

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



The Silent Sentinel

October 2014



Our Creed and Purpose

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 toward greater accomplishments. Pledge loyalty and patriotism to the United States of America and its Constitution.

In addition to perpetuating the memory of departed shipmates, we shall provide a way for all Submariners to gather for the mutual benefit and enjoyment. Our common heritage as Submariners shall be Strengthened by camaraderie. We support a strong U.S. Submarine Force.

The organization will engage in various projects and deeds that will bring about the perpetual remembrance of those shipmates who have given the supreme sacrifice. The organization will also endeavor to educate all third parties it comes in contact with about the services our submarine brothers performed and how their sacrifices made possible the freedom and lifestyle we enjoy today.



The Submarine Boats F-1 and F-3 Tied Up Alongside the Naval Dock in Honolulu. (1914)

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.

NAME: _____

ADDRESS: _____

CITY/STATE/ZIP: _____

EMAIL: _____

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Would like the SILENT SENTINEL emailed: YES _____ NO _____

Robert Bissonnette
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USSVI Base Commander
c/o VFW Post 3787
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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 meeting is held on the second Tuesday of the month at VFW Post 3787, 4370 Twain Ave., San Diego. Our next meeting will be on 14 October, 2014. 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

Al Strunk, George Koury, Frank Walker, R.C. Thompson, John Grienberger, and Judith Addington

Submarine Losses in August, September, and October

Originally Compiled by C J Glassford



August

USS Bullhead (SS-332)

Lost on August 6, 1945 with the loss of 84 crew members in the Lombok Strait while on her 3rd war patrol when sunk by a depth charge dropped by a Japanese Army plane. Bullhead was the last submarine lost during WWII.

USS Flier (SS-250)

Lost on August 13, 1944, with the loss of 78 crew members while on her 2nd war patrol. Flier was transiting on the surface when she was rocked by a massive explosion (probably a mine) and sank within less than a minute. 13 survivors, some injured, made it into the water and swam to shore. 8 survived and 6 days later friendly natives guided them to a Coast Watcher and they were evacuated by the USS Redfin.

USS S-39 (SS-144)

Lost on August 13, 1942 after grounding on a reef south while on her 3rd war patrol. The entire crew was able to get off and rescued by the HMAS Katoomba.

USS Harder (SS-257)

Lost on August 24, 1944 with the loss of 79 crew members from a depth charge attack by a minesweeper near Bataan while on her 6th war patrol. Harder had won a Presidential Unit Citation for her first 5 war patrols and CDR Dealey was awarded the Congressional Medal of Honor posthumously. Harder is tied for 9th in the number of enemy ships sunk.

USS Cochino (SS-345)

Lost on August 26, 1949 after being jolted by a violent polar gale off Norway caused an electrical fire and battery explosion that generated hydrogen and chlorine gasses. In extremely bad weather, men of Cochino and Tusk (SS-426) fought to save the submarine for 14 hours. After a 2nd battery explosion, Abandon Ship was ordered and Cochino sank. Tusk's crew rescued all of Cochino's men except for one civilian engineer. Six sailors from Tusk were lost during the rescue.

September

USS S-5 (SS-110)

Lost on September 1, 1920 when a practice dive went wrong and she sank bow-first, with her stern showing above the water. In a dramatic adventure, her exhausted crew was rescued during the next few days. Salvage attempts were unsuccessful, S-5 settled to the bottom and was abandoned.

USS Grayling (SS-209)

Lost on Sept 9, 1943 with the loss of 76 men near the Tablas Strait. Grayling was on her 8th war patrol and sank two ships before being lost.

USS Pompano (SS-181)

Pompano was sunk (between Sept 17 and Oct 5) with the loss of 77 men while on her 7th war patrol. Possibly lost on Sept 17, 1943. Japanese records show that a submarine was sunk in her patrol area on 17 September by air & depth charge attack off the Aomori Prefecture near Shiriya Zaki. Before being lost, she sank two enemy cargo ships. The exact cause of her loss remains unknown, but she probably was sunk by the air/sea attack above or fell victim to a mine on or after 9/25/1943. This boat's last recorded ship (Taiko Maru) sunk happened on Sept 25th, so she probably hit a mine on or after that date but before Oct 5th, when she was scheduled back at Midway.

USS S-51 (SS-162)

Lost on Sept 25, 1925 with the loss of 33 men when it was sunk after collision with SS City of Rome off Block Island.

USS Cisco (SS-290)

Lost on Sept 28, 1943 on her first war patrol with the loss of 76 men in the Sulu Sea west of Mindinao.

October

USS Seawolf (SS-197)

Lost on Oct 3, 1944 with the loss of 82 officers and men and 17 US Army troops when she was sunk just north of Moritai by USS Rowell, a Destroyer Escort (DE). In this tragic error, Rowell mistook Seawolf for a Japanese submarine that had just sunk another Destroyer. Seawolf ranks 7th for enemy ships sunk.

USS S-44 (SS-155)

Lost on Oct 7, 1943 with the loss of 56 men when it was sunk off Paramushiru, Kuriles. S-44 was on her 5th war patrol after attacking a target thought to be a merchant on the surface, S-44 found herself in a losing gun battle with a heavily armed Japanese destroyer. Two men were taken prisoner and survived the war.

USS Wahoo (SS-238)

Lost on Oct 11, 1943 with the loss of 80 men near La Perouse Strait. Under command of one of the great sub skippers of World War II, LCDR "Mush" Morton, Wahoo was on her 7th war patrol. Wahoo had won a Presidential Unit Citation and ranks 5th in the number of enemy ships sunk. She was lost to depth charges dropped by a Japanese patrol aircraft.

USS Dorado (SS-248)

Lost on Oct 12, 1943 with the loss of 76 men when she was sunk in the western Atlantic near Cuba. Newly commissioned, she had departed New London and was enroute to Panama. She may have been sunk by a U.S. patrol plane that received faulty instructions regarding bombing restriction areas or a German U-boat that was in the vicinity.

USS Escolar (SS-294)

Lost on Oct 17, 1944 with the loss of 82 men. She was on her 1st war patrol and was most likely lost to a mine somewhere in the Yellow Sea.

USS Shark II (SS-314)

Lost on Oct 24, 1944 with the loss of 87 men when she was sunk near Hainan. The second boat to carry this name during World War II, she was on her 3rd war patrol. Shark was sunk by escorts after attacking and sinking a lone freighter. Compounding the tragedy, it turned out that the freighter had 1,800 U.S. POW's on board.

USS Darter (SS-227)

Lost on Oct 24, 1944 when she became grounded on Bombay Shoal off Palawan and was then destroyed to prevent her falling into enemy hands intact. The entire crew was rescued by USS Dace. Winner of one Navy Unit Commendation, Darter had sunk a heavy cruiser and damaged another and went aground while attempting an "end around" on an enemy formation in hopes of getting in an attack on a battleship.

USS Tang (SS-306)

Lost on Oct 25, 1944 with the loss of 78 men in the Formosa Strait. Tang was on her 5th war patrol. Tang ranks 2nd in

the number of ships sunk and 4th in tonnage, and had won two Presidential Unit Citations. During a daring night surface attack, Tang was lost to a circular run by one of her own torpedoes. Nine of the crew were taken prisoner, including CDR. O'Kane and five who had gained the surface from her final resting place 180 feet below. All survived the war, and CDR O'Kane was awarded the Congressional Medal of Honor.



CONSTANT BEARING, DECREASING RANGE

Borrego Springs Parade
San Diego Base USS Los Angeles SSN-688 Float
October 25 – start time 1000

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Chula Vista 6K Veterans Walk
Fund raiser for Chula Vista Veterans Home
November 1


<http://www.CVVeteransWalk.org>

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San Diego Military Book Fair
USS Midway Museum
November 8 – 0900 to 1700
<http://www.militarybookfair.org/event.html>

*

**Veterans Day
November 11**

 **All Flags at 52 Boat Memorial**

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San Diego Veterans Day Parade
San Diego Base USS Los Angeles SSN-688 Float
November 11- start time 1100

*

San Diego Base Sunday Breakfast
VFW Post 3787
November 30 – 0800 to 1200

*

**Pearl Harbor Day
December 7**

 **All Flags at 52 Boat Memorial**

*

San Diego Base Christmas Party
VFW Post 3787
December 13 – 1330 to 1600

Minutes for Submarine Veterans San Diego Base 12 August 2014

1900 - Meeting of the Submarine Veterans Inc., San Diego Base was called to order by Base Commander Bob Bissonnette.

Conducted Opening Exercises:

Pledge of Allegiance by Senior Vice Commander Bill Earl.

Chaplain Jack Lester lead us in prayer.

Conducted Tolling of the Boats for August.

Observed a moment of Silent Prayer for our lost shipmates.

Recognized past and present E-Board members and Officers, and National Officers.

Secretary Ferguson announced 27 members and 3 guests (Juanita Williams, Richard (Andy) Steele, and Laura Potts) present.

The meeting minutes of 8 July 2014 were approved.

Treasurer Report was given by Treasurer David Ball. \$18247.60 total of which \$15242 is in savings including \$2136 in the Charlie Marin Scholarship Fund and \$3005.60 in checking.

The Treasurer announced that an audit was required and bylaws required the Treasurer, the Ways and Means Chairman (Vice Commander Burciaga) and two members at large (Warren Branges and Russ Mohedano volunteered) to comprise the audit team.

Call for Committee Reports:

Chaplain Lester announced Al Strunk, George Koury, Frank Walker, Judith Addington, R. C. Thompson and Al Simmons on the binacle list. Members John Grienberger, Walter Mazzone, William Jackson, Charles Wanket and B Jarne-Hansen were on eternal patrol.

Parade Committee: No report by Joel Eikam.

Membership Committee: Ray Ferbrache was not present. Bob Bissonnette stated 288 or so members paid up at present.

Scholarship Committee: Paul Hitchcock was not present.

Storekeeper Report: No report by Phill Richeson.

Breakfast Committee: Warren Branges announced next breakfast 31 August and volunteers needed.

52 Boat Memorial: Warren Branges stated that a contract was signed to repair the plaques and work should be complete in six weeks or so. The Submarine League members may be assisting the maintenace budget with a donation.

Float Committee: David Kauppinen was not present.

Base Commander called for a break at 1928.

Base Commander called the meeting back to order at 1940.

Unfinished Business:

2014 National Convention 1-7 September in San Francisco, CA

109 persons attended the Base Picnic and food, drink, games, and door prizes were enjoyed by all.

Veterans Walk November 1st. A motion to fund the entry fee for a 4-man team was approved by the members present.

Christmas Party Saturday 13 December, 1330-1600, dinner 1400, \$20 per person.

World War II Subvets cash balance to National. Bob Bissonnette will see about getting an agenda item on the National docket to determine disposition.

Voting, Base Commander encouraged all to vote and had computers available for those in need.

New Business:

USSVI has insurance to cover all official events. Forms are available for Chairpersons to fill out for each of their events so that a record can be compiled by National to determine sufficient coverage.

Men lost during WWII Book, A 6 volume set costs \$300. Secretary Ferguson will obtain more information concerning the contents to determine our interest in purchasing a set or two for the base.

Good of the Order:

Juanita Williams offered to obtain a loan copy of any books in the Midway Museum Libray for members.

Guest Richard Steele thanked Base Commander Bob Bissonnette and Chaplain Jack Lester for their "more than could

ever be expected" assistance in aiding his relocation to San Diego.

The Warrior Luncheon is 13 August at Smugglers Cove on the NavBase Pt Loma, 1400-1600.

David Ball related that recently deceased member Walter Mazzone served on Puffer and experienced the longest continuous depth charge attack on record. Generally recognized as 38 hours.

Bob Bissonnette related that the 2015 Submarine calendars contain photos of fast attack boats.

Mike Hyman offered a few details regarding the Memorabilia's Committee plans for auctioning of submarine items donated to the Base. The items are being offered for sale to the highest bidder-the auction date has not yet been determined. All proceeds from these sales will be placed in the Base Treasury. More details and Committee intents will be released to the members in the near future.

The meeting was adjourned at 2012.

Jack Ferguson, Secretary

Sailing List for 12 August 2014

Fred Fomby	Jack Ferguson	Jack Lester
Bill Earl	David Ball	John Lynch
Manny Burciaga	Tom Polen	Phill Richeson
Bob Bissonnette	Joel Eikam	Alfred Varela
Jack L. Addington	Dennis Mortensen	Benny Williams
Russ Mohedano	Bob Farrell	Peter Lary
Mertg Weltzien	Nihil D. Smith	Warren Branges
James Pope	Bud Rollison	Russ Filbeck
Mike Hyman	Seymore Phillips	Bob Welch

Commander's Corner

Hello everyone and hope you and your family had a great summer. As you know we just held the National Convention in San Francisco this year and it was our (USSVI) 50th Anniversary. There was a little over 600 folks there for the convention and about 8-10 boat reunions there too. I ran into old shipmates and friends that I met at the conventions over the years and had a good time chatting about what has happened in the past year. I also attended lots of meetings and special events like the Holland Club Breakfast, Tolling of the Boats, Welcome Aboard Party, and the Awards Banquet.

At the Pre-ABM (Annual Business Meeting), which consists of the National Officers and the BOD (Board of Directors)(which I'm on as the WRD), held a meeting to discuss USSVI business about the organization and issues the membership needs to be aware of. We discussed and voted on the 2015 budget with a few changes. The organization is operating in the black and doing good. Our National taxes were submitted on time and our tax returns can be viewed online under "Documents" on the National website. We also discussed the updating of several manuals we have to for Starting a New Base, Convention Manual, and several more. The DC's and many others will be working on this issue for the next 6 months (results before the Mid-term meeting). National had an out-side firm conduct an Audit and found no major hits for USSVI or for the CF (Charitable Foundation). It was also discussed that the bases conduct a financial review so the bases can report to the membership or national (if requested) their financial status. Yes we get a monthly report from our treasurer and an EOY report that gets submitted to National, but who does the checks & balance? We have it in our By-Laws, when the BC or treasure turn over, that review should be conducted. Most bases don't do that, they just use the EOY report. We also discuss that bases should have a back-up treasurer in case anything happens to the treasure. The USSVI Basic Liability Insurance is for all bases of USSVI and is for parades, special events, and any other event the base participates in other than the monthly meetings. This doesn't cover a person or vehicle towing a float to or from a parade and gets into an accident, just during the parade or event. Special events would be our annual picnics and Christmas parties. We will have to fill out a form and send it to the insurance company

prior to the event so we are covered and National can see how many parades and event the bases are participating in each year. We talked about what we can do about membership and retention. We lost over 700 members this past year due to not paying their dues on time (before 31 Dec). MAL's...National will be contacting the DC and BC about folks who are MAL (members at large) in the area so we can get them to a base.

At the District Commanders meeting we discussed most of the same things discussed at the Pre-ABM. We had our New DC Bob Schive from Bonefish Base there and 3 other DC from the Western Region. It was a pretty good turn out from the region. We are trying to push the Western Regional Meeting/Get Together in Laughlin better for 2015 due to the low turn-out last year. It will be held at the Aquarius Casino Resort from 27 April to 1 May 2015. The registration form and events will be out later. Room cost is \$30.99 + taxes per day (need to verify the cost), or something close to that. Hope to see you there!!

At the Base Officer's meeting the voting turn-out was very poor this year and not sure why, but wanted inputs from the bases. Overall only 17% of the membership voted. We discussed how to make the base meetings more interesting for the members to attend. To find ways to get more folks involve in the base and organization. National requested that the bases locate their Charter. If they can't find it, to contact the National Secretary for another copy of it. For the bases to update their POC and to make sure the POC is getting the info out to the membership. The bases need to improve the communications from National to the bases and bases to National.

I will talk more about the convention at our next meeting. I had a good time and enjoyed a few beers with some shipmats. I didn't go see many of the sights, but had some folks let me copy some of their picture. If you would like a copy of the convention pictures, please let me know and I will bring them to the next meeting.

Just a reminder, we still have 2 parades remaining this year, Burago Springs and Veterans Day Parades. We also have the Chula Vista Veterans Walk coming up and hope to see a few of you there since we do have a team to represent San Diego Base SubVets. Please see Warrens hand out for the days and times. Please mark the calendar for the Christmas party on the 13 Dec starting at 1:30 with dinner at 2pm. The Scamp base will be holding their Christmas party on the 7th of Dec. More info to follow. Folks I hope I didn't bore you too much with my report from the convention, but I fell it's something the membership should know about how the organization is operating. Smooth sailing and hope to see you at the next meeting.

V/R,

Bob Bissonnette

Base Commander/WRD

Current News

**“Plataginet, I will; and like thee, Nero,
Play on the lute, beholding the towns burn” (Henry VI, Shakespeare)**

More Than 100 New Nukes in Northern Waters

Thomas Nilsen, barentsobserver.com, Oct 2

Latest data exchange on nuclear weapons held by Russia and the United States shows the first Post-Soviet increase in numbers of strategic warheads sailing the Barents- and White Sea.

The Bureau of Arms Control with the U.S. Department of State released the latest exchange of data under the New START treaty with Russia on October 1st.

Compared to October 1st 2013, Russia's number of both deployed nuclear warheads and deployed launchers has increased substantially. The number of deployed ICBMs (Intercontinental Ballistic Missiles), SLBMs (Submarine Launched Ballistic Missiles) and Heavy Bombers (Tu-95 and Tu-160) increased from 473 in the autumn 2013 to 528 this autumn.

The increase in deployed nuclear warheads was 243, from 1,400 a year ago to 1,643 today.

The numbers listed in the U.S. fact sheet do not specify where and which launchers that are the reason for the increase. But, as reported by BarentsObserver this spring, the Northern fleet's newest strategic missile submarine, the “Yury Dolgoruky”, got its full set of Bulava missiles in June. The submarine can carry 16 missiles and each Bulava-

missile can hold up to six warheads, making up for a total of 96 warheads on that single submarine. It is, however, unlikely that “Yury Dolgoruky” has 16 missiles with full set of warheads. Normally a ballistic missile submarine carries one or more missiles without warheads, ready for test-launches like the one from the second new Borey-class submarine, the “Vladimir Monomakh” on September 10th, as reported by BarentsObserver.

Two submarines can hold 192 warheads

The blog-site Russian strategic nuclear forces, argues that it is most likely the two new Northern fleet submarines that make up for most of the increase in deployed strategic nuclear weapons in Russia over the last six months. Those two alone can hold 192 warheads, but since the increase, according to the official figures, is 131 since last information exchange in March, the two submarines are likely not fully loaded.

Russian Northern fleet Delta-IV submarine in surface position in the Barents Sea. (Photo: Thomas Nilsen)The third Borey-class submarine, the “Aleksandr Nevsky” is still test-sailing from the yard in Severodvinsk and is therefore not included to the Northern fleet. In total, Russia will get eight new Borey-class submarines.

Russia’s other seabased launchers of ballistic missiles include six Delta-IV class submarines. They are sailing for the Northern fleet with homeport in Gadzhievo on the Barents Sea coast of the Kola Peninsula northwest of Murmansk.

Tactical nuclear weapons are not included in the exchange of information under the New START treaty and information about the amount of such warheads is uncertain.

Lavrov: Investment is long-overdue

Interviewed by RT last week, Russian Foreign Minister Sergey Lavrov argues that the investment in military hardware is a long-overdue modernization and not a sign of a looming new arms race.

Russia’s Foreign Minister Sergei Lavrov. (Photo: Thomas Nilsen)“I don’t think we are on the verge of a new arms race. At least, Russia definitely won’t be part of it. In our case, it’s just that the time has come for us to modernize our nuclear and conventional arsenals,” Lavrov said and continued:

“We have a long-term armament program, which takes into account our economic situation and, of course, the need to have efficient and modern defensive capabilities to protect our national interest.”

Nautilus Joined The Fleet 60 Years Ago

Ceremony Marks Commissioning of First Nuclear Submarine

New London Day, Oct. 1

GROTON – A senator, a governor and a congressman joined Navy brass, shipbuilders, submariners and their families here Tuesday to celebrate the 60th anniversary of the commissioning of the Nautilus, the world’s first nuclear-powered submarine.

On Sept. 30, 1954, the Navy accepted Nautilus, designed and built at Electric Boat. President Harry S. Truman had laid the keel at the Groton shipyard more than two years earlier. Eight months before the commissioning, first lady Mamie Eisenhower had christened the ship.

When the Nautilus got under way on Jan. 17, 1955, the moment’s historical significance was lost on no one, Adm. John Richardson, director of the Navy’s nuclear propulsion program, reminded hundreds of invited guests.

After pausing briefly as a freight train rumbled past the museum, he likened the impact of Nautilus’ leaving the pier to that of the moon landing.

Richardson recalled how Nautilus’ first commanding officer, then-Lt. Cmdr. Eugene Wilkinson, captured the spirit of the moment, signaling the words, “Underway on nuclear power.”

Never mind, Richardson said, that Wilkinson’s aides had drafted a two-page message that Wilkinson, who died last year, chose not to deliver.

In the first row of the audience sat Eleonore Rickover, widow of Adm. Hyman G. Rickover, considered the “father of the nuclear Navy,” a man who envisioned a submarine that would never need to surface.

“I’m just overwhelmed,” Mrs. Rickover said after the celebration.

She was asked what she thought her husband might have expressed had he been present.

“At this point in his life, he would have just said thank you,” she said. “Thank you for everything you did.”

The other dignitaries who spoke at a podium atop the Nautilus, moored alongside the pier, were U.S. Sen. Richard

Blumenthal; Gov. Dannel P. Malloy; U.S. Rep. Joe Courtney; Will Lennon, vice president of engineering and design programs at Electric Boat; and retired Navy Capt. Ray Engle and David Boyd, members of the first Nautilus crew.

Courtney called those who designed and built Nautilus and those who served on it “pioneers,” and lauded Rickover’s perseverance in overcoming the skepticism that greeted his call for a nuclear-development program. Malloy pointed to the ship’s significance as a Connecticut icon, a symbol of the Navy’s enduring presence. He said the Naval Submarine Base at Groton generates an estimated \$3.4 billion in economic activity and provides 15,000 direct and indirect jobs.

“Another BRAC process is to be played out in the future,” he said, referring to periodic base-closing efforts that have targeted the Groton facility. “We’re prepared for that ... to compete for our history, our culture.”

From a shipbuilder’s perspective, Lennon, the EB executive, said, Nautilus’ commissioning was a defining moment, the culmination of a process launched years earlier.

It all started with a phone call from Rickover to EB’s general manager, O. Pomeroy Robinson Jr., Lennon said. Rickover wanted to know if EB could build a hull for a nuclear reactor. Robinson said it could, though neither he nor Rickover knew what it would entail.

Nautilus steamed more than half a million miles during its 25 years of active service. Since its commissioning, more than 200 nuclear-powered ships and submarines have been launched.

General Dynamics Awarded \$50 Million to Continue Submarine Modernization Program for U.S. and Australian
PRNewswire, Sept 30

General Dynamics Advanced Information Systems, a business unit of General Dynamics (NYSE: GD), was awarded two contract modifications totaling \$50 million to continue supporting the AN/BYG-1 combat control system aboard U.S. Navy and Royal Australian Navy submarines, as part of the AN/BYG-1 modernization program for the tactical control systems (TCS) and weapons control systems (WCS). General Dynamics is delivering enhanced capabilities across multiple submarine platforms, providing fleet operators and commanders with a common operational picture that strengthens real-time intelligence and improves situational awareness.

“We are dedicated to helping the U.S. and Royal Australian Navies advance their mission with cost-effective, innovative, agile and reliable solutions,” said Mike Egan, vice president and general manager of the Integrated Platform Solutions line of business at General Dynamics Advanced Information Systems. “By introducing our open architecture framework into these legacy systems, we can quickly insert relevant technologies onto the submarine’s open platforms to meet the fast-changing mission needs of today’s fleet.”

The open architecture framework facilitates the rapid integration of advanced capabilities developed by commercial, defense and academic entities on an annual or bi-annual basis. The common processing baseline across all submarines also helps ensure the independent, yet parallel, development and certification of the TCS and WCS.

Since 2003, General Dynamics has worked closely with the U.S. and Australian Navies on the AN/BYG-1 modernization program and continues to leverage commercial off-the-shelf (COTS) software and hardware upgrades to integrate improved tactical and weapons control capabilities across multiple submarine classes.

General Dynamics has also established and installed the AN/BYG-1 common processing baseline across domestic and international submarine classes, including the U.S. Navy’s Los Angeles, Seawolf, Virginia and SSGN-class submarines and the Royal Australian Navy’s Collins-class submarines.

Cyberwar and War in Space: Making SSBNs More Dangerous
Lowyinterpreter.org, Sept. 29

As several participants in our debate have argued, nuclear ballistic missile submarines (SSBN) can have a positive effect on strategic stability in Asia and globally. But they do not exist in a vacuum. New military capabilities, and strategies that take advantage of them, are being developed and deployed in the Indo-Pacific that make the gradual proliferation of sea-based nuclear weapons dangerous rather than stabilising.

These novel weapons, such as cyber and electronic warfare, anti-satellite missiles and hypersonic technology, add new dimensions to both conventional warfare and nuclear deterrence. Their development, along with their roles in comprehensive strategies, such as the US's Air-Sea Battle concept, requires us to ask whether the introduction of Chinese and Indian sea-launched nuclear weapons will only create instability and the risk of escalation in conflict.

The role of SSBNs is to provide an assured second-strike capability to a nation's nuclear deterrence. Essentially, a second strike capability acts as a kind of fail-safe by ensuring that any aggressor takes on the risk of being attacked by nuclear weapons in-kind. Thus, theoretically, SSBNs and assured second strike should lead to a more stable strategic system in the Indo-Pacific by deterring any potential disabling first strike.

As Rod Lyon has argued, the SSBN can make an aggressor think twice, as long as the threat of the platform is credible. It is mobile, quiet and difficult to track. Once professional crews, reliable communication technology and effective command and control are established, the SSBN can act as a credible deterrent. But if the SSBN is to play a positive role in strategic stability, communication with state leadership must be guaranteed.

Communications with submerged submarines, both conventional and nuclear, are established through very low frequency and extremely low frequency programs. These involve large antenna installations that are part of a state's military communications network. Thus for example India, conducting sea-trials of its first SSBN, has started construction of its own very low frequency station.

But what happens to deterrence and stability if such communications come under attack?

In the Cold War, the main way to neutralize an adversary's submarine-launched nuclear weapons was through anti-submarine warfare; detecting and tracking enemy SSBNs and, in the event of war, destroying them before they launched.

There was, of course, the risk that during a conflict anti-submarine warfare could induce 'use it or lose it' decisions on a state's leadership. That destabilising factor is now amplified by another possibility raised by new technologies: the prospect that a state's communications with its nuclear deterrent force could be cut in times of crisis.

What would happen in a future conflict in which the opening attack involved the use of cyber and other capabilities to disrupt or destroy military communication systems? How could we be certain that SSBN commanders, cut off from political authority, would not launch their weapons?

This goes to wider questions about vulnerability of communications, including satellites, in conflict. The head of US Air Force Space Command recently said that if one of the Advanced Extremely High Frequency satellites, a backbone of US military communication, was taken out 'we could potentially have a situation where the president can't communicate with forces in that part of the world.'

There is no guarantee that striking another power blind or dumb in the midst of crisis would add to stability. Thus the US Air-Sea Battle concept has an uneasy relationship with nuclear deterrence. Designed to counter Chinese anti-access and area-denial capabilities, Air-Sea Battle requires the integration of all 'interdependent warfighting domains (air, maritime, land, space and cyberspace)' in order to 'disrupt, destroy and defeat' enemy forces. The strategy calls for the disruption of enemy 'command, control, communication, computers, intelligence, surveillance and reconnaissance' systems before attacking their weapon systems and capabilities.

Many of these communication systems, like the low frequency installation India is building, are dual-use in the sense that they could network with conventional and nuclear forces. Thus it is possible to foresee a situation where a 'blinding' campaign like that envisioned in Air-Sea Battle could involve attacks on an installation that also communicates with SSBNs, radically disrupting a state's control over its sea-based nuclear arsenal. Presumably, India would face a similar problem if Pakistan or China ever planned to target its communications at the outset of a conflict.

These are some of the complexities and scenarios that will need to be thought through if the introduction of Chinese and Indian nuclear-armed submarines is to reduce risks of conflict rather than heighten them.

