in a manner that no western force or country would consider military intervention.

Don't be surprised if China validates its claim and takes possession of the Spratly Islands in less than a decade — that is what geopolitics is all about in a multipolar world.

Israel To Station German Nuclear Submarine In Persian Gulf

Press TV, January 18, 2010

Ahead of an Israeli-German cabinet meeting in Berlin, median reports indicate that Israel intends to station one of its German-made Dolphin submarines in the waters of the Persian Gulf.

"Israel's use of the dolphin submarine in exercises in the red sea aroused fears that Israel may seek to maintain a continued presence in the Persian Gulf as soon as it receives its submarines form Germany in 2011-2012," the tagesspiegel said on Sunday.

The meeting, delayed in November due to Israeli Prime Minister Benjamin Netanyahu's illness, is expected to focus on Israel's push to buy a sixth Dolphin-class nuclear submarine from the Germans.

During the day-long trip by the centre-right government, Netanyahu seeks to expand Tel Aviv's submarine fleet.

Israel has previously received three submarines as a donation form the government of the then German chancellor Gerhard Schroeder.

The German newspaper Berliner Zeitung in 2003 revealed that Germany's leading shipyard company Howaldtswerke-Deutsche Werft was involved in negotiations with Israel to construct two additional Dolphin submarines.

The company confirmed the reports adding the German government had approved them. Days later the German Focus magazine reported that Tel Aviv will not be receiving the submarines as the German government had decided to halt the delivery of the two submarines to Israel.

The Dolphin submarines are among the most sophisticated and capable submarines in the world, that could be equipped with nuclear missiles. Built in German shipyards for the Israel Navy, the submarine is capable of carrying American-supplied Harpoon cruise missiles equipped with nuclear warheads.

This is while political groups opposed to Israel's "occupation, settler and war politics" have announced plans to demonstrate near the Federal Chancellor's Officer.

"Why is a joint cabinet session taking place with a racist, fascist, Zionist ideology?" one of the groups asked in its announcement. After the United States, Germany is the principal donor of both economic and military aid to Israel. While restrictive German export regulations bar the sale of weapons to crisis areas, the German government has justified its actions by describing the move as "special responsibility" towards Tel Aviv.

How To Protect Our Nuclear Deterrent

By George P. Shultz, William J. Perry, Henry A. Kissinger, and Sam Nunn, Wall Street Journal, January 20, 2010

The four of us have come together, now joined by many others, to support a global effort to reduce reliance on nuclear weapons, to prevent their spread into potentially dangerous hands, and ultimately to end them as a threat to the world. We do so in recognition of a clear and threatening development.

The accelerating spread of nuclear weapons, nuclear know-how, and nuclear material has brought us to a tipping point. We face a very real possibility that the deadliest weapons ever invented could fall into dangerous hands.

But as we work to reduce nuclear weaponry and to realize the vision of a world without nuclear weapons, we recognize the necessity to maintain the safety, security and reliability of our own weapons. They need to be safe so they do not detonate unintentionally; secure so they cannot be used by an unauthorized party; and reliable so they can continue to provide the deterrent we need so long as other countries have these weapons. This is a solemn responsibility, given the extreme consequences of potential failure on any one of these counts.

For the past 15 years these tasks have been successfully performed by the engineers and scientists at the nation's nuclear-weapons production plants and at the three national laboratories (Lawrence Livermore in California, Los Alamos in New Mexico, and Sandia in New Mexico and California). Teams of gifted people, using increasingly powerful and sophisticated equipment, have produced methods of certifying that the stockpile meets the required high standards. The work of these scientists has enabled the secretary of defense and the secretary of energy to certify the safety, security and the reliability of the U.S. nuclear stockpile every year since the certification program was initiated in 1995.

The three labs in particular should be applauded for the success they have achieved in extending the life of existing weapons. Their work has led to important advances in the scientific understanding of nuclear explosions and obviated the need for underground nuclear explosive tests.

Yet there are potential problems ahead, as identified by the Strategic Posture Commission led by former Defense Secretaries Perry and James R. Schlesinger. This commission, which submitted its report to Congress last year, calls for significant investments in a repaired and modernized nuclear weapons infrastructure and added resources for the three national laboratories.

These investments are urgently needed to undo the adverse consequences of deep reductions over the past five years in the laboratories' budgets for the science, technology and engineering programs that support and underwrite the nation's nuclear deterrent. The United States must continue to attract, develop and retain the outstanding scientists, engineers, designers and technicians we will need to maintain our nuclear arsenal, whatever its size, for as long as the nation's security requires it.

This scientific capability is equally important to the long-term goal of achieving and maintaining a world free of nuclear weapons—with all the attendant expertise on verification, detection, prevention and enforcement that is required.

Our recommendations for maintaining a safe, secure and reliable nuclear arsenal are consistent with the findings of a recently completed technical study commissioned by the National Nuclear Security Administration in the Department of Energy. This study was performed by JASON, an independent defense advisory group of senior scientists who had full access to the pertinent classified information.

The JASON study found that the "[l]ifetimes of today's nuclear warheads could be extended for decades, with no anticipated loss in confidence, by using approaches similar to those employed in Life Extension Programs to date." But the JASON scientists also expressed concern that "[a]ll options for extending the life of the nuclear weapons stockpile rely on the continuing maintenance and renewal of expertise and capabilities in science, technology, engineering, and production unique to the nuclear weapons program." The study team said it was "concerned that this expertise is threatened by lack of program stability, perceived lack of mission importance, and degradation of the work environment."

These concerns can and must be addressed by providing adequate and stable funding for the program. Maintaining high confidence in our nuclear arsenal is critical as the number of these weapons goes down. It is also consistent with and necessary for U.S. leadership in nonproliferation, risk reduction, and arms reduction goals.

By providing for the long-term investments required, we also strengthen trust and confidence in our technical capabilities to take the essential steps needed to reduce nuclear dangers throughout the globe. These steps include preventing proliferation and preventing nuclear weapons or weapons-usable material from getting into dangerous hands.

If we are to succeed in avoiding these dangers, increased international cooperation is vital. As we work to build this cooperation, our friends and allies, as well as our adversaries, will take note of our own actions in the nuclear arena. Providing for this nation's defense will always take precedence over all other priorities.

Departures from our existing stewardship strategies should be taken when they are essential to maintain a safe, secure and effective deterrent. But as our colleague Bill Perry noted in his preface to America's Strategic Posture report, we must "move in two parallel paths—one path which reduces nuclear dangers by maintaining our deterrence, and the other which reduces nuclear dangers through arms control and international programs to prevent proliferation." Given today's threats of nuclear proliferation and nuclear terrorism, these are not mutually exclusive imperatives. To protect our nation's security, we must succeed in both.

Beyond our concern about our own stockpile, we have a deep security interest in ensuring that all nuclear weapons everywhere are resistant to accidental detonation and to detonation by terrorists or other unauthorized users. We should seek a dialogue with other states that possess nuclear weapons and share our safety and security concepts and technologies consistent with our own national security.

Mr. Shultz was secretary of state from 1982 to 1989. Mr. Perry was secretary of defense from 1994 to 1997. Mr. Kissinger was secretary of state from 1973 to 1977. Mr. Nunn is former chairman of the Senate Armed Services Committee.

Electric Boat Welcomes Home Returning Military Members

By Michael Gannon, Norwich Bulletin, January 19, 2010

Groton, Conn. — Electric Boat likes to say it provides the U.S. military with the finest submarines in the world.

But John Casey, president of the Groton submarine manufacturer, said it also has given the military some good people. He made the comments at a reception Tuesday morning to welcome eight workers back from military deployment.

Michael Lopes, of Ledyard, Michael Baycura, of Groton, and Michael Rushton, of Plainfield, all were deployed to the Middle East for periods ranging from three to 11 months.

"We believe in what you do," Casey told the workers, praising them for their military service. "We are proud to have you as friends and coworkers."

Received iPods

Six of the eight were present Tuesday. All received an iPod at the breakfast reception.

"We've found from other workers that those can really help pass the time on a deployment," said Bob Hamilton, director of communications for the company.

"This was nice," said Rushton, who works in materials and supply at EB, and is a staff sergeant with the Connecticut Air National Guard. "And a lot of people have just come up and said thank you."

Rushton, 40, installed computer equipment overseas. He and his wife, Heidi, have three children. Lopes, 36, and his wife, Carol, have four children. Lopes, an electrical engineer, is a lieutenant in the Navy Reserves. He said the time away is hard.

"You always know you can be recalled," he said. "You all just sit down together and do what you have to do."

Baycura, 26, is single. He and Rushton served in the same unit. Lopes roomed in Iraq with EB engineer Jonathan Seavey II of Rhode Island. Engineer Erin Foster, also of Rhode Island, was there in the same unit.

Bloggers Take Over Nuclear Sub USS Hampton

By Peggy Gartin, San Diego Met Blogs, January 19, 2010

What dangles when you angle? What slides when you dive? How many ladders can they fit in one sub, and must I climb all of them? This and many other questions were answered Friday when a group of 8 bloggers were invited aboard the U.S. Navy's nuclear submarine U.S.S. Hampton for an all-day distinguished visitor cruise.

The bloggers included Smarterware's Gina Trapani (@ginatrapani), NBC San Diego tech correspondent and Mashable associate editor Jenn Van Grove (@jbruin), Mitch Wagner (@mitchwagner), Angie Swartz (@aaswartz), Chris Cantore (@chriscantore), Scott Kingery (@techlifeweb), Rob Marlbrough (@DowntownRob), and me, Peggy Gartin (@thepegisin). The visit was arranged by Submarine Squadron 11's public affairs officer Lt. Denise Garcia and led by the squadron's commander, Commodore Brett Genoble. Waiting to greet us were the boat's commanding officer Commander Bill Houston and his crew of 134.

According to Lt. Garcia, we were the first bloggers the San Diego-based sub community has hosted, and are possibly the first for the entire submarine community as well. I wondered if it would turn into a kind of culture clash—disciplined military types faced with long-haired eggheads used to shooting off their mouths. As it turned out, we had more in common than you might think.

The Navy, it appears, is coming to recognize the value of new media, and thinks bloggers can be as effective at telling their story as traditional media. The U.S. military has been surprisingly open to blogging even within its ranks; the number of "milblogs" (or military blogs) run into the thousands, with bloggers ranking as high as admiral (as in Admiral John C. Harvey, Jr.). Milblogging.com currently

tracks 2,534 milblogs in 43 countries. Commodore Genoble confessed to reading up on all our blogs before we got there. Heck, lurking and snooping like that are core blogger skills! Maybe we're not so different from submariners.

The day began with a coffee, pastries and a briefing in Commander Houston's wardroom, the largest private room on the boat, but honestly, the size of a walk-in closet. They told us what they'd show us and what they couldn't show us: mainly anything classified, which means no inspecting the nuclear reactor. We would get to see weapons, go up the wing to the bridge, and be in the control room while they did some maneuvers, including 30-degree dives to depths of 500 feet.

I couldn't possibly tell you all the things we did in a brief blog post, but here are the highlights:

My "I shoulda joined the Navy" moment

I had heard that standing on the bridge (the top of the wing, or that part of the sub that sticks up) while heading out to sea is an experience not to be missed, so when they asked, "Who wants to go up first?" my hand shot up. I was then wrapped up in a warm jacket with USS HAMPTON on the chest and strapped into a rather complicated harness. I clambered inelegantly up 3 not-so-consecutive ladders, and kept thinking I was going to put my foot on a knob or a valve and a horn would go off. Then I stuck my head out of the hatch and couldn't quite believe what I would have to do next: wriggle up onto a maybe 4-foot-wide piece of real estate, on either side of which was a 25-foot-drop into foamy, freezing-cold ocean. I am not a wriggler. Somehow I got up there anyway, my harness was clipped to a hook on the floor, and I clung to a railing for dear life.

Once I looked out on the ocean, though, I knew it was all worth it. The day was gorgeous, with mist just burning off around Point Loma, sun shining on cormorants, pelicans and gulls skating by or hitching a ride on the back side of the sub, and even a few dolphins playing some yards to our left. A gray boat labeled NAVY SECURITY accompanied us on the right, and a white Coast Guard cutter followed behind. The power of the boat as she sliced through the water, and the greater power of the sea as it surged over the bow, was simply breathtaking. I would have stayed up there all day if they'd let me.

Buster Keaton, angles and dangles

When we'd reached a point 15 miles out where the water was deep enough to dive, we all gathered in the control room for an exercise called "Angles and Dangles." The CO explained that when you shoot a torpedo at an enemy, you reveal your sub's position, and they're probably going to fire back. So firing a torpedo is almost always accompanied by a steep dive so that when return fire comes, you're not there anymore. He then showed us what that kind of dive felt like, first with a 25-degree dive, then a climb, then a 30-degree dive.

Have you ever seen that silent film of Buster Keaton fighting a wind storm? A steep climb forces you into a posture something like that. Your calf muscles scream from the strain. You grab onto anything just to stay upright. A steep dive forces just the opposite. You have to lean waaaaaaaaay back. Then your abs and thigh muscles have a fit. It's a total body workout, and you're standing still!

The most impressive part of this exercise was the clear and exact communication between captain and crew. The control room was full of people, but each was quiet and focused on their individual task. The captain would say an order, not loudly but clearly, and the person who knew that task was theirs would repeat that order back, say "Aye sir," and get it done. I never heard anyone repeat back an order wrong or fail to get a handoff that was meant for them. In this way the captain and crew executed precise maneuvers, all while the captain was giving us a running dialogue of what we were doing and why. It made you feel that we were in really good hands.

Hmm…what's missing?

By now I had been all over the boat, and was even starting to recognize certain people when I saw them again. "Oh hey, there's Fisher again. Excuse me, Spillner. Hiya Jonesy, how ya doin'?" Still, there seemed to be something missing, and it seemed connected to the wide-eyed silence I sometimes encountered as I made my way down the halls. Then it hit me…THERE ARE NO CHICKS ON THIS BOAT. Well, other than me and 3 of my blogger sisters.

I asked Commodore Genoble about it later, and sure enough, women are not yet allowed to serve aboard U.S. Navy submarines. Other ships only began allowing women in the '90s, a fact that also surprised me. He explained that to have both sexes aboard such a confined space would be tough, given that space is at a premium and privacy practically nonexistent. However, there is a plan to integrate some of the bigger SSBN submarines in the near future. I hope so, because otherwise sustaining my joining-the-Navy-at-43 fantasy is going to be tough.

Eating like admirals

In preparation for this visit, I asked my dad what he remembered about subs from his Navy service. Here's what he said:

"Let me make a prediction: you will eat like admirals. When I was a young ensign in 1960 at the Naval Photographic Center, my first job was to sit in a screening room and declassify motion picture footage from the U.S.S. Triton, an SSN making a secret around-the-world cruise underwater. They only surfaced the conning tower to offload film to a helo off Spain. The job was torture. I was living in the BOQ and had not yet figured out how to get to work on time and eat breakfast first. The hours of watching the mess cooks at work were excruciating. SSN crews eat exceedingly well."

Just as my dad predicted, lunch was a feast. Two kinds of braided bread, salad, choice of tomato soup or seafood chowder, beef stroganoff, and for dessert, cookies & cream ice cream, cherry cheesecake or fresh fruit cup. If you held up 3 fingers, you got all 3 desserts. They even made one of the breads, one of the soups and the noodles vegan because they knew one of our party was vegan. I was stuffed.

The captain explained it like this: "These guys work 18-hour days, sleep 6 hours, then do it all again—generally seeing no sunlight for days at a time, and can only tell what time it is by what meal they're being served. The least we can do is make that meal enjoyable." He also confirmed what I'd heard about every sub having its own ice cream maker.

Roll me into the torpedo tube, I want to take a nap

Next they showed us the delicate operation of loading a torpedo into the torpedo tube. They used a dummy "shape" for our demo, but I could just imagine how nerve-wracking it would be to load a live shell. I mean, the torpedo is 21 feet and 1 inch long, and the tube is only ¼" longer than that—not much room for error.

Later they dared me to climb in to the torpedo tube, and of course, I did. Once I was in there they started telling me how there was only a thin 1" steel louvered door between me and the whole ocean, which caused me to scramble out in as ladylike a manner as I could muster. If I'd been calmer about it, my knees wouldn't be so black and blue today.

Home again

When we pulled back into port, I couldn't believe we'd been gone all day, from 8AM to 4PM. I'd had so much fun, it felt like we'd just left, but our day as submariners was over. As climbed out and walked onto the dock, we passed dozens of crewmen carrying boxes of food and produce. The captain had explained this earlier: "We can stay out at sea as long as our food holds out. We can make our own air, we can make our own water, and the nuclear reactor keeps us powered indefinitely. The resource we have to replenish is food."

If what I saw was any indication, they plan to be at sea for quite a while.

Scott Kingery's Blog Entry:

Last month, a week or so before Christmas, I received an email from Lt. Denise Garcia of the U.S. Navy. Now email from the Navy isn't something that occurs often for me so I opened that one ahead of the others in my in-box that day. That email was like getting an early Christmas present as it contained an invitation to join 7 other bloggers aboard a Los Angeles Class Fast-Attack Nuclear Submarine.

I had to read it a couple times. Really? Me?

I learned that my friend Jenn Van Grove, who I know from Twitter and several Twitter Meetups, had included my name on a list she gave to Lt. Garcia. Also, ours would be the first group a bloggers that Navy has invited on a submarine.

Our amazing trip was this past Friday, January 15, 2010.

My fellow honorary submariners are:

Gina Trapani (@ginatrapani)
Chris Cantore (@chriscantore)
Peggy Gartin (@thepegisin)
Rob Marlbrough (@downtownrob)
Angie Swartz (@aaswartz)
Mitch Wagner (@mitchwagner)
Jennifer Van Grove (@jbruin)

The group of us and Denise met Thursday night at Celadon in Hillcrest for dinner and as a kind of ice breaker. This was something we arranged on our own but I think it really added to the trip. Each us knew some of the others but not everyone. Denise was able to answer questions as well as give us some information about what we would be experiencing the next day. Good food, good times and an early evening as we had to be at the submarine base in Pt. Loma at 7:30 a.m. on Friday.

Morning Briefing

We met Friday in a parking lot just outside the base. Here, Denise gave us permits to drive onto the base and we carpooled together the short distance from there to the pier where the submarine would be. We were each given name tags and divided into 2 groups to facilitate tours through the sub. For security reasons, it wasn't until then that we learned than the we would be aboard the USS Hampton (SSN 767).

At 8:00 things came to a stop as we had Colors and the Star Spangled Banner played. Then it was across a gangway to the sub, into an open hatch and down a vertical ladder into the sub. It was immediately apparent why the 2 groups. Having all 8 of us in one spot would just clog things up.

We all went to the Wardroom where we were briefed on what we would be doing for the day.

My group was the first to go up to the control room and attack center where I was able to watch the men control the sub. I also got to go into the sonar room where I was given a set of headphones to listen in on what we could hear around us.

There is so much information coming at you on these screens. It was incredible. The screens in the control center aren't dedicated to a specific task. One minute they could be displaying sonar contacts and the next they could be displaying a live video feed from the periscope. Also, interesting is that these systems are COTS (commercial off the shelf) which keeps costs low and enables them to be easily switched out or upgraded.

Dive!

Around 10:00 we had reached our dive point. I was in the control room when the order was given. The Hampton was put at a 5 degree angle down and we started to slip beneath the surface. I was really looking forward to this. It was quick and silent. I was standing by a monitor that was receiving a video feed from periscope 2 and shot this little video of our dive:

Angles and Dangles

When we had reached a certain depth we went through a procedure the men call "Angles and Dangles." During this procedure the sub dives deep and then comes back up, both at a steep angle. You need to grab hold of something because at 25 degrees you are really leaning! One of the reasons for going through this procedure is that everything not secure will fall. Falling objects make noise and noise and submarines do not mix. Silence is your friend.

Also demonstrated for us was the crew coming to battle stations. A flurry of activity in very limited space occurs. Orders and acknowledgements fly. The bunch of us press ourselves out of the way as best we can in the tight control room. Everything like clockwork. Torpedo tubes flooded. The order given to fire! A quick shift in air pressure occurs that makes your ears pop as the torpedo leaves the tube. Today it was a 'water slug' which is basically a flooded torpedo tube with no torpedo in it. Torpedo away, the sub turns and moves. Fast.

Weapons Demonstration

We went down to the torpedo room where the sub has 4 torpedo tubes and watched a demonstration of a torpedo, this one inert for training purposes, being loaded into the tube. The torpedoes are 19ft long and only slightly less in diameter than the tube. Here is a picture looking down torpedo tube #1. The Pacific Ocean is about 20 feet away on the other side of that door at the end.

Loading that torpedo is a precision maneuver with no room for error. Orders shouted, acknowledgements given fore and aft of the torpedo as it is moved on its hydraulic rails into the tube.

Lunch

After weapons demonstration we made our way back to the Wardroom where lunch was served. With all the excitement of the morning I was hungry! The chef on the Hampton did not disappoint.

There was a menu at each of our places. From the soup options, I chose tomato and, while you could have had all three deserts I chose the ice cream. There was also fresh bread and pitchers of water, Diet Coke and juice. Everything was good.

After lunch the groups switched places. The others went up to the control room and my group went to the places they had been in the morning.

Afternoon

We went back to the torpedo room for a closer look at the controls and the tubes themselves. We also saw the auxiliary diesel engine, crew meeting room, crews mess room and galley.

Later we went up to the control room again. I believe we were around 60ft below the surface and we had a demonstration of an 'Emergency Blow'. This is where air is forced into the ballast tanks and the sub rises rapidly to the surface. Felt like a quick elevator ride.

An amazing day

We saw and did so much it is really had to distill it into a blog post. Everyone I encountered was ready to answer questions and proud of their amazing machine. And they should be. I am honored to have been included on this historic first blogger submarine embark.

Thanks to Commodore Genoble, Lt. Garcia and the men of the USS Hampton for your hospitality and an amazing adventure!

Angie Swartz's photos can be found here:
http://www.flickr.com/photos/angieaswartz/sets/72157623222680214/
Mitch Wagner's photos can be found here:
http://www.flickr.com/photos/mwagner/sets/72157623222623116/
Jennifer VanGrove's photos and video can be found here:
http://jbruin.posterous.com/tag/subembark/
Peggy Gartin's photos can be found here:
http://www.dropbox.com/gallery/4058843/1/sdsubdive?h=a8c4d1
Rob Marlbrough's videos can be found here:
http://www.youtube.com/watch?v=RyL40Z89g4Q
http://www.youtube.com/watch?v=hmvfqvTLyww
http://www.youtube.com/watch?v=BFdDIb7ReMs&feature=channel
http://www.youtube.com/watch?v=Ivc1KSVStUk&feature=channel

Gina Trapani's photos can be found here:
http://www.flickr.com/photos/ginatrapani/sets/72157623218874054/
Chris Cantore's photos and videos can be found here:
http://www.chriscantore.com/2010/01/16/uss-hampton/

India Losing Its Sub Supremacy Over Pakistan

By Shiv Aroor in New Delhi, Mail Today, January 19, 2010

FROM A current strength of 16 active submarines, the Indian Navy could face the ignominy this decade of having a submarine fleet strength on a par with Pakistans, a country with one- seventh the coastline of India.

According to a navy document, Indias available submarine strength (currently 16) stands to come down to nine by 2012 and eight by 2015 as a result of regular retirements.

Pakistan currently has five active submarines and by 2015 will add three new ones with no immediate retirements. Therefore, by the middle of this decade, its possible that well have the same number of submarines.

And without urgent attention to Indias fleet strength, China will soon have both the gumption and strategic ability to crawl the Indian Ocean with its new generation nuclear attack submarines, undermining the Indian Navy in its very own backyard.

Those are the decidedly uncomfortable warnings sounded in a recently circulated internal note by the Eastern Naval Command — the home of Indias submarine arm — and accessed by H EADLINES T ODAY . The note quotes international intelligence inputs to point out that Chinese nuclear submarines were detected 16 times outside their territorial waters in 2009, a substantial increase over the previous two years — enough reason to believe that " it will not be long before extended patrols of PLAN (Peoples Liberation Army Navy) s nuclear attack submarines increase in frequency, endurance and range, including but not limited to the Southern Indian Ocean Region, or well within the Indian Navys area of responsibility." The note goes on to predict that " by 2015, the Indian Navy stands to be positioned at its lowest ebb in terms of subsurface strength and attendant sea denial and anti- access capabilities in the IOR (Indian Ocean Region)" — adding that a combination of factors is pushing India into a situation of " grave operational concern". Worse still, " in four- six years, unless a great deal of course correction is implemented by the Indian Navy, it may be commonplace to assume that PLAN nuclear submarines are very much part of forces operating in a full- fledged manner in the Indian Ocean Region", the note declares in its conclusion.

Previously only the subject of hushed South Block conversations, the Navys note is the first comprehensive articulation of just how bleak things really are as far as the Navys silent service is concerned.

" The implicit focus for PLAN appears to be undermining the IN (Indian Navy) s maritime edge in the Indian Ocean Region with a view to controlling SLOCs (sea lanes of communication)," the note warns.

A senior officer posted with the Naval Headquarters told H EADLINES T ODAY , " The briefing note is just the tip of the iceberg.

Many more details are being shared with the government and we hope to push things faster now." Former navy chief Admiral Arun Prakash, whose tenure saw the long delayed signing of the Scorpene submarine deal in 2005, said, " This is a serious matter. The Navy has been communicating its anxieties to the government since the beginning of this decade. If things are still not starting to happen, its something to be sorry about." While the Navy itself is being cautious not to place the blame squarely at the governments door, the note illustrates how delayed procurements, the " highly unfortunate" delay in the Scorpene submarine building programme and lack of attention to perhaps the most crucial instrument of maritime warfare and strategic security has all snowballed into a deeply uncomfortable situation for successive Navy chiefs and their military planners.

The note ends by recommending that the Navys second production line for six conventional submarines, Project 75 (India), be kickstarted without further delay and the embattled Scorpene project be provided with urgent attention to avoid any further slippages.

Deep-sea sonar technology for advanced anti-submarine warfare

Rossblog, January 20, 2010

ARLINGTON, Va. - Ocean sensor specialists at the U.S. Defense Advanced Research Projects Agency (DARPA) in Arlington, Va., are asking the defense industry for revolutionary advances in extremely deep-operating undersea surveillance systems to protect U.S. Navy aircraft carriers and their support vessels from quiet enemy attack submarines .

DARPA issued a broad agency announcement (DARPA-BAA-10-20) Friday called Deep Sea Operations (DSOP) for deep-ocean surveillance submarine warfare technologies involving sonar and non-acoustic sensors that take advantage of unique signal propagation in the deep ocean.

Navy fixed-site undersea sensor systems today include the Fixed Distributed System (FDS) and the Sound Surveillance System (SOSUS), which are used in ocean choke points in the Caribbean as well as the straits between Greenland, Iceland, Greenland, and the United Kingdom — commonly referred to as the GIUK Gap.

For the Deep Sea Operations (DSOP) program, DARPA scientists want to use deep-sea areas known as the sound fixing and ranging channel — also known as the deep sound channel — that exists at ocean depths below about 3,000 feet where the water is cold, silent, and dense, and where the speed of sound is at its slowest.

Conditions in these areas act as a sound waveguide that enables low-frequency sound waves to travel for thousands of miles. DARPA wants to develop sensors that essentially look upward through this acoustically silent environment to detect the low-frequency sounds of enemy submarines against a quiet background at long ranges.

DARPA experts assume that deep-ocean areas are particularly advantageous for sound navigation and ranging technologies — sonar for short — yet will accept non-acoustic solutions, as well.

Goals of the program include the ability to achieve long-range detection and classification of submarines; the means to communicate underwater over long distances; and the ability to manage electrical energy to operate in hostile deep-ocean conditions for long periods.

Technologies developed under the Deep Sea Operations programs must result in sensors that operate near the ocean bottom; take advantage of distributed nodes; that can be configured to a range of operations, and environments; and adapts to the mobility of friendly and enemy submarines and surface warships.

Proposers must have at least a secret facility clearance and the capability to conduct secret-level research.

Phase 1 of the DARPA Deep Sea Operations program involves architecture studies that describe performance limitations, describe subsystem technologies, and identify developmental risks.

Descriptions should involve sensors and processing; communications among the system's sensor nodes, as well as and among nodes and aircraft, submarines, ships, and land bases; mobility issues; and energy harvesting, re-supplying, and AB>@846.

This research project will last about six months, and will include at-sea testing and measurement. Those interested must respond to DARPA no later than 4 p.m. eastern time on 1 March 2010, to DARPA/STO, 3701 North Fairfax Drive, Arlington, Va. 22203-1714 (Attn.: DARPA-BAA10-20).

Things That Go Bump In The Deep

Strategy Page, January 21, 2010

Three British submarine officers, including the captain, pled guilty at their recent court martial. The three were accused of not doing their jobs properly, and allowing their boat, the HMS Superb, to collide, on May 26, 2006, with underwater rocks, that were clearly marked on charts. The sub suffered damage to the bow and sonar, and was not repaired, because the boat was scheduled to be decommissioned shortly anyway, after 32 years of service.

The Superb collision was one of many recently, that have occurred because the crew was not paying enough attention. Last year, for example, a Chinese sub collided with a sonar array being towed behind a U.S. destroyer. Around the same time, a U.S. sub collided with an American amphibious ship in the Persian Gulf (where American subs have suffered two other such incidents in the last five years). Two years ago, an Indian sub, while surfacing near Mumbai, collided with a merchant ship. Five years ago, an American sub, travelling at high speed in the Pacific, collided with an underwater seamount. In one of the most unusual incidents, about a year ago, British and French SSBNs (missile carrying subs) collided with each other while submerged in the Atlantic.

Subs underwater are running blind, as most depend on passive sensors most of the time. Constant attention must be paid to charts and electronic location devices. Crews are intensely trained to stay sharp and be careful when traveling submerged. But it's difficult to keep everyone sharp all the time, and that's what leads to many of these collisions.

The Golden Age of submarine collisions was during the Cold War (1948-91). Once Russia began building nuclear subs in the 1960s, and putting them to sea often and for long periods, there were lots of collisions. Well, about one every two years. Most involved at least one Russian boat. The problem was that the Russians had pretty poor sonar, so they were the equivalent of half blind under water. From the 1970s on, the U.S. has increasingly superior sonar compared to the Russians. This led to the more collisions involving Russian and U.S. boats. It also saw the invention, by the Russians, of the "Crazy Ivan" maneuver. This occurred when an American sub was stalking a Russian one (often an American SSN keeping tabs on a Russian SSBN). The U.S. boat would stay in the Russian subs "blind spot" (behind its propeller). But sometimes the Russians would suspect they were being stalked, or wanted to confirm they were not, and would perform the "Crazy Ivan" maneuver, upping speed and making a sharp turn. The U.S. sub would have to quickly get out of the way, or there would be, and sometimes was, a collision.

Most of the collisions during this period involved Russian subs bumping into other Russian subs, or inanimate objects (icebergs, oil rigs). Western boats had far fewer collisions because they had better sonar, and better trained and more experienced crews. There are few Russians subs at sea these days, so most of the collisions are by Western subs, which now dominate the ocean depths.

Measuring The Chinese Fleet

Strategy Page, January 21, 2010

The U.S. Navy accidentally posted their classified estimate on the size and composition of the Chinese Navy. This data was quickly taken down, but not before it was copied and posted worldwide.

The strength of the Chinese fleet was listed as;

Submarines- 62 (53 diesel Attack Submarines, six nuclear Attack Submarines, three nuclear Ballistic Missile Submarines). The U.S. has 72 submarines, all nuclear (53 attack and 18 ballistic missile.)

Destroyers-26. The U.S. has 52.

Frigates-48. The U.S. has 32, including two of the new LCS vessels.

Amphibious Ships 58. The U.S. has 30, all much larger and equipped with flight decks and helicopters, plus landing craft.

Coastal Patrol (Missile)- at least 80. The U.S. had a few of these, but got rid of them. China uses these for coastal patrol and defense, a concept they inherited from the Russians.

In addition, the U.S. has eleven aircraft carriers (ten of them nuclear powered) and 22 cruisers.

Most of the Chinese ships are older (in design, if not in the age of the vessels) than their American counterparts. China is building new classes of ships, with more modern equipment and weapons. Their new destroyers have better anti-aircraft weapons, although nothing to match the American Aegis system, much less the 20 U.S. Aegis ships with anti-missile capability. China is trying to develop classes of nuclear submarines that come close to the capabilities of their American counterparts. China is also vastly outmatched in naval

aviation, with nothing comparable to the hundreds of American maritime patrol (P-3) aircraft. But China is building aircraft carriers, and upgrading its naval aviation. They are also innovating in some areas, like the development of a ballistic missile that can hit a moving ship (preferably an American carrier.)

Only a portion (about a third) of the U.S. fleet is facing China, because of other commitments, while nearly all the Chinese fleet operates along their coast. But the U.S. also has major naval allies in the region (like Japan and South Korea), while China has none. The Chinese fleet is no match for the U.S. Navy now, but the Chinese are building and planning for the future. In another few decades, the Chinese expect the situation to be quite different.

U.S. Missile Defenses to be Fielded Near Russian Border

Nicholas Kralev, Global Security News, January 21, 2010

The United States intends to field Patriot air- and missile-defense systems in northern Poland about 35 miles from the border with Russia, Agence France-Presse reported yesterday (see GSN, Dec. 11, 2009).

The town of "Morag was chosen as the location long ago, but we didn't make it public," the Polish PAP news agency quoted Polish Defense Minister Bogdan Klich as saying.

Klich said the decision to deploy the Patriot missiles so close to Russia's Kaliningrad region had "no political or strategic meaning — its good infrastructure is the only reason."

The missiles could be fielded by late March or the beginning of April, he said (Agence France-Presse/Spacewar.com, Jan. 20).

The outpost is expected to hold eight launchers with a complement of 100 U.S. troops, Russia Today reported (Russia Today, Jan. 21).

The Patriot missiles had been sought by Warsaw and are being deployed following a major revision to the U.S. program for missile defense in Europe, which now emphasizes using sea- and land-based versions of the Standard Missile 3 as a hedge against short- and medium-range missiles fired from Iran.

The previous missile shield plan advocated by the Bush administration involved deploying 10 long-range missile interceptors in Poland and a radar base in the Czech Republic. Moscow had strenuously objected to that initiative — threatening to deploy short-range missiles in Kaliningrad — and its concerns have not been fully assuaged by the new plan.

A senior naval officer told the RIA Novosti news agency today that Russia plans to build up its Baltic fleet as a result of the U.S. decision to field the Patriots in Poland, Reuters reported.

"The surface, underwater and aviation elements of the Baltic fleet will be strengthened," the officer said.

"In connection with the plans to install Patriots in Polish territory in the next five to seven years, there may be significant changes in the approach to define the tasks and the military potential of the Baltic fleet," he added.

Warsaw is not particularly worried about a Baltic fleet buildup, a senior source in the Polish Foreign Ministry said.

"Let's stay calm. Such strengthening, even if it becomes true, is no direct threat to Poland," the source said.

Headquartered in Kaliningrad, the Baltic fleet includes diesel-powered submarines, surface vessels and an aircraft component.

Moscow-based security studies expert Alexei Fenenko said the decision to locate missiles in Poland has renewed old worries over the reasoning for enhanced NATO defenses close to Russian territory.

"Russia was very concerned about the antimissile system being installed in Poland and the Czech Republic and didn't understand the need for it in these locations, if it was intended against Iran," Fenenko said.

"If it's not against Iran, then who is it against? The new missiles will be now be close to the territory of both Kaliningrad and Belarus" (a Russian military ally that borders Poland)," he said (Conor Sweeney, Reuters I, Jan. 21).

A senior Russian defense official refuted today's RIA report in a statement to Reuters.

"Alleged plans to expand the strength of vessels, submarines and aviation of the Baltic fleet in connection with the planned deployment of U.S. Patriot missiles near Russian borders do not correspond with reality," the official said (Reuters II/Yahoo!News, Jan. 21).

The Patriot deployment "should be a nonissue for Russia" as it "poses no threat to Russian defense forces, and it is a symbolic gesture of the existing U.S. security commitment to Poland," said Arms Control Association Executive Director Daryl Kimball in an interview with the Washington Times.

"Russia is not and should not be looking for new excuses to blow up the new [arms control] treaty," Kimball said, referring to the planned replacement for the Strategic Arms Reduction Treaty (see related GSN story, today). "Russia's long-term concern is all about potential future numbers and locations of the SM-3-interceptors in Eastern Europe" as described in the U.S. revised missile defense plan, he said

Vietnam Top Buyer Of Russian Arms

By Nabi Abdullaey, Defense News, January 21, 2010

MOSCOW - Vietnam became Russia's biggest arms client in 2009, having ordered six diesel-electric submarines and 12 Su-30 fighter jets, according to the calculations of the Center for Analysis of Strategies and Technologies (CAST), a think tank here that tracks Russia's arms exports.

This is Russia's second-biggest contract for submarines in the post-Soviet period, after a 2002 contract with China for eight submarines, CAST said. The contract also makes Vietnam one of the top five buyers of Russian arms, along with India, Algeria, Venezuela and China.

The contract for Project 636 (NATO codename Kilo-class) submarines, worth an estimated $2 billion, was signed during Vietnamese Prime Minister Nguyen Tan Dung's Dec. 15 visit to Moscow. Also, the Russian media reported then that Russia and Vietnam began preparing a contract for 12 Su-30MK2 fighters, in addition to a $500 million contract for another 12 Su-30MK2 fighters signed in January 2009. Under the first contract, Russia is to start delivering the fighters this year.

CAST analyst Konstantin Makiyenko said that the submarines' contract will entail infrastructure construction in Vietnam, including a naval base, repair and maintenance facilities, and a communication center, as well as training of the Vietnamese specialists. This would bring Russia another $2 billion and make the Vietnam deal Russia's biggest in three years. Vietnam has no submarine force so far.

The contract for submarines will be implemented by the St. Petersburg-based Admiralteiskiye Verfi shipyard, which is controlled by Russian Sen. Sergei Pugachyov. The Su-30MK2 fighters will be built at the Komsomolsk-on-Amur aviation plant.

Anatoly Isaikin, the head of the Rosoboronexport, Russia's government arms export agency, said Jan. 21 that despite the global financial crunch, his agency boosted its orders portfolio in 2009 to $32 billion from $22 billion.

"The crisis hasn't prevented our major foreign clients from paying for the contracts, and there were no hitches in how Russia performs its export obligations," he said, according to a report by the ITAR-TASS news agency.

Designed by the St. Petersburg-based Rubin Central Design Bureau for Machine Engineering, Project 636 vessels are believed to be the world's quietest submarines. They can develop a speed of up to 20 knots and submerge for 300 meters under surface.

After 50 Years, He's Still Dived Deepest

By Landon Hall, The Orange County Register, January 22, 2010

Retired Navy Capt. Don Walsh has only one regret about his voyage to the deepest place on Earth: Once he got there, he couldn't see the ocean floor.

Fifty years ago Saturday, Walsh and Swiss explorer Jacques Piccard rode a submersible vehicle into the Mariana Trench and touched bottom at 35,798 feet – about seven miles down – to a place never visited by another human being, before or since. They landed gently on the soft, liquid-like bottom, but the silt churned and obscured their view from behind a six-inch-thick Plexiglas porthole.

"During every dive, stuff boils up, and it gradually drifts away. This time it didn't," Walsh said. "And so it looked like a bowl of milk."

So even though Walsh and Piccard had sophisticated still and movie cameras on board the Trieste, and the craft had lights shining from its metal belly, the murk ensured that no document captured the historic moment. All that remains are the memories of the lone surviving pilot, Walsh.

The expedition, code-named the Project Nekton by the U.S. Navy, marked one of the great feats of exploration of the mechanical age, but it largely has been forgotten. The Navy kept the mission a secret beforehand, telling no one except a few journalists who'd gotten wind of it. And it was soon eclipsed by the American space program, with its dashing astronauts and soaring rockets that were the stuff of children's dreams. Walsh, Piccard and the other dozen sailors and Navy civilian personnel who worked on Nekton never got a ticker-tape parade.

"I've referred to it recently as the right stuff, but the wrong direction."

OVER HIS HEAD

Walsh, a graduate of Annapolis, was a 26-year-old Navy lieutenant when he was asked to take part in a project involving the Trieste in the summer of 1958. He had commanded a submarine for only two years and had never given much thought to the depth of the vast Pacific near the naval operations base in San Diego.

"Deep to me was anything deeper than I required to navigate a submarine," he said, adding that the maximum for his sub, the Rasher, was only 300 feet. "A hundred feet below that is an uncomfortable depth for navigating a submarine. You don't want to run into anything.

"How deep the ocean was, I didn't have a clue," he added.

"It was on all the charts, but I had no interest."

The Navy bought the Trieste from the men who had built it in 1953, Auguste Piccard and his son Jacques, for $250,000. It was actually the second Trieste; the original 1948 model hadn't held up that well. In the new boat, Jacques would be the scientist and Walsh the pilot. The Piccards said it could venture to any depth on the planet, but it had never been tested in very deep water.

In late September 1959, the Trieste and the project's engineers and staff arrived on Guam, which is near the bottom point of the curved, reverse-C-shaped Mariana Trench. The canyon runs for about 1,600 miles and was created when one plate of the Earth's crust burrowed beneath another. At its lowest point, the Challenger Deep (so named for the 19th century ship that first measured it), it is more than a mile deeper than Mount Everest (29,029) is high.

The crew worked seven days a week for the next few months and launched a dozen dives with the craft, at progressively lower depths. In early January, Piccard and Walsh ventured to 24,000 feet, then the deepest point on record.

On Jan. 23, 1960, the weather wasn't perfect, but calm enough. Sea-state 6, in sailor talk. The Trieste was towed about 200 miles from Guam.

LONG RIDE DOWN

The 59.5-foot long bathyscaphe ("BATH-ih-skaff," literally "deep ship" in ancient Greek) worked like this: A bulbous, submarine-shaped section was filled with gasoline, which is lighter than water but heavy enough to equalize the pressure from the ocean's depths. Some gas was pumped out and displaced by water to make the craft sink. The sphere was pressurized with oxygen. Once the steel cable was untethered, the craft sank at slightly faster than 1 mph.

Inside the tiny sphere, the 6-foot-4 Piccard (nicknamed double-metre by Jacques Cousteau) and the 5-foot-10 Walsh talked little on the ride down. "He wasn't a real chatty guy," Walsh said of his partner, who died in 2008 at age 86, a national hero in Switzerland.

It took nearly 5 hours to descend through the darkness. But after only 20 minutes on the bottom, it was time to head back up. Steel weights were dropped from the hull, allowing the craft to float to the surface. The ascent took just three hours.

Walsh, quizzed Friday about the adventure, answered a reporter's questions with simple, methodical, no-big-deal calm.

Was it cold down there? "About as cold as the inside of an average refrigerator."

Were you afraid?

"I had been drilling holes through the ocean in submarines. You can drown in a bathtub, so whether you're down 300 feet or 30,000 feet, it's kind of the same."

"UNIMPEACHABLE RECORD"

Walsh was invited to Orange County by Rolex, and on Friday he went to the watchmaker's South Coast Plaza store to commemorate the 50th anniversary of the dive.

He posed for photos with the watch that was strapped to the Trieste for the ride down. Curious shoppers came in and out, and many of them, having read the sign outside the store telling of Walsh's exploits, shook his hand and stayed to talk.

Walsh commanded a sub until 1970. Later, he ran his own maritime consulting company out of San Pedro and founded USC's Institute for Marine and Coastal Studies. He dived in submersibles on the wrecks of both the Bismarck and Titanic.

"But I'm known for this one thing," he said. Asked why the Navy never again dived to 35,000 feet, he replied: "After we made the deep dive, the Navy instructed us not to dive beyond 20,000 feet, intimating there was something wrong with the cabin.

"Now they tell me."

"I think the reason probably was not technical," he added. "I think they wanted to own an unimpeachable record."

The record is his alone.

China's Submarine Fleet Now Largest In World?

Democratic Underground, January 23, 2010

The first link below (sent to me by an alert reader) is an important analysis of the capabilities of the Chinese military by Defense News. I recommend it to all readers as it contains much information in it that Americans should know about China's growing military power and threats. However, the item I wish to focus on in this blog is the apparent fact that China now has the world's largest submarine fleet and it is growing at a rapid rate as China's military expansion continues. The analysis states that China has "the largest conventional submarine force in the world, totaling more than 60 boats" plus "a number of nuclear-powered fast-attack and ballistic missile subs." Does that mean China has approximately 70 or more submarines? The total is unspecified, most likely because western analysts aren't really sure how many submarines China has built. The report adds that many of China's surface ships and submarines are armed with "supersonic sea-skimming anti-ship cruise missiles" (emphasis added.) This is a critically-important fact.

The supersonic cruise missiles are likely the "Russian-made "sizzler" supersonic cruise missiles about which I've written in a number of previous blogs. These missiles were developed to overwhelm the defenses of U.S. carrier task force and sink the American carriers. Supersonic (and perhaps maneuverable) cruise missiles are one of the most revolutionary naval weapons systems developed in recent years. To my knowledge, only America's real and potential enemies have them, indicating that America's traditional technological edge is fading steadily.

The second link below, from Wikipedia, relates that the USA has 61 submarines currently in service and four more under construction. However, the U.S. Navy has been retiring submarines faster than they are being built so the U.S. submarine fleet has been steadily declining in numbers. The third link is a report by the Heritage Foundation warning about the risks of a shrinking U.S.

submarine fleet. The report was written years ago but its logic is even more forceful today in an environment where China now has more subs than the USA and is building even more at a rapid rate. The numerical advantage of the Chinese submarine fleet over the U.S. submarine fleet is likely to grow steadily in future years because China possesses vast currency surpluses and can afford to build a lot of new naval vessels. The U.S. government is saddled with mindless debts and bailout costs and can't afford many new naval vessels. This fact should concern all Americans, but the chances that the establishment media will tell you this are slim and none.

Some would note (correctly) that the U.S. submarine fleet is highly-trained and experienced in blue-water operations and that Chinese submarines will take years to develop those same skills. I'd tend to agree with that analysis, but there is the very disconcerting reminder [fourth link] that in 2007, a Chinese attack submarine successfully penetrated the defensive screen of the USS Kitty Hawk in the Pacific Ocean and surfaced within easy "kill" range of the U.S. carrier. That indicates that (A) the Chinese submarine crews are far more skilled that previously thought, (B) that the U.S. Navy is way too overconfident, or (C) both options could be true. It is actually good the Chinese submarine surfaced so the U.S. Navy had the chance to experience a "wake up call" and tighten its obviously porous defensive screen around its carriers. The USS Kitty Hawk has since been decommissioned.

Ezekiel 38-39 warns that Russia, China, Iran and their allies will attack the USA, NATO and their allies in a global World War III at the very end of this age before Divine intervention occurs. All those Chinese subs will be used against the U.S. Navy and allied navies. Let's hope the U.S. Navy develops defenses against those supersonic cruise missiles that will be coming at U.S. carriers and surface ships in volleys from those Chinese subs when that war begins. If we don't have effective defenses for its vital carriers, the U.S. Navy will lose its major assets at the beginning of that war. I pray that doesn't happen.

China's Military modernization: the Russian Factor

By Mikhail Barabanov, Asian Defense News, January, 2010

The Chinese leaders hoped the military parade in Beijing on October 1, the 60th anniversary of the People's Republic, would showcase the success of communist China's "Fourth Modernization" – that of its armed forces. The event was supposed to demonstrate that rapid progress in military technology has propelled the country into the ranks of the world's most advanced military powers.

All the brand-new military equipment put on display in Beijing has produced the required impression on the patriotic Chinese public, as well as some Western observers now gushing about the newly modernized People's Liberation Army.

A more careful look at China's military capability suggests there is little ground for either excessive optimism or alarmism – depending on the observer's attitude to the country – about China's status as a great military power.

The fruits of new great friendship

For almost three decades between the Soviet-Chinese bust-up in the early 1960s and the collapse of the Soviet Union in 1991, China was mired in technological backwardness. After the generous flow of military equipment from Moscow ended abruptly in 1961, the Chinese army was stuck with old Soviet technology dating back to the 1950s. The obsolete MiG-19 Farmer fighter jets manufactured under a Soviet license (Chinese designation J-6) remained the backbone of the Chinese fighter fleet. The adoption of the early versions of the MiG-21 Fishbed (J-7) fighter was excruciatingly slow and painful. The bulk of the bomber fleet was made of the Il-28 (H-5) Beagle aircraft, plus a few long-range Tu-16 (H-6) Badger bombers. The piston-engine Mi-4 (Z-5) Hound remained the main Chinese helicopter, the T-54 (designated in China as the T-59) the main battle tank, and the S-75 (HQ-2) the main SAM system. The Chinese navy relied on old Soviet designs of the 1950s, or their simplified clones. And the Chinese ballistic missile technology was based on the early Soviet R-2 (SS-2), R-11 (SS-1B) and R-12 (SS-4) missiles, which Nikita Khrushchev had given away as a gift.

China's own attempts at weapons-building tended to yield either feeble contraptions such as the J-8 Finback fighter jet and the Ming class submarine, or slipshod modernizations of tanks and missiles that were obsolete even before they left the drawing board. The main thrust of the Chinese defense industry's effort was therefore aimed at ripping off the more recent Soviet designs, which Beijing was smuggling in via third countries. That is how China had cloned the T-72 main battle tank by the late 1980s, as well as the BMP-1 armoured infantry fighting vehicles, the 122 mm and 152 mm self-propelled and towed howitzers, the 122 mm Grad MRL systems, the Malyutka (AT-3) anti-tank missiles, and the Strela-2 (SA-7) man-portable SAMs.

In the 1980s China managed to achieve a certain degree of rapprochement with the West, based on shared hostility towards the Soviet Union. That gave it access to some modern Western technology. From France, it licensed the Super Frelon (Z-8) and Dauphine (Z-9) helicopters, as well as the Crotale SAM system. Another SAM system, Aspide, was licensed from Italy. China also bought a number of other weapons systems from France and Italy, and signed contracts with US companies to retrofit Chinese planes with new avionics. Another key partner was Israel, which became instrumental in the development of the new J-10 fighter jet. But the Tiananmen events of June 1989 soon put an end to China's imports of military technology from the West, and plunged the country's defense industry into a new bout of technological isolation.

Fortunately for China, relations with the Soviet Union took a sharp turn for the better at about the same time, and new defense contracts with Moscow soon followed. In 1991, China signed the first deals to buy modern Soviet weapons, including 24 Su-27 Flanker fighters and two of the Project 877EK (Kilo class) conventional submarines.

This breakthrough was vitally important to China. It would not be an exaggeration to say that modern Russian weapons and defense technology bought after 1991 have been at the heart of the People's Liberation Army's modernization and the Chinese defense industry's progress in recent years. For China, Russia has become an abundant source of almost every type of modern weapons technology.

[B]Thanks to the massive supplies of the Su-27 and Su-30 families of fighter jets from Russia (a total of 178 by 2005), the Chinese Air Force has leapfrogged from the second to the fourth generation of combat aircraft.[B] The launch of production of the Su-27 (J-11) jets in

Shenyang under a 1996 license deal gave a similar fillip to the Chinese aerospace sector, which had acquired access to modern avionics, radars, engines and missiles.

Supplies of modern Russian jet engines became a real boon for the Chinese combat aircraft makers, hidebound as they were by the unavailability of powerful modern propulsion units. China has finally managed to launch mass production of the only two decent fighter jets that it has - the J-10 and the FC-1, fitted with the Russian AL-31FN and RD-93 turbofan engines, respectively.

A total of 12 Project 636 and Project 877 (Kilo class) conventional submarines have been built for China by Russian shipyards, in addition to four Project 956 (Sovremennyi class) destroyers. For the first time in its history, the Chinese Navy has got hold of some truly modern ships with advanced acoustics, radars, torpedoes and supersonic anti-ship missiles (Moskit and Club). And the Project 956 destroyers are the first Chinese Navy ships armed with medium-range air-defense missile systems (as opposed to short-range missiles).

Even more importantly than buying individual Russian-made weapons, China has been able to acquire and license a wide range of Russian military technology, and to make use of Russian military expertise to design some new weapons - indeed, sometimes entire new weapons systems - of its own. In the 1990s and the early part of this decade, many if not most of the Russian military design bureaus and research facilities worked for the Chinese, who had become their main customer. As a result, many of the latest Chinese weapons systems developed over the past decade bear the hallmarks of their Russian origins.

One example is the Bakhcha-U turrets of the new Chinese ZTD-05 armoured infantry fighting vehicles, which were paraded on October 1. It was designed for China by the Tula KBP bureau, using the fighting compartment of the Russian BMP-3 armoured infantry fighting vehicle as the starting point. The Kurgan machine-building plant was involved in the development of the rest of the vehicle, as well as the launch of its mass production. The same is true of the Chinese ZBD-03 airborne fighting vehicle.

China's latest artillery systems are licensed and slightly modified versions of Russian designs - and even the modifications themselves were probably made by Russian designers. That includes the fighting compartment of the 155 mm PLZ-05 self-propelled howitzer (a version of the Russian 2S19M1 Msta-S), the 120mm PLL-05 self-propelled gun-mortar (2S23 Nona-SVK), and PHL-05, a 300mm MLRS based on the Russian 9K58 Smerch system. China has also licensed the Krasnopol guided artillery projectiles, the Basnya, Refleks-M and Bastion tank-launched anti-tank guided missile systems, and the RPO-A rocket infantry flame-thrower.

And the latest Chinese powered chassis are obvious licensed clones of the MAZ chassis. Another area of Russian involvement worth a separate mention is the development of the latest Chinese SAM systems. Until recently China was hopelessly stuck with the archaic S-75's (SA-2) dating back to the Francis Gary Powers era. Since 1996, China has bought 28 battalions of the S-300PMU1/2 SAM (SA-20) SAM systems. What is more, it has also developed its own version of the Russian system, the HQ-9, with the help of the Russian Almaz-Antey group - although the Chinese are still having trouble launching mass production. The HQ-16 and HQ-17 systems also appear to be Russian designs, to all intents and purposes. China has also relied on Russian assistance in developing its short-range SAM systems (in addition to buying the Russian Tor SAMs) and radar stations.

In airborne weapons, China became the main importer of Russian air-to-air and air-to-surface missiles. It has also launched joint production of the Kh-31P/KR-1 (AS-17) anti-radar missiles (essentially those are just being assembled in China). And Russia's MNPO Agat has developed an active radar homing seeker for the latest Chinese PL-12 air-to-air missile. The developers of the latest Chinese airborne and ground-based cruise missiles are also believed to have made use of Russian assistance, as well as of some related technologies and the Kh-55 (AS-15) cruise missiles bought from Ukraine.

[B]Russia is known to have been heavily involved in the development and fine-tuning of the J-10 and FC-1 fighters. Russia's Yakovlev bureau took part in the development of the new Chinese L-15 training jet, which appears to be a clone of the Yak-130.[B]

The Chinese Navy has also made a colossal leap forward thanks to the acquisition of Russian arms and technology. It has bought a number of weapons and radar systems for its destroyers and frigates, such as the Rif-M (SA-N-20) and Shtil-1 (SA-N-12) SAM systems (the later includes a vertical launch version). The Chinese-built Type 051C and 052B destroyers, for which those systems have been bought, were themselves designed with the participation of Russia's Severnoye bureau. The same bureau appears to have contributed to the design of the Chinese Type 052C fleet destroyers and Type 054 frigates, while the Rubin bureau was involved in designing the new Chinese subs. In the 1990s, Russia sold China the full set of designs and documentation for the Varyag heavy aircraft carrier cruiser. And the Nevskoye bureau has actually designed an entire medium-size aircraft carrier for the Chinese, which fact it announced with little fanfare in its annual report last year. China has also licensed the Russian 76 mm AK-176 naval artillery systems, and Russian companies have been developing torpedoes and mines for the Chinese Navy.

It is therefore clear that Russia has been the main engine of the Chinese army's technological transformation, which fact has not escaped the attention of the experts who watched the October 1 parade. At least 12 of the key weapons systems put on display on Tiananmen Square that day have either Soviet or Russian origins. Russia has been both the main weapons supplier and the key weapons design bureau for China over the past decade and a half.

Trying to stand on its own two feet

In the past few years, however, it has become quite obvious that defense industry cooperation between Russia and China is on the decline. In the 1990s, China was the main importer of Russian weapons, accounting for up to half of Russian arms exports in 2004-2005. By 2007, that figure had shrunk to just 25 per cent. The projection for 2008-2010 is a mere 12-17 per cent. China has almost stopped buying complete weapons platforms from Russia. It is now interested only in components, subsystems, engines, and technical expertise. Once the final deliveries are made in 2010 under the S-300PMU2 contract, exports to China can be expected to shrink even further. Beijing has also chosen not to continue the licensed assembly of the Su-27 fighter jets.

China appears to have acquired all the technology it wanted from Russia, and its strategy now is to develop its own weapons systems based on this know-how. On the other hand, Russia has obviously been careful not to sell China its very latest weapons.

Interestingly, some of these weapons Moscow has been prepared to sell to India, but not to China. Essentially, Russian-Chinese defense industry cooperation has hit a glass ceiling.

What is more, the Chinese actually believe now that in many areas their technology is sufficiently advanced to do away with Russian assistance. That has resulted in blatant attempts to clone some Russian weapons rather than license them. The most notorious example is China's "indigenous" J-11B fighter jet made in Shenyang, which is actually nothing more than a pirated copy of the Su-27 jet previously assembled there from Russian kit.

However, this particular "achievement" has actually put in stark relief the limitations of China's defense industry. Only a few samples of the J-11B appear to have been built to date. China's attempts to end its dependence on Russia for jet engines also remain fruitless. The powerful indigenous WS10A turbofan engine, which was designed to replace the Russian AL-31F on both the J-10 and J-11B fighters (and which could itself be a partial clone of the AL-31F), is still struggling with teething problems. All this is forcing Beijing to swallow its pride and keep signing contracts for new shipments of the AL-31FN engines for its latest prime fighter, the J-10.

It would appear that by remaining the sole source of some key components, Russia is keeping its finger on the pulse (or its hand on the tap if you like) of a whole number of crucially important Chinese weapons programs. And many of the latest "indigenous" or licensed Chinese weapons systems still rely on Russian supplies. China's ability to launch indigenous mass production looks especially uncertain where it comes to a number of modern missile systems, and SAMs in particular.

Careful study of China's military capability and its latest weapons systems also leads to a number of other conclusions, which the Chinese would doubtless prefer not to hear. One obvious problem is the poor functionality and design of some of the Chinese weapons systems, which look half-finished. Another is the uninspired imitation of foreign designs, which points to a deficit of independent ideas in technology, strategy and tactics of warfare. There are gaping holes in some important areas of Chinese military capability. The air defenses of the parts of the country not covered by the Russian-made S-300PMU1/2 systems are a joke. Battlefield air defense also remains woefully inadequate. The anti-tank capability is rudimentary, and the country has no combat helicopters whatsoever; the Z-10 attack helicopter project is languishing because there is no indigenous engine it could make use of. The strike potential of the Chinese Air Force remains very limited, and the bulk of its fleet is made of the 1960s designs. The Chinese navy's ability to defend against modern submarines is rated as very low, and on many important indicators that navy itself is nothing more than a coastguard fleet.

Finally, the bulk of the Army's equipment remains obsolete. The handful of new vehicles of each type trotted out in front of Mao's mausoleum do not change the bigger picture. Fewer than 300-350 of the latest Type 99 main battle tank have been built over the past decade. In order to be able to replace the ancient T-59's, which still make up the bulk of the fleet, China has been forced to maintain production of the cheap, simplified and painfully obsolete Type 96. This kind of approach - i.e. producing a few modern-looking showcase pieces while the bulk of the output is made up of spruced-up old junk - exemplifies the current state of affairs in China's defense industry. Even the Chengdu facility, which builds the latest J-10 fighters, also continues to churn out the J-7G model, a slightly updated version of the venerable MiG-21.

Meanwhile, the Type 99 tank is a fine example of the true level of Chinese military technology. It traces its lineage to Type 90, which is itself a heavily upgraded clone of the old T-72. Chinese military web sites and forums, as well as some Western observers who take all the patriotic verbiage at face value, sing the praises of Type 99. They describe it as world-class; some even go as far as to suggest that it outclasses the Russian T-90A.

The truth is, the armor system of the latest and greatest Chinese tank's turret looks nothing short of ugly. Due to poor design choices, the thickness of the armor at the 30-35 degrees angle is a mere 350mm, whereas the figure for the latest Soviet/Russian tanks is about 600mm from all angles. Roof armor at the front is also weak, and the tank has inherited the weakness of the porthole and hatch areas from the old Soviet designs. The dimensions of the Type 99 turret make any substantial improvements in its built-in protection system all but impossible - witness the latest modification, Type 99A1. Meanwhile, the decision to use the powerful but bulky German MTU diesel engine forced the Chinese designers to add an extra meter to the tank's length, bringing its weight to 54 metric tons despite the sacrifices made in armor strength. (Besides, the use of imported engines - or their assembly from imported components - seems to be the key reason why so few of the Type 99's have been built so far.) So compared to the latest Russian designs, Type 99 is a bulkier tank with weaker armor, handicapped by poor engineering. The Chinese rely too much on superficial mechanical copying of individual design elements, which often do not fit together very well. This copying does not translate into any advantages compared to the original foreign designs, and in many cases leads to unexpected problems. Compared to the vast experience of Soviet/Russian tank designers, the Chinese are only making their first steps - and it really shows.

Finally, a few words about China's nuclear potential. For all the achievements of China's defense industry, the country remains a clear outsider among the five official nuclear powers in terms of its strategic nuclear capability. Beijing has no more than 40 intercontinental ballistic missiles (ICBMs), and about 120 intermediate-range ballistic missiles. The number of the new DF-31A (CSS-9) solid-fuel ICBMs manufactured each year is in the low single digits. China has only one Type 092 SSBN carrying 12 aged ballistic missiles of the JL-1 type. The sub has never been at sea on active duty. There are also the two recently completed Type 094 SSBN subs, but the JL-2 missiles they are supposed to carry are still in development. That means that the Chinese nuclear arsenal does not have a combat-effective sea-based component. The Chinese Air Force, meanwhile, does not have a strategic bomber. It has to make do with the H-6 (up to 100 units), a clone of the antiquated Soviet Tu-16 long-range bomber. Some of these aircraft are now being

fitted with the DH-10 cruise missiles. That could make them a more powerful instrument - but they would still be a far cry from a proper strategic bomber.

China's program of developing a new generation of strategic nuclear missiles has evidently hit some serious problems. Meanwhile, the existing arsenal, due to the limitations of its underlying technology, has insufficient potential and low combat-readiness. It is also highly vulnerable to a nuclear strike by the United States or Russia. That means that the Chinese nuclear arsenal is not fit for the purpose of either effective first strike or retaliation (since it would hardly survive the first strike against itself). And if the United States deploys even a limited ABM system, the utility of the Chinese nuclear deterrent will diminish even further.

The Chinese leadership (including the defense industry captains) as well as the ordinary Chinese seem to be unreasonably euphoric about their country's touted advances in military strength. Mesmerized by the brightly painted ranks of their new tanks and missiles, the Chinese flag-wavers tend to ignore the fact that their country's military technology achievements are fragile, tentative and scant. And most importantly, these achievements are primarily based on Soviet and Russian imports rather than indigenous technology. China has succeeded in importing a wide range of military know-how from Russia - but it is far from certain that the Chinese defense industry will actually manage to absorb all that know-how. There are questions even about China's ability simply to replicate the technology is has already bought. The current strategy of scaling down defense industry cooperation with Russia could yet come back to haunt China, revealing the decrepitude behind its army's high-tech veneer. And then Beijing will have to turn to its northern neighbor for help once again.

U.S. Prepares New Taiwan Arms Package Despite Beijing Hysterics

By Wendell Minnick, Defense News, January 26, 2010

Taipei - The U.S. appears unwilling to stop selling arms to Taiwan despite aggressive lobbying and pressure from China.

Sources in Taipei and Washington have confirmed the United States is preparing the release of U.S. congressional notifications for new arms on hold since the Bush administration.

New notifications are expected soon, said Rupert Hammond-Chambers, president of the Washington-based U.S.-Taiwan Business Council. These include 60 UH-60M Black Hawk utility helicopters, a submarine design study, phase two of the C4I/Link 16 "Po Sheng" program, two Osprey-class mine-hunter patrol boats, and additional Patriot PAC-3 missile defense systems.

Taiwan is facing about 1,400 short-range ballistic missiles from China and plans to deploy the new PAC-3s in the central and southern regions of Taiwan.

On submarines, Taiwan has been awaiting the release of congressional notifications since the Bush administration approved the sale of eight diesel submarines in 2001. A U.S. government source said they most likely would be smaller than conventional diesel attack submarines currently being deployed by China and other regional navies. Taiwan does not need deep submersibles due to the shallow waters of the Taiwan Strait, he said.

Taiwan has an urgent need for new utility helicopters to replace ageing UH-1H "Huey" helicopters procured during the 1980s. The requirement was highlighted during the recent Typhoon Morakot that killed more than 500 people in southern Taiwan in August.

Taiwan's Air Force also received a briefing from the U.S. Air Force on the General Atomics MQ-1C Sky Warrior tactical UAV in 2009. The Sky Warrior is an upgraded unarmed variant of the Predator. Taiwan's Air Force has a requirement for tactical UAVs to monitor sea lanes, coastal areas, disaster areas and conduct battlefield reconnaissance.

"USAF briefed on UAVs based upon Taiwan Air Force interest in building better ISR capabilities. They are in the info-gathering mode so nothing significant yet," said a U.S. government official.

Military-run Chungshan Institute of Science and Technology has developed a variety of UAVs, but has been unable to fulfill an Air Force requirement for an advanced, extended-range, multipurpose UAV. However, the Army is considering the procurement of CSIST's Chung Shyang.

Taiwan will have a tough time balancing new procurement costs as it implements a major streamlining and command restructuring plan. There will also be strains on the military as it begins to phase out conscription for an all-volunteer system beginning in 2011 and targeted for completion in 2015.

The problem is money, said one Taiwan defense analyst. Taiwan's legislature recently approved a $9.2 billion defense budget, a drop from the 2009 budget of $9.9 billion and a further drop from the 2008 budget of $10.5 billion. Further declines are expected as the economy continues to shrink.

To complicate matters, the United States has been hesitant to release new arms as China's increasing political and economic influence in Washington expands. The noisiest complaint by China is Taiwan's request for 66 F-16C/D Block 50/52 fighters to replace aging F-5s. Since 2006, the U.S. government has refused to accept Taiwan's letter-of-request for price and availability for new F-16s. Chinese officials have called any release of F-16s a "red line."

Taiwan's Air Force also has plans to upgrade its older F-16A/B and Indigenous Defense Fighters. The Navy has similar upgrade requirements that include refurbishing six French-built La Fayette-class frigates and two Dutch-built diesel submarines. Nien-Dzu "Andrew" Yang, deputy minister of defense for policy, has denied media reports the Navy wants to procure eight Perry-class frigates from the United States to replace eight Knox-class frigates.

Chen I-Hsin, vice president of the Foundation on Asia-Pacific Peace Studies, said Taiwan needs new U.S. arms to discourage China from becoming too aggressive. Even as cross-Strait relations improve, Taiwan still needs arms to allow Taipei to negotiate from a position of strength, he said.

Hammond-Chambers foresees further hysterics from China as the release of a new package of notifications draws near. "The Chinese are making hay in this vacuum as they raise the level of rhetoric in an attempt to spook the Obama administration into doing less in the future on Taiwan security issues," he said. "The longer Mr. Obama delays the notifications the more shrill the Chinese will act. The delay is seen as weakness or a lack of commitment toward Taiwan."

French Submarine Test-Fires M51 Missile For First Time

Xinhua, January 27, 2010

PARIS, Jan. 27 (Xinhua) — The French Navy successfully carried out its first test-firing of an M51 ballistic missile launched from a submarine, a defense ministry statement said on Wednesday.

The test, conducted earlier in the day, came after three flight tests from land-based launch facilities done between 2006 and 2008.

The test was carried out around 9:25 a.m. (0825 GMT) from the submarine, Le Terrible, at the Audierne Bay in northwestern France.

"(Defense) Minister Herve Morin expressed his great satisfaction with the success, which is so far the fourth experimental flight of the M51 strategic missile without a nuclear warhead," the statement added.

The missile, which reportedly weighs 54 tons and has a range of up to10,000 km, carries six to 10 independently-targetable thermonuclear warheads.

Six more flight tests have been planned for the missile before it enters service this year.

The submarine-launched missile will be part of France's nuclear deterrent program.

When in service, each submarine will carry up to 16 M51 missiles.

LIBYA: Kadafi's Son Denounces German Plans To Upgrade Israel's Naval Warships

By Alexandra Sandels, Los Angeles Times, January 27, 2010

The Times has obtained a lengthy letter by the son of Libyan strongman Moammar Kadafi to the president of Germany, complaining about the European nation's support for Israel.

Saif Islam Kadafi, the 38-year old son of Libya's long-ruling leader and the president of the Libyan charity Gaddafi International Charity and Development Foundation, said in the letter that he was troubled by alleged plans by the German government to provide Israel with more high-tech naval warships — a deal he claimed would be paid for by German taxpayers.

In the letter, he rebuked German Chancellor Angela Merkel for providing Israel with more offensive military capacity.

"We have read with great surprise about the news reports indicating that the German government will support the state of Israel by offering gifts in the form of a sophisticated submarine and two missile boats," said the letter, published on the stationery of the foundation he heads. "I do not think that the German taxpayers seek the enhancement of the offensive capacity of the world's greatest human-violating state in the world."

Recent media reports say Israel is currently "discussing" a potential purchase of a sixth Dolphin submarine from Germany. Israel is reported to have three of these already, all of which are equipped with high-tech military technology and capable of launching nuclear-armed cruise missiles. Two additional Dolphins are currently being built for the Jewish state in Kiel and are scheduled to arrive in Israel in two years.

If the new deal goes ahead, Israeli Defense Minister Ehud Barak is expected to ask Germany to underwrite several hundreds of millions of dollars of the new submarine costs. Just a few months ago, Israel reportedly asked Germany for two stealth corvettes with sophisticated anti-ship missiles for free.

Saif Islam Kadafi is being groomed to take the reins in Libya after his father's demise. Criticizing European dealings with Israel could help him bolster his Arab nationalist credentials.

The London-educated Saif Islam has faced the accusation that he's too soft and Westernized to lead Libya.

In his letter to Chancellor Merkel, the younger Kadafi praised the state of human rights in his country, claiming Libya had the best human-rights conditions of all countries in the Middle East "after having achieved a great deal of reform."

Human-rights groups, however, provide a grimmer picture. In its new annual report, rights watchdog Human Rights Watch (HRW) said Libya had seen a "year of serious abuses" in 2009 and called on the Libyan authorities to release unjustly detained prisoners, provide information on the fate of disappeared dissidents and reform legislation that criminalized free speech.

Kadafi concluded his letter by offering Chancellor Merkel a bit of personal advice in her dealings with the Middle East — as well as a warning.

"Peace and co-existence in the Middle East can neither be achieved through supplying of missile submarines nor through the stealth destroyers but rather through prevailing justice, equity, and fairness," he wrote.

"Today you are thoughtful towards Israel for the mistakes of the past," he wrote in an apparent referral to the Holocaust carried out by Germany's Nazis, "but I assure you that one day you will be thoughtful towards us to atone for today's mistake."

Estonian Military Source: Increased Russian Naval Activity In Baltic Sea

Finnish Military Sees No Dramatic Changes In Numbers Of Russian Vessels

Helsingin Sanomat (FINLAND), January 27, 2010

Sources at the Estonian Ministry of Defence say that the Russian Navy increased its activities in the Baltic Sea in 2009. The Estonians make particular note of two large naval exercises, called Zapad and Ladoga, which together extended from the between Belarus-Lithuania border to the Leningrad Region.

The exercises were the biggest in years in the Baltic Sea region, with units of the Russian North Sea and Black Sea fleets taking part.

Already in 2006 Russian President Vladimir Putin said that the planned undersea natural gas pipeline from Russia to Germany will increase Russian naval activity in the Baltic.

"Russian Naval vessels operated in the Baltic Sea more than before, which they naturally have the right to do", said an anonymous source at the Estonian Defence Forces.

The ships carry anti-aircraft systems, missiles, torpedoes, and anti-submarine weapons. They do not have any nuclear missiles on board.

In addition, there are Russian research and surveillance vessels in the Baltic, and surveillance aircraft are also active in the area.

Russia's Baltic fleet is not as large or as important as those in the Black Sea, the North Sea, and the Pacific, but the Estonian military source notes that there is a strong move to upgrade the Baltic fleet.

The Finnish Navy has better capability than the Estonian military to monitor movements of Russian surface vessels, but it does not report its observations.

Nevertheless, the Finnish Naval Staff says that the number of Russian ships in the Gulf of Finland has not increased.

"It has remained more or less unchanged", said commander Juha Savisaari to Helsingin Sanomat.

As the Finnish Navy sees it, the gas pipeline will mean an increase in the presence of the Russian Navy in the area, but "a presence does not mean a threat", Savisaari says.

The Russian Navy is expected to become more active even without a gas pipeline, as the Gulf of Finland is becoming one of the most important channels of export of Russian oil to the West. The increasing presence of NATO and the United States in the Baltic Sea is also contributing to the greater Russian activity.

"If the United States were to bring its planned anti-missile vessels into the Baltic Sea, it would bring about a reaction", says Lieutenant-General Matti Ahola (ret.).

The arrival of the gas pipeline is not seen by experts as causing any confrontations, as Russia wants to avoid any conflicts, and to keep the channel open.

The reference book The Military Balance reveals that the number of ships in the Russian Baltic fleet has declined slightly since the early part of the century.

There are two submarines in active use, and they have not been replaced by the new Lada class diesel submarines.

"The capacity is very limited, and the navy is not capable of large operations", says Major Heikki Lehtonen of the Strategy Department of the National Defence University, who follows Russian events closely.

Navy Sued To Halt Training Near Endangered Whales

By Russ Bynum, Associated Press, January 28, 2010

SAVANNAH, Ga. — Environmental groups are suing the Navy to halt plans for an offshore training range off the Georgia and Florida coasts, saying the military failed to properly assess the threat to endangered right whales.

The Southern Environmental Law Center filed the lawsuit Thursday in U.S. District Court in Savannah.

The Navy last year announced plans to begin laying underwater cables and sensors over 500 square nautical miles for training exercises involving ships, submarines and aircraft from Kings Bay Naval Submarine Base in Georgia and Naval Station Mayport in Florida.

Conservation groups say the planned training area is too close to coastal waters where right whales migrate each winter to give birth to their calves. Researchers estimate as few as 300 of the giant whales remain.

The Cursed Subs Of Oz

Strategy Page, January 29, 2010

Australias' submarine fleet seems to be cursed. Normally, two of the six boats are out on patrol, two are conducting training (but available for operations) and two are undergoing maintenance. The reality is that, right now, only one of the Collins class subs is available for operations, while one is conducting training. The other four are undergoing repairs or maintenance. Actually, a string of breakdowns has put three of the subs into a period of extended repairs. That means that the current situation may last for a year or more.

All this comes at a bad time for the Australian Navy, because last year it was decided that submarines would become the key component of the fleet. Over the next decade, Australia will double the number of subs in service, from six to twelve. This will mean that more than half (12 out of 23) of their major warships will be subs. What is remarkable about this is the relative isolation of the submarine sailors within the Australian navy. Because of that, and the smaller crews of subs, few submarine officers achieved high rank in the navy. But the admirals have come to recognize, for all that, the submarine is the best warship for Australia's needs (defense against a superior surface fleet, or enemy subs seeking to blockade the nation).

While the admirals are building more subs, the sailors who man those boats are jumping ship. The sailors who serve on these boats are not happy. This has been a problem for years. Recently, the navy surveyed the submarine sailors and were told that the submarine crewmen felt unappreciated and overworked. Half of them were getting out of the navy as soon as their current enlistments were up. Many found the work boring, and felt they spent too much time at sea. As a result, only enough qualified sailors are available to provide crews for three of the six Collins class subs. Each boat requires a crew of 45 highly trained sailors (eight of them officers.)

The initial navy response to this was to offer large cash bonuses to get existing submarine sailors to stay in the navy, and to attract qualified recruits to serve on subs. This helped a bit, but at the expense of officer morale. The bonuses increased sailors annual pay by up to $38,000, which meant officers were now making less than many of the men they commanded. Worse yet, not enough new recruits were attracted. The submarine service has high standards, and many of those who were interested, were not qualified to undertake the long training courses.

The situation was further complicated by a booming economy, and big demand for those with engineering degrees, and a few years of experience. This made it easy for engineering officers to leave the navy and get a higher paying, and more comfortable, civilian job. The navy responded with cash bonuses, better living and working conditions, and other fringe benefits. But the submarine force cannot have their working conditions improved much. While the subs are of modern design and recent construction, they are still subs. That means not much space or privacy in there.

All Western navies have similar problems, and have applied similar solutions, with some degree of success. U.S. subs have the advantage of being larger (because of the nuclear propulsion) and with larger crews (nearly three times the size of the Collins class boats). This apparently helps. Other nations have small, modern, diesel-electric boats like the Collins class, but do not send them off on long voyages. Australia can't avoid the long voyages, because Australia is surrounded by vast oceans, that require a lot of time to traverse. It is boring to transit all of that, and that was exactly what the dispirited sailors reported when asked.

The navy leadership has, in deciding to double the size of its sub fleet, agreed to either fix the morale and recruiting problems, or risk seeing most of those boats rarely going to sea, and manned by inexperienced crews when they did. The solution appears to be a combination of more pay, and using larger crews, so that everyone does not have to spend so much time at sea, or carry more people on cruises and reduce the workload for each. Another option is having two crews for each boat, a practice long used for American SSBNs (ballistic missile subs) and some surface ships. Another solution is the larger size of the next class of subs, that will provide, literally, more living room.

The current Collins class boats were built in Australia during the 1990s, and are based on a Swedish design (the Type 471.) At 3,000 tons displacement, the Collins are half the size of the American Los Angeles class nuclear attack subs, but are nearly twice the size of s European non-nuclear subs. Australia needed larger boats because of the sheer size of the oceans in the area.

There were a lot of technical problems with the Collins class boats, which the media jumped all over. Part of the problem was that Australia does not have a large shipbuilding industry, and thus has a small pool of experts to draw on for the extra difficult task of building submarines. The design of these subs was novel and ambitious, using a lot of automation. This reduced the crew size to 45, but resulted in a higher workload for the submarine sailors. This is a major reason for the morale problem. Another problem with the small crew was that every one of the sailors had to be pretty sharp to begin with, then required years of training to learn the job, and more responsibility for each sailor as well.

The new class of subs are going to build on the Collins design, and will probably be a bit larger, and probably have an air-independent propulsion (AIP) system. This enables the sub to stay underwater for over a week at a time. Before the decision to expand the size of the sub fleet, the "Collins Replacement" boats were to enter service in 2024, just when the oldest Collins class sub was ready for retirement. That building plan will have to be sped up if the submarine fleet is to be doubled in a decade.

A Potemkin Navy?

Despite Russia's Ambitious Plans To Restore Its Fleet, Experts Doubt Its Ability To Rival U.S. Naval Forces

By Otto Kreisher, Seapower Magazine, February 2010

Reinvigorated by dynamic and nationalistic young leaders, and bolstered by revenue from its vast oil and natural gas reserves, Russia appears to be moving aggressively to regain its superpower status by rebuilding and modernizing the badly decayed remnants of the once-powerful Soviet military.

A key part of that restoration, based on the pronouncements of naval officials, would be the creation of a blue-water fleet to rival the U.S. Navy.

Adm. Vladimir Masorin, then-commander of the Russian Navy, restated that ambition in late 2007, when he announced plans to build six aircraft carrier strike groups in 20 years. That would give Russia the world's second largest fleet of carriers, after the United States.

Masorin also declared that the Russian Navy was re-establishing its presence in the Mediterranean and the Atlantic.

Then last summer, the U.S. Navy tracked two nuclear-powered Russian attack submarines cruising in international waters off the Atlantic coastline, creating a brief spurt of concern and protest in Washington and elsewhere in the country.

In November 2008, a Russian warship steamed into the Caribbean, visiting Venezuela to bolster rabidly anti-American President Hugo Chavez and counter U.S. incursions into the Black Sea. U.S. Navy and Coast Guard ships had provided humanitarian supplies to Georgia several months earlier during that nation's clashes with Russia over the disputed region of South Ossetia.

And a rearmament program, recently approved by President Dmitry Medvedev, for the first time has put development of the Russian Navy on an equal footing with the country's strategic nuclear forces. Under the program, 25 percent of the $192.2 billion allocated to upgrade and re-equip all of the Russian military through 2015 would go toward building new ships.

But those pronouncements and naval excursions may be little more than a 21st century "Potemkin Village," aimed at hiding a dramatically diminished Russian fleet with little immediate capability to restore anything close to the might of the Cold War Soviet armada.

"The basic point we should always keep in mind: there is a big space between their statements and what they can actually accomplish," said Dmitry Gorenburg, a Russian Navy authority at Harvard University and the Center for Naval Analyses.

Instead of a naval renaissance, Gorenburg agreed with Alexander Khramchikhin, chief analyst at the Institute of Politics and Military Analysis in Russia, who wrote in the Russian newspaper Nezavisimaya Gazeta late last year that: "Any person who can see the real situation well understands that in a few years the Russian Navy as a whole, as well as all four of its component fleets, will cease to exist. This is already absolutely inevitable."

George Fedoroff, the senior intelligence officer for Russia at the Office of Naval Intelligence (ONI), however, has a more favorable view on the Russian Navy, though he acknowledged that it does have problems and is a shadow of the former Soviet armada.

As of January, the Russian Navy had 90 major combatants - ships able to operate away from home waters - Fedoroff said in a written response to questions. That included 34 surface ships and 56 nuclear and diesel-electric submarines, of which 14 are ballistic missile boats. About one-third of those ships are not operational at any one time, he said.

That is about one-sixth the size of the fleet at its peak in the early 1980s, when the Soviet Union had a global reach in its competition with the West, Fedoroff said.

Khramchikhin blamed the "inevitable" demise of the Russian fleet on the huge waste of Navy funds on the badly flawed development effort of the submarine-launched Bulava strategic missile - NATO designation SS-NX-32 - that was intended to arm the new Borei class of strategic submarines. The seventh of 12 test shots failed Dec. 9 and the future of the Bulava and Borei programs is in doubt.

In a Nov. 5 entry entitled "Update on the Navy" in his "Russian Military Reform" blog, Gorenburg did not attribute all of the Russian Navy's problems on the Bulava, but agreed that Khramchikhin was "exactly right in his analysis of the future trajectory of the Russian Navy."

Rather than worrying about the emergence of a mighty new Russian Navy, he wrote, "we should be thinking of it as living out the last years of the leftover glory of its Soviet years."

"The reality is, it really comes down to the shipbuilding industry. It's just not up to building ships," due to a loss of expertise and aging facilities, Gorenburg told Seapower. "None of the ships they forecast actually get built on time."

But Fedoroff said Russia "is, in fact, currently engaged in rebuilding the fleet," focusing mainly on new missile patrol boats and two classes of frigates. Construction of a new destroyer is expected to start midyear, he said.

The stated goal of building aircraft carriers to match the U.S. Navy faces an even bigger obstacle, Gorenburg said, because the yard used to build carriers during the Soviet era was in Nikolayev, Ukraine, now an independent nation that is often on unfriendly terms with Russia.

Fedoroff said the pronouncements about six carriers "represented a reasonable proposal and not an actual approved plan."

The ONI analyst agreed Russia would have to build a larger shipyard and said there has been no decision on where to do that.

"Therefore, while we are confident there will be a future new Russian aircraft carrier," Fedoroff said he did not expect the first ship to be operational "until the end of this decade at the earliest." And it "would take decades and huge resources to build two or three carriers, much less possibly six."

Most of the Soviet "carriers" actually were large cruisers with a modest-sized flight deck and ski-jump bow that could handle only short takeoff and landing jets, similar to the AV-8 Harriers used by the U.S. Marine Corps.

An attempt to build American-sized carriers in the 1980s failed.

The carriers were proposed as 90,000-ton, nuclear-powered ships with steam catapults similar to the U.S. Nimitz class. But due to the cost and complexity, the design was reduced to 65,000-ton, oil-burning ships that used the bow ramp to launch conventional Su-33 multipurpose jets. Officially called a "heavy aircraft-carrying cruiser," the first ship of the class, the 1,000-foot-long Kuznetsov, also carried a large number of anti-submarine and rescue helicopters.

Launched in 1989, Kuznetsov has been plagued by mechanical and structural failures, including nearly sinking during sea trials in 2003.

The second ship in the class, Varyag, was only 70 percent completed after nearly a decade of construction. It was seized by Ukraine when the Soviet Union disintegrated. China bought it in 1998 to use as a model for its own carriers.

Russia has been able to continue building submarines, for its own use and foreign sale, Gorenburg said. The diesel-electric Kilo-class attack boats are in service in several nations, and Russia now is selling or leasing some of its nuclear-powered subs.

Noting that Russia is conducting sea trials on the first of the new Petersburg class of conventional subs, with additional units under construction, Fedoroff said, "If this design lives up to its advertisement, it should be the quietest and most capable diesel-electric submarine ever."

Fedoroff also expected the imminent launch of the first of the new Severodvinsk class of guided-missile submarines (SSGNs), which he said combine the missions and capabilities of the Akula attack boats and Oscar guided-missile subs "in being able to fulfill anti-submarine, anti-surface ship and land-attack missions."

Russia plans to build seven or eight of these submarines, he said.

Despite the problems with the Bulava missile, Fedoroff said, "the maintenance of the nuclear strategic deterrent force, including the SSBNs [ballistic-missile subs] as the sea-based leg of the triad is Russia's highest military priority."

But, he added, Russia needs to successfully develop the Borei SSBN and the Bulava "in order to have a long-term sea-based strategic deterrent force."

Russian leaders have vowed to continue tests until the missile succeeds, Fedoroff said, noting, "We have no reason to doubt their resolve."

But Russian submarines have had a checkered history, including a number of fatal accidents and losses at sea with all hands, most notably the August 2000 sinking of the Oscar-II class submarine Kursk that killed all 118 crew members.

In one recent event, the fire suppression system on the Akula II-class nuclear-powered attack submarine Nerpa accidentally released deadly fire suppression gas into the sleeping quarters during sea trials on Nov. 8, 2008. Three crew members and 17 shipyard workers were killed.

After repairs and additional tests, Nerpa was leased to the Indian Navy last year for $650 million for 10 years.

In his blog late last year, Gorenburg wrote that because all of the shipbuilding projects have been delayed repeatedly, "there are few replacements in the works" for the existing ships reaching the end of their expected service life.

Unless something changes, "in another 10 years, its major ocean-going ships will be gone, with nothing but a few corvettes and a couple of French LSTs to replace them," he wrote.

The "French LSTs" was a reference to announcements last fall by Russian Navy officials that they are considering buying a foreign-made, helicopter-carrier assault ship, such as the French-built Mistral. The lead ship of the class, Mistral, a 21,300-ton ship about two-thirds the size of the U.S. Tarawa-class amphibious assault ships, visited St. Petersburg late last year to be inspected by Russian officials.

But Adm. Vladimir Vysotsky, the Russian Navy chief, said in December that the navy also was talking to the Netherlands and Spain about acquiring that type of ship in an effort to modernize the aged fleet. Russia was proposing to buy one ship built in the foreign shipyard and the rights to build more in its own yards.

The idea of Russia obtaining a ship that would facilitate amphibious and special operations actions provoked protests from its neighbors, including Georgia. Six U.S. senators, all Republicans, sent a letter to the French ambassador in December warning against such a sale. And Rep. Ileana Ros-Lehtinen of Florida, the top Republican on the House Foreign Affairs Committee, introduced a bill that would express the sense of Congress that no NATO nation should sell offensive weapons to Russia.

But some analysts believe that Russian purchases of military equipment from a NATO nation could aid the normalization of relations between Russia and the West, which has been a key goal of President Barack Obama's foreign policy initiatives.

Although Gorenburg said the Russian ships are in such bad material condition the major combatants never go far from port without a rescue ship, Fedoroff contended that "the fleet is not that bad."

He noted that Russian warships have been operating away from home fairly actively for years, including contributing to the anti-piracy patrols off Somalia.

For the future, Fedoroff said, achievement of Russia's ambitious shipbuilding plans "is a huge challenge, which clearly is being addressed at the highest levels of the Russian government.

"President Medvedev has endorsed the priorities and Prime Minister (Vladimir) Putin has promised that appropriate resources will be made available for rearming the Russian Armed Forces, including the Navy," the ONI analyst said.

Photos by Jack Kane of Subvets San Diego Christmas Party


I Believe
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SCAMP BASE