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The Silent Sentinel

October 2009

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.

Convention 2009, San Diego, CA

San Diego Charger Girls

U.S. Submarine Veterans
San Diego Base

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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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Would like the SILENT SENTINEL emailed: YES_____ NO_____

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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*

October Meeting

Our monthly meetings are held on the second Tuesday of the month at VFW Post 3787, 4370 Twain Ave., San Diego. Our October meeting will be on 13 October, 2009. 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

Mike Hyman (recuperating at home)
C J Glassford (recuperating at home)
Dick Fullen, unfortunately is back in the Nursing Home with Pneumonia. Seems to be doing OK, but is no longer recuperating at home. Can be visited/called at: Villa Monte Vista, 12696 Monte Vista, Poway, Ca 92064, 858-487-6242, Room 119. Dick's wife said he'd be pleased to see/hear from any of us.
Tom Warner's wife Sherry is doing very well and walking two and one-half miles each day.

Submitted by Mike Hyman

Submarine Losses in September

Submitted by C J Glassford

GRAYLING (SS 209) - 76 Men on Board:
Probably Rammed and Sunk, on 9 September 1943, by Japanese Transport in South China Sea, West of Luzon :
" ALL HANDS LOST "

CISCO (SS 290) - 76 Men on Board:
Sunk, on 28 September 1943, by Japanese Observation Seaplane, and Gunboat (ex – US River Gunboat "Luzon " (PR#7) in the Sulu Sea, off Panay Island :
" ALL HANDS LOST "

Base Commander's Corner
September 2009

Hello everyone! And WOW, was that convention one hell of a week!!??? I know I was exhausted Sunday afternoon after everyone departed. I want to say THANKS to everyone from the San Diego and Scamp Base for all of their hard work. If it wasn't for everyone working hard at the registration desk, info desk, raffle desk and many other positions needed to be filled by everyone there, this National Convention would not had been as successful as it was. I want to give Mike & Tracy Hacking a big round of applauds for their organization and leadership, time and dedication they both put into the success of this convention. Mike & Tracy will be greatly missed by everyone from San Diego & Scamp Base. They have moved to Utah so "Fair Winds & Following Sea" and hope to see you when you both drop in on us.

Mike & I have received numerous letters and email on how Great the convention was. We had almost 1600 people register for the convention and ISA had a little over 300 people from 16 different countries. Wow what a feat that was. Still had some communication issues, but it all worked out for the best. I can tell you this… I thought I was going to crap my pants when I seen we had over 850 people at the banquet. I never talk in front of that many people before. Everyone said I did ok, so it was okay!!!! I will have more on the convention to post from the Commanders Meeting and the general business meeting. Oh, by the way, Norfolk VA won the 2012 National Convention Location at the general business meeting. The other location was Reno NV.

Some of the upcoming events we have going on are the Veterans Day Parade downtown San Diego Nov 11 time frame. More info to follow. We have another breakfast in Nov. And we are going to hold a joint Christmas party with USSV WWII, and Scamp Base. It was suggested to hold it in the San Diego area to help out our WWII shipmates and families. I recommended holding it at the VFW on a Sat or Sunday afternoon. This way our older members and our WWII Shipmates can attend the party. The VFW can hold a little over 100 people and keep the cost down. If you have any other ideas, please email me at rbisson250@aol.com or bring your ideas to the next meeting.
JUST A REMINDER…Next years dues are due at the end of December. I would like to see if we can earn a Silver or Gold Anchor Award at the next convention. What this means is all annual members' needs to have their dues into Ron Gorence by the end of December (unless you paid ahead). If you want to review the requirements, you can goto the Awards section on the National website www.USSVI.org . The Scamp Base is holding their annual Food Fest in Oct. more info to follow.

Again I want to Thank everyone for the time and effort in making this years national convention a great success!! Please remember all of our shipmate who have gone on Eternal Patrol and their families in our daily thoughts and prayers. Be safe and hopefully I will see you at the next meeting.

Sincerely your Base Commander,

Bob Bissonnette

Membership Report for September '09

New Members: Welcome Aboard to our 7 newest members: Thomas P Cox, in Irvine who qualified in 1969 on Grayback; Russ Fillbeck, of SD, qualified on Blackfin in 1964; Carl Gibbens, of Poway, qualified on Tang in 1963; Willliam Miller of San Diego, qualified on Spinax in 1959; William Stangle of SD, qualified on Sennet in '62; John Sampson, of San Diego qualified on Barb in '78 and Doug Wiley of Grants Pass, Or who got his dolphins aboard Trout in 1974.

Status: 350 members as of 9/28/09

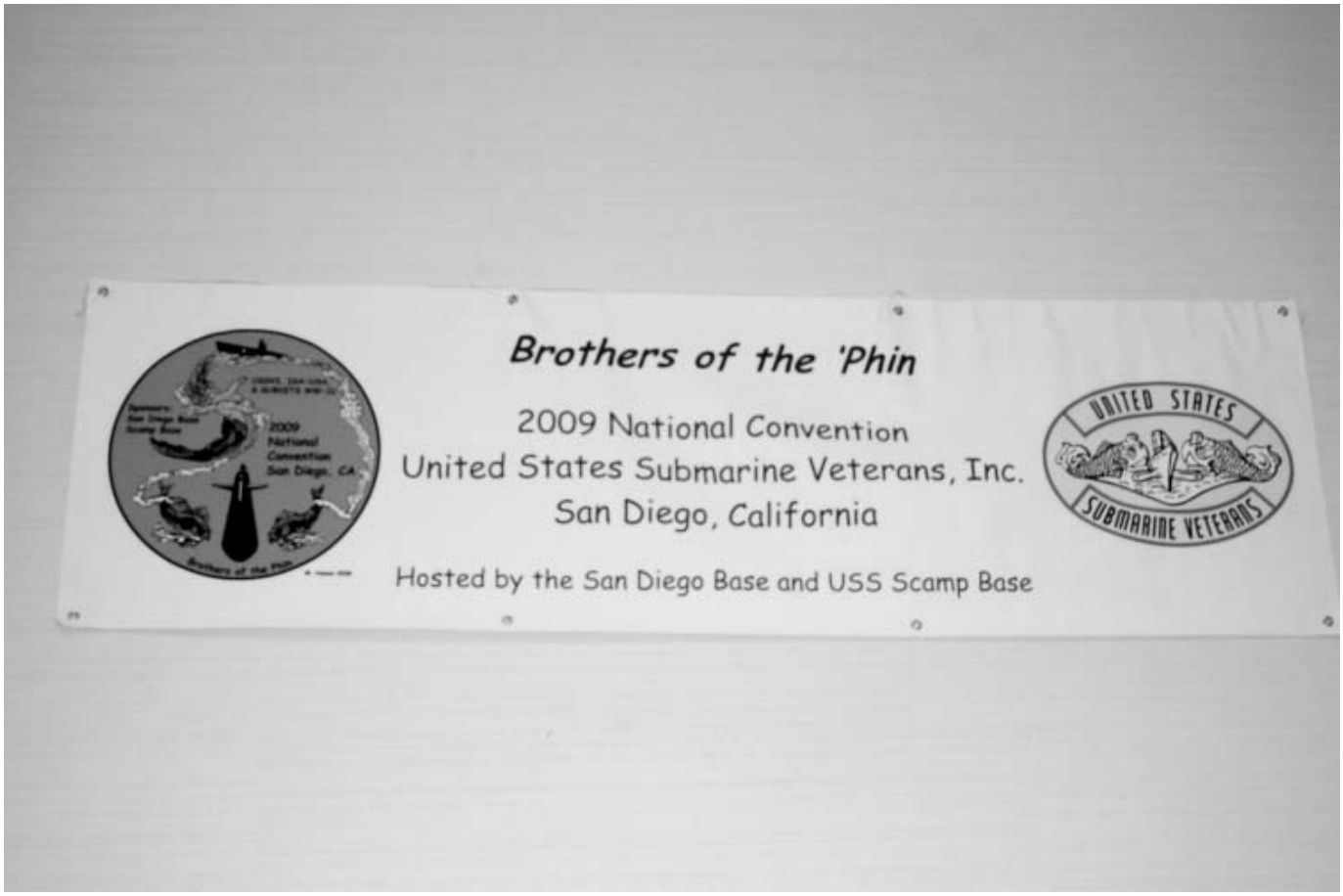
Member Notes: We asked members to "Volunteer again (like you proudly volunteered for an opportunity to earn dolphins)!" and did they ever come through! Many participants stated that our National Convention was the best (in many ways) that they'd ever attended! And, our National Chairman, Pat Householder, opined that we'd "Raised the Bar" for future Conventions (to be held in: 2010— Cincinnati, Oh; 2011— Springfield, Mo; and 2012 —Norfolk, Va.).

THANK YOU MIKE AND LINDA HACKING and thanks to all the hard-working, tireless, and courteous SAN DIEGO BASE VOLUNTEERS; you've made us all proud. Pride Runs Deep!

Be safe,

Ron G

CONVENTION 2009




46TH INTERNATIONAL SUBMARINERS CONGRESS
2009
SAN DIEGO
46th ISA CONGRESS, San Diego
International Friendships run silent and run deep


Eugene Wilkinson Joins the Holland Club
USS VOLADOR
SS - 490
Eugene P. Wilkinson

Dan Rosenfeld and his wife, Goldie

Dan is the last of the original commisioning crew of Bang, SS-385

Chief Charlie Odom Qualified
Seventy-Five Years Ago


USS BANG
E
385
770

Adm McAneny (SS) COMSUBPAC

Awardee #1 Carolina Piedmont Silver Anchor

Navy Set to Crew Subs with Female Sailors

by Christian Lowe, Military.com, September 25, 2009

Breaking with a tradition that spans more than half a century, the Navy is in the final planning stages to integrate female Sailors into its submarine fleet.

Long considered one of the most elite communities in the U.S. Navy, the small, secretive force has been comprised entirely of male officers and crew in large part because of the small living spaces and long endurance missions.

The service had examined assigning a small number of females on subs over the last ten years, but found the tight confines and lack of a well-defined career path for female submariners too daunting to change.

Until now.

"Having commanded a mixed gender surface combatant, I am very comfortable addressing integrating women into the submarine force," said Chief of Naval Operations Adm. Gary Roughead in a statement to Military.com. "I am familiar with the issues as well as the value of diverse crews."

"This has had and will continue to have my personal attention as we work toward increasing the diversity of our Navy afloat and ashore," he added.

According to a senior commander in the Navy's submarine fleet who spoke to Military.com on condition of anonymity, incoming Secretary of the Navy Ray Mabus has charged the service with overcoming past objections and assigning females to subs – breaking down one of the last barriers in the service to female assignments.

"We have now received a signal from the secretary of the Navy that he's ready to move out on this. We have never had that signal before," the senior sub commander said. "So now it's time to do some detailed planning to ensure that this is executable."

The official said the submarine fleet would likely not see female crewmembers for at least two years, but he said it was a change whose time had come.

"There is no job on a submarine that a woman can't do," the official said during a Sept. 25 phone interview. "We have a vast pool of very talented young women out there who want to serve on submarines."

The official agreed to speak with Military.com after reports indicated that Joint Chiefs of Staff Chairman – and former Chief of Naval Operations – Adm. Mike Mullen told lawmakers he was pushing the service to lift the ban on women in the so-called "silent service."

One of the biggest obstacles to the integration is technical – how can the Navy make accommodations on such small vessels for female crew, such as separate heads and bunks? The official said integrating females into the ballistic missile submarine fleet would be less of a challenge than on the attack sub fleet, where he said "we really don't have much room to store the toilet paper much less make up a new bathroom" for female crew.

It's likely that the first female submariners will be officers and that they will be assigned to the larger, ballistic missile submarines, or "boomers." The officer accommodations on subs include two- and three-man staterooms and a shared head that could easily be made unisex, the official said.

"The plan for officers involves no physical changes to the ships," the official said, adding that rough estimates of changes for enlisted crew on ballistic missile subs and cruise missile subs run below $10 million per ship.

The official estimates assigning as many as five female officers per sub.

With the enlisted cadre, it's a much more difficult proposition. Not only is there the amount of physical space to consider, but also the career paths and non-commissioned officer leadership to build, the official said.

Navy officials agree that females must be at least 20 percent of the sub's crew – meaning 20 women on an attack sub, for example – so that the women don't feel isolated and have "mutual support" from Sailors of the same gender.

Sub fleet leaders also want to make sure there are enough qualified chief petty officers to lead and mentor those female crewmembers.

"Eventually [the Navy] will need to retain enough of the women coming in so that they can eventually provide that leadership," the Navy official said. "We need to have a program and a plan in place that is self-sustaining [and] not always dependent on the surface fleet to get petty officers and officers."

But perhaps the biggest challenge to integrating women into the submarine fleet is cultural.

For decades a male-dominated community whose long-endurance missions and distance from logistical support make living and working on a submarine a sometimes dirty job with little privacy (attack submarine crew share bunks when not on duty), the idea of placing women in such close confines worries both veteran submariners and spouses who fear distraction from the job or infidelity.

"The idea is likely to be unpopular with some traditionalist submariners, who long have believed that the lack of any physical and mental privacy whatsoever and the claustrophobic confines make the idea unworkable," said Joe Buff, a noted expert on submarine warfare, novelist, and Military.com contributor.

"Some wives of submariners have also expressed concern over fraternization, which has at times been an issue in the surface Navy and on diesel subs of other nations that have had co-ed crews."

No matter the rumblings within the fleet and from vets and spouses, SecNav Mabus told Military.com in a statement his service is "moving out aggressively on this."

"I believe women should have every opportunity to serve at sea, and that includes aboard submarines," he added.

Israeli Dolphins Rule The Waves

Strategy Page, October 2, 2009

Three years after it signed a deal with Germany, Israel has received two more German built Dolphin class submarines. Israel already had three Dolphins, which they received 8-9 years ago. These have since been upgraded to include larger fuel capacity, converting more torpedo tubes to the larger 650mm size, and installing new electronics. The fuel and torpedo tube mods appear to have something to do with stationing the subs off the coast of Iran. Larger torpedo tubes allow the subs to carry longer range missiles. The larger fuel capacity makes it easier to move Dolphins from the Mediterranean to the Indian ocean. Although Israel has a naval base on the Red Sea, Egypt had, until recently, had not allowed Israeli subs to use the Suez canal. So the Dolphins were modified to go around Africa, if they had to.

Larger fuel capacity also allows the subs to spend more time on station off the Iranian coast. Currently the Dolphins can stay at sea for about 40 days (moving at about 14 kilometers an hour, on the surface, for up to 8,000 kilometers). Larger fuel capacity extends range to over 10,000 kilometers, and endurance to about 50 days.

The two new Dolphins cost about $650 million each, with Germany picking up a third of the coast, as part of their reparations for World War II atrocities against Jews. The Dolphins have a fuel cell based propulsion system which enable them to stay under waters for over a week at a time. The Dolphins are also very quiet, and very difficult for the Iranians to hunt down and destroy. The first three Dolphins didn't have the AIP (Air Independent Propulsion) system.

Israel equipped it's new Dolphin class submarines with nuclear cruise missiles in 2002. Israel also fitted their 135 kilometer range Harpoon missiles with nuclear warheads. These missiles are fired from the subs torpedo tubes. The 1,625 ton Dolphins can carry 16 torpedoes or missiles and have ten forward torpedo tubes (four of them the larger 650mm -26 inch- size). The Dolphins are considered the most modern non-nuclear subs in the world. The first three cost $320 million each. All have a crew of 35 and can dive to a depth of more than 600 feet. The Dolphin design is based on the German 209 class subs, but has been so heavily modified that it is considered a different class.

The Israelis have developed a cruise missile, which is has a range of 1,500 kilometers and carries a 200 kiloton nuclear warhead. The objective of deploying nukes on subs is to further enhance deterrence to any nation launching a nuclear strike against Israel. If one of the Dolphins are always at sea, even a first strike against Israel would not prevent a nuclear strike by submarine launched nukes. Israel is reported to be trying to set up a base in the Red Sea, because the most likely nuclear attackers are Iran.

The Future of Trident Nuclear Submarines

By UK Ministry of Defence, Navy News (United Kingdom), Sept. 25, 2009

There has been widespread media coverage of reports that Prime Minister Gordon Brown will unveil plans to cut the number of Trident nuclear submarines from four to three, in line with President Barack Obama's goal of eradicating the world of nuclear weapons.

The Prime Minister is determined that Britain will play a full part, including at the important UN meeting on Thursday Sept. 24, 2009, in trying to find an international deal to move towards the long-term ambition, which we all share, of a world free of nuclear weapons.

The PM has always said that we should have the minimum deterrent necessary. As part of 'the road to 2010' non-proliferation process, the PM has made it clear that he wants to look in detail at whether it is possible to maintain the UK's independent nuclear deterrent with three rather than four nuclear armed submarines when the next class of submarine enters service.

The PM's aim is that from the mid 2020s we should meet our minimum deterrent requirements with three next-generation nuclear armed submarines, unless analysis demonstrates that this would be impossible.
He has asked for further work to be considered by the NSID cabinet sub-committee.

Brazil Favors Developing Nuclear Weapons For 'Respectability'

UPI, September 29, 2009

RIO DE JANEIRO – Brazilian Vice President Jose Alencar says he favors Brazil developing nuclear weapons as a deterrent against any foreign aggressor's attempt to capture its offshore oil fields – but also to win international respectability.

"Nuclear weapons as an instrument of deterrence are of great importance for a country that has 15,000 kilometers (9,000 miles) of border," Alencar told Brazilian news media.

Alencar's aides confirmed his comments, but officials later tried to distance the government from the statement, saying they were his personal opinion.

Nuclear weapons would also act as a deterrent to ensure security of Brazil's newly discovered vast offshore oil deposits and give the country greater respectability on the international stage, Alencar said.

He cited the example of Pakistan, which he termed a poor nation with "a seat in various international entities, precisely for having an atomic bomb."

Brazil's nuclear profile has come into the news lately after President Luiz Inacio Lula da Silva launched a military regeneration program, signed agreements for weapons purchases in Europe and announced plans for building a nuclear-powered submarine in preparation for extensive patrolling of Brazil's offshore oil wealth.

Brazil's nuclear intentions gained further attention as Lula played host to Iranian President Mahmoud Ahmadinejad at the U.N. General Assembly in New York last week and invited the Iranian leader to visit Brazil in November. Lula is scheduled to go to Iran in May next year.

Brazil began its nuclear science activities in the 1930s and mounted an active nuclear weapons research program that lasted through two decades of successive military dictatorships from the mid-160s to mid-1980s.

The program was abandoned after restoration of democracy in the late 1980s, but much of Brazil's technical expertise and infrastructure remained intact throughout.

Lula announced this year that Brazil planned to build a nuclear-powered submarine through a promised transfer of technology from France. It was the first indication that the nuclear program was back on the country's priority list.

Although Alencar cited security concerns over the developing offshore oilfields, analysts said the nuclear program also was favored for its potential to give Brazil a pre-eminent role on the South American continent. Lula and his aides have referred to Brazil as a regional power and campaigned for a Security Council seat for the country.

However, Defense Minister Nelson Jobim said in August that Brazil has no interest in developing nuclear weapons. Brazil is a signatory to the 1988 Tlatelolco Treaty that bars Latin American and Caribbean countries from developing nuclear weapons programs. Analysts said Alencar's comments did not necessarily indicate a policy shift but could offer clues to various ideas at work within the Lula administration.

Medvedev Pledges To Recreate Strong Navy In 10 Years

RIA Novosti, September 28, 2009

KALININGRAD REGION – Russia will recreate a powerful Navy in the next ten years, President Dmitry Medvedev said on Monday at a meeting with military personnel who took part in the Zapad 2009 drills.

The Zapad (West) 2009 large-scale joint military exercises being held by Russia and Belarus started on September 18 and will end on Tuesday, with about 12,500 service personnel and up to 200 items of military equipment and hardware having taken part.

Asked whether any of Russia's naval fleets are to be replaced now that many vessels have been in service for 20-25 years, Medvedev said: "We are facing the most large-scale task – to reestablish the Navy, as a significant number of our ships – both surface and submarine – are serving their last years now."

"This does not mean they can't operate, but nevertheless new ships should be put into operation. And we have a stock of submarines and ships," he said. "I am convinced we will be able to reestablish our Navy in the next decade at levels that our state will require. And we need a strong navy," the president said.

The service personnel, numbering over 20, presented Medvedev, who is Supreme Commander-in-Chief, with a striped sailor vest, a marine beret and a mockup of a battleship that took part in the maneuvers, while the president presented them with watches.

The ex-Soviet neighbors Russia and Belarus announced plans in the late 1990s to form a union state in a bid to achieve greater political, economic and military integration, but the project has largely existed on paper.

The exercise among other things rehearses interoperability within the framework of the Belarusian-Russian integrated air defense system, which the two countries agreed to establish recently.

Russia is represented by the Moscow Military District units, Ground Forces, Air Force, Air Defense Forces, Airborne Troops and Baltic Fleet naval task forces, and Belarus by operational command units, Interior Ministry, Emergencies Ministry and State Security Committee troops.

Singapore Submarine Development

Gentle Seas, Sept. 22, 2009

This website's survey of regional submarines forces, which has taken readers to Indonesia, Malaysia, South Korea, Pakistan and periodically India and Australia, now moves on to Singapore.

Singapore has been a shrewd buyer of used Kockums built submarines and then had them upgraded. It is unlikely the Singapore will buy Kockums submarines again given Kockums is now owned by a competing submarine builder – the German HDW company.

Its possible that Singapore may soon take the opportunity of purchasing 2 new AIP equipped HDW 214 submarines on favourable terms. This has come to pass due to the possibility of 4 extra HDW 214s being placed on the world market due to payment disputes between the Greece and HDW's parent company TKMS.

Along with Australia Singapore is one of America's closest allies in the Southeast Asian/Oceania region. Singapore is also on good terms with India while a little wary of its larger neighbours Indonesia, Malaysia and further afield China.

Singapore's earlier submarine purchases

In 1995, the Republic of Singapore Navy (RSN) acquired a Challenger class (formerly known as Sjöormen class built by Kockums) submarine from the Swedish Navy and another three in 1997, making them Singapore's first underwater platforms. As the submarines were designed by the Swedish for operations in the cold Baltic Sea, various modifications were required to suit them to tropical waters. A comprehensive tropicalisation programme was carried out for all four submarines, which involves installing air conditioning, marine growth protection systems and corrosion-resistant piping.

It is believed that the Challenger class were purchased to develop the required submarine operations expertise before selecting a modern class of submarines to replace them, since all the boats were launched in the late 1960s. The four Challenger class submarines form the 171 Squadron of the RSN.

Singapore's Ministry of Defence maintained its relationship with Kockums and in November 2005 signed an agreement with Kockums for the supply of two Archer class (known in Sweden as Västergötland class) submarines to the RSN. Originally launched in the mid 1980s and previously in reserve with the Swedish Navy, the submarines will be transferred to the RSN on completion of the modernisation and conversion for operation in tropical waters.

RSS Archer (photo above) was relaunched on 16 June 2009. The Archer class submarines are equipped with an AIP system, enabling longer submerged endurance and lower noise signature. The advanced sonar system allows the submarines to detect contacts at a further distance, while the torpedo system has a better target acquisition capability, which allows the submarines to engage contacts at a further range. The Archer class submarines are expected to enter service from 2010 and may replace some of the Challenger class submarines.

Singapore's Archers are a little larger (1,500 tons submerged) than the Challengers, to accommodate the AIP system. With the AIP and the state-of-the-art sensors, the Archers boats are more capable than Indonesia's HDW 209s and probably more so than Malaysia's new but non AIP Scorpene's.

Singapore's submarines probably operate close to home (in and close to the Straits of Malacca) and probably work in close cooperation with America's SSNs and other anti-submarine assets. I assume that little has been written in decades about submarine tactics especially cooperative tactics between submarines of close nations (say the US, Singapore and Australia). The bland image that submarines work alone without help from foreign friendly boats begs questions.

China says military arsenal comparable with West

By Christopher Bodeen, Associated Press, Sept. 21, 2009

BEIJING – China's military now possesses most of the sophisticated weapon systems found in the arsenals of developed Western nations, the country's defense minister said in comments published Monday.

Many of China's systems, including the J-10 fighter jet, latest-generation tanks, navy destroyers, and cruise and intercontinental ballistic missiles, match or are close to matching the capabilities of those in the West, Liang Guanglie said in a rare interview posted on the ministry's Web site.

"This is an extraordinary achievement that speaks to the level of our military's modernization and the huge change in our country's technological strength," Liang said.

The minister's remarks come ahead of China's biggest military parade in a decade scheduled for the Oct. 1 National Day in Beijing. That event will showcase much of the country's most advanced equipment, the fruit of China's booming economy and nearly two decades of annual double digit percentage increases in the defense budget.

Liang said he believed the parade would "display the image of a mighty force, a civilized force, a victorious force."

Still, in its 2009 report on Beijing's military power, the Pentagon ranked Chinese defense technology below that of the United States – as it always has – but noted that the country's armed forces have improved their capacity to carry out operations away from its shores and deny other militaries access to its airspace and seas off its coast.

Defense industry reforms and arms imports "have enabled China to develop and produce advanced weapon systems such as missiles, fighter aircraft and warships," the report says.

The 2.3 million-member People's Liberation Army is the world's largest standing military and its modernization has been accompanied by gradual steps toward greater engagement with the outside world. Liang said China has contributed 13,000 troops to U.N. peace keeping operations along with three navy flotillas to join in anti-piracy patrols of the coast of Somalia.

Despite such moves, however, the PLA remains largely a closed shop and military ties with the United States and other nations are often hobbled by disputes over Taiwan and other political issues.

China's improved capabilities are also seen as emboldening the country's military and civilian leaders in using force to back up political and territorial claims. Chinese ships have repeatedly harassed U.S. Navy surveillance vessels collecting intelligence off China's southeastern coast, while Chinese submarines have aggressively pursued aircraft carrier battle groups.

And while relations with Taiwan have warmed in recent months, Beijing continues to add to the hundreds of missiles it has pointed at the self-governing island that China considers its own territory – to be unified with by force if need be.

Analysts say the odds of conflict with the U.S., Japan and other regional militaries is likely to increase as China further beefs up its arsenal.

China announced a 14.9 percent rise in military spending in its 2009 budget, to 480.6 billion yuan ($70.3 billion). Many observers say actual Chinese military spending is much higher.

The 225,000-sailor People's Liberation Army Navy already operates more submarines than any other Asian nation, with up to 10 nuclear-powered vessels and as many as 60 diesel-electric subs. It boasts almost 80 destroyers and frigates – more than a dozen of which have entered service since the 1990s – along with hundreds of smaller craft and support ships.

China's second-generation, nuclear-powered Jin and Shang class submarines are considered just a notch below cutting-edge U.S. and Russian craft. The diesel-electric Yuan class boasts a Chinese-developed air-independent propulsion system that allows it to remain submerged for weeks, while Chinese Luyang destroyers and Jiangkai missile frigates incorporate stealth features and a mix of latest-generation Chinese and Russian weapon systems.

Russia Tests New Nuclear Submarine

Barent's Observer, Sept. 16, 2009

Russia's newest nuclear submarine, the "Yury Dolgoruky", is currently undergoing new rounds of testing in Russian Arctic waters.

This is the third testing of Russia's first fourth generation nuclear submarine. The submarine has not been out at sea for more than a month, Interfax reports. During this time defects and flaws noted in the last testing have been repaired.

After the previous testing, the shipyard Sevmash in Severodvinsk outside Arkhangelsk informed that it was expected that five to six more rounds of testing will be required before the submarine can be delivered to the Navy.

The "Yury Dolgoruky" will be the new flagship in the Russian submarine fleet. "Yury Dolgoruky" will be Russia's first submarine to be equipped with Bulava missiles. It will have 16 missiles, each carrying up to 10 nuclear warheads and having a range of 8,000 kilometers.

Could War Erupt In Arms-Spree LatAm?

By Robert Munks, BBC News, September 15, 2009

Is Latin America gearing up for conflict? Some regional commentators certainly fear that a handful of countries are teetering on the edge of a full-blown arms race they can ill afford - either financially or diplomatically.

That fear has been stoked in the past week by the coincidental announcement of two major procurement programmes.

Firstly, Brazil confirmed on 7 September that it will buy four Scorpene attack submarines from France, and will build 50 EC-725 transport helicopters under licence.

It has also opened negotiations with French company Dassault for a large order of Rafale fighter aircraft.

Then Venezuelan President Hugo Chavez returned last week from a successful shopping trip to Moscow, with T-72 main battle tanks and an unknown quantity of air defence systems in the bag.

Both countries are ramping up military expenditure to levels not seen in decades.

For Brazil, re-armament is ostensibly necessary to update much of its obsolete equipment and to improve the protection of its vast territory and recently-discovered offshore oil fields.

But Brasilia also harbours a desire to cement its status as the regional political and economic heavyweight through increasing military clout.

Hence the accords with France, which will also see the two countries co-operate on the construction of a hull for a nuclear-powered submarine that Brazil wants in service by 2020.

Full technology transfer was a key Brazilian demand during all its contract negotiations.

Conscious of regional sensitivities, Brazil has consistently stressed that its re-armament is non-offensive.

For an emergent world power seeking the prize of a permanent seat on the UN Security Council, that claim is entirely credible.

Cross-border spate

Yet the acquisitions by Mr Chavez, the region's most mercurial and outspoken leader, are a different case - particularly since Venezuela's relations with neighbouring Colombia have slumped towards outright belligerence since late July.

The standoff followed Bogota's decision to grant basing rights to the US military at seven sites across the country.

Mr Chavez - whose military doctrine is founded on a hypothetical US invasion from Colombia to seize his lucrative oilfields - has used the US-Colombia agreement to justify his new Russian hardware.

Moreover, with diplomatic relations between Venezuela and Colombia partially suspended and a cross-border trade spat brewing, the dispute on this occasion appears set to be unusually venomous.

Colombia, meanwhile, continues to be by far the largest recipient of US military aid in Latin America - some $6.1bn (£3.6bn) since 1999 - as it continues a war against left-wing Farc insurgents and drug cartels.

Its armed forces are designed and equipped for airmobile counter-insurgency operations, unlike their more traditional Venezuelan counterparts, meaning that military conflict between the two sides would be ill-matched and, in the final analysis, almost certainly inconclusive.

This begs the question of whether Venezuela's recent military purchases could be a precursor to conflict.

In theory, yes, given that Venezuela is consolidating its conventional armoured and air superiority over Colombia - it has already taken delivery of 24 advanced Su-30 fighters.

In a worst-case scenario, analysts fear that an embattled Chavez might be tempted to launch a military adventure to divert attention from his growing domestic woes, pushing his AMX-13 and Scorpion 90 light tanks across the border and launching long-range airstrikes.

But in practice, the risk of war breaking out is still negligible, given the likelihood of massive dissuasive pressure from both the US and Brazil.

For the moment, at least, arms acquisitions by Mr Chavez continue to be a mix of both nationalistic pride and sabre-rattling.

Economic suicide

Elsewhere on the continent, fears of an arms race between neighbouring Chile and Peru - which have contested a maritime boundary since a war in 1879 - resurface periodically.

Yet here again, the actual threat is minimal.

Peru knows that it would be economic suicide to try to match Chile's vastly superior armed forces.

Sporadic outbursts of nationalist rhetoric are good for letting off steam, but do not indicate genuine military competition.

Even military minnows Paraguay and Bolivia have recently been mentioned in an "arms race" context.

Recent Bolivian military purchases - including helicopters from Russia - briefly raised over-exaggerated fears in Paraguay of a retaliatory re-run of the bloody 1932-1935 Chaco War, in which Bolivia lost large swathes of territory.

In reality, however, the appetite for confrontation is non-existent.

Appropriately, perhaps, it is the two countries that for four decades embarked on the world's largest ever arms race - the US and Russia - who may hold the key to the situation in Latin America.

The former superpowers are playing out a miniature version of an oddly nostalgic game on the continent, reminiscent of Cold War proxy conflicts where each has their favoured partners.

Russia, for example, is supplying a number of countries with arms on generous terms, while the US reactivated its naval Fourth Fleet in mid-2008 to patrol the waters of the south.

Yet even here, explanations are relatively straightforward.

Russia sees Venezuela as a key military market in the developing world, and in reality has little appetite for a genuine strategic alliance with the volatile Mr Chavez.

The US, meanwhile, has expressed concern about the recent arms purchases.

The state department said Venezuelan policy posed "a serious challenge to stability" in the region.

Washington knows that accepting Brazil's claim to regional leadership steals much of the thunder from Mr Chavez in a part of the world it can no longer treat as its "backyard".

So an arms race in Latin America? Not yet, not quite.

As with much of the region's tempestuous politics, the rhetoric continues to outpace the reality.

But even so, recent developments suggest that while the world is preoccupied with conflicts on other parts of the globe, the seeds are quietly being sown for the increased militarisation of a region that arguably should have its budgetary priorities elsewhere.

Stealthy Italian submarine will train with U.S. Navy

By Timothy J. Gibbons, Jacksonville News, Sept. 12, 2009

From its high-tech fuel cell engine to its automated torpedo loading system, the ITS Scire proudly shows off the advanced technology crammed into its narrow body.

But being on the crew of a cutting-edge fighting vessel doesn't mean one has to ignore the comforts of life – which perhaps is why cans of extra virgin olive oil manage to find a corner amid the fearsome torpedoes.

From the espresso machine outside the galley to the pizza the cook makes each night for those working the midnight shift, little touches help make the work more enjoyable for the 28-man crew of the Scire, the most modern vessel in the Italian fleet.

"These are things that make us comfortable," said Lt. Sebastiano Rossitto, the Scire's executive officer. "It's more than eating."

But the focus is on leveraging that technology, particularly a fuel cell that produces electricity from hydrogen and oxygen, allowing the boat to stay submerged for three weeks while running completely silently.

That ability will be put to the test over the next week as the Scire takes part in a Joint Task Force Exercise being held off the coast of Jacksonville.

The second Italian boat to visit the United States since the end of World War II – the first stopped by Mayport in 2008 – the crew of the Scire has been working on its role in the Joint Task Force Exercise for the past six months.

The exercise, centered on the strike group led by the USS Harry S. Truman, is designed to test the group's reaction to a variety of wartime scenarios as the carrier prepares for an upcoming deployment.

For its part, the Scire will both work within the task force and serve as an enemy, allowing the Navy's submarine hunters to do their job.

"We're not typically part of a strike group," said Lt. Cmdr. Alberto Tarabotto, the commanding officer of the boat. "This will allow us to test our skills at integrating together."

The Todaro-class submarine comes out of a joint Italian-German project started in the 1990s, focused on producing a virtually undetectable vessel with a much lower magnetic, acoustic and thermal signature than other subs.

"These important partnerships provide the U.S. Navy with unique training opportunities against the real-world threat found in the modern, quiet, diesel-electric submarine," Lt. Courtney Hillson of U.S. 2nd Fleet said about the exercise.

Including the Scire, 13 ships from nine countries will work with the U.S. strike group.

Getting to the United States took the Italian boat about 25 days, with the crew arriving at New London Naval Submarine Base after 18 days underwater.

The voyage itself presented challenges as the crew adjusted to the differences between the Atlantic and its home base, the Mediterranean.

"We had a meeting with Bill," the captain said with a laugh, referring to the hurricane the ship passed through on its way to the United States. "You could feel it even hundreds of meters under the sea."

But the crew was in no great hurry to get the trip over with. As is typical with submarines, the focus wasn't speed, but stealth, requiring slow, deliberate movements.

As the Scire slowly crept across the ocean, its crew focused on searching the deep for other boats while keeping itself hidden, using the skills that it will hone further during next week's exercise.

"The more silent you are, the better it is in submarines," Rossitto said. "Submarines are not like surface ships, transporting themselves from Point A to Point B. We have a job to do as well."

Why the US Weapons Industry Has Lost Brazil and LatAm to China and Europe

Brazil Magazine, Sept. 9, 2009

The news that Brazil is planning to buy French fighter jets confirms a trend across Latin America that is based in recent history and the proclivity of US lawmakers to put political restrictions on what customers can and cannot do with their purchases.

This had convinced many Latin American countries that it is more reliable and less politically sensitive to acquire military hardware from Western Europe, Russia and lately from the emerging China and in the near future possibly from India.

In Brazil's case this helps explain in part why France's Rafale emerged victorious over the US F/A-18 Super Hornet and Sweden's Gripen NG, according to the planned purchase announced on Monday; plus the US$ 9 billion cooperation agreement, again with France, for the acquisition of submarines, one of them nuclear powered and 50 choppers.

While the Rafale was an excellent choice anyway on performance criteria, Brazilian officials said it was France's offer to share all of the plane's technology that really sealed the deal.

The technology behind the F/A-18 and the Gripen (which uses some US components such as the engine) are subject to approval from Washington - which has in the past vetoed any transactions with of which it disapproved.

That was the case under President Jimmy Carter, who embargoed military sales to South American dictatorships in the 1970s. Argentina as a result turned to Europe - buying French Super-Etendard fighters with Exocet missiles that subsequently proved so successful and fearsome for the British Task Force sent to recover the Falkland Islands taken over by the Argentine military dictatorship in 1982.

More recently, former US president George W. Bush slapped an arms embargo on populist Venezuelan President Hugo Chavez who has close relations with Iran and is accused of not doing enough in the "war on terror."

As a result, and with no spares for his US military hardware, Chavez went shopping in Russia, which has proved only too happy to sell him 24 sophisticated Sukhoi fighter jets, 51 combat helicopters, missile-launchers and 100,000 AK-103 assault rifles for a total of US$ 4.4 billion. He also purchased 24 light jets from China and turbine anti guerrilla aircrafts from Brazil.

Across the rest of South America the situation is not different.

Peru although now friendly with the United States, had longstanding ties with Moscow. It has Russian MiGs and Sukhois and French Mirages in its air force, German submarines and Italian frigates in its navy. The army has US tanks, but they are backed up by French, German, Italian, Brazilian and Russian armored vehicles.

Even Colombia, the United States' main ally in the region, is not relying entirely on Washington, which has given US$ 5.5 billion in mostly military aid over the past decade to fight drug trafficking and rebels.

The Colombian air force has 15 Black Hawk helicopters but its pilots also fly French Mirages (and Israeli-modified Mirages Kfirs) and Brazilian Super Tucanos for jungle warfare. Colombia is also scheduled to receive five Russian Mi-17 transport helicopters and is asking France and Germany to look at modernizing its navy.

In Chile, cooperation with European suppliers goes back to the start of the 20th century with the British supplying the Navy and Air Force, and Germany traditionally the Army. Currently the Navy is undergoing a renewal process with British and Dutch frigates, French submarines and Israeli torpedo boats.

The Air Force opted for F-16s from the US as part of the free trade deal signed with Washington in the mid nineties plus other refurbished F16s from Europe and French Mirages. The Army is equipped with German Leopard tanks.

The smaller countries, Bolivia, Paraguay and Uruguay have also diversified their sources of supply from the traditional US military hardware to Europe, Russia, China, Israel, Brazil and lately even Iran.

According to the Stockholm International Peace Research Institute, SIPRI, statistics, an "arms race" seems to be emerging in Latin American arms race, which says regional defense spending grew 50 per cent between 1999 and 2008.

US Share of Weapons Market

The United States not only increased its arms sales by nearly 50% last year but its share of world weapons sales also rose to more than two-thirds despite the global economic downturn, The New York Times reported.

The US expanded its ranking as the top weapons supplier with sales of US$ 37.8 billion in 2008, or 68% of the world total, up from US$ 25.4 billion in 2007, said the American daily, citing a report from the Congressional Research Service, considered the US Congress' "think tank."

The increases were seen despite a 7.6% drop in global arms sales to 55.2 billion.

US sales rose from major new orders from the Middle East and Asia and contracts with existing customers for equipment and support services, the agency's report said.

Ranked second in global arms sales was Italy with US$ 3.7 billion, followed by Russia with US$ 3.5 billion. Russia saw a considerable drop from the US$ 10.8 billion in weapons it sold in 2007, the report said.

The US also took the top spot in arms sales to developing nations, making US$ 29.6 billion, or 70% of such sales.
The top buyers among developing nations last year were the United Arab Emirates with purchases of 9.7 billion, followed by Saudi Arabia at 8.7 billion and Morocco with 5.4 billion, the report said.

Underwater Lasers Change Everything

StrategyPage.com, September 10, 2009

Finally, there are lasers that can be used communicating underwater. This is done by using a laser pulse tuned to ionize water, and generate an acoustic pulse. Thus surface ships or aircraft could communicate with suitably equipped subs. This stuff is still in the lab, but given the need for underwater communications, there's lots of incentive to get it into service. If this survives development and testing, it will revolutionize submarine operations.

For years, researchers have been trying to find ways to use lasers to detect submarines, or to enable underwater communications. So far, it's been found that blue-green lasers can reach some ten meters beneath the surface, and be used for detection and communication. Not terribly useful for subs (which typically stay farther down than ten meters), although work continues on using this capability to search for bottom mines in shallow waters.

Two years ago, the U.S. Navy completed development of this system, which enabled nuclear subs to communicate with the rest of the world that, normally, could not be done until the boat came close to the surface and poked a radio antenna above the surface. The Deep Siren, or "tactical paging system", provided a practical solution to the problem of communicating with a submerged sub. The system consists of a disposable buoy, that is dropped in the water, by an aircraft or over the side of a ship, in the general area (within about 90 kilometers) where the sub is believed to be. The buoy sends out an acoustic signal that U.S. subs are equipped to automatically pick up. This coded message either orders the sub to get a radio antenna above water and call home, or simply delivers a brief message. The buoy also has a satellite telephone capability, so that additional messages can be sent from anywhere, to the sub. The sub cannot send messages to the buoy (because powerful sensors are required to pick up the signals). In the past, the only way to "page" submerged subs was via a large, shore based, low frequency, transmission system. This system was less reliable than the new one, although it had a much longer range.

The navy recently successfully tested the other end of the system. To do this, the sub releases a similar buoy through its garbage chute. The buoy hovers for a while (so the sub can move away), then rises to the surface and sends its messages. Thus the buoy signal will not give away the exact location of the boat. The buoy then receives messages (short ones) and uses a sonar type device to send the data acoustically, for up to 90 kilometers, to the sub. Outgoing messages, which are sent via satellite, can be longer, and even include outgoing email from the crew to family. But the acoustically transmitted messages are much shorter, and include orders from the surface ships, or anyone in the chain of command, to the sub commander.

Deep Siren can also be useful for American carrier task forces, which are usually accompanied by at least one SSN (nuclear attack sub.) Because thermal layers make underwater transmissions vary a great deal in range, the buoy sends the command messages several times to insure at least one gets through. The buoy from the sub can stay active for several days, if the sub is remaining in the area. But eventually, the buoy sinks itself.

The U.S. Navy has spent about $10 million on Deep Siren so far, mainly to install it in some subs and test it. These tests continue, to see how reliable it would be under realistic conditions. Raytheon apparently believes the Deep Siren isn't ready for prime time yet, but for security reasons, isn't discussing what the problems are.

Navy: No Risk from Bad Welds

By Chris Cavas, Navy Times, Sept. 10, 2009

Defective welding procedures discovered at Northrop Grumman's Newport News Shipbuilding in late 2007 pose no significant danger to sailors or submarines, a recently completed Navy review of the situation concluded.

"The Navy conducted a 16-month in-depth review of the shipbuilders' findings and is satisfied that our people and platforms are not at risk due to this issue," the Naval Sea Systems Command (NAVSEA) said in a statement e-mailed Thursday to Defense News.

"Both Northrop Grumman Shipbuilding and General Dynamics Electric Boat have conducted exhaustive analysis and testing that demonstrates: the low probability of improper welds occurring aboard submarines; that improper welds are unlikely to fail during the ship's operational life; and that should a weld fail it would leak but not break, thereby alerting the crew in time to address the issue before the weld degraded further."

The problems were first reported in mid-November 2007, when the Navy discovered welding process weaknesses associated with some of the non-nuclear piping welds made on Virginia-class submarines at Newport News.

According to the Navy, "the failures during testing were caused by trace amounts of copper alloy weld filler material incorrectly welded into corrosion resistant steel (CRES) socket-welded joints. The copper alloy weld filler in CRES piping joints could potentially lead to premature cracking of the joints, which could result in leaks."

Northrop Grumman Newport News and General Dynamics Electric Boat share equally in building Virginia-class submarines. Each shipyard has responsibility to build certain sections of each sub, and the yards alternate in assembling, launching and completing the vessels. The weld issues discovered in November 2007 were found only at the Newport News, Va., shipyard, where, at the beginning of a work shift, welders were handed different kinds of weld filler material to use on multiple work assignments. The bad welds resulted when some welders accidentally used the wrong kind of filler on a job.

Northrop has instituted a number of process changes and no longer issues more than one kind of weld filler at a time. Workers also have undergone an extensive retraining program.

The company provided the Navy with a full report on the problem in April 2008, but more time was taken by the Navy to complete its assessment and approve the findings and actions of both shipbuilders to address the issue.

Northrop's Newport News shipyard also builds all of the nation's aircraft carriers. A separate review of the aircraft carrier program is still ongoing, according to Katie Roberts, a NAVSEA spokesperson.

As part of the review, according to NAVSEA, Northrop Grumman Shipbuilding:

- Reviewed its welding procedures and inspection criteria to limit the issue to non-nuclear CRES pipes completed between January 2000 and January 2008.
- Conducted quality process reviews, weld record reviews and shipboard material verifications tests.
- Inspected CRES piping located within ship-critical systems. The inspections found a low number of copper-contaminated welds, which were replaced.
- Revised shipyard practices with regard to control of welding materials.

The shipbuilders and the Navy concluded that, while additional improper welds are possible, contaminated welds would likely not show any signs of failure during a submarine's operational life and if they did, the pipe would leak rather than fail.

"The quality of our work is something we take very seriously," Margaret Mitchell-Jones, a spokesperson for Northrop Grumman Shipbuilding, said in response to the NAVSEA statement. "We have a rigorous program in place that includes inspecting and evaluating our work to ensure it adheres to the Navy's strict requirements. When issues arise, it's something we address in an immediate and methodical way, in full communication with the U.S. Navy and our industrial partners."

The Navy completed its assessment of Northrop's inspection report and revised procedures on Aug. 7, a source said, but took more than a month to release the statement because of the need for multiple internal departments to provide their approval.

China Will Not Join Global Nuclear Disarmament

By Junichi Abe, The Turkish Weekly, Oct. 5, 2009

During the G8 Meeting of Foreign Ministers in June this year, Japanese Foreign Minister Hirofumi Nakasone pointed a finger at China, saying it is the only country building up strategic nuclear weapons. To be sure, China deploys nuclear missiles that have Japan within their range, making the country a greater threat to Japan than North Korea in a way. Why is China proceeding with nuclear weapons modernization amid growing international pressure toward nuclear disarmament?

China's attitude toward nuclear weapons has been complex. While pretending to make slight of American atomic bombs by calling them "paper tigers," Mao Zedong was aware that China would need to arm itself with nuclear weapons in order to counter the American nuclear threat. Due to its rivalry with the Soviet Union, China had to develop nuclear weapons on its own, but managed to declare itself a nuclear state after successfully conducting its first nuclear test in October 1964. By that time, however, the nuclear capabilities of the US and the Soviet Union had reached a significant level, with the two countries possessing intercontinental ballistic missiles (ICBMs), submarine-launched ballistic missiles (SLBMs), and ballistic missile submarines (SSBNs) capable of launching SLBMs. China was despairingly lagging behind the US and the Soviet Union in terms of nuclear capability. China managed to acquire nuclear weapons amid economic hardship with the kind of determination shown by then Chinese Foreign Minister Chen Yi, who insisted that China should develop nuclear weapons at any cost, "even if the Chinese people have to pawn their trousers for this." Thus from the beginning, China has had no intention of becoming a nuclear power like the US and the Soviet Union and has modernized its nuclear capability at its own pace.

Sun Tzu said in "The Art of War", "if you know both yourself and your enemy, you can win a hundred battles without a single loss." As if to take the reverse, China has the tendency to keep quantitative military data secret, including the total size of its conventional forces. This lack of transparency concerning the Chinese military is nothing new. The Chinese leadership may consider hiding information an effective way of presenting its small nuclear capability to the world. Among the five nuclear powers under the Nuclear Non-Proliferation Treaty (NPT), only China's nuclear capability is veiled in secrecy. China has, of course, showcased some of its strategic nuclear missiles during its military parades, but has never revealed data concerning its nuclear weapons, such as the numbers of nuclear warheads and deployed missiles. This has contributed to errors in data collected by foreign countries concerning China's nuclear capability. Given the small degree of these errors, however, we may be able to take the international data as broadly correct.

If we take this information as given and look at China's nuclear capability, the number of China's nuclear warheads stands at around 200 – the smallest arsenal among the five nuclear powers and essentially on the same level as that of Britain. China places overwhelming emphasis on ground-launched ballistic missiles in its nuclear force structure. It is assumed that SLBMs, to which the other nuclear nations attach growing importance, are not functioning as war potential, for no Xia-class nuclear-powered submarines capable of launching JL-1 SLBMs have been found on patrol duty. Two Jin-class nuclear submarines have been confirmed through photographs, but the JL-2 SLBMs to be launched by these new nuclear submarines are still under development and there has been no report confirming their launch tests. China does not possess air war potential categorized as strategic bombers, such as B52s, B1s and B2s.

Technologically, China's current nuclear capability remains at the level of the US in the first half of the 1960s. China's nuclear capability can be summarized as about 130 ballistic missiles deployed on the ground with each missile able to carry only one warhead, meaning that no multiple independently targetable reentry vehicles (MIRVs) have been introduced. Furthermore, middle- and long-

range ballistic missiles, such as DF-5 intercontinental ballistic missiles (ICBM), are liquid fuel rockets not suited to rapid reaction. In other words, China lags more than 40 years behind the US in modernizing its nuclear capability.

China has argued that it is the responsibility of the US and Russia to first reduce their nuclear arsenals, stating that China's nuclear force level is no match to those of the two largest nuclear powers. In July, US President Barack Obama and his Russian counterpart Dmitry Medvedev agreed to reduce their strategic nuclear stockpiles to between 1500 and 1675 warheads each as part of a new treaty to succeed START I. Even if the proposed reduction is realized, however, the nuclear capabilities of the US and Russia will remain far stronger than those of China.

Nevertheless, China would go along with the ideas and philosophy of Obama's proposal for a nuclear-free world, which were outlined in his April 5 speech in Prague, for China has continued to advocate for nuclear abolition. However, if nuclear abolition means all the nuclear states abolishing their arsenals at the same rate, China would strongly oppose the idea. This is because, in a world without nuclear weapons, the US would maintain absolute supremacy with its overwhelming conventional forces. What is most important for China is to secure deterrent capability against the US.

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Navy Will Test SSGN's Ability To Control ScanEagle UAVs Next Month

Similar test conducted earlier this year

By Dan Taylor, Inside the Navy, Oct. 5, 2009

The Navy will test the ability of an Ohio-class SSGN guided-missile submarine to receive control of a ScanEagle unmanned aerial vehicle mid-flight next month and use it to conduct intelligence-gathering missions, according to Allen Griffith, director of special programs for the commander of submarine forces.

In July, the submarine community conducted an exercise called Talisman Saber 2009, in which the Michigan (SSGN-726) took control of a ScanEagle that had been launched from land and used it to collect video footage for 20 hours. In November, the Navy will hold another test "to get kind of a feel for how far away we can control the ScanEagle with the SSGN," Griffith said during an Oct. 1 interview with Inside the Navy.

Today, submarines only have access to the Buster UAV, which can be launched from subs while surfaced and can be on station for about four and a half hours. The ability to take over longer-range aircraft such as the ScanEagle by having a ship or land unit pass control over to the submarine would greatly increase its ability to conduct intelligence, surveillance and reconnaissance (ISR) missions, Griffith said.

"I think anytime you can take advantage of other assets that are out there, whether they be overhead satellite assets or UAVs or anything like that, it will expand your influence by providing you a better picture of what's happening around you," he said. "The point is that we don't need to necessarily launch our own. If somebody else is already launching it, we can get the full bandwidth downlink from that, too."

Getting data through a direct connection with a UAV is much more efficient than receiving it indirectly, he said.

"It's all part of this net-centric thing that we can all use everybody else's sensors and tie them together so everyone has a bigger operational picture," he added.

The submarine would have to be a periscope depth with an antenna out of the water to receive the transmissions, he added.

Griffith said that while he would not get into specifics, the submarine community is looking at a number of large UAVs, which may include the Navy's future Broad Area Maritime Surveillance (BAMS) drone, scheduled to reach the fleet in the middle of the next decade.

The November test will be completed before Thanksgiving (Nov. 26), and there will likely be more tests, he said.

"I'm sure there will be if we think we're going to deploy the system," he said. "If the ship is going to have to work up or there's a possibility the ship will use the capability forward, we'll make it part of the certification process and she'll have to demonstrate that capability. That's how we do everything."

The ability is not limited to SSGNs; attack submarines (SSN) with the necessary equipment could also control a ScanEagle, Griffith said.

Italian Navy Orders Two More Submarines With Siemens Fuel Cell Technology

Frontier India Strategic and Defence, Oct. 5, 2009

For the Italian navy, the Siemens Industry Solutions Division is equipping two new submarines of the U212A type with fuel cell modules for air-independent propulsion. The systems are ordered by Howaldtswerke-Deutsche Werft GmbH (HDW). Delivery of the two submarines to the Italian navy is planned for 2015 and 2016. This will increase to 30 the number of submarines plying the seas worldwide with a Siemens fuel cell technology. The order has a volume of around 29 million euros.

The submarines are being built at the Italian Fincantieri Cantieri Navali Italiani S.p.A shipyard. By order of HDW, Siemens is delivering two PEM (polymer-electrolyte-membrane) fuel cells each as core components of the air-independent propulsion as well as

the associated automation and control systems. The solutions and systems used are part of the Sinavy SUB solution platform developed specially for submarines.

The PEM fuel cell system takes charge of the power supply, thus enabling air-independent propulsion (AIP) of submerged boats. The AIP system comes from HDW. Siemens is supplying the fuel cell system and delivering the associated automation and control systems based on the Simatic S7 platform. The fuel cells convert oxygen and hydrogen directly into electricity without generating noise or pollutants. They are distinguished by high efficiency and extremely slight signatures. Contrary to conventional diesel-electric submarines, submerged time is prolonged by a multiple, which benefits operative deployment.

The latest order is for licensed manufacture of the first lot belonging to this class. The first two models also arose out of German documentation in Italy and have already been in use by the Italian navy since 2006 and 2007.

Neutrinos May Someday Provide High-Speed Submarine Communication

By Jeremy Hsu, Popular Science, October 6, 2009

Submariners should brace for some crazy science to match those Crazy Ivan maneuvers. A physicist says that ghost-like neutrinos that pass easily through just about everything could provide a future method of communication with deep sea submarines.

Neutrinos represent the ghost particles of the physics world that typically pass through about every form of matter without a trace. That solves one half of the problem in communicating underwater, where radio waves travel poorly and even very low frequency (VLF) waves can only go so far. But it leaves open the other half of the issue in that submarines have no way of receiving communications via neutrinos.

Physicists have typically studied such particles by detecting the secondary particles or electromagnetic waves that result from rare neutrino collisions. They have also used an experiment at the Fermi National Accelerator Laboratory in Chicago to beam neutrinos more than 435 miles to a Minnesota mine, where a giant underground detector can easily pick up the muon particles that result from neutrino collisions—although even that detector has only found 730 muons over the past two years of operation.

Patrick Huber, a physicist at Virginia Tech, believes that the next generation of muon detectors will dramatically improve in sensitivity to the point where a submarine could possibly carry one. Covering a submarine hull in thin muon detector modules could possibly work, but an even easier method might involve looking for the Cerenkov light radiation left by muons moving through seawater. That large signature could represent an easier target for detection, despite interference from the usual light in an underwater environment.

There are several ifs, and yet the idea of receiving data at rates of up to 100 bits per second must sound appealing to naval forces. Submarines that want to communicate without surfacing must currently trail a long radio antenna behind them, and can only receive up to 50 bits of data per second.

But even if a neutrino communication method arises, Technology Review points out that there's still no way for submarines to phone home in reply. So for the near future, submariners may have to settle for the usual: run silent, run deep.

Dismantling The Soviet Submarine Fleet

Strategy Page, October 7, 2009

Russia, with financial and technical assistance from America, Britain, Canada, Japan, Italy and Norway, has been dismantling about 20 retired nuclear submarines a year, and plans to have 191 dismantled by next year. Up through the early 1990s, Russia had built nearly 260 nuclear ships (nearly all submarines). The end of the Cold War in 1991, left the Russians unable to keep most of those subs in service. Russian nukes were expensive to maintain, and many were not worth keeping in service (too noisy, too old, too many other flaws).

Most of the submarine dismantling was paid for by the U.S., which spent over $15 billion to implement the 1993 Strategic Offense Arms Elimination Implementing Agreement with Russia. Britain, Canada, Japan, Italy and Norway also contributed cash and technical assistance to this effort.

Throughout the 1990s, Russia only decommissioned 2-4 nuclear subs a year. Many nuclear subs were taken out of service in the early 1990s, although lots of older boats were being decommissioned in the late 1980s, before the Cold War even ended. That's because Russians tend to keep old weapons in service long beyond the time it's worth it. By the end of the 1990s, Russia had 150 decommissioned nuclear subs waiting to be dismantled. Russia hoped to complete dismantling these submarines by 2007, but things went much slower than expected, because there was no money. However, by 2000, things really began to pick, as 18 subs were dismantled in that year.

It costs about $7 million to dismantle one submarine. The primary task is to safely take apart the nuclear reactor, and get the radioactive components to a secure storage facility. The foreign nations contributing to this effort are all maritime nations that were concerned about the old Soviet subs falling apart while still in the water. What got this aid program going was the discovery that the Soviets were just dumping some radioactive components into Arctic waters. Russia was more willing, than the Soviets, to do the right thing and is determined to safely dispose of all these old nuclear subs.

Chinese spymaster complains about news leak

By Bill Gertz , Washington Times, Oct. 8, 2009

China's most senior military intelligence official, a veteran of spy operations in Europe and cyberspace, recently made a secret visit to the United States and complained to the Pentagon about the press leak on the Chinese submarine that secretly shadowed the USS Kitty Hawk aircraft carrier in 2006.

Maj. Gen. Yang Hui said senior Chinese leaders suspected the Pentagon deliberately disclosed the encounter as part of a U.S. effort to send a political message of displeasure to China's military. The Song-class submarine surfaced undetected near the carrier, and Gen. Yang said the Chinese believed the leak was timed to coincide with the visit of a senior U.S. admiral.

Gen. Yang made the remarks during a military exchange visit in early September, according to two defense officials. The officials discussed the talks on condition of anonymity because they were not authorized to discuss the contents of the private meetings.

Pentagon spokesman Bryan Whitman confirmed that Gen. Yang was hosted by Defense Intelligence Agency Director Lt. Gen. Ronald L. Burgess Jr. but declined to provide details of the discussions. The visit included meetings at the DIA, Pentagon and State Department and within the intelligence community, he said, noting that Gen. Yang invited Gen. Burgess to visit China.

The U.S. visit by the senior spymaster was unusual. The Chinese service has been linked to two spy rings that operated against the United States, including the case of California defense contractor Chi Mak, who was sentenced to 24 years in prison last year for supplying China with military technology.

Chinese military intelligence also was behind the cases of two Pentagon officials recently convicted of spying. James W. Fondren Jr., a Pacific Command official, was convicted of espionage Sept. 25 for his role in supplying secrets as part of a spy ring directed by Tai Shen Kuo, a Taiwanese-born naturalized U.S. citizen who court papers said was an agent for Beijing. The second Pentagon official linked to the ring was Gregg Bergersen of the Pentagon's Defense Security Cooperation Agency, who was convicted along with Kuo last year for supplying defense technology for China's military.

Both that spy ring and the Chi Mak case were linked through a Chinese official in Guangzhou, identified in court papers as Pu Pei-liang, who worked as a researcher at the Chinese-military-funded Center for Asia Pacific Studies and received the defense secrets from the spies.

According to defense officials, Gen. Yang is an experienced clandestine operative who speaks English fluently and worked undercover in Europe.

Gen. Yang told U.S. officials during meetings that Chinese leaders were so angered by the disclosure of the Chinese submarine maneuver that they considered canceling the visit at the time by Adm. Gary Roughead, then-Pacific Fleet commander who has since been promoted to chief of naval operations.

The disclosure first appeared in The Washington Times and embarrassed Navy officials, who had to explain how defenses were breached against one of the military's most important power projection capabilities.

Gen. Yang brought up the incident during talks in Washington and said his intelligence service, known in U.S. intelligence circles as 2PLA, carried out an investigation. He said the service informed senior Chinese communist leaders that they had determined that the press disclosure was not an officially sanctioned leak.

The Chinese Song-class diesel submarine surfaced near the Kitty Hawk on Oct. 26, 2006, and was spotted by one of the ship's aircraft.

Current and former U.S. officials said Chinese intelligence cooperation, the reason for Gen. Yang's visit, has been mixed, focusing mainly on large numbers of Chinese reports on Muslim Uighurs in western Xinjiang province. Some of them are linked to Osama bin Laden's al Qaeda, but many are dissident Chinese Muslims seeking independence from communist rule.

Former State Department China affairs specialist John J. Tkacik Jr. said Gen. Yang is an expert in cyberwarfare and once headed the PLA's electronic intelligence section.

"His success as a cyberwarrior led to his promotion from senior colonel to major general and chief of the PLA's prestigious Second Department, which is not only responsible for military human intelligence collection, but also collates and analyzes all-source intelligence for the PLA," Mr. Tkacik said.

"I have no doubt that he has been directing the Chinese military's vast, industrial-vacuum-cleaner cyber-intelligence campaign that has penetrated not just U.S. military computer systems, but just about every U.S. business, university and research institute's computer systems as well."

Mr. Tkacik said it is not clear why the Pentagon is seeking to increase transparency with Gen. Yang and his intelligence collectors. "They certainly aren't going to reciprocate," he said.

Larry M. Wortzel, a former military intelligence specialist, said he found his past liaison and exchange meetings with the 2PLA to be professional and productive. "I'm pleased the contacts are still going on," he said.

"As for terrorism reports, the foreign, non-Chinese contacts I had as an attache in China convinced me that at that time, in the late 1990s, a violent separatist movement was active in Xinjiang committing acts of terror," Mr. Wortzel said.

Wang Baodong, a Chinese Embassy spokesman, had no direct comment on Gen. Yang's visit but said enhanced military exchanges between the United States and China are mutually beneficial and promote peace and stability.

"We believe that under the current complex and changeable international situation, China and U.S. share expanding common interests in handling various global issues, such as challenging climate change, alleviation of natural disaster, counterterrorism and nonproliferation," he said.

On the Chinese military spying cases, Mr. Wang said "allegations of China conducting espionage in the U.S. are false and unhelpful for increasing mutual trust between the two countries."