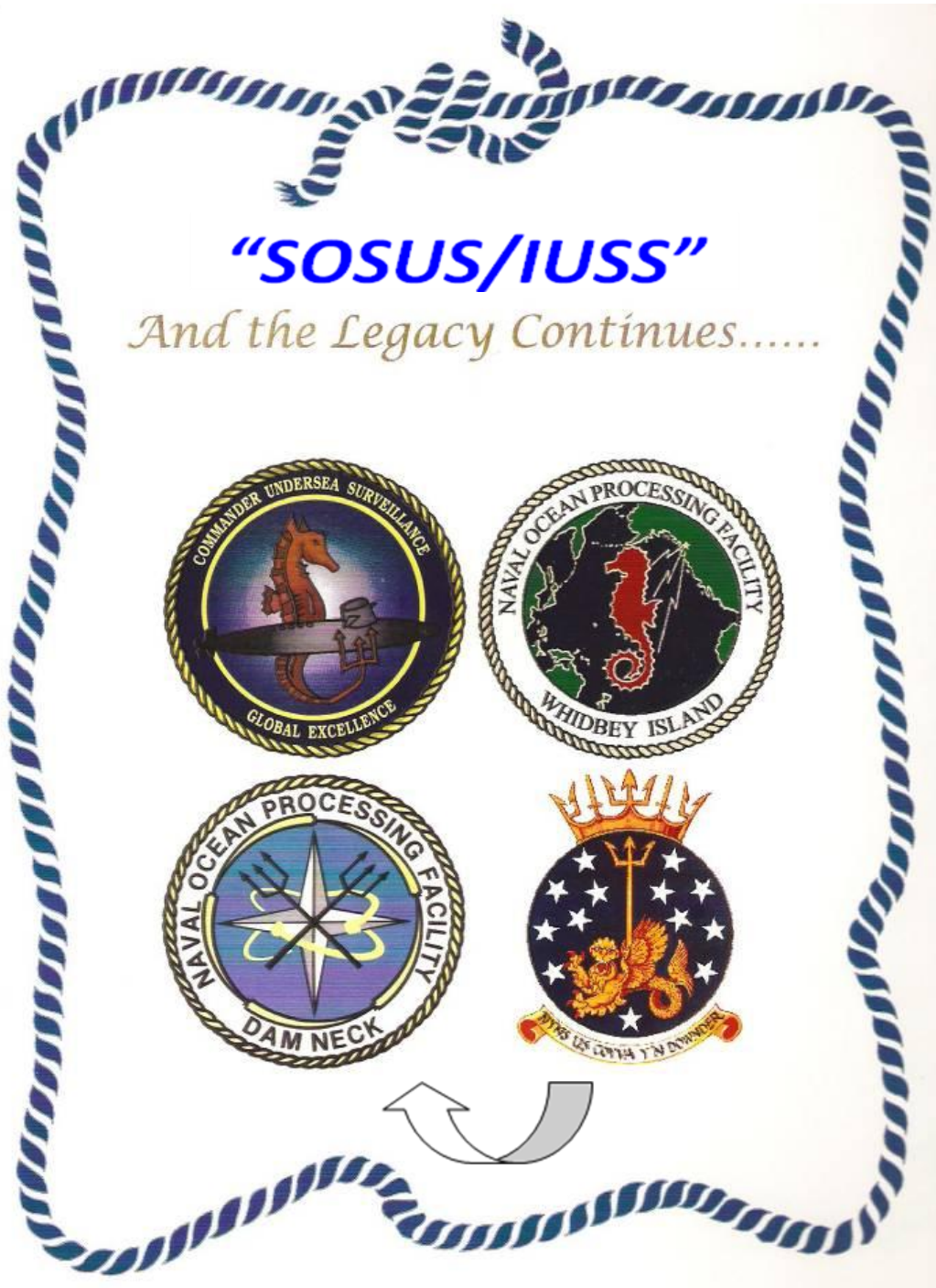


“Our Book”





Please accept "Our Book" as it is intended.

It is intended for use by our SOSUS/IUSS Family and their "family members". When the grandchildren ask "what did you do when you were in the Navy" - hopefully these shared memories will ignite the fire that was once there when the words SOSUS/IUSS were uttered.

Our Book is not intended for general publication nor distribution to the general public

“Our Book” is free – Freedom is not.

*Thank a Vet
All gave some.
Some gave all.*

**Very respectfully,
Edwin K. Smock OTCM USN (Ret)**

Acknowledgements (Entered as requested by the authors.)

Ed:

Thanks for the update. Here is an input I would like to see close to the front of the next update:

A “Thank You” note to Ed Smock.

Ed.....I hardly know where to start. We have shared so much over the years. And you have taught me so many important things. I was a junior CPO when I met you. I became a better Chief because of you. I gave you some questionable advise about public parking and walking, but you gave me so much more. Have I mentioned that you have given our nation your life-long commitment? And you continue to do so! Impressive!

You taught me the importance of converting an under-used garage in the rear of a terminal building into a spaghetti kitchen (NAVFAC Bermuda 1971). That seemingly innocuous activity brought the command CPO’s together at a time when it was very much needed. You taught me that while it is important to work hard, it was also OK to “knock off” following a full days effort. I still remember the day LT Cox (Research Officer – Bermuda 1971-72) told you that you couldn’t leave until he did. You calmly suggested to him (with appropriate respect) that he best locate his hat.

You have always carried yourself with poise and confidence. You know how to be right, and how to instill those qualities in others. I can go on and on with many examples of your leadership, as many others could do as well.

“Our Book” has been a major accomplishment. It is a testimony to your life-long dedication to our country and to undersea surveillance. Each time I review the progress of the book, I am amazed at what it has become. And Ed – let there be no doubt, “our book” is among your most impressive accomplishments. Today as I reviewed the newest update, I was again overwhelmed by it’s composition. By encouraging past shipmates to contribute, you have compiled many facets of the undersea surveillance story - technology, history, almost unbelievable system achievements and personal stories about those who “stood the mid”.

When I reflect on my navy career, you are among my fondest memories. Red checkered table cloths, “ching-ching” announcing your arrival through the oleanders, and the ever so subtle lessons you taught so well.

Thanks Ed, for the book, for your 50+ years of dedication to undersea surveillance, and for being you.

George (Widenor OTCM USN (Ret)) (6 Sep 07)

Ed,

I joined the Navy in May, 1975. Boot camp in San Diego. "A" school in Key West... "Behind the green doors", then tours in (in order), Argentia, Bermuda, Grand Turk, Norfolk ("C" school), Point Sur, Norfolk (Instructor Duty), Japan (COMNAVFOR), Brawdy Wales, and finally Dam Neck, where I served with you my last 5 years in the Navy. I retired in 1999.

I truly enjoy reading your recollections, Ed... and hope you keep up what you have started. Just remember this... While we may not always be able to verbalize our thoughts and memories.. know that we are with you in spirit. And THROUGH you and your words we are able to give meaning to the efforts we went through for so many years. YOU have become our voice. And if I can recall correctly, at the last gathering of SOSUS cronies, you were so aptly remembered and enshrined in our history as "MR SOSUS"! (Courtesy of Jim Donovan)

Ed, many people worked together for many years to make SOSUS what it was, and what it evolved into. But it was men like you that saw it through from infancy, to the end, and truly were instrumental in winning the Cold War. I am proud to have served with you.

Randall A Baker OTMC USN (Ret) (8 Mar 07)

Ed,

I'm Bill Tilley the 4th. Nora sent me your book. I think that is a really neat idea. I have read about half of it so far. There is a lot of real history in those pages. It made me smile to read about dad. Dad never told us anything about his work either because he didn't think we were interested or because it was classified and he took that very seriously. We never asked because we knew how secret everything was.

I told Nora I would have loved to have heard dad's stories because a lot of people have told us how good he was and how important a job he did, but we have never ever been let in on the details. As far as we know dad was an OT1 in the Navy and trained Oysters. And he was good at it. We know he had a lot to do with SOSUS but we never heard the day to day stories, funny or serious. I can tell people that my dad was important in the Navy community he worked in but I have no idea exactly why.

Your writings on dad made me smile because it made me remember dad's sense of humor as well as his dedication to the job. Thanks.

Bill's son, William Tilley IV (14 Mar 07)



And now,

“Our Book”

*Respectfully dedicated
To our SOSUS/IUSS family
Past and Present*



**IN MEMORY OF OUR DEPARTED COMRADES
KEEPING ETERNAL WATCH IN THE SEA**



Eternal Father, strong to save...



Deceased persons listed here, military and civilian, have honorably served in and supported the U.S. Navy’s undersea surveillance program known as Project CAESAR, Sound Surveillance System (SOSUS), Surveillance Towed Array Sensor System (SURTASS), and Integrated Undersea Surveillance System (IUSS).

(Listed alphabetically, by surname)

**For current listing of our dear departed shipmates please go to
<http://www.iusscaa.org/ide.htm>**

*“Eternal Father, Strong to Save”
(The Navy Hymn)*

*Eternal Father, Strong to save,
Whose arm hath bound the restless wave,
Who bid'st the mighty Ocean deep
Its own appointed limits keep;
O hear us when we cry to thee,
for those in peril on the sea.*

The Rev William Whiting.
Church of England
(1825-1878)

Every time we get together we say "We ought to write a book"

OK, let's do it together.

I was sitting here thinking of some great memories I have had during my lifetime with SOSUS/IUSS and decided to jot some of them down (Aug 2006). It came to me that if each one of us would select a few of our great memories and add them together, we would in effect have written the book we all want to have.

I am not talking about equipment installation, changes of command and things like that but rather, events of SOSUS/IUSS that have greater meaning to our history and our participation in the Cold War and our related personal experiences.

We are not allowed to, nor would we want to, tell of "how" we do/did our job however, "what" we have done in SOSUS/IUSS is part of history that one finds in numerous official "declassified" Navy documents. So I am not really concerned about that part.

The following reflects the type of memories and events I have in mind.

Some guide lines I would suggest we follow would be: (First, they must be true.)

- Each of us uses the same font and format. (Times New Roman 12)
- Items can be either "system events" or "human relations/experiences".
- Please add your name rate/place (at that time) etc., after the items reflecting your personal participation etc.; and to bring out the "family" flavor.
- If you see a specific event that you too have shared, please add your perspective to it and/or if preferred, merely indicate after the original author's designation that "I too shared this specific memory." (i.e., event... (Ed Smock San Sal) (Ed Dalrymple ENS))
- Write your memories/comments and forward them to me. I will add them where they belong in the master. I will send out updates periodically.
- Please add your name, rank, dates and total time served in SOSUS/IUSS as seen in the contributors list near the end of the book.
- Upon receipt of an update, please delete the previous version as the new update will contain all previous articles.

My hope is that "Our Book" will grow into something worthy of being passed on to our relief's...

We can do it... We MUST do it... We are the "keepers of the flame"...

V/R,
Ed Smock





**USS Neptune (ARC-2) coming alongside to get
survey charts**

1953 – Getting Ready

In 1953, *Neptune* was activated by the Navy to support the SOSUS program. She went to the Bethlehem Steel Co. in Baltimore, Maryland for a number of modifications: e.g., electric cable machinery (in place of steam), precision navigation instrumentation, and a helicopter platform over the fantail. She was commissioned on 1 June 1953 as a regular Navy ship (*USS Neptune*), with Cdr. Robert A. Bogardus in command.

In 1973, *Neptune* transferred to the Military Sealift Command (MSC), was re-designated T-ARC-2, and continued operations with a mostly civilian crew. *Neptune* was extensively modernized in 1982 by General Dynamics Corp. in Quincy, Massachusetts, and that work included new turbo-electric engines. It is said that *Neptune* and sister ship *Albert J. Meyer* were the last ships in the Navy to operate using reciprocating steam engines.

Neptune performed cable repair duties all over the world until 1991, when she'd been in service for some 38 years. During her career, she received a Navy E ribbon in 1988. Inactivated in 1991, she was eventually placed in the James River reserve fleet near Ft. Eustis, VA. The ex-*Neptune* was dismantled and recycled by International Shipbreaking Ltd of Brownsville, TX in late 2005.

[http://en.wikipedia.org/wiki/USNS_Neptune_\(ARC-2\)](http://en.wikipedia.org/wiki/USNS_Neptune_(ARC-2))



"Protecting Freedom through Undersea Surveillance"

**“The Good Lord has blessed all of you with many SOSUS and IUSS memories.
The Good Lord has blessed me “more””. - Ed Smock 1954-2022**

**"Our Book"
Respectfully dedicated
To our SOSUS/IUSS family
Past and Present**



1954-2023 SOSUS/IUSS

Sixty-nine (69) years ago one of the Navy's most secretive communities began. Its members went by the designation SOSUS, Sound Surveillance System. A new front line in the Cold War, they had one mission: to find submarines.

<http://www.fas.org/irp/program/collect/sosus.htm>

http://www.chinfo.navy.mil/navpalib/cno/n87/usw/issue_25/sosus.htm

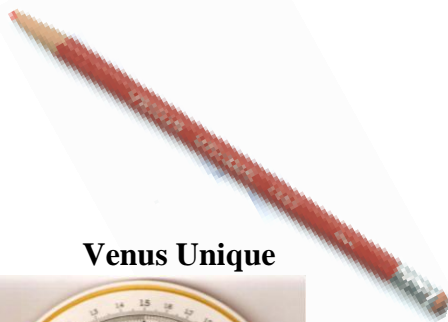
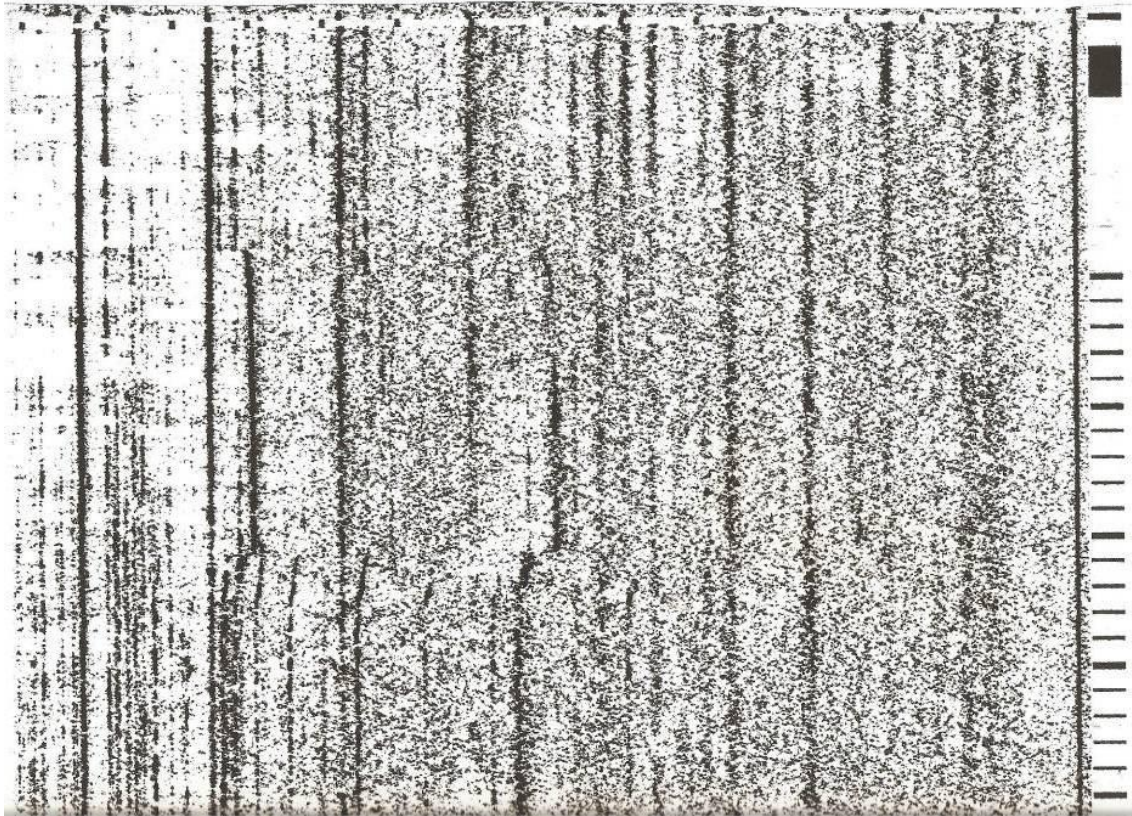
And any man who may be asked in this century what he did to make his life worthwhile, I think I can respond with a great deal of pride and satisfaction,

“I served in the United States Navy.”

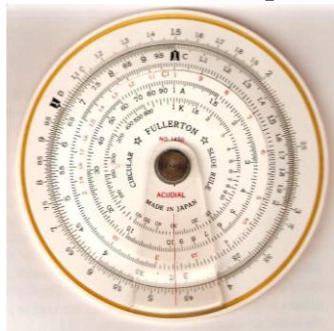
***President John F. Kennedy
01 August 1963***

“Give it some gram.”

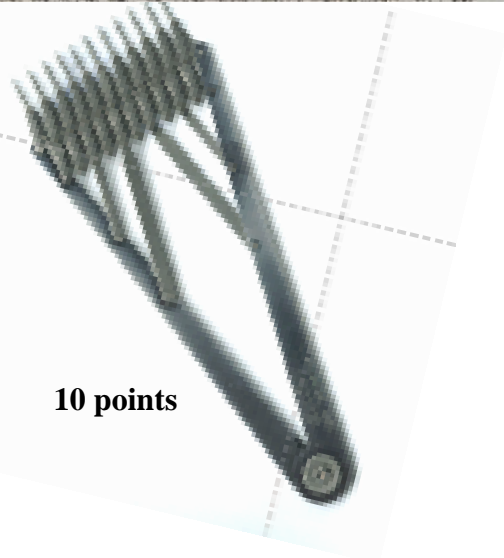
Sammy SOSUS



Venus Unique



**Circular
Slide
Rule**



10 points



Venus Unique – After the mid...

Introduction

“Initial Contact”

1954 - "The Beginning" - think-about-it, the real “Initial Contact”

"To do what you do - for the first time - when it had never been done before."

- We had no experience, no reference material, no pub library, no STIC, no ONI, no N2, no QA, no experts to call upon, (experts like you...you were not yet invented)..."we had nothing", no previous grams to look at etc., "We knew nothing"...
- We did not know what made the lines, spacing etc., how they got to the paper etc., we were taught harmonics in reference to music, we had to think about every line, what could be making it? And, develop a theory about its origin...
- We did not know "onboard machinery"- the platform.
- We had never heard of a "ratio" - we had to discover and define them.
- Every day from day one there was a new signature that "no one" had ever seen before....
- "Grams" were not yet on Air, Surface or Submarines (not for many years).

All of you should be very proud of what you do and have done for SOSUS/IUSS. You are members of the finest family the Navy has ever had... And, never forget,

"The System" is not the equipment, it is "The People"

I will always be grateful for having the opportunity to have been in on it from the start... Edwin K. Smock OTCM USN (Ret)

UNCLASSIFIED

MISSION AND DEFINITIONS OF U.S. INTEGRATED UNDERSEA SURVEILLANCE SYSTEM

From CNO in reference to action 15 Mar 1991 - (circa Jan 1992) ENCLOSURE (1)

Mission.

To provide command and direct tactical control of Surveillance Towed Array Sensor System (SURTASS) ships, Naval Facilities (NAVFACs) and associated Naval Ocean Processing Facilities assigned to Commander Undersea Surveillance, U.S. Atlantic Fleet and U.S. Pacific Fleet; to support antisubmarine warfare command and tactical forces by detecting, classifying, tracking and providing timely reporting information on submarines; to gather long term oceanographic and undersea geological information; and to maintain all ships, shore activities and staff of the command in an optimum state of training and readiness.

Definitions

Sound Surveillance System (SOSUS) is a fixed undersea surveillance system with readout facilities in shore locations called U.S. Naval Facilities.

A Main Evaluation Center (MEC) for each fleet commander acts as headquarters and central repository for information. The data from the readout facilities is transferred to the MEC by means of high speed communications, thereby allowing a variety of users to quickly obtain the data required. This information is disseminated on a real—time basis to fleet commanders since this knowledge is a vital factor in successful tactical antisubmarine warfare and other naval operations. This data is also used to provide post operational reconstruction by integrating environmental and tactical information derived during an operation or exercise. CNO - in reference to action 15 Mar 1991 - (circa Jan 1992) ENCLOSURE (1)

SOSUS Cover Story (Originally used to protect the true purpose of SOSUS)

During World War II, the U. S. Navy's efforts against the submarine threat were frequently frustrated because of limitations in its knowledge of the ocean environment and lack of information concerning oceanographic and acoustic conditions off the continental coasts. It became apparent at the end of the war that the German Navy had better information than the U. S. on ocean areas of the Atlantic and Pacific.

Consequently, since the war, the U. S. Navy has maintained a continuing program of oceanographic surveys designed to provide more detailed information on currents, temperature, salinity and other factors which comprise the oceanic environment and affect the transmission of sound in sea water. The U. S. Navy is determined to never again lag behind others in its knowledge of this vital area.

This program of oceanographic and acoustic surveys requires ships to work throughout the year in the various ocean areas of the world. Because of other commitments, it is not

always possible to allocate ships which can be exclusively dedicated to this duty on a continuous basis. Moreover, the collection of data by ships is very often a slow procedure. Rapid advances in the field of electronics have made it possible to obtain at least part of the information more expeditiously and more economically by means of shore stations. These are the U. S. Naval Facilities.

The headquarters or evaluation centers of the Naval Facilities act as a central repository for the data received from the Naval Facilities by means of high speed communications. This permits a variety of users to quickly retrieve the data required. Certain of the data are provided to the Fleet ASW Data Analysis Program for post operational reconstruction of the overall picture of an ASW exercise by integrating environmental and tactical information derived during that exercise. This oceanographic information is also disseminated on a real-time basis to Fleet Commanders, since knowledge of the environment is a vital factor in successful SW operations. Because of this, the Oceanographic System Commanders report directly to their respective Fleet Commanders.

I HAVE READ AND UNDERSTAND THE ABOVE STATEMENT.
(Signature was required)

Later:

The following lead in statement is taken from Undersea Warfare Winter 2005 (after the Cold War).

Ref: Undersea Warfare – Winter 2005 Vol. 7 No. 2

http://www.chinfo.navy.mil/navpalib/cno/n87/usw/issue_25/sosus2.htm

The primary threat against which SOSUS was originally designed was snorkeling Soviet diesel submarines at the surface, and the system’s key technical characteristics – such as frequency coverage – were established accordingly.

Fortunately, the resulting capability proved even more effective against deep-running Soviet nuclear-powered submarines when the first of these went operational in 1958.

In a 1961 demonstration of the capabilities of the system, SOSUS tracked the USS *George Washington* (SSBN-598) across the North Atlantic on her first transit from the United States to the United Kingdom.

Then, in June 1962, NavFac Cape Hatteras achieved the first SOSUS contact on a Soviet diesel submarine, to be followed a month later with the first detection of a Soviet nuclear boat west of Norway by NavFac Barbados.

Later that year, during the Cuban Missile Crisis, the first positive correlation with a visual sighting was made, when a patrol aircraft confirmed the presence of a Russian FOXTROT-class submarine that had already been detected by NavFac Grand Turks.

In 1968, NavFac Keflavik made the first SOSUS detections of Soviet CHARLIE- and VICTOR-class nuclear submarines, and that same year, SOSUS played a key role in locating the wreckage of USS *Scorpion* (SSN-589), lost near the Azores in May.

Moreover, SOSUS data from March 1968 facilitated the discovery and clandestine retrieval years later of parts of a Soviet GOLF-class submarine that foundered that month north of Hawaii.

Soviet Submarines

In submarines as in much else, the Soviets lagged behind their Western foes, and what they lacked in sophistication and accuracy they attempted to make up for in numbers.

Their first subs were based on German models observed during [World War II](#). By the late 1950s, they had deployed their first diesel and electric ballistic missile submarines, and in 1960 launched their first nuclear-powered subs. The Soviets, with their more limited budgets, were actually decades ahead of the Americans in one area: the SSGN, which they first began operating in the 1960s.

By 1980, the [Soviet Union](#) had 480 submarines, of which 71 were fast-attack craft and 94 SSBNs or SSGNs. Among these was the Alfa class, built in the 1970s, which had 30-man crews and could achieve speeds of 43 knots (80 kph) and depths of 2,000 feet (600 m).

The Typhoon class, first deployed in 1977, was the largest class of submarines ever built, at a length of 563 feet (172 m) and a beam of 81 feet (25 m). The Soviets, unlike the Americans, continued to build diesel-electric subs. Among these were the Kilo class, which first entered service in 1979 and are still being built for export.

<http://www.answers.com/topic/undersea-espionage-nuclear-vs-fast-attack-subs>

(End of background information, begin personal memories...)



SOSUS/IUSS “Family” Memories

Nov 1951 - SOSUS (Sound Surveillance System) Conceived

Projects JEZEBEL (equipment R&D), CAESAR (procurement, installation, & evaluation - LT Joe Kelly 1952), and MICHAEL (operational use of equipment) were initiated for the development of six experimental stations: NavFacs Ramey AFB PR, Grand Turk TWI, San Salvador TWI, Shelburne Nova Scotia, Bermuda and Nantucket Mass.

From the Log Book "Who is Kelly" (as written)

- *1 Mar 51: BuPers to LT Kelly subject: Active Duty Service. (They had caught up with me.)*
- *14 May 51: Reported for duty, BuShips*
- *Dec 51: Discussion of my career with RADM Homer Wallin, Chief of BuShips.*
- *Nature of the discussion - Unhappy over lack of work.*
- *Admiral's solution - "What do you know about "JEZEBEL?" LT Kelly - "What's that?"*
- *Admiral Wallin - "Welcome, you are the Project Officer."*
- *All bridges were burnt after that session!! (Ed Smock)*

1952 - First USN evaluation of LOFAR detection principle

Projects first USN evaluation of LOFAR detection principle, using the experimental laboratory at Eleuthera (on one of our diesel boats)... They could not believe it...

From the Log Book "Who is Kelly" (as written)

Flag Officers visit Eleuthera. Two navy planes, one from Washington with RADM Akers of OP31 and party, and one from NORVA with RADM Entwistle COMOPDEVFOR and party arrived Eleuthera 29 April 1952.

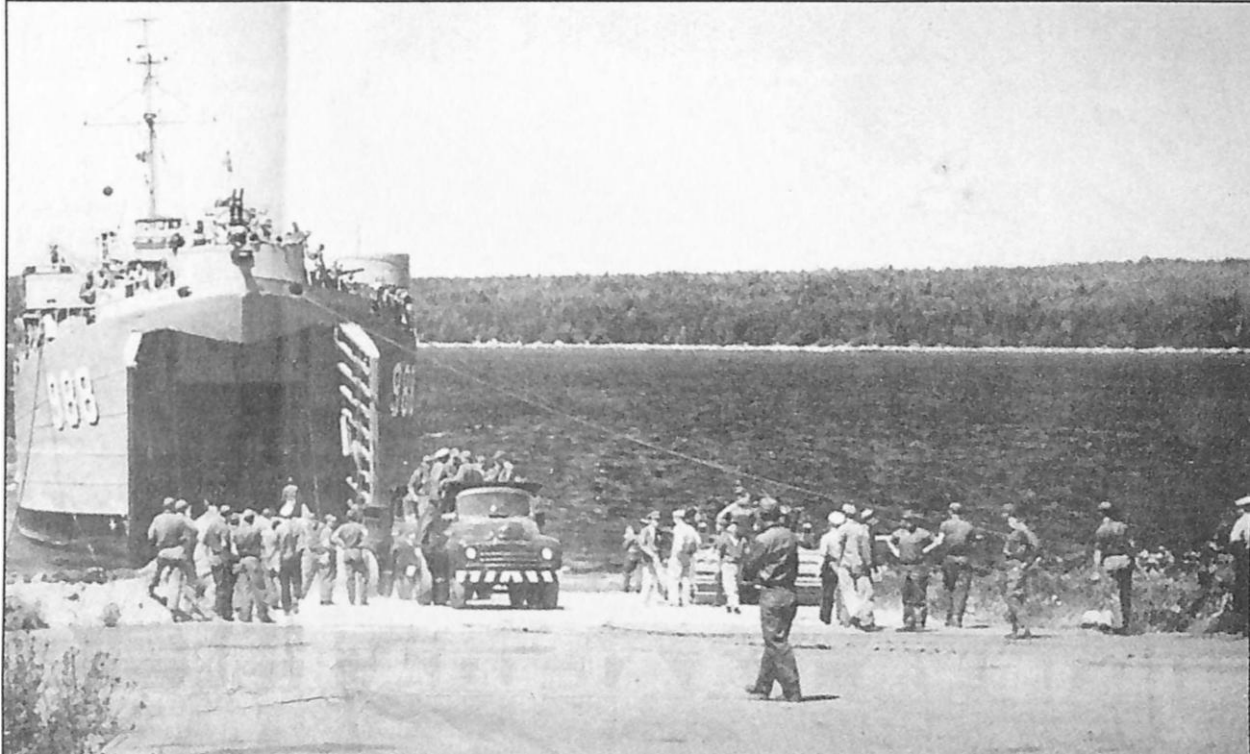
The Admirals looked at the lofargrams which was printing the signature of a submarine offshore. Submarine could be seen at time from the station. Instructions were given to the submarine to change speed, course and depths and changes were observed on the lofargrams. Final instruction were to have the submarine open range and make a box maneuver every twenty five miles to give check points on the lofargrams.

The Admirals never waited - they had seen LOFAR and were convinced. As far as they were concern that submarine is still opening range. They headed back to Washington and NORVA respectfully to make CAESAR happen.

*""The brakes were off the merry-go-round. Project CAESAR was on its way.""
(Ed Smock)*

18 Sep 1954 - We recognized this date as the Birth of SOSUS - when NavFac Ramey AFB P.R. was commissioned

Navy, WECO and the elite Seabees (they built them) have done their jobs. We are ready to go... (Ed Smock SOSN - "Green Door")



**“The Coast Guard”
Shelburne, Nova Scotia, CA**

**“Time to Raise the Flag”
by Lewis M. Jackson
26 Mar 2002**

The above image, taken on July 13, 1954, documents the delivery of the first work crews belonging to the USN Mobile Construction Battalion 6 (Seabees), to a site on the grounds of the decommissioned WWII Naval Repair base known as HMCS Shelburne. Once ashore the Seabees would go on and build a new SOSUS naval base at Government Point which was commissioned as HMCS Shelburne on April 1, 1955.



1954 - Sound Search Course 572 "Green Door" established at FSS, Key West, FL

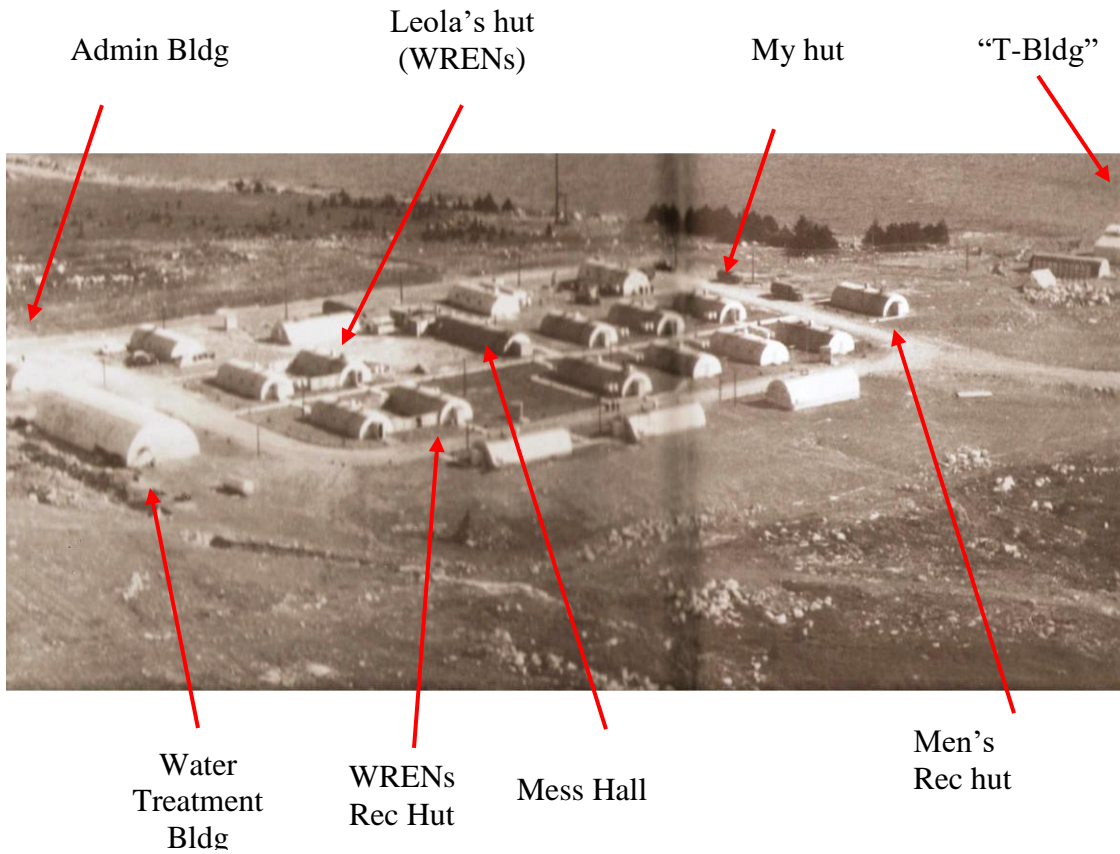
The course name was originally classified confidential. Its content was secret. I graduated with orders to NavFac Shelburne, Nova Scotia and proud of my achievement, I mailed my graduation certificate to my parents in Belle Vernon, Pa. Within days, a Navy detail was on my parent's doorstep, demanding the certificate back. They said it was confidential because of the course name. (Scared the heck out of my Mom and Dad.) My service record was actually stamped confidential from then on. This really caused a stir of suspicion later, when I reported to the USS Weatherford EPC 618. (Ed Smock SOSN)

The first 5 females of the system Royal Canadian Navy (RCN) WRENs were in my class. Their LPO was Leading WREN Leola MacDonald (future Mrs. Ed Smock, married 2 March 1957 - Shelburne). And yes, I have trained my relief, my son Keith currently has twenty-five (25) years with IUSS working as a Navy contractor on SURTASS, Submarine and Fixed systems. (Keith retired 25 Apr 2018 after 25 years with IUSS). Another son Mark builds submarines at Newport News Naval Shipyard - (don't want to run out of submarines to look for) (Mark also has retired)... (Ed Smock SOSN/SO2)

1 Apr 1955 – Joint RCN/USN Oceanographic Research Station Shelburne Nova Scotia, Canada is commissioned.

On 1 Apr 1955 NavFac Shelburne, Nova Scotia was commissioned as a "Joint RCN/USN Oceanographic Research Station. The first Commanding Officer was LCDR R.R. Ellis, who was also appointed as OIC Joint RCN/USN Oceanographic Research Station. The Naval Facility was in the command, for administrative purposes, of LT Earnest Lowen, USN. The facility was manned by both RCN-USN personnel on an approximate 40-60 ratio. The RCN primarily employed personnel in the service areas, while the USN provided employment in the operations field. On 1 Nov 1959, the RCN assumed complete responsibility for the operation and manning of the station, with a USN liaison officer remaining in compliment (LT Ernie Castillo USN). In 1968 when Canada went to the combined services concept, HMCS Shelburne became Canadian Forces Station (CFS Shelburne). (Ed Smock SOSN/SO2 (Sonarman) Shelburne 1955-57)





1955 - Joint RCN/USN Oceanographic Research Station Shelburne Nova Scotia, Canada

1955 - Shelburne “T-Bldg” and two generator shacks.

Originally, every NavFac “T-Bldg.” was built to the same floor plan spec.
(AT&T/Seabee assembly line fashion.)

Later, concrete block structures where added **right over** the original “Butler” (Quonset hut) style “T-Buildings”. NavFac San Sal is a good example of this as the original Quonset can be seen as you enter the building (inside). We stored paper, emergency rations and other supplies in the void area between the concrete and the Quonset hut walls. We used to say “Boy they did a good job – they even lined up the “leaks in the roof”... (Ed Smock)

Gen Shacks

“T-Bld”



1955 – Typical “Operations” Watch Bill Structure.

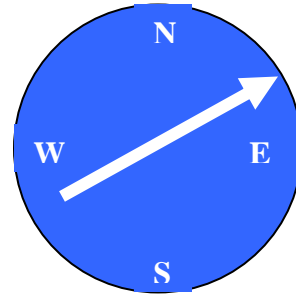
Normally we were in four sections. (We had about 16 Sonarman billets)

- Four “staff officers” were assigned collateral duties as Watch Officers; the Supply officer, Admin officer, Research officer and the Comm officer.
- 1 Supervisor, 1 Plotter and 2 Readers (2 USN Sonarman and 2 RCN WRENs)
- 1 USN radioman and 1 RCN radioman
- 1 duty ET (24 hour on-call basis)
- The WECO rep was on call.
- We had 1 first class and 1 CPO as day workers.

(Ed Smock SOSN-SO2 Shelburne 1955-1957)

1955 - Localization/Communication

NavFac Shelburne: LT Fred A. Jones RCN Ops incorporates a large white wooden arrow mounted on a short pole outside the “T” Building (by the burn barrel) to point (from a pre determined point of reference) the “search direction” that the MP aircraft is to follow. (We did not have communications with aircraft at this time.) The MP would fly down from the Halifax area, site the arrow's direction, and proceed to the point of reference and begin the visual search in the direction indicated by the arrow. (Ed Smock SOSN/SO3)



1955- Shelburne - How we sharpened our detection, reporting and localization skills

Our choice sources were:

The Canadian (on loan from Britain) British “A” class submarines HMCS (HMS/M) Ambush, Alderney and Astute operating out of Halifax.



HMCS (HMS/M) Ambush



USS Strickland DER 333

The US Radar Picket ships coming-on, maintaining, and going-off their Atlantic Barrier station patrols. i.e., DERs USS Strickland, Kirkpatrick, and Kretchmer, (before AGRs replaced them). The Atlantic Contiguous Barrier stretched along the East Coast from Cape Cod to North Carolina. The barrier consisted of five radar picket stations (Stations 12, 14, 16, 18, and 20) about three hundred nautical miles off the coast. In addition, we reported and tracked ALL merchant traffic. (This the entire system did well into the early 70’s) (Ed Smock SOSN/SO3/SO2 Shelburne)

1954-1956 NavFac Ramey

I was in the first class to graduate from the FSS Key West “green door”, and was sent immediately to NAVFAC Ramey AFB in Puerto Rico where the Seabee's had just finished building the site. That was in the summer of 1954, I think August, but not sure. The next month the rest of the group, CO and the rest of the officers came aboard for the commissioning in Sept of 54. I spent the time before that painting etc in preparation for the big event.

(Howard Tilton SOSN/SO2 NavFac Ramey)

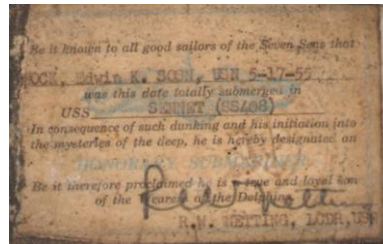
17 May 1955 – Honorary Submariner USS SENNET (SS408)

“Green Door” sea phase - In an attempt to help us understand what we were looking at on the “grams”, we had the opportunity to go to sea and observe first hand the working parts of a submerged submarine. It was a great experience.

(Ed Smock SOSN USS SENNET (SS408))



USS SENNET (SS408)



1954-55 – First Nuclear Submarine

First nuclear submarine "USS Nautilus (SSN 571)" sea trials – they said we would not detect her as she was nuclear She lights up the ocean...we couldn't believe it... We soon started our own submarine "quieting program".

<http://www.hnsa.org/ships/nautilus.htm> (Ed Smock SOSN/SO3 - Shelburne)

The Nautilus was the world's first true submarine. Nautilus demonstrated her capabilities in 1958 when she sailed beneath the Arctic icepack to the North Pole and broadcast the famous message "Nautilus 90 North."



1954 – USS Nautilus SSN 571

The first nuclear-powered submarine went to sea: the 323-foot, 3,674-ton "Nautilus." Surface speed 18 knots, 23 knots submerged. On her shakedown cruise, she steamed 1,381 miles from New London to San Juan, Puerto Rico – submerged all the way at an average speed of 15 knots. She was so fast that, on her first exercise with an ASW force, she outran the homing torpedoes.

Note the use of the term, "steamed." The nuclear plant finally made a steam-powered submarine practical: the reactor generates heat that turns water into steam to drive the turbine. Two different reactor configurations were proposed: one used pressurized water to transfer heat from the reactor to the steam plant, the other used a liquid sodium potassium alloy.

Rickover built one of each; the first was installed in "Nautilus," the other in the second nuclear boat, "Seawolf," where it proved to be difficult to maintain and not as effective as the "Nautilus" plant. It was replaced a few years later.

<http://www.submarine-history.com/NOVAfour.htm>

Jul 1956 - Andrea Doria and Stockholm Collide

Andrea Doria and Stockholm collide in heavy fog 45 miles off Nantucket at 11:10 PM on 25 July 1956. Stockholm's reinforced ice breaking bow slices into the starboard side of the Andrea Doria at nearly 18.5 knots.

At Shelburne in the AM of 26 July we saw a total blackening (heavy burn) of the grams that lasted about 12-15 minutes or more. We thought that we had experienced a hardware problem, most likely a cable fault. As we prepared to report this to headquarters, the grams slowly returned to normal. Hours later we were advised that other sites had experienced the same gram disturbance. We later learned that this was the Andrea Doria breaking up and sinking - at 10:10 AM 26 July 1956. (Ed Smock SO2 Shelburne)
<http://www.andreadoria.org/TheEncounter/Default.htm>

SS *Andrea Doria* awaiting her inevitable fate the morning after the collision in the Atlantic Ocean, [July 26, 1956](#)



Stockholm

Andrea Doria

More:

USS Edward H. Allen (DE 531) and USNS Private H. Thomas (AP 185) rescued more than 200 passengers from Andrea Doria and transport them to New York after the Italian liner collided with Swedish MS Stockholm off Nantucket on the New England coast. Forty-six people died from the collision, but 1,600 passengers and crew are saved.

More:

Linda Morgan: The "miracle girl" of the Andrea Doria tragedy.

Linda was traveling with her family to New York for a vacation on July 25, 1956, when the Stockholm rammed the Andrea Doria in the area where Linda's family's cabins were located.

Linda's mother, Jane Cianfarra, and her stepfather, Camille Cianfarra, a correspondent for the New York Times in Spain, were in cabin 54. Linda and her step sister, Joan Cianfarra, 8, were in the adjoining cabin 52. Joan and Camille Cianfarra were killed in the accident. Jane Cianfarra was severely injured.

For a few minutes, in the turmoil and wreckage, Linda was missing and feared dead. Her father in New York, Edward P. Morgan, a well-known ABC radio broadcaster, was assembling news of the crash for a broadcast when he was told she was dead.

The ships, temporarily fused by the accident, separated. Moments later a Spanish-speaking sailor on the Stockholm heard a voice calling, "Donde esta Mama" ("Where is my mother?").

It was Linda. In his book, "Collision Course," Alvin Moscow wrote: "She was alive because the Stockholm bow miraculously had swooped beneath her bed and had catapulted her from Cabin 52 on the Andrea Doria to the bow of the Stockholm."

15 August 1956 “Jones” twin boys arrive at Shelburne

On August 15, 1956 Mr. Jones (Fred to friends, Alun to family) his wife Mona, daughters Linda and Marlene were joined by twin boys, soon to be baptized Frederick Paul and Norman Keith in the HMCS Shelburne Ships Bell at HMCS Shelburne. Both boys were presented with the traditional navy glass bottom steins. Two short years later Keith tragically lost his life in an accident. HMCS Shelburne shared in this loss...There has been an additional shining star above Shelburne since that day. (Ed Smock SO2 USN)

1956 - Nova Scotia - Hospitality

It is the week of the Queen's birthday celebration. A 3rd Class Seabee mechanic by the name of Larson has asked me and SOSN James to accompany him and share expenses on a trip to Sydney Nova Scotia and on around the Cabot Trail on Cape Briton Island. Off we go, heading toward Sydney.

About 20 miles before reaching Sydney, a loud noise and smoke started coming from the old Chevy engine. We were out of commission. As luck would have it we broke down within site of a small single bay old fashion garage. We pushed the car in and asked for help. The owner of the garage, Mr. McDougal stated that he was already closed due to the late hour and that we could leave the car there and he would drive us into Sydney where we could seek lodging. He said that when we returned the next day we could use his garage, lift and tools however, being the Queens birthday he would not be able to help us.

Into Sydney we go to get a room. We then went to the local dance hall and had a good old fashion clean liberty. (Three U.S. sailors in uniform had no problem meeting girls at a dance hall – those were the days...)

The next day we took the bus back to Mr. McDougal’s garage. He looked and listened to the car and said that we had blown a piston. Lawson said that he thought it was something else however he could not be sure until he broke it down. Mr. McDougal said he would bet that it was a blown piston. Lawson said “how much” ? - .25 cents was the reply from Mr. McDougal. Lawson broke the engine down and decided yes, it looked like a blown piston. Mr. McDougal drove us to the local junk yard where we were given a used piston – free to the Yanks (could not sell it on the Queens birthday)...

Back to the garage - the rest of the day was spent putting the car back together. When we were near done Mr. McDougal came out and said that dinner was ready. Inside his home we went, where the family was waiting to share a fine roast beef dinner with us. Before we could eat the three of us sailors had to dawn McDougal tartan hats and became honorary McDougals.

As we parted this fine family Lawson asked Mr. McDougal how much we owed for all he had done for us. The reply again was .25 cents – the bet... We paid the .25 cents and left with a priceless memory. (I finally got to tour the Cabot Trail in 1995 – 40 years later.)
(Ed Smock SOSN Shelburne Nova Scotia)

1956 - Man Overboard Drill - NavFac Shelburne

One day we were conducting an exercise with a Canadian NavSurf when, during a break in the exercise the ship requested (voice comm.) permission to break away and conduct a man overboard drill. Of course, Mr. Jones granted permission. Unknown to the ship, we were holding her and observed her increase in speed, hard turn, and abrupt stop. Thirty-eight (38) minutes later we saw her motor whale boat start up to proceed to the “dummy-man”. When the drill was over, the ship requested permission to resume operations. Mr. Jones replied “permission granted”, request reason for 38 minutes to launch motor whale boat. “Assume man is now a casualty”... Reply: Will relay to CO – wait - out...
(Ed Smock SOSN/SO2 Shelburne)

1955-1957 The 9 lives (tales) of Shelburne’s cat “NavFac”

“NavFac” was one scrounge looking cat that was taken in by the WRENs, mainly Norma Weatherbee who mothered it to a degree that would equal any mother’s care for her child. The cat had free passage anywhere on the base and spent most of her time in the T-Bldg. A few of the “tales” are worthy of mention:

Tales of the cat named “NavFac” received from Linda Jones (Fred’s daughter):

“NavFac” must have had a boy friend somewhere as she soon produced a basket full of kittens. My Dad not known for being a cat lover got a surprise one day when he opened his desk drawer and inside was a little kitten (present from the WRENs no doubt). I’m not sure if the visiting Navy inspecting Officer thought that was amusing or not.

One of the cats ended up at our house where it crawled up into the engine compartment of Dad’s car. Dad spent hours trying to get it out, with my sister Marlene making quite a scene about her poor kitty. When it was not possible to retrieve the cat, Dad had to drive the car to the garage where the rather oily and terrified kitten was extricated. When Dad

brought back the cat, Marlene was onto some new venture so she just looked at the kitten before returning to her new interest. Dad was not amused and this did not improve his opinion of cats! (Linda Jones)

- It was no secret that Vern Hayden RM1 USN hated cats – at least that is the impression he wanted Norma to have. Numerous threats (pretends) were made on “NavFac’s” life just to fire-up Norma. (Norma could send and received CW at 20 words a minute while smoking on a cigar and listening to BBC... She reminded us of Winston himself.)

One evening Vern came onto the display floor with a hatchet covered with catsup, shouting “well that’s the end of that darn cat”. “Norma lost it, out the door she went – We never knew where she went, she just “quit”... She showed up a few days later; after having made her grievance to the Command. Norma really disliked Americans and this act pushed her over the hill. She said she hated Americans but in the end we all knew different. She married Joe Sabela ET1 USN. (Ed Smock SO2 Shelburne)

1956- 1957 Grand Turk, Turks and Caicos Islands, British West Indies

My memory is not as fresh as it was 50 years ago, so if anyone has corrections to the following, please jump in: (Jim Stalter SO1/SOC Turks)

In mid April of 1956 I reported to Grand Turk Island in the Caribbean Sea. It is an island about 300 miles southeast of Cape Canaveral, Florida. A small place seven or eight miles long by a mile wide. The local population was black and their industry was salt mining and conch shells. On one end of the island was a group of civilians headed by an Air Force officer. Their reason for being there was to record data by radar tracking of the test missiles which were shot off from Cape Canaveral and passed overhead on their way to impact in the South Atlantic.

There were a half dozen or so of the tracking stations along the missiles projected tracks. National Guard planes (supporting the missile test system) flew from Patrick Air Force base in Florida to the various tracking stations "downrange". This was great for us because we could get hops on them to go home or to Puerto Rico for a "96" every 6 weeks or so. On the other end of the island was our Naval Facility of approximately 120 men and a dozen officers.

Before reporting to any of the NavFacs all Sonarman went to the Fleet Sonar School in Key West, Florida, to learn how to read Iofargrams. Security was a big thing there. As a reply to questions about "what were (we) doing at the NavFac?" we were to reply; "Oceanographic Research". We were assured that this would stop almost everyone from asking any more questions; they would either be uninterested in such a dull activity or would be ashamed to admit they didn't have a clue as to what oceanographic research was.

We all had to memorize "**The Cover Story**". It was to be used only in the event "Oceanographic Research" wasn't enough of an answer and we were questioned to the point where we felt we needed to give an answer. As everyone who went through this knows, the cover story starts " During world war two the U.S. Navy found itself at a disadvantage ..." It then went on to describe that we didn't know enough about the ocean;

temperature, salinity and so on and that we needed as much info as we could get to be able to defend ourselves in a future conflict. And, the Navy found that it could gather such data much cheaper from land than using ships. Therefore, that's why we were there. I guess many of us used the story once or twice and I don't know of anyone who was questioned further after using the story.

We lived in Quonset huts. As I recall, 30 or 40 men lived in each hut. The hut was an open bay, meaning no cubicles or private rooms. First Class and Chiefs lived together in the same size hut but there were fewer of us and we had cubicles partitioned by curtains. First class bunked two to a cube while Chiefs had their own. The huts were made of aluminum, were rounded pretty much like a hoop. They had flaps on each side which lifted up from the bottom to provide air flow. We didn't have air conditioning but since there was almost always a breeze we were fairly comfortable. And they had panels at shoulder height which could be propped-up to provide screened openings for windows. If you ever see the TV show Gomer Pyle, the quonsets shown there are the same as we lived in.

The base covered an area of about four to maybe six football fields. We "caught" almost all of our potable water in a catchment basin. The basin was about the size of a football field and sloped down from the outer edges to a drain. The water from frequent rains ran to the drain and was pumped to one of three giant storage tanks. We were happy campers when all three tanks were full. When we got down to around 50 percent capacity we went on water hours and the desalinization plant (machines) was started. This process made drinkable water from ocean water. It was difficult, time consuming, inefficient and the equipment broke down regularly. We did not like water hours.

We had 10 or 12 quonsets. About half were living spaces and a few were for such things as equipment and spare parts/supplies and office space. There was one very large Quonset. It was called the Terminal Building or T building for short. It was probably 150 feet long and 40 feet wide. In it was the classified equipment. The cable was "terminated" in this building, hence the name Terminal building. Clever huh? The T-Building was also called "elephant hut" no doubt because of its size.

Many of us had our laundry done by the local women. It was inexpensive and pretty good. There was always a slight offensive smell to the clothes but it went away quickly. The women would use salt water, pound the clothes on rocks and then dry them in the sun followed by ironing. Even with the salt water to act as a bleaching agent, whites got a slightly yellow cast over time.

We still had a lot of WW II type security. For example we were known as U.S. Naval Facility #104 and we had a Fleet Post Office, New York address. That way Grand Turk and #104 were not tied together. We were very security conscious and were constantly tested. Our annual inspections always had people trying to get unauthorized entrance to the T building. There was an open space around the building (about 30 feet deep) and then an eight foot chain link fence topped by barbed wire. Usually, entrance was gained by ringing a bell at the fence gate. Someone inside would either recognize you and open the gate from a button inside or come to the gate and admit you as appropriate. If the

inside person had to go to the gate this meant that another bell had to be rung at the T-building door. Eventually, we got cipher locks which cut down on the manpower. Chief Dan Cushing built one for Grand Turk from off the shelf parts. I believe this was in 1962 or 63.

We lived kind of rough but it was also fun. We ate good, got to go to Florida or to Puerto Rico every six weeks or so and had mostly a good group. We stood eight hour watches and not a lot of harassment when off watch. We had volleyball teams and played it mostly every day. We had movies every night under the stars. No theater as such. The screen was a big piece of canvas painted white and we sat on benches in the open under a sky full of stars. During the day the same area was an open air mess hall. The club was adjacent so we always had something to drink or eat. Cigarettes were 10 cents a pack, beer 10-15 cents, Heineken included, and hamburgers 15 cents. Tropical hours were standard. I believe we started work about 6 AM, broke for mid morning snack provided by the galley at 1000, and then continued to 1300. The rest of the day was pretty much ours ... if you were a day worker that is. Watch standers stood eight hour watches. Usually it was 2 mids then 2 eves and then 2 days followed by 80 hours off, hence the term "2, 2, 2 and 80".

Going to the T-building for the mid watch could be an adventure. Once or twice a year land crabs would migrate from one side of the island to the other. They were the ones with fairly large pincers and they looked vicious. Usually when walking the dark road (about a hundred yards) from the base to the T-building to assume the mid-watch, the first indication one would have that the crabs were crossing would be clicking followed by a "crunch" then another and another and so on. It was kind of unnerving at times. Hundreds and hundreds of crabs crossing. Always at the same place and (I believe) always at night. A good thing we didn't wear flip flops to go on watch.

In the early days we used Teledotos paper for recording the grams. It was a dark paper about 5 inches wide and was extremely dirty. Rolling the grams was not a job anyone volunteered for. Signatures could actually fall off the paper if it wasn't handled carefully. Grams to be kept as part of our signature library were sprayed with Krylon (clear) to preserve the signature. When sprayed the gram had the look of an old time photograph. SOSUS was still very primitive. We had no library and no depth of experienced operators to help. We learned as we went. We needed a way to identify targets of no interest and keep track of them so as we'd be able to recognize something new coming in amidst the clutter.

Enter our Operations Officer LT Seibel (?). He was a brilliant guy and had zero people skills. To get things going, he devised a time bearing chart. It was a paper roll about 24 to 30 inches wide and was manually rolled up an inclined (table) with a hand crank. The table was made by our Seabees. Bearing was the horizontal axis and time was vertical. Each target was plotted on the chart. Since commercial shipping followed pretty specific tracks it was a simple matter to convert the expected track of a merchantman going from, say, New York to San Juan, Puerto Rico. The New York Times carried info concerning ship movements. We had it mailed to us, extracted ship movements and plotted them on

the graph using the expected time of arrival in our area and the movement through the area. Lloyds of London published a large book giving, among other things, the propulsion method of the various merchant vessels. By plotting our targets versus the New York Times info versus expected signatures the Research folks (called day workers) were able to construct a Signature Library. The same ships made the same transits month in and month out so it wasn't long until we had a basic library. At least we could identify the signature of those we weren't interested in. LT Seibel instituted several procedures while he was there and they invariably worked.

As a personal note, I remember, the day after I made Chief. OPS said "Here type this as a memo." (I didn't even know how to spell typewriter). Told him sorry LT, I don't know how to type. His reply "You're a Chief now and all Chiefs know how to type".

End of story.

An embarrassing fact of being "downrange". M Boat "flashes". (The two M-boats were the VERA-G and the WESTERN VENTURER.)

There should still be a lot of folks who served on Eleuthera, San Salvador, Grand Turk and further south who will be slightly embarrassed to remember the following: We were always looking for Russian diesel boats and hoping to be first to flash. We were always (?) alert, ready to "Flash" that quick start Foxtrot. An M Boat brought supplies regularly from the mainland down to the Islands. She was equipped with FM 10's but never showed-up on the grams with the right harmonics. Almost always started as a Foxtrot and was flashed ... **even when we knew her schedule and were waiting for her.** A lot of red faces for us and razzing by the oncoming watch and the day workers. (Jim Stalter SO1/SOC)

1957-60 - VP Jez Development

While stationed aboard the USS Weatherford EPC 618 - 1957-60, we would "tow" a non-flying sea plane (with early VP Jezebel equipment onboard) to sea, place the "Maypole" and sonar buoys in their pattern, and then steam away and around the buoys for sea plane VP Jez detection/development (we became the target). Then we would come back, sink the buoys with an M1 rifle and then tow the sea plane back to Key West FL. We did this numerous times while VP Jez was being developed. (This saved air-time and VP platform.) USS Weatherford had two Fairbanks-Morse 38D8 1/8 diesel engines (FM-10s) and two 3 bladed props. (Ed Smock SO2/SO1 USS Weatherford)



1957-60 - USS Weatherford (EPC 618) - Early SOSUS target

Because of the Weatherford's propulsion, we were often "flashed" as we transited between the North Atlantic and the Tongue of the Ocean. The NavFacs seemed to have a "Flash" - thing for us... Steve Davis SO2/SO1 (a future COSL Ops and CO of NavFac Barbados) and I were the only "cleared" need-to-know members of the ships crew (both having come from Shelburne) and spent some time in the CO's cabin explaining why he was always being asked to "identify nationality and intent", and "make engineering evolution changes enroute" - when he was so far out at sea.... (Ed Smock SO2/SO1 USS Weatherford)

<http://www.navsource.org/archives/12/010618.htm>

1957-60 USS Weatherford EPC 618 (1957-1960) (more memories)

- Being in Havana right before Castro took over Cuba (1 Jan 1959) - he blew up the pier where we had been tied up to two months earlier.
- Liberty at the "Tropicana" (Scenes in the God Father II movie - the kiss of death for Freedo and gambling at the Jai-Jai games etc..)
- Patrolling escaped Cuban President Batista's Florida residence while on shore patrol with the local Fort Myers police - when the police officer told me - if shooting starts, get down low in the patrol car... "Right, me and my shore patrol night-stick"... "As if I had to be told"...He had his guns...
- Ship's immediate recall to go search for a downed pilot - no luck...
- Finding and rescuing eight Cuban refugees adrift in an undersized boat without fuel, food nor water. They were armed however, salt water had rendered their arms useless. We had a Spanish speaking Yeoman who handled the dialog. They were just glad that we found them. We had to sink the small boat - navigational hazard...
- Tied up and in the vicinity of, and observing the filming of "Operation Petticoat" (Pink Submarine) (Cary Grant and Tony Curtis - 1959)
- More trivia: The Helm/Wheel, Enunciator and Monkey Balls that are on display at NOPF Dam Neck are the exact same as was on the Weatherford... I was sea detail helmsman - did touchy things like hi-line with a submarine (exchange movies) for underway quals - no easy task etc... Our Captain LTJG Joe Buggy in these tight cases would not give me the full three degree bearing to steer, he would just call down the voice tube the "last" digit – he didn't want to make a mistake... --3, --4, --5 etc..
- Following a mine sweeper and sinking the mines (that she cut) with the M1 rifle with metal piercing ammo... The gunners mate (GM1 Bill Grady) and I was the so-called marksmen onboard... We always had a contest to see who could sink one with the fewest shots... The secret was to wait until the mine was on the up side of a wave and hit it below the water line while there was very little water there to impact the shot... We also sank the sonar buoys I wrote about earlier... And the Cuban boat...
- Putting on new experimental sonar in New London, steaming up into the North Atlantic for cold water ops and then straight down to the Tongue of the Ocean for warm water ops - make required changes, and do it again... The "E" in EPC meant Experimental Sub Chaser (Patrol Craft) (Ed Smock SO2/SO1)

USS Weatherford EPC 618 caught up in Hurricane Janice 5-13 Oct 1958

We got caught by hurricane Janice with 30+ foot waves - had to put into Fort Pierce FL. I had been sitting at the Sonar chair and had just gotten up, when the LORAN (above the stack) broke loose, came down, hit the chair and smashed through the fire door and out into the passageway. A metal desk in admin/supply (our SO1 Steve Davis's desk) actually flipped over onto its desk top. We really thought the old 172 foot long sub chaser was going to break up... Our twin screws were totally out of the water on the downward side of the waves... (Ed Smock SO2 USS Weatherford EPC 618)



USS Weatherford EPC 618

1957-60 - Sonarman rating (SO) are replaced at end of their current NavFac tours.

It was in late 1957 that the Navy decided to return the Sonarman to their normal sea going billets and that the NavFacs would be manned by Ship Servicemen, Cooks, Storekeepers and Boatswain Mates for their shore duty tours. This is how Steve Davis and I found us transferred to the USS Weatherford (upon completion of present tour at Shelburne).

This proved to be a poor decision and the Navy soon realized that they needed to return Sonarman to NavFacs and try to establish continuity and longevity required for system proficiency (i.e., job code). Steve Davis and I were approached (closed door session) by a Navy Commander who had been sent to the ship (by CDR Joe Kelly USN and LT Fred Jones RCN) to see if we would be interested in returning to a NavFac upon completion of this current sea tour. We both agreed, and soon found ourselves at NavFac San Salvador for a one year unaccompanied tour (thank you very much Joe and Fred - Ha-Ha.). (Ed Smock SO2/SO1 USS Weatherford EPC 618)

1958 – James Rucker Boyett begins as WECO Resident Engineer, advances to Technical Director NAVELEXSYSCOM

The System was supported over 50 years by many civilian engineers, scientists, and technicians. A few old-timers on the hardware side will recall that there was one early WECO Resident Engineer that made the atypical transition from *contractor to Government Service* and eventually rose to the top directorate of the Navy Program Office. Some 17 years after Jim Boyett was an engineer in training at Eleuthera, he served as technical director at the Naval Electronics Systems Command in Washington, DC. (Jim Weinel, WECO/AT&T/Lucent/GD Resident Engineer and Headquarters Technical Support.)

Circa 1958 - How the NavFac at Centerville became known as Centerville Beach

By mistake. The "Beach" in Pacific Beach was mistakenly transposed in Washington D.C. and added to Centerville in California. The name was never revised because it would have required a change in SecNav's "Brick Bat" 03 approval for the establishment of the Facility.

Some might be unaware that the titled words "Brick Bat" was a term used to indicate the Navy's relative priority system. The 03 indicates Project Caesar was the third highest priority in the Navy at that time. The Polaris project held the number 02 position. I never learned, or wasn't cleared to know, which program held the 01 position though I suspect it might have been the U2 program or the "hit a bullet with a bullet" anti missile study which is still being implemented today. (Taken from notes of Robert L. Kneedler Brick Bat 03 Project CAESAR 11 Pacific – Ed Smock)

The property was owned by a dairy farmer named Miranda. He lived with his brother and sister. All were unmarried and live frugally despite their obvious wealth. They had settled the area about sixty years before and named their farm/dairy Centerville. They were disturbed it was being called Centerville Beach. The portion of their property selected for the Facility was the high ground where they drove their cattle when the rest of the property would flood.

The unsuspecting contractor arrived with his grading equipment and proceeded to tear down all the fences surrounding the site. The bulls got in with the heifers and the cows were scattered. The neighbors took glee in telling the Miranda's that their cows were all over. The contractor was confident that he was authorized to proceed and ignored Miranda's complaints.

It happened that LTJG Jon Lindbergh and I arrived the following week. We found the eighty year old Mr. Miranda at the top of five or six bales of hay, swinging a baling hook at us saying he was going to call Attorney General Brownell whom he knew personally, through political contributions. He said he would ask if US citizens had fewer rights than people in Russia because his land was had been taken without any due process.

When Mr. Miranda came down from the pile I introduced LTJG Lindbergh and he recognized that **Jon** was the son of Charles. He said he always admired his father and immediately assumed a less angry position. Jon explained that there had been a procedural error and apologized to him. Jon explained that the facility was extremely important to National Defense.

(Tragedy struck the Lindbergh's in 1932 when their first child, Charles, Jr., was kidnapped. Greatly distressed by the loss of their child and the sensational publicity it was given, they sought privacy in England and, later, France. Charles and Anne had five more children, **Jon**, Land, Anne, Scott, and Reeve. – (Ed Smock)
<http://www.lindberghfoundation.org/history/calbio.html>)

I stated that although access to the completed facility would not be allowable, a provision could be made for his cows to occupy the high ground when bad weather dictated. Mr. Miranda as head of his family strictly controlled all aspects of his family finances. His sister cooked for both brothers. Miranda's revealed his only extravagance was occasional ocean cruises while leaving his brother and sister to remain home to mind the dairy.
(Taken from notes of Robert L. Kneedler Brick Bat 03 Project CAESAR 11 Pacific – Ed Smock)

Circa 1958 – NavFac Pacific Beach – Canadian connection

The proposed Facility was to be built on a former military site adjacent to an Indian reservation Moclips, WA. An additional site was to be built on Vancouver Island, Canada. However, a change in Canadian prime ministers was made to one that would not allow any incursion by US Navy personnel in Canada.

This dictated that additional engineering would be required to turn Pacific Beach into a site capable of incorporating the cancelled Canadian site plans. A redesign was the order of the day. (Taken from notes of Robert L. Kneedler Brick Bat 03 Project CAESAR 11 Pacific – Ed Smock)

1 May 1958 Oceanographic System, Atlantic (COSL) was established.

Oceanographic Units at Norfolk, New York, and San Juan were disestablished on 1, 15, and 30 May, respectively. (SECNAVNOTE 5450, 6 May 1958).



COMOCEANSYSLANT (COSL) CTG 81.1
Zippo Lighter (Notice the longitudinal bars
read-out the number 81.1).

Sep 1959 - CNO established requirement for SOSUS Monthly Report
(CNO ltr OP312E1 Ser 0030P31 of 10 Sep 1959)

1959 - Eleuthera - The best part of the island was underwater

I arrived at NavFac Eleuthera in Mar 1959 and quickly discovered that although the island looked idyllic as viewed from the C-54 “long-liner” at several; thousand feet altitude, ground-level reality was sand, scrub brush and saw grass. Most of the officers were bachelors and spent their off-duty time in the “BOQ” bar drinking anything not labeled Aqua Velva. (Beefeaters was 65 cents a fifth.) I gratefully accepted an invitation from the crew to go skin-diving, and that was my salvation from May through Oct. There were no restrictions in 1959-60 and that meant Ops Dept. beach parties with all the “gusta” you could eat boiled in saltwater, beer and tobasco sauce with five pounds of melted butter. (B. Rule, ENS)

1959 - Eleuthera - Thank you Don Miller, Wherever You Are

I cringe when I remember my state of professional ignorance upon arriving at NavFac Eleuthera, and so it would have remained had not Don Miller, my Watch Supervisor decided I might be “salvageable.” While others struggled to avoid Aqua Velva at the BOQ bar (see above), I spent time in “T” building actually trying to learn the basics. I remember the “Eureka” moment when I finally understood why the direct-drive “M” boat showed the predominance it did.

I owe my entire professional career to Don Miller - who made E7 in six years, six months - and was as sharp as they come Wherever you are Don Miller, thank you. (B. Rule, ENS)

1959 - Eleuthera’s “Shark-Free” (har har!) Beach

In 1959, the French Leave Resort had just been opened on the Atlantic side of Eleuthera near Governor’s Harbour. The website (<http://www.frenchleaveresort.com/>) shows a picture of the Resort’s Atlantic beach including a very small islet just (50 yds or so) off the north end of the curving main beach.

In 1959, this stretch was advertised as a “shark-free” beach. What tourists were not told was that before the resort was built, local farmers would, after slaughtering their cattle, bring the collected blood to that beach and throw it into the narrow passage between the beach and the islet. Then they would bait a large hook with raw meat, attach the hook to a wire cable, attach the cable to the rear bumper of a car, and throw the baited hook into the passage. When a shark took the bait, they would drag it ashore with the car.

The cost of French Leave accommodations in 1959 were about \$60US a day. The website appears not to provide current rate information. I assume that if you have to ask, you can’t afford it.

As an aside to the shark-free beach, the water depth on the Atlantic side of Eleuthera reached 17,000 feet some three miles off the island. There were three, progressively deeper reefs seaward of the beach. Beyond the third reef, the bottom fell away into darkness, the most sinister water I have ever seen. It gave a lot of room for something very big to maneuver in.

I only went beyond the third reef once. Better the Nassau side of the island with it relatively shallow, friendly water with lots of "gusta," hog-snappers and "barracudas" (which never gave us any trouble). (B. Rule, ENS)

1960 - Eleuthera - Trial by Fire

1960 was still the Dark Ages for acoustic analysis. Had anything of interest stumbled by, we would not have recognized it, and even if we had, COSL would not have evaluated it. The Cuban Missile targets proved that. Essentially, the FOXTROTS were recognized only after they became about the only thing left in the ocean and/or were “converted” by aircraft - and even then the Data processing Unit (DPU) almost refused to admit their validity.

So, we stood very boring mid-watches until we discovered that by saving the burn bags for 4-5 days (instead of burning them each night), we could stuff the quarter-inch thick steel-plate, 10 foot tall incinerator to the very top, pour five gallons of bug-juice (plot cleaner) into the incinerator and enjoy a really roaring fire.

Perhaps too roaring. If those sleeping the barracks some 150 feet away were not awakened by the tremendous “poof” as the stack of bags caught fire, they were awakened by the light from the 20-foot or so tower of flame that issued from the grating on the top of the incinerator and approached full daylight levels.

Several “trials by fire” produced a very noticeable sagging by the incinerator stack and

threatened to bring down the antenna wire that ran 30 feet above the stack. Sadly, we were forced to find other mid-watch entertainments such as land crab races on the plotting table. (B. Rule, LTJG)

1960 - SCORPION: Snuck Out Early and Got Nailed

In the spring of 1960, NAVFAC Eleuthera detected what had to be a 585/588 Class nuclear submarine on the bearing 016 that went into the Narragansett Bay op-areas. No one else had contact.

COSL went to SUBLANT who, naturally, denied there were any candidates, and there the situation remained for about a month. SUBLANT then coughed up the fact that SCORPION had very briefly gone to sea for the first time and had barely stuck her bow into deep water, but it was far enough.

SUBLANT personnel never understood that when you had a ratio, there was a near zero chance you were wrong. (B. Rule, civilian)

1960 - USS Triton: Around the World Submerged in 84 Days

In February 1960, the USS TRITON (SSRN 586) departed New London to start a round-the-world submerged transit via Cape Horn that covered 41,000 nm in 84 days for an average speed of about 20 knots. This operation was not made public, or was the System alerted, until the transit was completed.



Triton (SSRN-586)

Atlantic SOSUS intermittently tracked a target from the area northwest of Bermuda to a position near 7 North, 40 West. Only after the USS TRITON completed an around the world submerged cruise was it recognized that this contact had been TRITON on the outbound Atlantic leg of the deployment.

A reexamination of WESTLANT SOSUS data indicated that at least NavFac Barbados held contact on several relatively high frequency “Aux” sources until TRITON passed well east and then beyond bearing 090 as the submarine headed toward the South Atlantic. Although the track aroused some interest at the time, the contact was not recognized as TRITON. (B. Rule, ENS)

1960 - San Salvador Island.

I had just reported in from Key West. Chief told me to go to the galley. After a couple months I asked, when do I get off mess cooking. Chief said, when you make 3rd class. Made 3rd class when rates exams came back and got off mess cooking. (SOOSN Harding NavFac San Salvador)

1960 - San Salvador Island.

Watch Officer was Chief Thompson (BMC), I was a new reader and had a US Destroyer tracking south. Was skipping a few beams along the way. Asked the Chief why that was

happening. His answer was that the seas were so rough the ship was coming out of the water and shooting through the air. Off course it was just sea mounts but I thought his answer was novel. Especially for a BMC. I met him again in Key West at FSS in late 62 when I was going to ST “A” school. It was during the Cuban Crisis. We were on watch and I was in charge of the Seaman who were patrolling the beaches. Driving around in the pickup I heard shots being fired. Raced to the beach and a Seaman was standing there shaking. He had just unloaded his clip into a floating log.
(STG2 Harding FSS Key West, FL)

1961-1962 Grand Turk

Air Force C-54 plane ride from Patrick AFB to Grand Turk with stops at Grand Bahama, Eleuthera (got donuts and coffee there), San Salvador, Mayaguana and finally Grand Turk. Not the most comfortable plane ride as the passengers sat along the sides with life jackets on in canvas seats just like paratroopers used. But if you had a window to look out of, it enabled you to see some beautiful sights below. Groceries and other supplies for down range facilities were strapped down along the middle the entire length of the plane. Sometimes you could not see the passengers on the other side.

Upon landing on Grand Turk was met by a Navy duty driver that drove a 2 ½ ton truck. Baggage was thrown in the back and off we went to the NavFac. Past the good smelling salt flats. First stop was in town at the "El Tropical" where new comers were introduced to the welcome to Grand Turk handshake by “Martha Dahlings and a bottle of beer before continuing on to the base.

Sign at base entrance----Grand Turk Country Club----No Vacancy

We stood 2, 6 hour watches every other day----can remember at least 20 watches going by without even having a reportable contact. Some other highlights of my tour were the daily 9:30 AM soup break (who ever came up with that should have been given a medal); even the watch standers were catered to as someone always brought down a bucket of soup for them to enjoy; fresh water pool (if we did not have to go on water hours); weekend ball game with Pan Am; long goosters; acey ducey; 90 days before first R&R; Feb 62 meeting 4 of the original 7 astronauts after the John Glenn orbital flight; Vernier call marks that lasted over an hour (oops, on occasion); Radiomen and Sonarmen swapping jobs; glare of the sun coming out of the T Building; FIVE Commanding Officers in 10 months; roof leaks in the barracks---everyone would start moving their bunks whenever it started raining; USO shows; daily movies in the outside theater usually showing Perry Mason and Rawhide (get em up and move em out) TV shows; sunfish sailing; snorkeling; shelling; Cinderella liberty; SOC W. W. Miller helping/forcing me to study for SO1 in his room.
(Nick VanHerpen---SOG2/SO1 Grand Turk)

1960-61 San Nicolas Island and 1961-63 Pacific Beach - “Salesmanship” or “photo op”

During these early days of SOSUS, for whatever reason, the reporting condition was such that ALL contacts were required to be reported via RTTF (Reader’s Target Tracking Form). The procedures were that if you could find a photo reference (each NAVFAC had

a library of thousands of photos) that closely matched the reported contact, then the contact could be placed in a “cease reporting” status. Further, the procedures were that if a photo reference could not be found, then a set of photos must be taken and added to the station library for future reference.

The reduction in workload was significant once a contact was placed in a “cease reporting” status, so the urge to get an approved photo reference was strong. However, the Watch Officer had the only approval for the match. I am certain that many current-day used car salesmen got their start in this manner. It was the plotter’s task to dig through the drawers of photos, find a match (or near match), and convince the Watch Officer that they were one and the same. The closer you were to the end of the watch, the more desperate the sales pitch. Did I mention that it was the plotter’s job to set up for a photo and that this was at least a 1-hour process per contact? I can still see the “photo slips” in my dreams.

In that period, Watch Officers rotated differently than the watch sections. This became an important factor in the photo-correlation process. Watch Officer’s were identified and labeled for their tendency to approve a marginal reference. You were either going to have an easy time of it, or you better check to be sure that the command Exacta had lots of film. (SOOSN/SOO3 George Widenor – San Nicolas/Pacific Beach 1960-63)

CNO “COLD” Project

In Reference to Georges’ comments (above) regarding “all the many photographs” the sites made and submitted:

The photographs were the main ingredient to CNO “COLD” (Correlation of LOFAR Data) Project- managed by AT&T Bell Labs Whippany, NJ.

To summarize the events: We wrote up all merchant traffic the same as we did any reportable TOI (however, we had a separate set of numbers assigned to them to keep them separated).

At the MEC, the data taken from the RTTF/TARF was transferred onto IBM “punch” cards and the NavFac submitted photos were placed onto micro-fiche film. These were fed into the very primitive COLD project card sorter/ micro-fiche reading computer.

When a site would report a new contact to the MEC a punch card was produced and fed into the COLD computer. – Out would come a number of photos as possible candidates for correlation, and these photo numbers were sent back to the reporting site for possible correlation. Each NavFac had the same photo data base for reference.

The reason we had to write up everything, was that we had to account for “ALL” lines on every gram, and if you could not account for them, the remaining lines had to be reported to your adjacent site and the MEC. We were very busy – and well trained... (Ed Smock)

1961 - USS George Washington (SSBN-598) – From here to Holy Loch (3200 nm)

In a 1961 demonstration of the capabilities of the system, SOSUS tracked the USS *George Washington* (SSBN-598) across the North Atlantic on her first transit from the United States to the United Kingdom. Daily while she was enroute, SUBLANT would question COSL to see if SOSUS was still maintaining contact. The answer was always and un-wanted “Yes”. A “Like-Hate” relationship grew between COSL and SUBLANT...

George Washington was originally named USS Scorpion (SSN-589). During construction, she was lengthened by the insertion of a 130-foot-long missile section and renamed (another hull under construction at the time received both the older name and hull number and became the ill-fated USS Scorpion), but inside the forward escape



USS George Washington (SSBN-698)

hatch remained a plaque bearing the name USS Scorpion. (Ed Smock SO1-P2)
[http://en.wikipedia.org/wiki/USS_George_Washington_\(SSBN-598\)](http://en.wikipedia.org/wiki/USS_George_Washington_(SSBN-598))

And: The George Washington wasn't as noisy as this detection would suggest; however, she did have a nasty resonance condition when operating at 150 rpm and had been told not to operate at that speed. Naturally, almost the entire transit was conducted at about 150 rpm with the results we all know. As I remember, Antigua and Barbados took turns holding contact in the eastern Atlantic but seldom held simultaneous contact. (B. Rule, LTJG)

Early 1960s - It Can't be an FM-10, and it Wasn't!

This is a secondhand story but still worth telling. NavFac Shelburne personnel, perplexed by the signatures detected during a SOCEX that involved a US diesel submarine, went onboard the unit when it pulled into Halifax after the exercise.

Their curiosity was satisfied; the diesels were FM-9s, not FM-10s. There were a number (4-5?) of US diesels with hull numbers in the very low 300s that had this variant engine, and they produced the signatures one would expect. (B. Rule, LT)

1961 – “Funeral details” to remember

Upon leaving the USS Weatherford and awaiting assignment back into SOSUS (to San Sal in 1962), I first had to complete my effective orders as the sole instructor and maintainer of a Sonar Attack Teacher at the USN and Marine Corp Reserve Training Center at St Louis, MO. (Which in 1961 was a building at the foot of Ferry St. which is now the exact site of the northern foot of the “Gateway Arch”).

One of the collateral duties assigned was as USN Honor Guard for military funerals in and around the St Louis area, which included Illinois and Arkansas. We averaged about two funerals a month.

This memory is from a sailor’s funeral in Arkansas. – I was the senior petty officer in charge and was leading the procession driving the navy sedan. While traveling on a rural road to the cemetery we came upon a cross roads where I was supposed to make a left hand turn. I missed the left hand turn and continued through the intersection with the hearse and about fifteen family member’s vehicles following me. Total “panic” immediately began to set in. “How to “back-up” this caravan”.

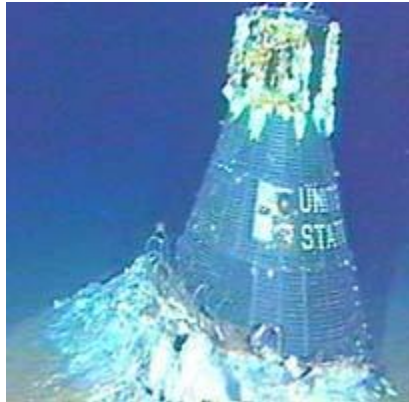
Immediately upon passing through the intersection I noticed a “Piggly Wiggly” type grocery store on my left with an entrance road. I made a fast hard left turn into the grocery store parking lot, continued past the store front and then made a right hand turn back onto the road I was suppose to have been on. The procession followed without hesitation. We received a few glances of wonderment from the local residents, and later, praise from the funeral director...

On a more serious note, I also had the honor of being a member of the Honor Guard for Dr. Thomas Anthony Dooley, III. His funeral was held January 23, 1961, at the St. Louis Cathedral. He is buried in Calvary Cemetery in St. Louis.
(I have a thank you card from his family) (Ed Smock SO1-P2 USN)

On May 27, 1961, Congress authorized the issuance of a commemorative gold medal to honor Dooley and his work. President Kennedy presented the medal to Dooley's mother, Agnes Dooley, at a White House ceremony on June 7, 1962. Kennedy commended Dooley for providing a model of American compassion before the rest of the world.

1961-63 - Mercury Space Program Support

Cape Canaveral - Down Range - 1961-63 timeframe - Mercury Program – Mission Control would place a SUS charge (explosive device) in the space capsule for localization by SOSUS Missile Impact Localization System - Broad Ocean Area (MILS-BOA). The SUS would be automatically released when the capsule hit the water, sink and explode. This was the way we located (using time difference fix (TDF) where the capsule and astronaut (i.e., Alan Shepard, John Glenn and Scott Carpenter vintage) landed in the early Space Program days - long before live TV landing coverage. The surface fleet would then steam toward the location at full speed (sometimes taking hours to get there). SOSUS participation was paramount to mission success. (Ed Smock SO1/SOC San Sal)
https://salempress.com/Store/samples/fifties_in_america/fifties_in_america_mercury_space_program.htm
<http://stinet.dtic.mil/oai/oai?&verb=getRecord&metadataPrefix=html&identifier=AD0479032>



**Liberty Bell 7 - Virgil I. “Gus” Grissom 21 July 1961
U. S. 2nd human flight. Capsule sank after landing
(hatch blew off...).**

Our first six astronauts:
Carpenter, Glenn, Cooper,
Grissom, Shepard, and Schirra.

The photo was taken after John Glenn landed at the Aux AFB on Turks 20 Feb 1962 by SOO3 Ron Theriault.



1962 - Soviet “HEN” Class submarines

Soviet HEN Class submarines (Hotel, Echo, and November) go to sea. - "They light up the ocean" (Takes two grease pencils just to draw the long LOB...) (Ed Smock SO1 San Sal) <http://www.chinfo.navy.mil/navpalib/cno/n87/history/cold-war-asw.html#PhaseIII>

The first Soviet nuclear submarine was the November SSN, launched in 1958. Using the same basic design, Hotel SSBNs and Echo SSGNs were deployed soon after. Together, these were known in the west as the HENs, and between 1958 and 1968, a total of 55 were deployed, 13 Novembers, 8 Hotels, and 34 Echos. They all had two reactors, two fast-turning screws, and a double hull.



6 Jul 62 - NavFac Barbados makes first SOSUS detection of Soviet nuclear submarine as it crosses GIUK Gap into Atlantic

"Way to go Bill Tilley" - (Ed Smock SO1 San Sal)

http://www.chinfo.navy.mil/navpalib/cno/n87/usw/issue_25/sosus2.htm

(See belated recognition – next.)

1964 - The Belated Recognition of the First Soviet Nuclear Detection by LANT SOSUS

On 6 July 1962, NAVFAC Barbados (much to their credit) reported detection of a possible Soviet nuclear submarine on their bearing that stabbed into North Atlantic oblivion: 027. Barbados held contact for about six hours; Antigua did not hold contact, nor did Ramey

COSL agreed with the classification and the data was sent to the Data Processing Unit (DPU) at the Brooklyn Naval Shipyard for evaluation. DPU called it twin turbines from a Fleet Oiler.

In 1962, SOSUS data went to DPU. All other acoustic data from US or foreign sources went to NAVSTIC in Washington, DC where I began work as a civilian in Oct 1963. In early 1964, I came across the report of a 6 July 1962 detection of a Soviet nuclear submarine near 60N, 20W by H.M.S. Oberon. The Oberon detection occurred several hours after Barbados lost contact but the speeds were essentially the same. Better late than never, Barbados target 27103 became the first Soviet nuclear detection by SOSUS, and at a range of about 3200 nm. (B. Rule, civilian)

And: LOFAR detection ranges against both American and Soviet first generation nuclear submarines were astounding. For example, SSBN George Washington, which was essentially a lengthened Skipjack, on one of her first deterrent patrols in 1961, was tracked continuously across the Atlantic all the way to the United Kingdom by SOSUS arrays deployed along the East Coast of the United States. In July, 1962 a SOSUS array

off Barbados detected a Soviet HEN class submarine as it crossed the Greenland-Iceland-UK gap, the first detection of a Soviet nuclear submarine by SOSUS.⁽³⁸⁾ In both cases, SOSUS was able to exploit the fact that both propellers and rotating machinery mounted directly to a submarine's hull generated clear, predictable narrowband tonals at source levels high enough for large LOFAR arrays to detect and track them on an ocean wide basis. http://www.chinfo.navy.mil/navpalib/cno/n87/usw/issue_25/sosus2.htm

August 1962, NAVFAC Barbados reported detection of the USS NAUTILUS (SSN 571) at 20 knots on bearing 035. This contact was indeed NAUTILUS operating at high speed in the approaches to Holy Lock at a range of 3550 miles. This is, by a narrow margin, the longest submarine detection range ever documented for the North Atlantic Basin. (B. Rule)

1962-63 – NavFac San Salvador to VP Acoustic Data Exchange

We put a VP sonar buoy on top of the T-Bldg and connected/wired its hydrophone to our beam data of interest. The P2V would fly over the T-Bldg, monitor the buoy and see what we were holding, and what they should look for on their grams. Many positive correlations were obtained this way. (Ed Smock SO1/SOC San Sal)

Fortunately, when I received orders to San Sal for a one year unaccompanied tour, I rented a place for my family in Jacksonville, FL. I had been advised that VP-10 and 18 flew out of Jax and it might be possible for me to catch a ride (when it was my turn for a 96) back to Jax after a SOSEX/Type Six - Site debrief etc...

This provided me the opportunity to ride back to Jax for my 96 and then on the return flight, to operate with the P2V system. A few times we had plane problems and we could not land at San Sal... "Great-for-me"... The pilot would advise the site that he was returning to Jax with "one happy PAX" and we would return in a few days for more operations etc.....

Enroute, I would ride in the "little glass bubble" - at the nose, with no floor... You had to crawl through the bomb bay to get to it... Didn't really care for it to much when we dove down to rig (photo etc...) our TOI... But I would not have wanted to miss the prosecutions etc.... (Ed Smock SO1/SOC San Sal)

Oct/Nov 1962 – NavFac San Salvador surveyed for possible Cuban conflict troop staging area

One day soon after the start of the Cuban crisis, we observed a TOI containing "numerous" unknown sources. So many that we just had to find out what it was. Considering the geography of the area, I decided to take binoculars and the duty truck to see if I could learn anything. It wasn't long before I discovered a very large Naval vessel



USS Hunley AS-31

that was obviously the TOI in question. I made a drawing of its silhouette and headed back for "Jane's"... It turned out to be the USS Hunley AS-31. Later that day we had high ranking visitors who proceeded for the next 3 or 4 days to survey the island and our facilities. Their intent was to use San Sal as a staging area (tent city) to house troops that may be called upon, and for use as a possible medical facility. (Ed Smock SO1 San Sal)

Oct/Nov 1962 – Cuban Crisis (A very serious situation not realized by many.)

First confirmed detections of Soviet Diesel and Nuclear submarines by SOSUS.

(Ed Smock SO1 San Sal) <http://www.gwu.edu/~nsarchiv/NSAEBB/NSAEBB75/>

Navy SitReps - Cuban Crisis

Ref: The National Security Archive - The Submarines of October - October 31, 2002 (as written):

9. CINCLANT cable to AIG [Address Indicator Group?] 930, JCS, CINCARIB, et al., "Current ASW Status," 26 October 1962, showing visual sightings and SOSUS (sound surveillance system) contacts with Soviet submarines--including C-18, C-19, and C-20--since 22 October.

Source: CHF, 21 (A) SS/ASW Contacts (Closed)-1

11. CTG 81.1 (element of COMSAWFORLANT?) cable to CTF 81 (COMASWFORLANT) "Appreciation of SOSUS Activity in Western Atlantic from 23001Z to 273100Z," 27 October 1962, reports seven SOSUS contacts with conventional Soviet submarines, although noting difficulty of using SOSUS to track C-18 and C-19

Source: CHF, 21 (A) SS/ASW Contacts (Closed)-1

12. CINCLANT cable to JCS, "Summary of Soviet Submarine Activities in Western Atlantic to 271700Z," 27 October 1962, reporting various visual sightings and various technical intelligence contacts of Soviet submarines through radar, SOSUS, MAD, as well as Julie and Jezebel sonobuoys.

Source: CHF, 21 (A) SS/ASW Contacts (Closed)-1

17. CTG 81.1 cable to CTF, "Appreciation SOSUS Activity from 271201Z-284300Z (?)," 28 October 1962, reporting that SOSUS system "total remaining above normal", including 6 contacts of Soviet conventional submarines: C-18, C-19, C-20, and C-23.

Source: CHF, 21 (A) SS/ASW Contacts (Closed)-1

33. CTG 81.1 cable to CTF 81, 31 October 1962, "Appreciation of SOSUS Activity from 301301Z to 311300Z," reports high detection visibility although a decrease in SOSUS contacts.

Source: CHF, 21.SS/ASW

13. Deck Log Book [Excerpts] for U.S.S. Beale, DD 471, showing tracking and signaling operations, with use of practice depth charges (PDCs), and eventual surfacing of submarine C-19 on the evening of 27 October (local time). The Beale was part of the Randolph ASW task group 83.2.

Source: National Archives, Record Group 24, Records of Bureau of Naval Personnel (hereinafter cited as RG 24), Deck Logs 1962, box 74

16. Recollections of Vadim Orlov (USSR Submarine B-59), "We Will Sink Them All, But We Will Not Disgrace Our Navy." Orlov's account includes the controversial depiction of an order by Captain Valentin Savitsky to assemble the nuclear torpedo.

Source: Alexander Mozgovoï, The Cuban Samba of the Quartet of Foxtrots: Soviet Submarines in the Caribbean Crisis of 1962 (Moscow, Military Parade, 2002). Translated by Svetlana Savranskaya, National Security Archive. (B-59 equates to C-19 above - Ed Smock)

*** Thanks to Mozgovi's and Huchthausen's efforts, as well as the recent Havana conference on the missile crisis which produced new details on submarine operations, interested readers now know that Soviet "Foxtrot" (NATO classification) submarines heading toward Cuba were the spearhead of an effort to develop a Soviet naval base at Mariel Bay, Cuba. One of the most startling disclosures was that **each of the submarines carried a nuclear-tipped torpedo**, which greatly raised the dangers of an incident as the U.S. Navy carried out its efforts to induce the beleaguered Soviet submariners to bring their ships to the surface. ***

*** Possibly even more dangerous was an incident on submarine **B-59** recalled by Vadim Orlov, who served as a communications intelligence officer. In an account published by Mozgovi (see document 16), Orlov recounted **the tense and stressful situation on 27 October when U.S. destroyers lobbed PDCs at B-59**. According to Orlov, a **"totally exhausted"** Captain Valentin Savitsky, unable to establish communications with Moscow, **"became furious"** and ordered the nuclear torpedo to be assembled for battle readiness. Savitsky roared **"We're going to blast them now! We will die, but we will sink them all."** Deputy brigade commander Second Captain Vasili Archipov calmed Savitsky down and they made the decision to surface the submarine. Orlov's description of the order to assemble the nuclear torpedo is controversial and the other submarine commanders do not believe that that Savitsky would have made such a command. ***

Oct 1962 - The following Cuban Crisis Charts from Navy Archives have been declassified. <http://www.gwu.edu/~nsarchiv/NSAEBB/NSAEBB75/>

""Notice the three (3) Soviet submarines (red), our two (2) submarines (blue), the string of destroyers and numerous other Battle Group Naval Surface vessels and VP aircraft - relative to our NavFacs""

"This was not an Exercise, this was Real"

"We were in the Front Row... Best seats in the house..."

"These seats were not for sale...they were earned, "We" had been looking for eight (8) years - "We were ready..."

(Ed Smock SO1 San Sal 1962)

28 October 1962 - The U.S. Navy shadows the second Soviet F-class submarine to surface, after repeated rounds of signaling depth charges on 27 October
<http://www.gwu.edu/~nsarchiv/NSAEBB/NSAEBB75/index.html>

Washington, D.C., 31 October 2002-- Forty years ago today, the U.S. Navy forced to the surface a Soviet submarine, which unbeknownst to the Navy, was carrying a nuclear-tipped torpedo. This was the third surfacing of a Soviet submarine during the Cuban Missile Crisis.

After a day of persistent tracking by the U.S. destroyer, the Charles P. Cecil, commanded by Captain Charles Rozier, Soviet submarine B-36, commanded by Captain Aleksei Dubivko, exhausted its batteries forcing it to come to the surface.

On 27 and 30 October respectively, U.S. Navy anti-submarine warfare (ASW) forces sight surfaced Soviet submarines B-59 and B-130. No one on the U.S. side knew at the time that the Soviet submarines were nuclear-armed; no one knew that conditions in the Soviet submarines were so physically difficult and unstable that commanding officers, fearing they were under attack by U.S. forces, may have briefly considered arming the nuclear torpedoes.

Indeed, one of the incidents--the effort to surface B-59 on 27 October 1962-- occurred on one of the most dangerous days of the missile crisis, only hours after the Soviet shoot-down of a U-2 over Cuba and as President Kennedy was intensifying threats to invade Cuba.

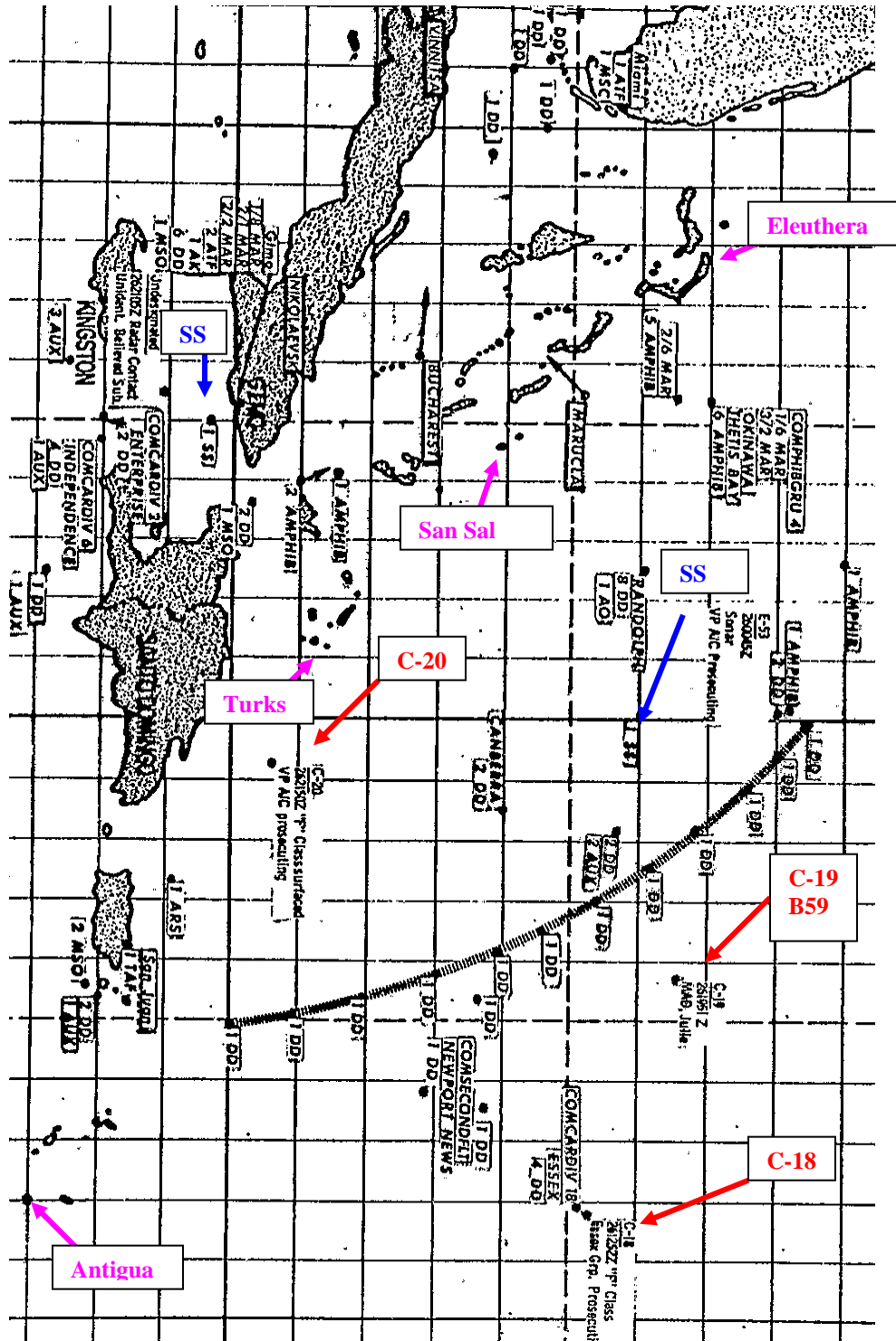
(B-59 equates to C-19 above - Ed Smock)



28 October 1962: The U.S. Navy shadows the second Soviet F-class submarine to surface, after repeated rounds of signaling depth charges on 27 October

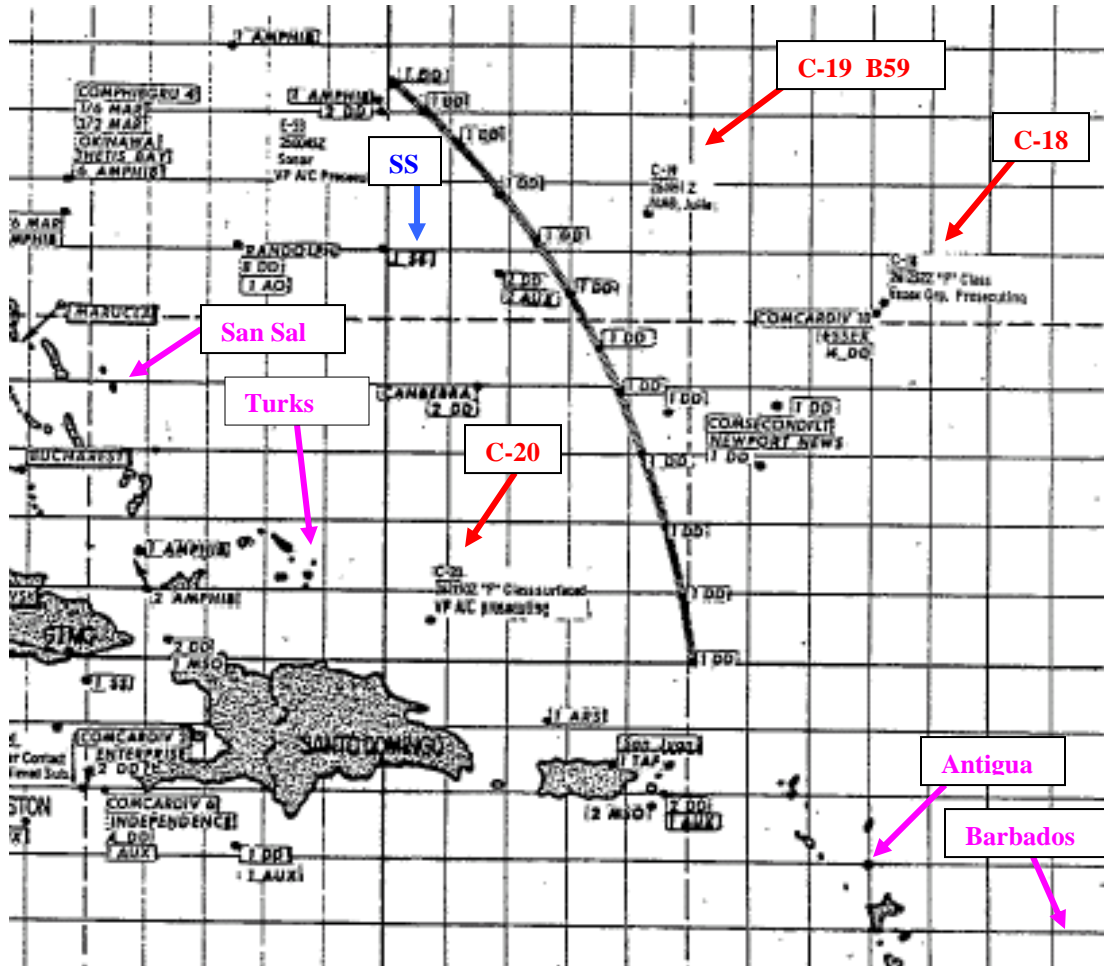
Charts have been declassified.

<http://www.gwu.edu/~nsarchiv/NSAEBB/NSAEBB75/>



Charts have been DECLASSIFIED

<http://www.gwu.edu/~nsarchiv/NSAEBB/NSAEBB75/>

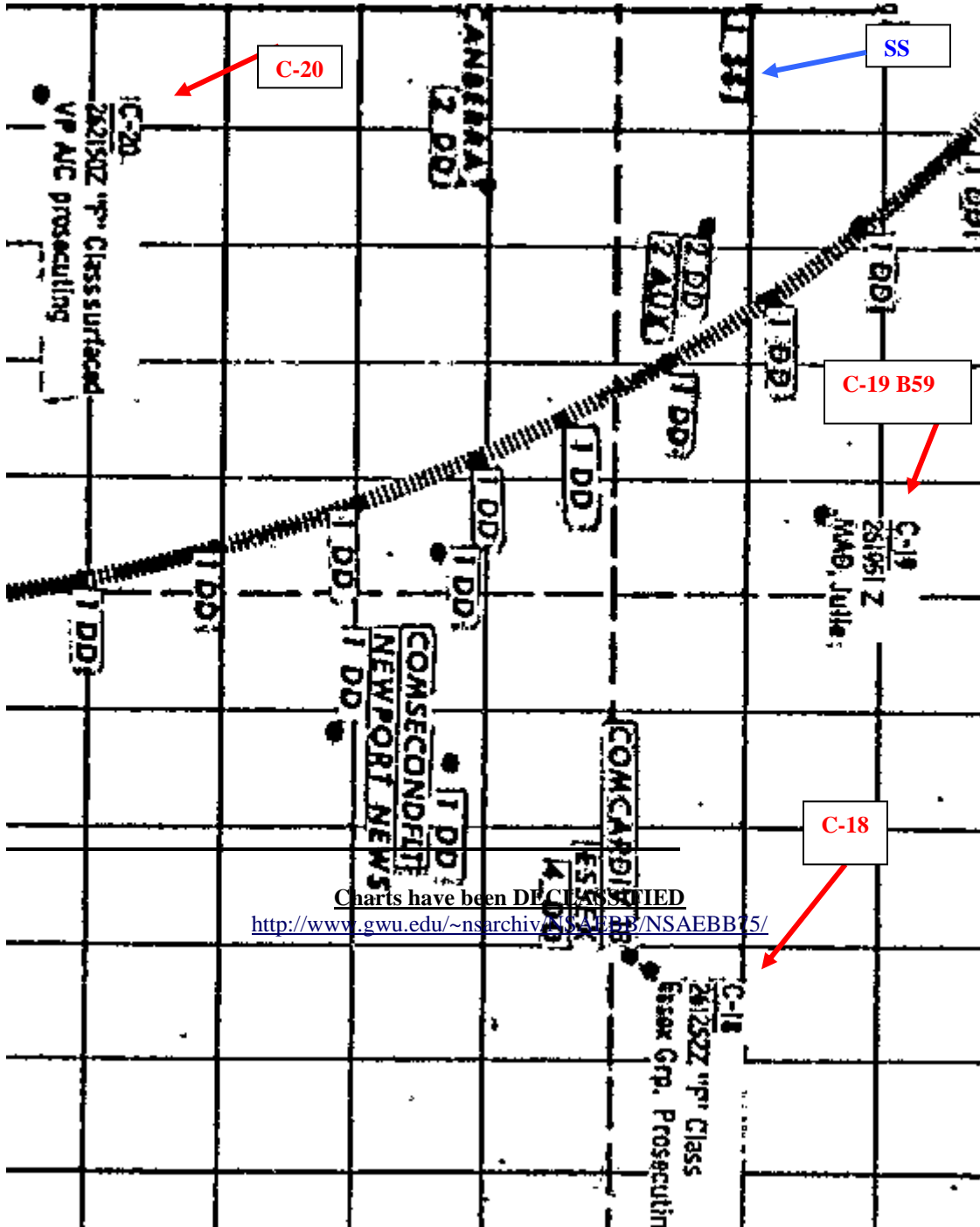


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Charts have been DECLASSIFIED

<http://www.gwu.edu/~nsarchiv/NSAEBB/NSAEBB75/>

Cuban Crisis - The Thirteen Days, October 16-28, 1962

<http://history.sandiego.edu/gen/filmnotes/thirteendays4.html>

Day 1 - On the morning of October 16, National Security Advisor McGeorge Bundy told President John F. Kennedy about photographs of medium range ballistic missiles, or MRBM, in Cuba; JFK created the Executive Committee of the National Security Council, or ExComm, to advise him on how to respond to the missiles. At the first meeting of the ExComm, the missiles are mistakenly identified as SS-3, later corrected to the SS-4, MRBM with a range of 1000 miles, and six more U-2 flights are made to collect more photos. The ExComm discussed options ranging from a military invasion of Cuba to a blockade of Cuba. That afternoon, JFK met with the Special Group Augmented (SGA) led by RFK that had been supervising Operation Mongoose directed by Edward Lansdale since Nov. 30, 1961, and discussed options using Cuban exiles. The second meeting of the ExComm that evening discussed the latest intelligence reports that no missiles were operational or had nuclear warheads, but they could be operational in two weeks. In Moscow, U.S. Ambassador Foy Kohler met with Khrushchev; the Soviet premier criticized U. S. bases in Turkey and Italy and claimed Soviet activity in Cuba was only defensive.

Day 2 - On October 17 at the State Department, Robert McNamara argued in favor of the blockade and Dean Acheson argued in favor of an air strike. Photographs revealed SS-5 IRBM sites under construction but no missiles have yet arrived in Cuba. The IRBM range of 2200 miles was twice the range of the MRBM.

Day 3 - On October 18 at the ExComm meeting, the JCS argued for the air strikes but RFK questioned the morality of a "Pearl Harbor in reverse." That evening JFK met with Gromyko at the White House.

Day 4 - On October 19, the ExComm formed separate working groups to examine the air strike and blockade options, and by the afternoon most support in the ExComm shifted to the blockade option. Ted Sorensen began working on JFK's speech. That evening Paul Nitze produced a schedule for military preparations, but the Defense Dept. denied the claims of such preparations in an article by Paul Scott and Robert Allen.

Day 5 - On October 20, the morning ExComm meeting at the State Dept. completed blockade plans and approved Sorensen's speech. At the afternoon meeting, JFK met with the ExComm and approved the plans for a blockade. Adlai Stevenson argued that the U. S. should pull missiles out of Turkey, but JFK opposed. James Reston of the New York Times agrees to hold a story on the military buildup. An intelligence report concludes Cuba has 16 launchers operational for MRBM, plus 24 SA-2 SAM missile sites and 3 coastal cruise missile sites and 12 cruise missile patrol boats and 28 jet bombers and 39 MiG-21 jet fighters. One MRBM site has a nuclear warhead storage bunker that Soviet sources later indicated held 20 warheads.

Day 6 - On October 21, JFK officially approved the quarantine plan and notified Pierre Salinger. JFK arranged for John McCloy to fly from Germany to help Adlai Stevenson at the United Nations.

Day 7 - On October 22, State Dept. began briefing foreign leaders of the Cuban crisis. At noon, SAC bombers went on alert and the JCS put all military forces on DEFCON 3 status at 7 pm.. Air Defense Command mobilized 161 aircraft at 16 bases and for the first time armed aircraft with nuclear weapons. JFK informed 17 congressmen of the quarantine plan, and Dean Rusk gave Dobrynin a copy of JFK's speech. Ambassador Kohler in Moscow delivered a letter from JFK to Khrushchev demanding the missiles be removed from Cuba. At 7 pm, JFK delivered his 17-minute speech to the nation on television.

I had just arrived back at Cape Canaveral, (having hitch-hiked from Jacksonville, FL) heading back to San Sal after a 96 hour liberty when I heard the JFK TV speech. There were troops, tents and armored vehicles all over the place. Tension of an eminent attack was very real. I caught a Pan-Am down range flight to San Sal the next morning (Ed Smock SO1 San Sal)

Day 8 - On October 23, Ambassador Kohler transmitted a letter from Khrushchev to JFK that refused to remove missiles. At the UN, Adlai Stevenson criticized the Soviet Union; Cuba denounced the quarantine as an act of war, and Soviet representative Valerian Zorin denied any missiles in Cuba. Castro mobilized his armed forces in Cuba, and the Soviet Union put all Warsaw Pact forces on alert. For the first time, low level reconnaissance flights began by F-8 and RF-101 aircraft to supplement the high level U-2 flights, and the Soviets responded by camouflaging their missile sites. That evening, JFK sent another letter to Khrushchev urging prudence and asking that Soviet ships observe the quarantine. **JFK ordered the Navy to give the highest priority to tracking Soviet submarines near Cuba and protecting American ships.** At 7:06 pm, JFK formally signed Proclamation 3504 that declared the quarantine was necessary under the OAS charter to defend the western hemisphere. At the suggestion of British Ambassador David Ormsby-Gore, JFK moved the quarantine line around Cuba from 850 to 500 miles to give the Soviet Union more time to comply.

Day 9 - On October 24, during the morning 16 of 19 Soviet ships enroute to Cuba reversed course. Only the tanker Bucharest continued its voyage to Cuba as the quarantine officially went into effect at 10 am. Robert Kennedy's memoir noted that this was the tense moment of the crisis. McNamara reported two Soviet ships still sailing toward the line, the Gagarin and the Komiles, **with a Soviet submarine between the ships.** The USS Essex was ordered to make the interception. At 10:25 am intelligence reported the two Soviet ships had stopped. Dean Rusk said "We're eyeball to eyeball and I think the other fellow just blinked." That evening, TASS made public a telegram from Khrushchev warning that the Soviet Union would respond to the "pirate action" of the U.S. In a letter to JFK that same evening, Khrushchev called the blockade "an act of aggression" that would not stop Soviet ships. For the first time in history, the JCS ordered a DEFCON 2 alert.

Day 10 - On October 25, at 7:15 am the USS Essex and destroyer USS Gearing determined that the tanker Bucharest carried no missiles and was allowed to proceed to Cuba. The morning syndicated column by Walter Lippman proposed an agreement to remove Jupiter missiles from Turkey in exchange for the missiles in Cuba. At 5 pm, CIA director McCone reported that some missile sites in Cuba were now active. At 5:43 pm, the USS Kennedy began to make preparations to board the Lebanese freighter Marucia.

Day 11 - On October 26, At noon, correspondent John Scali met with KGB station chief Aleksandr Fomin at the Occidental Restaurant in Washington at Fromin's request, and Fromin offered a proposal to end the crisis by a Russian removal of missiles and an American promise not to invade Cuba. This same proposal was later mentioned in a long letter from Khrushchev received at 9 pm. RFK secretly met that night with Dobrynin at the Soviet Embassy and Kennedy offered to remove missiles from Turkey in exchange for the missiles in Cuba.

Day 12 - On October 27, Radio Moscow at 9 am reported a message from Khrushchev that missile bases in Turkey would be dismantled in exchange for missiles in Cuba. A letter with this message is delivered to the U.S. embassy in Moscow, and was transmitted to the ExComm at 11 am. At this same time, the ExComm received information that a U-2 plane in Alaska had flown off course over Soviet territory on the Chukotski Peninsula, causing MiG fighters to fly from Wrangel Island and American F-102 fighters with nuclear air-to-air missiles to fly to the Bering Sea. McNamara turned white and yelled "this means war with the Soviet Union." However, the U-2 flew back to Alaska before any shots were fired. **At noon, a U-2 plane was shot down over Cuba by a SA-2 missile fired by local Soviet officers and the pilot Major Rudolf Anderson was killed. That afternoon, an F-8 low-flying reconnaissance plane was hit by a 37mm anti-aircraft shell from Cuban troops but returned to base.** That evening, the ExComm drafted a reply to Khrushchev's long letter, accepting his offer to remove missiles from Cuba but without mentioning the Jupiter missiles in Turkey. JFK later met with a small group of advisors and agreed to send an oral message to Dobrynin that the U.S. will not invade Cuba and the Turkey missiles will be removed. Robert Kennedy met with Dobrynin and made this proposal. JFK ordered McNamara to mobilize 14,200 Air Force reservists.

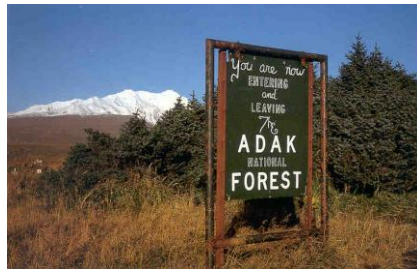
Day 13 - On October 28, the CIA reported that all 24 Soviet MRBM missile sites had been completed. At 9 am, Radio Moscow broadcast a message from Khrushchev ordering the removal of all missiles from Cuba, thereby ending the crisis. <http://history.sandiego.edu/gen/filmnotes/thirteendays4.html>

1962 - "Beautification" of NavFac Adak

As Ops officer of the commissioning crew at NavFac Adak, I was tasked by the CO to do something about the barren landscape around the TE building - which closely resembled the far side of the moon. I drafted a letter to the Dept. of Agriculture at the University of Alaska asking for advice on types of grasses, fertilizers, etc. which would work best. The response received from the cognizant department professor was: "with many years of experience in agronomy in the Aleutian Islands, I recommend you spray the entire area with green concrete". We later got a letter from the professor's supervisor with a profuse apology for the "flippant response" along with suggestions which he thought might work. We were tempted to follow the advice of the 'flippant professor' but we ultimately left the landscape in its natural state. (LTJG George Miller)

And: The Adak National Forest

These 33 spruce trees were planted in 1944 to boost the morale of soldiers stationed in Adak. It is a good bet that every sailor who was ever stationed on Adak has taken home a picture of the Adak “National Forest” – and will never forget it...(Ed Smock)



1962-63 NavFac San Sal (more memories)

- It was a long year...You knew it would be tough - when you arrived, got off the plane, and the sailor you are relieving gives you a big hug...
- Chief Robert Sherill who forced me to study - to make Chief... "Thanks Bob"...
- A friend like PN1 John Williams (who helped the time go by easier...)
- The sailor I hugged a year later when he relieved me... (Ed Smock SO1/SOC)

1962-63 – NavFac San Salvador XO vs. Wardroom Walk/Race

Before JFKs (later called PTs) were really defined, our XO LT Harry Clock (disliked by most - and he enjoyed it) challenged (ordered), to put it his way the wimps of the wardroom to a walk/race around the island - a distance of 37 miles. Being a smart young sailor, I elected to drive the pickup behind the group with appropriate medical supplies (mainly “refreshments”) to pick up survivors. It turned into a nasty mess. LTJG Jim Stalter pulled up lame at about the 27 mile mark (explaining to me that he hates himself and that SOB XO for edging him into this (his feet were bleeding etc...)) As it ended up, our own ENS Ed Dalrymple (fresh from the forest service) was the first to sight the main gate finish line and broke into a fast pace run onto the base. Next came the PWO LTJG

Len Graham (who had to be rushed to sick bay for oxygen - HM1 Frank Folio - HM1 Jim Smith), ENS Mark Halperin, and then our illustrious XO followed by the Supply Officer LT Ken Livingston. (Ed Smock SO1/SOC)

1962-63 – NavFac San Salvador fires a few rounds at Merchant Vessel (has guns removed)

When I reported to San Sal, it was the policy that we all be issued an M1, a full bandoleer of ammo, a bayonet, helmet and a canteen. These we hung from our two man bunk beds (80 man open bay barracks). (Can you imagine a disturbed sailor with these at his finger tips - think about it...?) It was common practice (by direction of the XO LT Harry Clock) that we conduct quarterly NEGDEF drills using live ammo. Machine guns were used to fire over the troop's heads for realism. One day a merchant vessel running close to the island (we had deep water less than 1 mile out) was seen as a threat by the XO and he ordered a few rounds from the machine gun to be fired across her bow.... This pleased the XO and he went on his way. Less than three days later a team of investigators came onboard and after confirming that rounds had in fact been fired, they ordered the removal of all firearms. (Ed Smock SO1/SOC San Sal)

1962-63 – NavFac San Salvador forces private airplane to land

Here we are again with our XO LT Harry Clock (known for his cowboy hat, uniform shirt and shorts, Wellington cowboy boots and a pearl handled six shooter...) This time, a small plane (Cessna) was perceived by the XO as being a threat; as the plane did in fact buzz the T Bldg and surrounding grounds 3 or 4 times. The XO ordered BM1 Pike to drive him in the jeep and proceeded to chase/follow the plane where ever it went - firing off a few rounds as they went... The plane actually made an emergency landing on the beach between our base and the Pan Am base... Of course by now, we had a formidable force at the scene "he wasn't getting away from the XO..." "" He said "Mon"- why you shoot at me??? "" He was actually a "labor party" person from Turks coming to visit Jake Jones (San Sal political big shot) and was running out of gas and could not reach the air strip. Now, to the rescue part...

After refueling the plane, we had to manually push-pull the plane from the sand to the hard surface road (about 80 yards). Then we had to pull up Pan Am buried cable markers to allow room for the wing span. - The XO told the man that if we held the plane, and he revved it as high as he could and then we let go, he should be able to lift off before hitting the next power line crossing the road. The man kept saying I can not "do-dot-mon", "I will no make dot"...The XO convinced him that he could. - He sent LT Ken Livingston with the station wagon down the road to the "end-of-runway" mark so that the pilot could use that as a reference. He revved the plane higher and higher - XO yelled "let go" and the plane started down the road... The XO looked at me and said ""the dumb SOB will never make it"" Ha-Ha..... The closer the plane got to the car the more it appeared that he was going to crash... LT Ken Livingston jumped over a sand dune and out of sight - the plane lifted slightly - veered to the left, hit the car's antenna, and up into the wild blue yonder...the antenna whipping back and forth...

After the fly-by we returned to base to await our next twilight zone experience...

There are too many to list in detail however, I will use some one liners: Like the XO shooting Jake Jones's cows when they got near the fence and then ordering the gate guard not to let Jake on the base; XO flushing mud hens with hand grenades; spinning his six shooter on his finger in front of COSL (CAPT A.R. Gordon) in the T Bldg and having it fall to the floor and breaking apart - COSL said "put that away"...

When it came time for the XO (LT Harry Clock) to be relieved, he called me into comm and laughingly showed me the message of who was to relieve him.... He said to me "Smock", if you think I'm crazy, wait till you meet this crazy SOB...""He's my brother"" (Dick Clark) (Sorry to tell you, the XO LT Harry Clock - LDO type was an ex Sonarman...!!! So I guess he was one of us....") (Ed Smock SOC San Sal)

COSL believed that San Sal's crest motto SSS stood for Sea, Sand, and Surf...To the crew it was San Sal Sucks....(Crews version would never have been approved...)
(Ed Smock SO1/SOC San Sal)

I also served with LT (SO1-1956) Harry Clock.... (Howard Tilton SO2 USS Hickox DD 673)

Hey Ed - Guess what?? In the summer of 1956 (June I think) I was transferred from Ramey to the USS Hickox DD 673, I was a SO2 by that time, and would soon replace SO1 Harry Clock so he could go to OCS and become LT. Harry Clock!!

He was the same old Harry you remember. My introduction to Harry was when we were trying to communicate with a practice target sub off Bermuda, and the Gertrude was too garbled... I suggested we try CW, and it turned out I was the only one that knew (not fast) Morse code. The sub put their radioman on and well, ... Harry went ballistic when I could not keep up with him. I don't remember the exact words, but they weren't pretty.

I soon found out that no one could stand the man, and were praying for the moment that he stepped off the gangway for good... (That included the Captain) Yes I guess he was one of us, but my contact only lasted for a couple months. Wonder where he is today??
(Howard Tilton SO2 USS Hickox DD 673)

1962 - The sailor who lived under a cloud - NavFac San Salvador

At San Salvador, as comic relief to being plagued by Harry Clock, the infamous XO, we had a seaman who was a nice guy but was always having minor problems. His last name was Lepak and he either had a college degree or had attended college for awhile. I believe he was a history major. When it was time to grind the stylus we could always count on hearing a loud howl from Lepak. He never failed to shock himself and those shocks could be nasty. His uniform constantly got him into trouble. He was unable to look sharp even in clean, pressed clothes. We prepared for a material inspection and Lepak was part of the Research Division cleanup, paint-up crew. He was a hard worker and really helped painting the bulkheads, cutting in around the baseboards and buffing the deck. The Division Chief, Boyd (the pipe smoker not the Boyd who later got a

commission) remarked to Lepak how good a job he did and told him that he could present the space to the C.O. for inspection.

Knowing that he would present a poor appearance Chief Boyd told Lepak to buy all new clothes for the presentation. Lepak showed up shortly before inspection in his new dungaree uniform and looked presentable. The chief noticed a partial 5 gallon can of dark grey paint adrift in the space and told Lepak to get rid of it before the inspection. Paint was always stored upside down to make mixing easier when someone was ready to use it..... You saw this coming didn't you.....

Lepak picked the can up; got it chest high and the top (now the bottom) fell off. It got the highly shined deck, the freshly painted bulkhead and every part of Lepak's new uniform except his hat splashed with paint. And he managed to get paint on his hat when it slipped from his head and he grabbed it with a paint covered hand. *Another time.*

The T- building watch standers got paid in the building. Lt. Ken Livingston, the Supply/Disbursing Officer brought the cash to the building and made the payment. If you're not familiar with the method of payment in those days: A chit similar to a check was filled out by the person getting paid (write the date, the person getting the money, the amount in numbers and spell out the amount, sign it and add a fingerprint (index finger). A person could draw any amount up to whatever he had on the books. Some guys took just enough to get by on and saved for their 96. (One trip off the island every six weeks or so). Others took the maximum. On this particular day Ken was paying the troops and Lepak was in line and his chit was written for \$28. Ken looked at the chit and told Lepak he would have to make a new chit out because he misspelled the “eight” in twenty eight.

Lepak made a new chit and got back in line. Again, Ken told him the same thing (eight was misspelled). Another chit and again the same routine although this time, Ken told him “this is the last chance. You're holding me up and I have other things to do”. Lepak started on his final chit ... studied a long time ... gave a little smile and proudly went back to see Ken. The chit said “twenty seven”. (Jim Stalter LTJG) (Ed Smock SO1)

Oct 1962 - "Columbus" Returns to San Salvador - Lepak's near demise

In the 60's timeframe there was a historian and television producer named David L Wolper who made documentaries called David L. Wolper Presents. Wolper was a historian with a love for Columbus, San Sal etc... He had a fancy house on the island and spent a lot of his time there with his family. He was producing a documentary of Columbus landing on San Sal and had three ships built replicating the Nina, Pinta and Santa Maria. They had set sail from Spain as Columbus had and were hopefully scheduled to arrive at San Sal on 12 Oct 1962. . The day they arrived was a day of celebration, filming of the event etc., and the base was invited to attend.

I had the duty and remember Lepak telling me, as he left the base for Wolper's, that he was "going-to-get-wasted"... During the celebration they had been firing a black power canon... Lepak was smoking and sitting on "an empty black powder keg"... It blew up -

catching Lepak on fire. RM1 Dunton grabbed him and jumped into the pool - saving Lepak from anymore serious burns than he had already received... Lepak was rushed back to the base for medical treatment (he was in bad shape- but did recover without serious scars etc.). (Ed Smock SO1 San Sal)

1962 – NavFac San Salvador – “Black Bag” retrieval

One late evening a medium sized sail boat (40-60 feet) was seen floundering in the rough surf and in the process of breaking up and sinking. With the rough surf and darkness coming on there was little we could do. We did get the jeep and parked it towards the area with headlights on. The people onboard were shooting flares etc. Then the boat broke up and all we could see was her masts whipping back and forth against the rocks. Slowly one man came ashore then another etc., until 5 of them were on the beach. We took them to the base and cared for them as we could.

They said that there was a very important “Black Bag” onboard and would give a sizable reward to have it recovered. A strapping young Seabee by the name of Halgerson (more guts than brains) offered to go get it the next day. The next day finds us all there to watch the event. Halgerson fought the waves and maneuvered through the rocks to the remains of the sail boat. Reduced now to only heavy junk, that did not drift away. Halgerson dove down a few times and at times we thought he had been down to long for his own safety. Finally he could be seen swimming to shore. It took him awhile to get back. We could see that he had something tied to his ankle – a black bag.... The men got real happy when they saw that. Their joy ended when he got in – the bag opened – and inside was a 16 lb bowling ball. - Wrong bag – no reward.... (Ed Smock SO1-P2 San Sal).

This young lad was also one of many who have climbed the San Sal water tower. He had too many beers and decided he was fed up with San Sal. SOC Bob Sherill ordered him to “come down from there”. Halgerson replies !!!**# You Chief – come up and get me... He came down on his own after another hour or so – to wait Captains Mast.

1962 NavFac San Sal – A “FLASH” to remember.

There it was, a knee start - abrupt stop – short duration – single beam – expected part of the spectrum - long range - hot beam etc., and it repeated over and over again. What more could we want. “FLASH” it. “We received negatives from adjacent NavFacs, – we were on our own. We continued to report the “FLASH” for about two days – same in and out pattern and duration. We stirred up a lot of interest and attention for San Sal.

Then it happened, the paper on the SDR was running out and had to be changed. In the course of changing the paper it was a requirement to clean the roller. “That is when we saw it – an eye lash on the roller... The exact length as our TOI in and out duration... YES, we had been FLASH-ing an eye lash stuck on the rotating roller... The out going “downgrading” message was rather embarrassing... (Ed Smock SO1-P2 San Sal)

1963-64 – NavFac San Sal “Flashback” (30 Sep 2007)

Ed, I just skimmed the two parts of "Our Book" and can only say - Holy S***. A very impressive book. Lepak was still on San Sal when I got transferred in from Ramey, but all the things you write about happened prior to my arrival. However when our class finished training, we were put to work sanding and varnishing the writing arm on the chairs that served as our desks. I am sure you know exactly what is coming as Lepak managed - no one knows how as there were no witnesses - to spill a full gallon of the varnish all over the deck. Fortunately, I was put to work finishing the varnish while Lepak and someone else had to clean the deck. Some things just never change.

Mr. Clock - well your assessment that he was pretty universally disliked is a very generous one. To add to the bizarre Clock Stories from the Twilight Zone, he is my contribution. I had written ahead from Ramey for permission to bring my Luger with me. On arrival, I took it to Mauny who checked it into the base armory for me. Next day, before assuming duties, several of us took some M-1s, 1911s and my Luger out to do some target shooting. No more than a few rounds had been fired when Clock came barreling over to the line in his jeep. He got out and walked directly to my Luger, took it out of the holster and began shooting. After a few rounds he asked me if I had ever hunted Baboons. I said I had not. His response was, Too Bad because shooting Baboons was very dramatic - the clutch their chests and spin around before dying - just like shooting people. Think I got religion right after that. What I recall about his brother was he was as crazy, but much more subtle.

While on San Sal one of the fellows found a bottle (at east beach if I remember correctly) with a note in it from a little girl asking for money. We took up a collection and sent her some money - \$40 to \$50 as I recall. Turns out she was from a well to do family in New York and had thrown the bottle overboard while on a cruise. Her mother sent us all a letter thanking us for our kindness and generosity. (Reply from Ed Smock – Yes, John Williams and I found the bottle. The young girl had written it to the Easter Bunny!!!! After we took up the collection, we mailed it to her and signed "The Easter Bunny".... We received a very nice letter thanking NavFac 106 and the U.S Navy for making a little girls dream come true. I have the letter somewhere in my “treasures”. – Ed Smock)

I enlisted June 21, 1961 right after high school graduation and went to San Diego for Boot. As you said, the recruiters were spinning quite a tale. At that time the Navy had a program called the NESEP (Naval Enlisted Scientific Education Program) and I was interested in Oceanography. In one of the career sessions in Boot, they said that there was a rate called SOO. Told the chief to put me down for that and was one of the few that got their first choice. By the time I got to O school and was in such a highly classified program, there was no chance for NESEP.
Such is life.

Went into the Navy a typical smart mouth Know It All kid and by the time I left BDA for separation from active duty, I was a much wiser person who finally understood that in many respects I had no idea what the questions were much less the answers. I learned many valuable life lessons while serving which have helped me many times in life. I have

an enormous amount of pride not only in having served but especially in having been a part of some of the earlier days of SOSUS.

The Cuban Missile Crisis was the most scarred I have ever been. I did volunteer to fly as an observer on one of the old P2V Neptune's on a couple of reconnaissance missions near Cuba while the crisis was going on. No subs detected but did run across a Soviet refrigerator ship, the Baltijsk, towing the rustiest vessel I have ever seen - it was an old Kotlin class gun boat. You were right, today's population has no idea how dangerous that time really was - closest we have come to nuclear war as far as I know. (Jim Hill SOG3 (Ret) NavFac San Sal)

A Historical, Operational Perspective of SOSUS/IUSS 1954-1991 (B.Rule)

The purpose of this article is to provide an historical perspective of the developing operational capabilities of SOSUS/IUSS from the period of initial capability in 1954 through 1991. The emphasis is on operational successes and failures in threat target recognition and why they occurred. The signal processing and display technologies developed from exploitation of SOSUS/IUSS detections of Soviet/Russian nuclear submarines are discussed as are major contributions by SOSUS/IUSS to refined assessments of the design characteristics and performance capabilities of Soviet/Russian submarines. A chronology of unique operational events is provided to document detection capabilities and ocean basin transmission characteristics including the arctic basin as far north as 87 degrees and the south pacific as far south as 54 degrees.

1954-1962 The Acoustic Dark Ages (B. Rule, civilian)

The operational development of SOSUS/IUSS in terms of threat target signature recognition and exploitation can be divided into two periods: the 1954 - October 1962 period, referred to in this article as the Acoustic Dark Ages, and the Post—October 1962 Acoustic Renaissance Period which extends beyond 1991.

The Dark Ages occurred because SOSUS had no useful Soviet submarine acoustic signature database to provide target classification criteria. Beginning with the Cuban Missile Crisis in October 1962, SOSUS became its own source of representative acoustic signatures and entered the Renaissance Period. Of equal importance, SOSUS developed its own (in-house) target evaluation capability and no longer had to rely on other activities for this support function. Through 1991, IUSS remained not only its own best source of threat target signatures but also provided the basis for the development of acoustic intelligence (ACINT) of great utility to all other passive acoustic sensor systems.

Additionally, SOSUS/IUSS provided the database from which critical and otherwise unavailable assessments of the design characteristics and performance capabilities of Soviet Russian nuclear and diesel submarines were derived. This unique intelligence was the only information that indicated the Soviet Union had developed the nuclear submarine propulsion technology required to achieve speeds of 40+ knots by 1970-1975.

The propulsion system design specifications, horsepower ratings and electrical/auxiliary machinery system operating speeds and functions now known for all classes of

Soviet/Russian nuclear submarines were derived almost exclusively from SOSUS/IUSS data, as was the missile salvo firing interval capability of a Soviet SSBN. Without these contributions, Acoustic Intelligence (ACINT) would not now be the mature intelligence discipline it has become nor would the U.S. Technical Community have had the refined intelligence information upon which to support the construction of higher speed nuclear submarines such as the 688 Class.

1962-1964 - The Evolution from Target Classification by Exclusion to Target Classification by Inclusion (B. Rule)

As the data base of valid acoustic detections of Soviet nuclear and diesel submarines expanded in the 1962-1964 period the classification of SOSUS targets evolved from an exclusionary process (it must be a threat because it doesn't fit any known category) to an inclusionary process (it fits a known data base).

A classic case of classification by exclusion occurred in early 1959 when several WESTLANT SOSUS stations reported detection of an unknown target northeast of Bermuda at ranges greater than 1500 nm.

As more stations gained contact, it became evident the contact was transiting toward the northeast coast of the US at a speed of 23 knots. The signature, which consisted of three strong propellers sources and associated turbines, did not match any known target category. Accordingly, the contact was classified an Unknown, Non-American Submarine, Nuclear.

The contact continued tracking to the west, passing well north of Bermuda. Detection was eventually lost as the contact entered shallow water off the US East Coast on a course that would take it into New York Harbor.

Three days later, detection was regained on the same signature tracking eastbound toward Europe. The target was a large ocean liner that apparently had developed a severe vibration problem. Because no similar signature was subsequently detected, it is concluded that either the vibration problem was corrected or the ship had been retired.

At the time, it was conjectured the ship was the French liner, the *Liberte*; however, this identification was never confirmed. The *Liberte* was a war prize, the German liner *Europa*, which had set a trans Atlantic cross speed record of 28 knots in 1931. It was refitted by the French and entered trans-Atlantic service in 1950. The last crossing was in 1961. The ship was scrapped in 1962.

By 1964, the expanded valid Soviet submarine signature data base provided a reference library that permitted inclusionary classification of SOSUS detections, i.e., it is a Soviet submarine detection because the signature characteristics (and derived assessment of operating mode and speed) match a large data base.

As discussed elsewhere, this advance in acoustic target classification was basically a

“boot-strap” process. The SOSUS system used its own data to improve its surveillance capability, and the better it got, the better it got. (B. Rule, civilian)

Early decisions That Affected the Operational Performance of SOSUS (B. Rule)

The ability of SOSUS/IUSS to provide effective open-ocean surveillance, developed as a function of the ability of the system to be its own acoustic signature data collection activity. This was then, and remains now, necessary because no other passive acoustic sensor system has the capability of providing the variety of acoustic signature data required to effectively support such surveillance.

SOSUS did not fully escape the Acoustic Dark Ages until significant forward-area surveillance/collection assets became operational in 1963. Therefore, those asset deployment and utilization decisions that most affected the performance capabilities of SOSUS before 1970 involved forward-area collection. The below listed decisions had the most impact, pro and con:

Con: the decision, before 1961, to shut-down Project 61, a small test array which could have provided long range detection of Soviet State Acceptance Commission nuclear submarine performance trials as long as 10 years before such events became available for exploitation.

Con: Circa 1961, a decision by the U.S. Intelligence community not to provide SOSUS with collateral information on the design characteristics of Soviet diesel submarine propulsion systems.

Con: the 1962 decision not to place a SOSUS array northeast of Newfoundland because “what we need is an integrated system, not a burglar alarm.” The perspective missing in this decision was that when no one knew what the burglar would look like, an alarm that would assist in recognition and provide early warning was exactly what was needed.

Pro: the decision to install an array on the Near Bank west of Adak, Alaska. This array, which became operational in late 1962, was the first effective forward-area collection asset. It provided unique surveillance capabilities and an enormous volume of Soviet submarine signature data.

Pro: the decision in early 1963 to provide Norway with the AN/FQQ-1 (V) LOFAR system for installation at Project BRIDGE. Con: the decision to only intermittently provide on-site US support at BRIDGE which became the Atlantic counterpart to NAVFAC ADAK. <http://www.vitiaz.ru/congress/en/thesis/110.html>

Pro: the decision in 1965 to install a SOSUS array near Jan Mayen in the Norwegian Sea (terminated at NAVFAC Keflavik and operational in February 1966) following by three additional arrays. (B. Rule)

Project BRIDGE documented background can be found in:

- <http://www.vitiaz.ru/congress/en/thesis/110.html>

Controlling the enemy: cross-Atlantic collaboration in the development of military control systems in the North Atlantic. O. Wicken (Centre for Technology, Innovation and Culture University of Oslo, Norway)

- <http://www.amazon.com/Norwegian-Intelligence-Service-1945-1970-Studies/dp/0714649007>

The Norwegian Intelligence Service, 1945-1970 Olav Riste

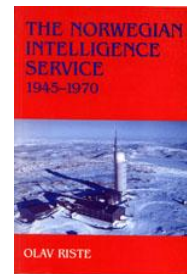
Project Bridge - Related: Norwegian Ministry of Defense in 1993 decided to commission a history of the Norwegian Intelligence Service (NIS) up to 1970 by an independent historian...**Olav Riste** ... had the full co-operation of Norwegian Intelligence and access to all relevant archives. Project Bridge is documented in his “declassified” report. Chapter 8 contains some 20 pages pertaining to the Bridge connection.
<http://www.informaworld.com/smpp/content~content=a755246796~db=all>

The Norwegian Intelligence Service 1945-1970 - Olav Riste

This is a “declassified” history of the Norwegian Intelligence Service (NIS) during the Cold War, based on its secret archives. The author's assessment is that the NIS was "perhaps Norway's most significant contribution to the strength and security of the Western alliance in this crucial period of postwar history".

(Excerpt)

Naval Command North Norway (MKN), following an order issued by the Chief of the Navy, had formulated a briefing on and an assessment of Stave after a year in operation. This report shows that as of 1 June 1964, 20 diesel and four nuclear submarines had been registered. All of them were positive contacts. Among them was a submarine which had been tracked for 86 hours, with results considered by Washington to be the most rewarding intelligence yet achieved in the area of Soviet submarine speed capabilities.



The detection area had turned out to be larger than expected. With a bit more experience, it ought to be possible to detect submarines also east of the line Tromsø—Bjornoya, so that within a six-month period Stave would be providing all information on the submarine patrols carried out by the Russians north of the North Cape. The navy concluded that ‘Project Bridge’ had shown capabilities far beyond all expectations in detecting Russian diesel and nuclear submarines in the Norwegian Sea and from the coast of Norway to the coast of Greenland. Furthermore, BRIDGE was able to provide information on target positions, early warning of submarine operations in the Norwegian Sea and the North Atlantic, and important information on the acoustic ‘signature’ of the new submarine types.

And: Controlling the enemy: cross-Atlantic collaboration in the development of military control systems in the North Atlantic

Project ‘Bridge’, initiated by the Norwegian Defense Research Establishment (NDRE), was funded through various agencies in the U.S. and involved collaboration and

interaction of a number of actors, including scientists, engineers, military personnel and politicians, over a long period of time (c. 1955 – 1970). The main idea of Bridge was to develop a technology for long distance detection of submarines which could be an alternative to or complementary to the American SOSUS/LOFAR systems which were constructed and installed from the mid-1950s. The idea of Bridge was to detect noises from submarine propellers by wiping out background noise and using correlation analysis of signals. The method was based on the fact that background noise is isotropic and the hydrophone therefore would detect the sound of the background noise from all directions, while sound from the submarines would have a specific direction. By alternating between two (or more) hydrophones, background noise could be distinguished from sounds from specific sources.

Development and implementation of the system demanded the involvement of many groups of actors, both in Norway and the USA.

<http://www.vitiaz.ru/congress/en/thesis/110.html> (B. Rule)

1955-1962 The Acoustic Dark Ages: Soviet Diesel Submarine Detectability (B. Rule)

It is now assessed that the Soviet Union probably did not deploy diesel submarines within the surveillance areas of the Atlantic and Pacific SOSUS before 1958 when three-engine ZULU and FOXTROT Class units with long-range capabilities became reliable operational platforms. What probably did occur between 1958 and early 1962 were a limited number of deployments, supported by Soviet surface auxiliaries along both coasts, which involved snorkel-mode operations and, occasionally, surface transits at night.

How dark the Dark Ages were was not recognized until the Cuban Missile Crisis in October 1962 when SOSUS made extensive detections of snorkeling FOXTROT Class Soviet diesel submarines, primarily by NAVFAC Grand Turk, one of which was visually identified by a P2V ASW surveillance aircraft and designated CHARLIE 20.

These snorkel-mode signatures were correctly classified after they became the only SOSUS targets repeatedly detected in the area north of the U.S. Naval Blockade. Even after these acoustic targets were localized and visually identified as FOXTROT Class submarines, there were serious doubts about their validity because their characteristics differed radically from all confirmed acoustic detections of Soviet diesel submarines then available.

This disparity, not fully explained until 1964 by additional SOSUS data occurred because prior to the Cuban Missile Crisis, there was no acoustic signature database on long range Soviet diesel snorkeling submarines.

Basically, SOSUS operators and analysts had no idea what signature characteristics to look for. These personnel should not be faulted as the now mature discipline of acoustic analysis that evolved from exploitation of SOSUS data had not yet boot-strapped itself out of the Dark Ages in 1962.

In 1964, the burgeoning signature database on Soviet diesel submarines, primarily from Project BRIDGE in Norway, was applied to a review of those SOSUS targets detected between 1955 and 1962 that had been submitted to the Data Processing Unit of the Brooklyn Naval Shipyard for evaluation and documentation. Of the approximately 30 targets then still available for review, only one, a NAVFAC Cape Hatteras target of January 1962, was considered to have been a possible valid detection. That target, detected at night, appeared to have been produced by two, six.-bladed propellers at a typical surface transit speed for FOXTROT and ZULU Class Russian diesel submarines.

No snorkel-mode signatures were identified during the review of the pre-1962 data; however, as discussed above, such signatures would not have been recognized by SOSUS watch standers if detections had occurred.

Another factor affecting the depth of the Dark Ages was the assessment that Soviet diesel submarine propulsion systems were “continental” (European) and used 4-cycle diesel engines to directly drive three-bladed propellers. This position, still taught at the Fleet Sonar School, Key West, as late as 1961, and used as a SOSUS target classification criteria at least as late as 1960, was based, in part, on a series of signatures given Roman Type designators: Roman I - Roman V. The sources of these signatures, detected in the Black Sea by a small test array, now are assessed to have been three bladed Soviet naval surface ships. The different Roman type designators were based on the blade rate spacing and represented the same type of ship at increasing speeds.

The assessment that ocean-going post World War II series production Soviet diesel submarines used 4-cycle diesel engines persisted despite the fact that use of the Kolomna 37D, 6-cylinder, 2-cycle diesel had been known for several years. This information was not made available to the SOSUS community until after 1961.

Finally, the Dark Ages persisted as long as they did because Project 31, the Black Sea system, and another forward-area test array, Project 61, were intentionally shut down. This decision was made because these systems were detecting Soviet targets at ranges of several hundred nautical miles in areas where confirming visual identification was not possible, and it was not then believed possible to “identify” the contacts as submarines based on signature analysis alone. (B. Rule, civilian)

1955-1962 The Acoustic Dark Ages: Soviet Nuclear Submarine Detectability

(B. Rule)

Although, relatively speaking, there was more representative signature information available on Soviet nuclear submarines during the closing years of the Dark Ages than there was on Soviet diesel submarines, this data was considered in context of expecting the early (Type 1) nuclear submarine to be quiet. Since some of the earliest detections implied these submarines were extremely noisy, these events were often evaluated non-submarine. As was the case with Soviet diesel submarine, SOSUS did not have an acoustic signature data base of Soviet nuclear submarine representative of long range detections.

The first known SOSUS detection of a deployed Soviet nuclear submarine occurred on 2 July 1962 when a NOVEMBER Class unit entered the North Atlantic through the Iceland-Faeroes Gap. NAVFAC Barbados detected the NOVEMBER for six hours at a range of about 3200 nautical miles. This submarine was detected by HMS OBERON at about 60N several hours later. The Barbados signature was evaluated as a U.S. Naval auxiliary by the Data Processing Unit. The OBERON data was sent to the Office of Naval Intelligence. The two data sets were not correlated until 1964. By which time Project BRIDGE in the Norwegian Sea and both Pacific SOSUS and Atlantic SOSUS had made numerous detections of Soviet nuclear submarines, some at ranges between 3,000 and 4,000 nautical miles.

Another circumstance that complicated the recognition problem was the inordinately strong blade rate detections made at ranges of about 400 nautical miles by NAVFAC Adak as Type 1 Soviet nuclear submarines operated over the continental shelf just east of the Petropavlovsk naval base on the east coast of the Kamchatka peninsula. Some of these detections consisted of five or more blade rate harmonics on all 40 beams. Since it was not believed that any nuclear submarine could produce such strong blade rate signatures, these detections were evaluated only as “possible” submarines.

The Dark Ages Soviet nuclear submarine “detection” event that best illustrates the approach to target classification then extant occurred in April 1959. A contact consisting of multiple, non-integrally-related narrowband sources was detected by several Western Atlantic SOSUS arrays while east of the Mid-Atlantic Ridge. By the time the target was several hundred miles northeast of Bermuda, it had been determined that the speed was 23 knots, the course was about 270, and a strong blade rate spacing was associated with other components which were assessed to be turbines. Based on these characteristics, which did not match any known ship or submarine, and the derived speed, the target was classified as an Unknown Non- American Submarine Nuclear. The contact continued to track westward and was lost in the approaches to New York harbor. Three days later the contact was detected tracking eastward from the approaches to New York Harbor. The target was a French ocean liner. This approach to classification (if you don’t know what it is, it must, by default, be a Soviet submarine) was typical of the Acoustic Dark Ages. (B. Rule)

Run Silent Run Deep – “Blade Rate”

For a refresher on terms like “Blade Rate “used throughout “Our Book” you can consult any number of DOD web articles.. <http://www.fas.org/man/dod-101/sys/ship/deep.htm>
(Ed Smock)

1962-1991 Introduction to the Acoustic Renaissance Period (B. Rule)

As previously discussed, SOSUS emerged from the Acoustic Dark Ages because the system became its own best source of signature data and of equal importance, because the system developed its own (in-house) target evaluation capability during the post-1963 period. SOSUS no longer had to rely on out-house personnel who had never seen a “live” detection of a Soviet submarine and who were not familiar with the often unique detection capabilities of the SOSUS arrays such as Barbados, Adak and Project BRIDGE.

The Soviet submarine signature data needed escape from the Dark Ages was provided primarily by NAVFAC Adak and by Project BRIDGE, a 10-hydrophone experimental array that terminated at the island of Andoya on the northwest coast of Norway. In “THE NORWEGIAN INTELLIGENCE SERVICE 1945-1970,” the author, Riste, states that “Project BRIDGE had shown capabilities far beyond all expectation in detecting Russian diesel and nuclear submarines in the Norwegian Sea and from the coast of Norway to the coast of Greenland.”

In this unclassified publication, Riste also notes that “as of 1 June 1964 (after one year of operation on a purely experimental basis), twenty (20) diesel submarines and four (4) nuclear submarines had been detected. Among them was a (nuclear) submarine which had been tracked for 86 hours, with results considered by Washington to be the most rewarding intelligence yet received in the area of Soviet submarine speed capabilities.” Riste further states that “BRIDGE produced extremely important information on target positions, early warning of submarine operations in the Norwegian Sea and the North Atlantic, and important information on the acoustic signatures of new submarine types.” It was primarily the performance of BRIDGE that convinced the U.S.Navy in 1965 to install a 40-hydrophone SOSUS array near Jan Mayen.

The critical analytical capability developed by SOSUS during the 1964 to 1966 period was the ability to understand narrowband signature radiation mechanisms in terms of the design characteristics of both nuclear and diesel submarine propulsion systems, the specifications of which were derived from SOSUS data. For the first time, it became possible to determine the speed of SOSUS targets from their propeller blade signatures by applying turns-per-knot values, often derived from SOSUS data. This evolutionary - and revolutionary - development can be described as a self-reinforcing, bootstrap process.

The more that was learned, the more it became possible to learn. Rather than being a user of collateral intelligence, SOSUS became a producer of critical and otherwise unavailable intelligence on the design characteristics and performance capabilities of Soviet nuclear and diesel submarines.

Much of this information did not agree with official Navy positions on the capabilities of Soviet “unconventional” submarines which were not officially described as nuclear-powered until 1966, and then only because their SOSUS documented performance capabilities made any alternative propulsion system even more unlikely. At a time when ACINT indicated the NOVEMBER Class SSN was capable of 30 knots, the official Navy position remained 22 knots because it was not believed possible that Soviet technology was capable of developing a nuclear propulsion plant with more than the 15,000 horsepower installed on the USS NAUTILUS.

It is now known that the Type 1 propulsion system used by the NOVEMBER, first operational in 1958, developed 35,000 horsepower. In the mid- to late-1960s, the Soviets were building the PAPA Class SSGN which achieved a speed of 45 knots in 1970 with

80,000 horsepower, and, later, the ALFA Class SSN: 41 knots with about 40,000 horsepower.

These platforms, and later the TYPHOON SSBN and the OSCAR SSGN, each with about 100,000 horsepower, remain classic examples of Soviet obsession with performance, with little regard for the resulting acoustic vulnerabilities before the late 1970's. (PAPA was designed to have a 10-knot speed margin over U.S. nuclear powered carriers.)

Note: three weeks before acoustic data provided the basis for assessing the maximum speed of the ALFA to be 41 knots, the official Navy estimate of 32 knots for ALFA was lowered to 28 knots because it was not thought ALFA had the internal space required for a propulsion system capable of 32 knots. What was missing in this equation was recognition of the fact that ALFA used a high-power-density, lead-bismuth-eutectic reactor system. (B. Rule Civilian)

1963 - Contributions of U.S. SOSUS and Project BRIDGE to the Acoustic Renaissance (B. Rule)
<http://www.vitiaz.ru/congress/en/thesis/110.html>

In 1963, NAVFAC Adak and Project BRIDGE complemented each other in terms of acoustic signature collection. NAVFAC Adak provided extensive detections of Soviet nuclear and diesel submarines conducting local-area operations near Petropavlovsk, Kamchatka, and some out-of-area activity while Project BRIDGE provided detections of out-of-area transits and Norwegian Sea patrols.

The most important of these acoustic Renaissance targets and their ACINT ramifications are discussed below. Other BRIDGE and NAVFAC Adak targets are described, together with important open—ocean Pacific and Atlantic contacts, in the chronology section.

On 16 May 1963, the Data Processing Unit issued a summary report of the analyses of 10 NAVFAC Adak detections of Soviet diesel submarine conducting surface-mode operations in the Petropavlovsk area between Dec 19, 1962 and February 21, 1963, all at ranges of about 400 nm. None of these signatures contained the gear-driven engine support systems previously considered to an absolute requirement for positive classification of any SOSUS detection as a Soviet diesel submarine. As much as the Cuban Missile Crisis snorkel mode signature detections, these 10 Adak targets provided the basis for revised SOSUS target classification criteria that were based on actual SOSUS data rather than non-representative collections by other sensors.

In October 1966, NOVEMBER Class SSN, pendant 147, trailed the USS SARATOGA (CVA 60) for 850 nautical miles at ranges between three and 30 nautical miles. The Soviet unit, designated COMASWFORLANT Track Number 0076-66, maintained speeds of 23-24 knots for 26 consecutive hours, took a one-hour communications break

and then resumed 23-24 knot speeds for another 15 hours.
http://en.wikipedia.org/wiki/November_class_submarine

In January 1968, another NOVEMBER Class submarine, designated XRAY 5/ROMEO 1 operated at 25 knots for 37.7 consecutive hours while unsuccessfully trying to intercept the USS ENTERPRISE (CVAN 65) during a transit from NAS Alameda to Pearl Harbor. The submarine was located within 10 nautical miles of 41-18N, 134-22W at 041101Z Jan 68 and, 37.7 hours later, within 25 nautical miles of 28-24N, 146-23W.

<http://www.submarine-history.com/NOVAfour.htm>

1968 A Soviet "November" class nuclear submarine surprised the U. S. Navy by keeping up with a 31-knot high-speed task force led by the nuclear-powered aircraft carrier "Enterprise.")

All remaining Project BRIDGE target documentation is retained by the Norwegian Intelligence Service; all remaining U.S. SOSUS target documentation is retained by the U.S. Office of Naval Intelligence. (B. Rule)

Footnote to History

Between 24 and 28 June 1963, the Royal Norwegian Navy provided the services of a German World War II Type VIIC diesel submarine equipped with a snorkel, and recommissioned as KNM KYA. The KYA provided target services during Exercise HUBRO (Owl) to evaluate the detection capabilities of Project BRIDGE subsequent to the installation of the AN/FQQ-IV lofar equipment on an experimental trial basis.

At the maximum exercise range of 320 nautical miles, BRIDGE detected strong cavitation blade rate harmonics from one, three-bladed propeller during snorkel-mode operations. KYA was detected 100 percent of the time the unit snorkeled and intermittently during surface mode transits between snorkel-mode operating areas.

It is concluded that had SOSUS been operational during World War II, it would have been effective against the snorkel-equipped German Type XXI units, and probably against both Type XXI units and other classes during surface-mode transits at speeds above 10-12 knots at ranges of at least 200-300 nm. (B. Rule)

22 Nov 1963 - JFK Assassination - Where were you?

I was standing on the display floor at NavFac Barbados looking up at the Navy radio (WWV monster) and listening to the announcement in disbelief... Driving home later, many of the local people actually stopped my car and spoke of their sorrow. Throughout the evening and for the next week or so they would come to the house, stand outside and call out - "Good-night" (this, their greeting would equal "good-evening" to us) and when acknowledged, they would share their feelings with us... Memories like this will never be forgotten and must be shared... (Ed Smock SOC NavFac Barbados)

22 Nov 1963 - JFK Assassination - Where were you?

Three days after the assassination, I was flying the Atlantic to evaluate the detection of three GOLF Class Soviet SSBs reported southbound through the Norwegian Sea. It was a

false alarm, all three detections involved the same surface ship, twice transiting south with a transit north in between. While there, I learned that Adak isn't the only location that has horizontal snow: “It doesn't snow much here, but a lot passes through.” (B. Rule, civilian)

1963-65 Project HARP Barbados W.I.

It was no secret when the HARP large gun was fired in Barbados. We could hear it from all over the island. Project HARP (High Altitude Research Project) was officially publicized as a means to develop an alternative method to launch payloads into space (instead of using rockets). This incredible 16-inch gun (100 tons) measured 120 feet long at one time and was later extended to 176 feet long. (Ed Smock SOC Barbados)
<http://www.astronautix.com/articles/abroject.htm>



May 1963 - But He's a Canadian!!

In early 1963, COSL was tasked to put together a liaison, training and performance evaluation team of two to go to Norway coincident with the IOC of Project BRIDGE. LT Fred Jones, RCN, handled the political and technical liaison issues while I did the training and system performance evaluation.

COMSUBLANT became extremely upset when they learned a Canadian was representing the USN in bilateral negotiations with Norway; however, COSL, CAPT Gordon at the time, stuck to his guns and told SUBLANT he had sent the best man on his staff to do the job, and events proved him right. Fred did an outstanding job. (B. Rule, LT)

May 1963 - Learn Who Speaks What Language Before You Unload.

When Project BRIDGE went operational in early June 1963, there was still no agreement between the USN and NDRE (the Norwegian Defense Research Establishment) about which processing system would be considered primary: the AN/FQQ-1(V) lofar system or the NDRE developed LYDIA (the lady who listens and reasons) system which provided excellent bearing information but no basis for classification.

In fact, there was disagreement among the Norwegians who sat in one end of the station “living room” arguing among themselves (in Norwegian) while the Americans sat at the other end of the space staring out the window. One of our group was LCDR Steig Mylander, USN, attached to the MAAG (Military Aid and Assistance Group) who were the in-country activity that coordinated USN support of Project BRIDGE.

The phone rang. Mylander picked up the phone and spoke in fluent Norwegian. From the other end of the room there was dead silence as the NDRE personnel appeared to be trying to remember what they had said and about whom they had said it.

It turned out that Mylander had lived in Oslo until he was nine and still had a slight Oslo-

area accent when he spoke Norwegian. From then on Mylander was introduced with a caveat: “Be careful, he speaks Norwegian very well.” (B. Rule, LT)

10 Apr 1963 - Loss of USS Thresher (SSN 593)

USS Thresher (SSN 593) sank off New England with the loss of all hands (129).
Subsequent playback of SOSUS recorded data confirmed the event and position. HMCS
Shelburne was instrumental in the effort.

<http://www.history.navy.mil/danfs/t/thresher.htm> (Ed Smock SO1 San Sal)



On Eternal Patrol



Thresher is in six major sections on the ocean floor, with the majority in a single debris field about 400 yards square. The major sections are the sail, sonar dome, bow section, engineering spaces, operations spaces, and the tail section.

10 Apr 1963 USS *Thresher* (SSN-593) - Disaster

<http://www.history.navy.mil/danfs/t/thresher.htm>

In company with *Skylark* (ASR-20), *Thresher* put to sea on 10 April 1963 for deep-diving exercises. In addition to her 16 officers and 96 enlisted men, the submarine carried 17 civilian technicians to observe her performance during the deep-diving tests.



On Eternal Patrol

Fifteen minutes after reaching her assigned test depth, the submarine communicated with *Skylark* by underwater telephone, apprising the submarine rescue ship of difficulties. Garbled transmissions indicated that--far below the surface--things were going wrong. Suddenly, listeners in *Skylark* heard a noise "like air rushing into an air tank"--then, silence.

Efforts to reestablish contact with *Thresher* failed, and a search group was formed in an attempt to locate the submarine. Rescue ship *Recovery* (ASR-43) subsequently recovered bits of debris, including gloves and bits of internal insulation. Photographs taken by bathyscaph *Trieste* proved that the submarine had broken up, taking all hands on board to their deaths in 8,400 of water, some 220 miles east of Boston. *Thresher* was officially declared lost in April 1963.

Subsequently, a Court of Inquiry was convened and, after studying pictures and other data, opined that the loss of *Thresher* was in all probability due to a casting, piping, or welding failure that flooded the engine room with water. This water probably caused electrical failures that automatically shutdown the nuclear reactor, causing an initial power loss and the eventual loss of the boat.

Thresher is in six major sections on the ocean floor, with the majority in a single debris field about 400 yards square. The major sections are the sail, sonar dome, bow section, engineering spaces, operations spaces, and the tail section.

<http://www.history.navy.mil/danfs/t/thresher.htm>

10 April 1963, NAVFAC Shelburne detected the hull collapse of the USS THRESHER (SSN 593) at 1418.4Z (0918.4 local, corrected for sound travel).

THRESHER was later located within the 4 by 8 nautical mile position ellipse derived by SOSUS from time difference loci of the collapse event and the last NAVFAC Shelburne bearing for narrowband signature sources. (B. Rule)

May 1963 - The THRESHER Disaster; They Had to Hang Someone

Having done the time-difference (TD) location of the THRESHER implosion event that occurred at 100918.4R April 1963 (an 4 by 8 nm ellipse) and having analyzed the signature detected by Shelburne at a range of about 30 nm (grams only; there were no tapes), I was selected to testify before VADM Austin's THRESHER Board of Inquiry at the Portsmouth Naval Shipyard in May 1963. Two others went with me, a CAPT Leahey, BUSHIPS, and Sam Sebastian (sp?), NSRDC.

As we were checking into the BOQ, we observed an individual coming down the stairs who looked as though he had been through absolute hell. I think it was Sam who said: “I’ll bet that’s the CO of the SKYLARK.”

Sam was right; it was the CO. SKYLARK had been the escorting ASR and the CO, not believing THRESHER could possibly have been lost, did not report his concern for at least several hours (six?).

We heard he had been raked over the coals by the Board even though there was absolutely nothing he could have done. (The “someone” has to hang syndrome) THRESHER’S last garbled UWC transmission was at 0917R and may have included the figure 900. One can conjecture (but never prove) that this was the depth by which THRESHER had exceeded her 1300 foot test depth. (She was scheduled to be at 6 knots, 1300 feet when she first reported a problem.) If so, THRESHER was at 2100 feet at 0917R and sinking at about 100 feet a minute (1 knot) to collapse one minute later.

I testified about the TD reconstruction and the “09” on THRESHER components about seven minutes before collapse while the others provided associated/supporting statements.

In late May, I left for Norway, not to return until late July, and then almost immediately went back to Norway until early September. I left the “club” on 11 Sep. Later I learned the Kindly Old Gentlemen (ADM Rickover) had called CAPT Leahey and Sam Sebastian in for “discussions” after which they were reported to have recanted their testimony which was then stricken from the record. I was never contacted on the matter; however, I have no doubt my testimony also was stricken. (B. Rule, LT)

1963 - Loss of USS Thresher (SSN 593) (inquiry)

CDR Kelly and I were summoned to Adm Rickover's office in BUSHIPS to answer some questions re this thing called SOSUS. He was not in a jovial mood because it seems he got word that a mutual WO friend had told CINCLANTFLT that the reactor blew up!

He really grilled me and seemed somewhat relieved when I said that on a BB gram a loud noise could appear black and most likely an implosion or an explosion would appear as a black noise. He seemed somewhat mollified until the Admiral in charge of ASR's returned his call and Rickover told him that if he didn't return the qualifications to the radioman talker (who might have been relieved because of the garbles in communications with Thresher) of the ASR, he would file charges against the Admiral. Rickover wasn't hot, he was on fire.

When we got out of there we were thanked by the head civilian who said he understood everything and would be able to answer questions for the Admiral at any inquiry regarding the reactor. We came away feeling it was worth the small arms fire. (Frank Gambino NavElex)

THRESHER: A Disturbing Assessment - Bruce Rule (1 Nov 19)

The THRESHER UQC (underwater telephone) exchanges with her escort ship, the USS SKYLARK (ASR-20,) and - primarily - the SOSUS (HMCS Shelburne) acoustic data support the conclusion that THRESHER knew that her depth was increasing (going deeper than test depth) 48 seconds after the reactor scrammed at 0909.0R and she lost propulsion. The basis for that conclusion was the detection of a failed attempt to blow ballast 48s after the primary electrical bus began exhibiting stability anomalies.

Further THRESHER sank from 1300-feet at 0909.0R to collapse at 2400-feet at 0918.4R on 10 April 1963. That's an average sink-rate of 117 ft/min or 1.15 knots. The THRESHER Court of Inquiry erroneously concluded a sea-connected pipe between two and five inches in diameter had burst and the resulting flooding caused loss of propulsion. Such an event would have created impact generated resonances - "screaming" narrowband energy - that would have "insonified" the entire western North Atlantic basin, and no such detection occurred. Further, THRESHER never reported flooding to SKYLARK.

These data support the conclusion that THRESHER was ballasted heavy and held at her depth by speed and the action of her dive planes (slightly on rise)

The question that arises from these assessments is: "Why was THRESHER trimmed heavy when - if she had been trimmed light and held at depth by action of the dive planes - she would have risen when she lost propulsion, and the disaster would not have occurred.

A technical exchange site that I monitor and contribute to provided the following comment relative to THRESHER.

The ship operators of the day (1963) tended to ride the ship on its planes—only so instead of holding the ship down as it was positively buoyant; they held it up as they tended to run negatively buoyant.

So, we have that disturbing conclusion: THRESHER was lost because she was out-of-trim (heavy) at test-depth and, when propulsion was lost, her inability to blow ballast because of the formation of ice in the air line, caused her sink to collapse at almost twice test depth.- Bruce Rule (1 Nov 19)

1963 - NavFac Barbados ORI drill canceled "before it begins"

COSL's ORI team (with staff member LT Fred A. Jones (RCN)) was onboard giving us our semi-annual ORI inspection. Mr. Jones had prepared a "tape" that contained a signature-look-alike, of a "pine tree" (a term common to most of you readers). However, this time I really mean pine tree, like a "Christmas tree"... When the tape was done playing, the reader had written up all the shifts and drifts of the branches...and, it did in fact look like a Christmas pine tree...People went to great lengths in those days to generate a signature that made you look stupid when it was over (i.e., how many of you have written up your own name!!!! - come on, admit it) our friend Bill Tilley (May he rest in peace.) was great at making this type of signature.... He once had his watch write up a floor fan (sitting by the tape deck) as he increased its RPM... That part of the story is just to set the stage....



While the ORI team was preparing to start the more serious controlled operations drill, we detected and wrote up a real signature of interest with a relatively high confidence indicator. Mr. Jones and ORI members watched and listened to our watch team's discussion pertaining to the TOI... When we gained additional info, we raised the confidence accordingly.... Our LOB put the TOI in the GIUK Gap area.... Mr. Jones said to me "Smokie" - what do you have there? - I replied - a Soviet HEN class submarine - Sir... Fred said "show me why you think that... - which I proceeded to do... Mr. Jones hollered "do not start the tape....stop the drill"... they have a real one here....

(Remember, a year earlier, on 2 Jul 62 - NavFac Barbados made the first SOSUS detection of a Soviet nuclear submarine as it crosses GIUK Gap into the Atlantic http://www.chinfo.navy.mil/navpalib/cno/n87/usw/issue_25/sosus2.htm) This was a big thing for SOSUS, as this was only the second or third Soviet nuclear submarine detected to date... And, we did it in front of COSL... We passed the "cancelled ORI drill"... (Ed Smock SOC Barbados)

1962-1965 NavFac Bermuda (Nick's Memories)

- SOCM Warren H. Smith more commonly referred to as SOCKEM---a truly great Master Chief who ruled with an iron fist. White shorts with knee length black socks and black shoes looked ridiculous on Enlisted--but several did choose to wear them.
- Still had BM and SH ratings standing operations watches.
- T-Building still a Quonset hut that leaked badly when it rained; and it rained frequently--lots of plastic covering equipment.
- Only 2 day workers.
- Watchstanders would get off watch--change clothes in the parking lot---go on liberty--return just in time to change clothes in the parking lot and go on watch. Great liberty for single sailors especially during College Week.
- Weekly parties.
- 20 mph maximum speed limit except for 25 mph on the base.
- P5M seaplane rides.
- Submarines would come into the Navy Annex pier and the crew would immediately head for the NavFac BEQ to take showers and use up a lot of our fresh water.

- SO1 Dan Cushing as Training PO made some truly remarkable training aids out of cardboard ----to scale, with knobs that turned----AN/SQS-4 Sonar Console---MK-5 Attack Director---Bathythermograph---am sure that many who successfully passed advancement examinations can thank him for his efforts. He should have been awarded a medal for his efforts.
- Remember a watch section reporting a supposed contact on one of ours----but nothing on the grams to substantiate such----grams had to be forwarded and COSL sent the command a reprimand for reporting something that they could not see. Our CO LCDR R.C.E. Craven responded with a message to COSL that stated "At this command we remember Pearl Harbor --- we prefer to be safe rather than sorry." COSL responded with an apology.
- Kept busy on most nights with activity in NBOA. Just pull up a stool and keep writing.
- Cuban Missile Crisis (Oct-Nov 1962)-immediately went to 3 section 1-1-1-32---glad that did not last long. Had a perfect match for DPU-18 page W-4 and still got evaluated UnkSurf as did everything else in those days. I wonder how many actual submarine contacts were evaluated as UnkSurfs.
- Grand Turk contact ----BZ.
- HEIFER---Stan Kloc making the rounds installing the equipment.
(Nick VanHerpen SOI, STI, STCA - NavFac Bermuda)

1964 – “”KaBoom””

In 1964, the Project BRIDGE site was located in the “outermost” house (at the base of an 800-foot cliff) in the small fishing village (then 15 houses?) of Stave on the west coast of the island of Andoya 180 nm north of the Arctic Circle. Nearly all the watchstanders were civilians from the island or nearby areas, and they retained their local interests of hunting and fishing. One of the second group of watchstanders whom I trained in 1964 was Ragnar Schaug-Pettersen, now a very good friend, who received the CAPTAIN JOSEPH P. KELLY AWARD in 2000. Another was an individual by the name of Wangen. Ragnar told me the following story about Wangen who had been trying to shoot a flock of geese that fed near the station.

“”I was returning to the station late one afternoon when I saw the geese Wangen wanted to shoot. They were feeding in the field next to the station. I ran into the station and told Wangen, who was on watch, that ‘there are geese feeding in the field.’ Did Wangen grab his gun which was standing in the corner? No, Wangen ran across the room and connected two wires. There was a thundering explosion; Wangen had baited the field with corn and had ringed the baited area with dynamite.””

There were also unconfirmed reports that station personnel used German machine guns to hunt varying (Snowshoe) hare. So much for sportsmanship when there is the need to put food on the table. (B. Rule, civilian)

1 Jul 1964 - Sonarman (SO) changed to Sonar Technician (ST)

US Navy Sonarman rating changed to Sonar Technician throughout.



1964 Barbados So close to making Chief – but they held it from me.

I had taken the Chiefs exam in early 1964. In April or May I was notified in the barracks one afternoon that the Op's Officer was looking for me. So I called him and he congratulated me on passing the Chief Sonarman exam. The next comment Ops Officer (LT Henry Rempt) made floored me, he said “you were quoted out”. I was soon transferred from Barbados to an Ocean Going Minesweeper – without the advancement.

While on leave and before arriving in Charleston I received a telegram from Ed Smock letting me know I had been picked up on the June supplement and gave me the issue date for Navy Times that listed me for SOC. I or the commands to which I had been ordered never received any word from Barbados regarding this advancement. The CO of the school called me from class one afternoon and while we were conversing in his office he called BUPERS and received verbal authorization for my advancement. (Bob Farver SOC)

(They did that a lot in those days, if you were on someone's list, you did not get the advancement. The same thing happened to RM1 Dunton in May 1963 on San Sal at the time that I made Chief... - I got it he did not... In those days you were given an “A” after your rate i.e., SOCA which meant “acting” – for one year and then the command might or might not give you the permanent Chief's assignment.- The navy “was not” very people oriented in those days. – Sure glad they have changed for the better. Ed Smock)

1965-1967 Centerville Beach “our guys” did not like being seen.

We began getting routine detections on something no one could define. This caused us to send Flash traffic each time. COSP always down graded these contacts but never gave any suggestions as to what they may be from. I became a bit concerned that they would come up from the south, pass each of our stations, and in a few days the track would reverse itself. Having been able to establish a solid speed of advance we knew this was no normal coastal craft (too fast). We had at that time a surface search radar installed on our roof and we never saw any surface traffic. I began checking on ships in port in the San Francisco area and I noticed that a specific vessel was missing when the contact tracked north and then it reappeared in San Francisco following the track south. I cornered CDR Redgate in our training classroom during an ORI to discuss these contacts. I told him what I thought this contact was and he somewhat agreed with me but assured me that the people in that program would not comment on our contact and I do not know if they ever did own up to it. (Bob Farver STC)

3 Jan 1965 - Couple rescued from the sea by NavFac Barbados crew

Official Navy release: (condensed) Don Hessener and fiancé Margot Sorelle from Louisiana were washed to sea from the Animal Flower cave on the Atlantic side of the island (time 1600). OOD LTJG Jim Stalter dispatched 18 crew members to the scene to render assistance. U.S. Navy aircraft from Trinidad and 3 local light airplane club aircraft reported to aid in the rescue. The aircraft dropped life jackets and an inflatable raft however; because of the rough sea and wave action (excess of 30 ft.) these could not be reached by Don and Margot. At 1730 they were drifting SE at about 4-5 knots and further apart from each other. As darkness fell all the cars we could muster were pointed seaward with lights on to give a little hope to the victims and to show that we had not abandoned them. We spread out and moved down the coast accordingly.

At about 1830 a cry for help was heard from the dark-noisy sea, it was Margot. In the dark, we scaled down a 40 foot cliff to the small 100 foot sand beach below - all of the surrounding area was cliff and rock. We formed a human chain to reach out into the water. We reached her, and soon Don was heard and rescued in the same manner. Margot's comment as she was being carried back up the cliff by Chief Smock was "Thank God for the Navy"... The rescue party included: The XO LT Jarwin, LTJG Grzbowski, ENS Jawidzik, Chief Petty Officers Smock, Abel, and Leonard, First Class Petty Officers Heath, Coggon and Fountain, Second Class Petty Officers Motley, Dornig, Price and Tompkins. Third Class Petty Officers Carter, and Luck and Seamen Hensley and Cannizzo.



ENS Jawidzik and wife, LTJG Grzybowski, Mr. and Mrs. Don and Margo Hessener (center), (couple ?- sorry), Leola and Ed Smock, Doc Leonard (right) – Barbados 1965

They were treated by our hospital corpsman Chief (Doc) Leonard. They returned to Barbados for their wedding and we were all invited... (Ed Smock STC Barbados)

1965 – Barbados – “TOI” - COSL did not agree...

I had detection on a “classic source”. The beams looked at the Cape Verde Ghost area. I knew it wasn’t the fishing fleet but couldn’t convince COSL watch.

I was under orders to COSL so I packed up the grams and shipped them to COSL. When I arrived there in January 1966 Bruce Rule (sp) and his team from STIC or whatever they called themselves that year came for a visit. I hauled out the grams and showed them what I had seen. The first words out of their mouths were E-I and E-II that went around South America to the Pacific. May have been the only detection south of Barbados. (ST1 Chuck Harding NavFac Barbados then COSL MEC)

(This would equate to the following San Nic story (circa early 1966) about the LANT to PAC Fleet transfer of XRAY II and III – Ed Smock)

Circa early 1966 - COSP designates San Nic’s contacts XRAY II and XRAY III

LANT to PAC Fleet transfer. We watched them appear together south of San Diego heading NW and watched them continue to their new home...Originally it was thought that what we were seeing was just one (who would have thought that two would be together - not normal)... Then, we at San Nic noticed a slight bearing difference - get the picture.... I had duty weekend as the W.O. (all others to homes at Pt. Mugu on Fridays) and advised COSP MEC that I was separating them, calling them two, and tellers would explain...

COSP disputed my action and said - "not to"... I replied "too late", I had already done it...and, to the Task Group... "What is your name Mister" - the phone said... "Chief Smock says I"... "The other end of the phone said that they were not going to call them two separate TOIs... as they did not believe it... But I knew we were right and would live with our call...I did not change them back to one, continuing to report them separately...

About 8-10 hours later (due TOI transit), PT Sur reported that they now believed that there are two - and they supported San Nic's call...COSP designated them XRAY II and XRAY III... (November (SSN) and Echo II (SSGN)) (Ed Smock STCS San Nic)

And: - XRAY II and XRAY III, the round-the-world Soviet nuclear submarine transfers in 1966, were detected at a maximum range of 4800 nm on a NavFac Adak backlobe bearing. They were found by a watch supervisor coming on duty who asked the off-going watch what they were. The response was: “They look good but we never detect anything of interest on that bearing.” The new supervisor then traced the detections “over-the-hill,” retrieved the previous day and then had to go to the day previous to that. Had the submarines been released earlier for independent-steaming (at higher speeds) by the OTC on the accompanying surface ship, the maximum detection range would have been about 6,000 nm. (B. Rule, civilian)



Echo II

http://en.wikipedia.org/wiki/Echo_class_submarine

Echo class is the [NATO reporting name](#) assigned to the submarines created by six projects of the [Soviet Navy](#). Echos are nuclear-powered guided-missile submarines, which are known in the [Soviet](#) and [Russian](#) Navies as *Podvodnaya Lodka Atomnaya Raketnaya Krylataya* (PLARK). (The [United States Navy](#) gives them the [hull classification symbol](#) SSGN.)

Projects 659 and 659T are known as the "Echo-I" class and projects 675, 675M, 675MU, and 675MKV are designated the "Echo-II" class. All six are externally very similar; Echo-II's are about ten feet longer than Echo-Is. All are decommissioned and laid up at various sites awaiting disposal.

The **November class** is the general [NATO reporting name](#) for the first type of [nuclear-powered submarine](#) that was put into service by the [Soviet Union](#) starting around April [1958](#). In the Soviet Union, they were produced under **Project 627 Kit (Whale)**. These vessels were only armed with [torpedoes](#), although the basic design was modified to create the [Hotel class](#), which carried nuclear [ballistic missiles](#). Fourteen vessels of this type were built.



November

Between 2 February and 20 March 1966 XRAY 2 and 3, a NOVEMBER Class SSN and an ECHO II Class SSGN were transferred from the Soviet Northern Fleet to the Pacific Fleet submarine base at Petropavlovsk, Kamchatka, via the Drake Passage (Cape Horn). Upon being released for independent steaming in the central Pacific by Soviet RADM A. Sorokin, officer in tactical command (OTC) of the accompanying surface ships, the SARYCHEV and the DUNAY, the NOVEMBER and ECHO II increased speed to 20 knots and were detected by NAVFAC ADAK array 2121 as XRAY 2 and XRAY 3 on a back lobe bearing of 113 while near 5 degrees south latitude. This distance, about 4,800 nautical miles, is the longest SOSUS detection range ever documented for a narrowband submarine target. Had XRAY 2 and XRAY 3 been released earlier by the OTC, detection ranges (at speeds of 20 knots) probably would have exceeded 6,000 nautical miles. (B. Rule)

1965 - ASW Exercise: Intruders and Surveillors

There was and still could be an exercise area west of San Diego named the Julie Jez One Area. This was a rich contact area for NavFac San Nicolas as there was almost constant submarine activity.

In 1965 I was a section supervisor; a section usually consisted of two Readers, a Plotter, Supervisor and Watch Officer. We were involved in an ASWEX named Intruders and Surveillors. This was a several day exercise involving a Battle Group and four fleet diesel submarines. The objective was to have the submarines attempt an attack on the Battle Group. The submarines were three FM-10's and one GMV-16. The GMV-16 was the Menhaden and the FM-10's could have been the Spinax, Segundo and Tiru. The FM-10's

I am not sure, too long ago. The Op Order was that two of the boats were to act as intruders and attack while the other two while snorkeling, would surveille and provide attack data.

During the exercise the VP squadrons from North Island San Diego sent several AT/AX AQA operators to San Nicolas as observers. This was their first time at a SOSUS site. Needless to say they were impressed with the detection, analyzing and tracking capabilities. During one period of the events I told one of the Readers “grab a TARF and write up the Menhaden, it just abrupted in on bearing 195.” A little later one of the air crew operators called me aside and said “we are really impressed with how good you guys are but how do you call them by name”. I just laughed and said training. I did not tell him that there was only one GMV-16. (STG2 P. Brown San Nic)

1967 USS Queenfish (SSN-651) Sea Trials (SOSUS Wins)

In 1967 the USS Queenfish got under way from Bremerton, Washington to conduct sea trials. She was to operate in the vicinity of the NavFac Coos Head array location. We received an Op Order from COMSUBPAC via COSP to collect all detection data, analyze, and prepare to critique the Queenfish crew at a later date.

The trials lasted several days with the Queenfish doing every maneuver conceivable. As you can imagine they had the latest boat out and thought they were “running silent and deep”. That boat looked like a freight train. We had everything continuously for the entire exercise.

I had the job of doing the post analysis, organizing the debrief and giving the brief as our Ops Officer was a fleet type and new to the system. The Queenfish contingency arrived: CO, Ops Officer and Chief Quartermaster. I started the brief showing composites of detection data aligned with grams and maneuvering board solutions. At first the CO was in denial that this was his boat and actually became belligerent. This is when more detail was added, machinery etc. The Chief Quartermaster interceded and told the CO that he and the Ops Officer were tracking our findings against the ships log and all was correct. Needless to say the CO was not happy but thanked us for a comprehensive critique. Upon leaving the CO stated that they had much work to do. We later packaged the data and forwarded as per COSP. The Command got a very nice letter of thanks.
(Phil Brown STG2 NavFac Coos Head)

1966-1970 - NavFacs and the Missile Impact location System (MILS)

Each of the NavFacs had been provided with the in-house equipment to record impact events. This included ambient noise amplifiers configured for the array dipoles, which were phones 1 & 39 and 2 & 40. This provided two exact distances from which to triangulate splash and explosion arrivals, therefore location. This data was observed on a 4 channel graphic Sanborn recorder and a 3M magnetic tape recorder. There were other MILS sites staffed by contractor personnel i.e., Eniwetok, Johnston Island and Quadulan Island. Atlantic Down Range facilities were connected to suspended Pentagon arrays with three Sanborn Recorders and three magnetic recorders. These were principally used for submarine missile tests launched from the Cape Canaveral test area.

Guidance and oversight was provided by Navy SOFAR in Bermuda. Occasionally they provided a representative on-site to support.

My first experience as a MILS PO was at NavFac Coos Head in summer 1966. We received an OP Order named Martha, Carol and Diane, to collect data for a 42 consecutive day event. For those of you that have not served at Coos 42 days is the entire summer. With the prep and calibration involved the shortest day was eleven hours and the longest fourteen. The event involved two aircraft diagonally crossing the Pacific dropping SUS bombs on a predetermined schedule. I later learned that the acoustic data was used to place the arrays for NavFacs' Midway, Barbers Point and Guam. Point of interest, I asked my Ops Officer, Lt. Kirkland, if I could train a relief to get a break. Answer, NO and at the top of the OP Order wrote, "some days you get the Bear and some days the Bear gets you".

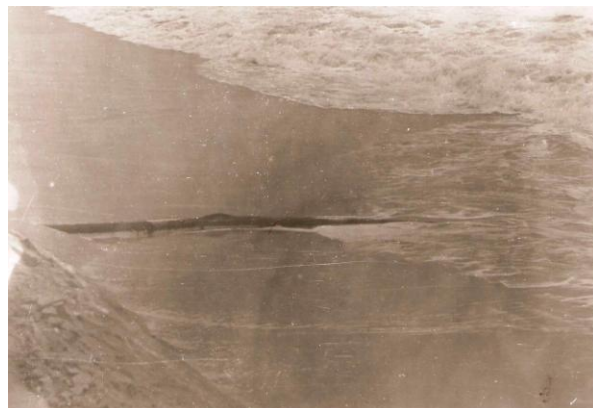
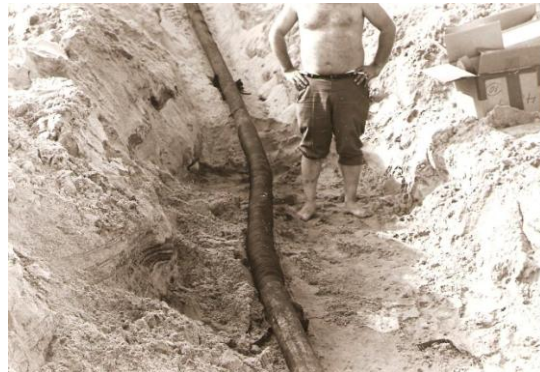
In 1968 I transferred to NavFac Antigua and had the good fortune to be the MILS PO for many exciting test events. The most impressive was the first test of the Poseidon which was phasing out the Polaris. Several government and contractor representatives were on site for the event. The lead for the test was a man named Dr. Ward. I do not remember which agency he was from. I will never forget that we had a direct voice link with the Cape to monitor for launch command etc. The flight time for the "Bird" was 1900 seconds. This was a sub surface launch out of the Atmosphere and targeted for the Pentagon array. Each of the warheads were targeted for various phones.

After the calibration was completed and the ready message was sent the equipment was placed in a static state. Upon hearing the launch command Dr. Ward asked me to come outside with him. This seemed strange as we were about to engage the recorders. Outside Dr. Ward pointed to the dark sky and told me to watch. I saw what appeared to be a shooting star, the Poseidon, then a burst of the warheads. Dr. Ward said "I hope that is the only time you see that in your lifetime". Back inside the triggers were tripped and recorders engaged. Each of the warheads had a 1.8 lb SUS bomb for acoustic triangulation. The biggest miss was 100 meters, that was 40 years ago!!
(Phil Brown STG2/1 NavFac Coos Head, OR)

Circa 1966 – Cape Hatteras Shore End 21 quad damage and repair.

The damage was caused by a bad “nor-east’er” that washed away 7 feet of the dunes and put a “twist” to the cable and caused on outage.

These pictures caused the Commanding Officer LCDR Don Leach to be summoned to Norfolk, VA to appear before ADM Weakley to explain the “physical condition” of our people. Don said it took some fancy words to explain that these two were Otto Erikson (left), and Kenny Baine (right) – WECO Cable Techs/splicer’s. (Ha-Ha) (CDR Don Leach USN (Ret))



1966 Timeframe and forward - "Tricks of the trade"

Beating Time Lates: We would monitor data relay from a forward site and have the TOI plotted (knowing station "P's") and written up long before we ever detected the same event (travel time) (Would you believe 40-45 minute time difference? - believe it...). The tellers would already be in comm, cut and ready to go... We would tell comm "let it go"... (We had to watch out for "negative time late"...COSP really thought we were good...) (Ed Smock STCS San Nic)

Early Intel (inexpensive-autovon): When holding one of our own of a certain class, if we had any doubt as to which one it was, we would call San Diego, or HI etc., sub base and ask to speak to the quarter deck of the "name". If we got the quarter deck - we would take her off the candidate list. After about two calls we normally knew who we were holding... (Ed Smock STCS San Nic)

1966 – NavFac San Nic - Navy Chief halts Vandenberg AFB missile launch

During a launch count down at the Pacific missile range by Vandenberg AFB, the waters around San Nic are monitored as the Island is part of and in the path of the missile range. This day, we were watching the launch on closed circuit TV when they called for a “hold” in the count down. They had an intruder in the water at San Nic. They sent a jet out to the area and the jet dove down toward a small fishing boat numerous times trying to get the man’s attention... They trained their camera in on the area and there sat “Our Chief Brown” (SK type). He was just sitting there fishing and waving at the jet... (We laughed so hard it hurt.)

The Chief had no idea what they were trying to tell him... He continued to fish and as darkness would soon interfere with the launch, the launch was cancelled... All that prep, ships, aircraft, people, etc., was wasted... The Chief (and all of us) were again warned to make sure the area is clear before we go fishing... (Ed Smock STCS San Nic)

Spring of 1967 – NavFac San Nic - Cable Location - "before you dig"

We were in the planning stage of having the Seabees build a training building along side of the T-Bldg. The exact route of the cable (near and around the building) was unknown... We knew where it was near the water as that was rather obvious... The problem was we did not have charts showing where we could dig or not dig - close to the building... WECO was no help in this case either... We were out of options short of digging here and there etc... So, we hired a "cable finding expert"...

Soon he appeared at the air strip and proceeded to the NavFac. We asked him if he needed help with his equipment... He replied "nope", aint-got-none... We thought - "he will be a big help". When we got to the site he asked for two wire coat hangers... He opened the wire hangers and made each into an "L" shape. He picked up 6 or seven small stones and walked back and forth etc., around the building and on toward the water. Dropping a stone here and there as he went. In a matter of 5-10 minutes he had plotted the cable route and advised us not to dig "there" - not "there" etc...

He won many a beer that evening at the club betting he could find small metal items place under white hats etc... He made all of us "believers"... (Ed Smock STCS San Nic)

1965-67 - NavFac San Nicolas Island, CA (more memories)

- Not bad for sea duty, they flew you back to Pt Mugu on weekends if you did not have the duty. Admin took care of all of it, you just had to get on the plane...
- The fishing and fish fries every Thursday night...
- From Pt. Mugu, you could be at the beach, Hollywood, Disney Land, or up in the snow within 1 hour drive...
- A friend like Master Chief Jim Melzer and wife Kay... (Ed Smock STC/STCS)

1967 – COSP Establishes the Expert Oceanographic Analyst Program

EX PROFUNDO MARI SCIENTIA (“From the depths of the sea knowledge”)

The Expert Program was fathered by CDR Redgate and LCDR Don Clifton in 1967 at COSP Treasure Island. It was an effort to enhance the training program and add some personal competition to our unpublished profession. It was also the first effort to establish a breast insignia for our "job". (Ed Smock STCS COSP Treasure Island, CA)



Bob Masciangioli tells of recently (11 Dec 2006) going through some old papers when he came across his Expert Oceanographic Analyst Certificate dated 18 July 1968 signed by Capt Cook COSP.

LCDR. Marcus Aurelius Arnheiter (COSP Treasure Island 1967-68)

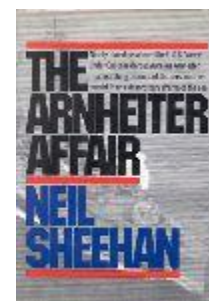
http://www.aspen-ridge.net/DE_R_s/USS_Vance/body_uss_vance.html

For you Navy history buffs interested in U.S. Navy mutinous activity charges whether founded or un-founded, I offer the name of LCDR. Marcus Aurelius Arnheiter.

Ref: Story from a Dallas area newspaper in 1968

Bad Judgment, Lack of Integrity - Reason Cited for Arnheiter Removal

WASHINGTON (UPI) -- The Navy said Friday that it relieved the controversial skipper of a destroyer escort operating off Vietnam because he would create pretexts for shelling the shore -- without even knowing whether friendly forces were in the area.



The Navy cited this and other examples of what it called "bad judgment and lack of integrity" as factors in its decision to relieve Lt. Cmdr. Marcus Arnheiter of command of the USS Vance on March 31; 1966. The Navy made available the findings of a May, closed hearing into the Arnheiter case following an unofficial inquiry in Congress this

week at which only pro-Arnheiter evidence was aired. The unofficial hearing was held by Rep. Joseph Resnick, D-NY.

It was while stationed at COSP Treasure Island San Francisco, CA that I had the opportunity to work with LCDR Arnheiter, after he had been relieved of his command. He was assigned TAD at COSP and my association with him was in doing some reconstruct activity for a recent OOA target of interest. (OTCS Ed Smock COSP T.I.)

23 Jan 1968 - USS Pueblo (AGER 2) captured (X.O. previously from NavFac Centerville Beach)

The USS PUEBLO was a U. S. Navy vessel sent on an intelligence mission off the coast of North Korea. On January 23, 1968, the USS PUEBLO was attacked by North Korean naval vessels and MiG jets. One man was killed and several were wounded. The Eighty-two (82) surviving crew members were captured and held prisoner for 11 months. She may have been carrying sensitive SOSUS data (Subsequent Soviet submarine tactics confirm compromise.). <http://www.usspueblo.org/>

The Commanding Officer was CDR Lloyd Mark "Pete" Bucher the Executive Officer was LT Edward R. Murphy Jr. “LT Murphy was previously stationed at NavFac Centerville Beach.



USS Pueblo AGER-2

Follow-up:

Sad to report that the North Koreans have made the USS Pueblo into a museum (their trophy!!!). EKS



CDR Lloyd "Pete" Bucher's personal effects.

1968 – Soviets Deploy “CVY” Class Nuclear Submarines

Soviets deploy their Charlie, Victor, Yankee class submarines. Magnitudes quieter than the HEN class.

<http://www.fas.org/nuke/guide/russia/theater/670.htm>

http://www.bellona.no/en/international/russia/navy/northern_fleet_new/vessels/28134.html
(Ed Smock STCS COSP Treasure Isl., CA)



Charlie



1967-68 COSP Treasure Island, CA (more memories)

- Living on Treasure Island and San Francisco - nice experience, good tour of duty...
- Living one block away from the "Cow Palace" before getting Navy Housing on Treasure Island. - View of Alcatraz
- Taking Keith and Mark to the Giant's game at Candlestick park.
- Keith (9) and Mark (7) - Alter boys for Christmas Eve Mass - What a proud night for Leola and I... Father Pappirra (ex-Army enlisted) (from Monessen, PA - six miles from my home in Belle Vernon, PA)... (Ed Smock STCS)

1968 – COSP "invades" San Francisco's Candlestick Park land fill

One day as luck would have it, one of the sailors was in the process of gathering the trash (non-burn bag type) from LCDR James P. Redgate's office. By chance he happened to pick up a bag that was slated for the "acid pit"... (We used an acid pit for destruction of classified material) The bag was full of "hot-classified" trash... When a panicked LCDR Redgate saw that the bag was gone - all heck broke loose...

Get a good picture of this: The sailor said he had put the bag in the "Dempsey-dumpster" (yes, the one in front of the entrance door). An alert went out - the Dempsey-dumpster had just been emptied - call the trash company, get the route of the truck... A four man detail, one officer and three enlisted (including me), was formed to follow the route and try to catch up with the truck... All over Treasure Island we went - then down the highway - through San Francisco - continuing to the land fill - where we started searching around in the trash - dodging the trucks, sea gulls, bull dozers etc... But to no avail... We even went to the trash company's office to try and figure out a more precise spot in the dump to look...

No luck - returned to base and a hot shower.... Proper required " possible compromise" messages were submitted etc... LCDR Redgate got orders to Guam as CO when it was commissioned. (3 Dec 1968)... (not as punishment, just a fact...) He wanted me to go with him... he kept saying "Guam is Good"... By that time, I was at the "ROC" (temp MEC while COSP moved to Ford Island, Pearl Harbor, HI) at NavFac Centerville Beach. (Ed Smock STCS COSP Treasure Isl., CA)

1968 – Soviet Submarines circle each PAC SOSUS array

Soviets deploy their submarines to circle each PAC SOSUS array (on top).

We kept thinking - at any time we are going to loose "that" array... But that never happened. The excitement level was very high... Almost had to order people not to come to the building unless you had the watch... But we would never have done that, no way...Morale was never a problem in those days. (Ed Smock STCM Centerville Beach)

Sep 1968 – First VICTOR Class

NAVFAC Keflavik detections of DELTA 110, the first VICTOR Class Soviet nuclear submarine to deploy out of area, identified the design characteristics of the main propulsion power train used by all VICTOR and CHARLIE Class unit: a single shaft driven by one main propulsion turbine through a planetary gear system. (B. Rule)

Late 1960's – NavFac San Salvador “What’cha gonna do!”

In the late sixties a COMOCEANSYSLANT Chief Staff Officer accompanied an inspection team to NAVFAC San Salvador in the Bahamas. San Salvador was an arid, isolated duty station with a twelve month duty tour, and very sparse in amenities. During the visit, the captain decided to lunch at the general mess with the crew. He took his metal tray and proceeded to the serving line.

The mess cook asked the Captain if he wanted mashed potatoes. Receiving an affirmative answer, the cook sloppily dashed the potatoes on the tray, splattering some on his khakis. The Captain calmly brushed off the potatoes and proceeded to the vegetables.

Once again, juice from the sloppily dashed vegetables splattered on the Captain’s khakis. Next in line was the gravy and the mess cook stood with a full ladle! At this point the Captain asked the mess cook, “Son, you have a pretty poor attitude, don’t you?” “Yes Sir” came the reply. The Captain inquired, “Do you know what I could do to you for that attitude?” “No Sir” came the reply, and in amplification the mess cook continued, “I have been busted to Seaman Apprentice, am mess cooking, am stationed at San Sal and I would be interested in knowing just what you could do to me.”

The Captain meekly accepted his gravy and continued through the serving line. (IUSS 35th Anniversary Book)

Death of Royal Canadian Navy - RCN 13 Jan 1968

Obituary - Royal Canadian Navy

Born May 4, 1910 - died Jan. 31, 1968. The RCN passed away quietly on Wednesday, Jan. 31 in the hearts of all loyal Canadian sailors and Wrens after a lengthy illness in Ottawa.

She was the daughter of the Royal Navy and is survived by all her loyal sailors and Wrens.



Her remains arrived at C.F.S. Shelburne on Friday, Feb. 2 where they lay in state in the CPO Mess prior to a full naval funeral at 1600.

At 1600 Feb. 12, 1968 final services for the Royal Canadian Navy got underway in the CPO Mess with the singing of “Eternal Father Strong to Save.” After the reading of the “Orders of Termination of the Canadian Navy” those in attendance expressed their gratitude and love for the RCN and the role it has played in their lives. They also pledged their loyalty and devotion to making the new Canadian Armed Forces a worthy successor.

On completion of the Eulogy read by LCDR F.A. Jones the funeral party fell in outside the CPO Mess. Six pall bearers bore the casket to the gun carriage prepared and waiting at the roadway. The honorary pall bearers took their places alongside the gun carriage as the procession marched quick time to the main gate at which time the procession changed to slow march as they approached the grave site.



LCDR Fred A. Jones RCN

The funeral service was conducted by Father G. D’Entremont (RC) and the Rev. P. MacDonald (P) at the grave site. On completion of the service the firing party rendered a gun salute. The

procession then retreated to the CPO Mess where a “wake” was held for the deceased.



Naval Burial Party at graveside during funeral services for the Royal Canadian Navy at CFS Shelburne 08 Feb 1968.

(As read in the Coast Guard Newspaper February 8, 1968)

8 March 1968 – Soviet “Golf” II Class (K-129) Sinks

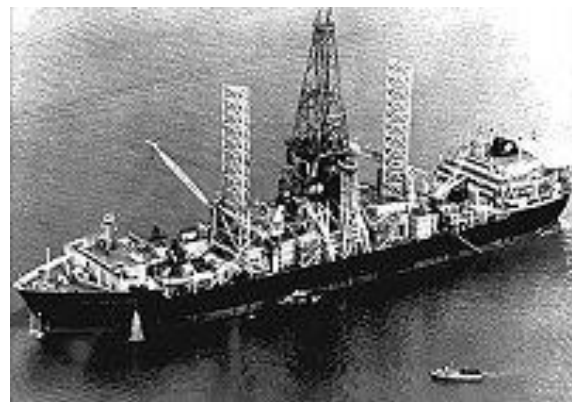
Soviet GOLF- II class SSB sank northwest of Hawaii in 17,000 feet of water. Soviets put everything they have to sea looking for her. We thought "things could get out of hand"... Their whole fleet was coming our way - looking for her. (SOSUS supports Air Force AFTAC system in localizing the wreckage.) (Ed Smock STCS COSP Treasure Isl., CA)

Glomar Explorer program was initiated (Project Jennifer) - to raise her. The CIA cover story was that the ship was being built by Howard Hughes to mine manganese nodules on the ocean floor. Glomar Explorer reports on site in 1974 (six years later). The full truth of what they recovered may never be told however, they did recover the bodies of six Soviet seamen and returned them to the sea... They were provided a full military funeral in Soviet tradition. The ceremony was filmed in good faith to deliver to the Soviets after the cold war ended...<http://www.fas.org/irp/program/collect/jennifer.htm> (Ed Smock STCS COSP Treasure Isl., CA)



On Eternal Patrol

Russian Golf II class submarine K-129



**Glomar Explorer
Project Jennifer**

Soviet submarine K-129 (Golf II)

http://en.wikipedia.org/wiki/Soviet_submarine_K-129_%28Golf_II%29K-129

K-129 was a Project 629A (NATO reporting name Golf-II) diesel-electric powered submarine of the Soviet Pacific Fleet, one of six Project 629 strategic ballistic missile submarines attached to the 15th Submarine Squadron based at Rybachiy Naval Base, Kamchatka, commanded by Rear Admiral Rudolf A. Golosov. In January 1968, the 15th Submarine Squadron was part of the 29th Ballistic Missile Division at Rybachiy, commanded by Admiral Viktor A. Dygalo. K-129's commander was Captain First Rank V.I. Kobzar. K-129 carried hull number 722 on her final deployment.

After having successfully completed two 70-day ballistic-missile combat patrols in 1967, K-129 was tasked with her third patrol to commence 24 February 1968 with an expected completion date of May 5, 1968. Upon departure 24 February, K-129 reached deep water, conducted its test dive, returned to the surface to report by radio that all was well, and proceeded on patrol. No further communication was ever received from K-129, despite normal radio check-ins expected when the submarine crossed the 180th meridian, and when it arrived at its patrol area.

By mid-March, Soviet naval authorities at Kamchatka became concerned that K-129 had missed not one but two consecutive radio check-ins. First, K-129 was instructed by normal fleet broadcast to break radio silence and contact headquarters; later and more urgent communications all went unanswered. By the third week of March, Soviet naval headquarters declared K-129 "missing", and organized a massive air, surface and sub-surface search and rescue effort into the North Pacific from Kamchatka and Vladivostok.

This highly unusual Soviet surge deployment into the Pacific was correctly analyzed by U.S. intelligence as probably in reaction to a submarine loss. U.S. SOSUS Naval Facilities (NAVFACs) in the North Pacific were alerted and requested to review recent acoustic records to identify any possible associated signal. Several SOSUS arrays recorded a possibly related event on March 8, 1968, and upon examination produced sufficient triangulation by lines-of-bearing to provide the U.S. Navy with a locus for the probable wreck site. One source characterized the acoustic signal as "*an isolated, single sound of an explosion or implosion, 'a good-sized bang'.*" ^[1] The acoustic event is claimed to have originated from near 40 N, 180th longitude, ^[2].

Soviet search efforts, lacking the equivalent of the U.S. SOSUS system, proved unable to locate K-129, and eventually Soviet naval activity in the North Pacific returned to normal. K-129 was subsequently declared lost with all hands.

With the aid of SOSUS triangulation, American intelligence resources would later locate the K-129 wreck, photograph it *in-situ* at its 16,000-foot (4,900 m) depth, and (several years later) partially salvage it.

22 May 1968 – Loss of USS Scorpion (SSN 589)

USS Scorpion (SSN 589) sank 400 nm SW of the Azores Islands with the loss of all hands (99), while en route to Norfolk, VA. Subsequent playback of SOSUS recorded data confirmed the event and position. (SOSUS supports Air Force AFTAC system in localizing the wreckage.) <http://www.csp.navy.mil/othboats/589.htm>
(www.txoilgas.com/589-court.html)

At the time that the news was announced over TV, I was in Mike and Valerie Annetta's home in Key West FL. I was in Key West at the FSS working with Frank Gambino and others doing an update to the US Submarine Handbooks... (Ed Smock STCS COSP Treasure Isl., CA)



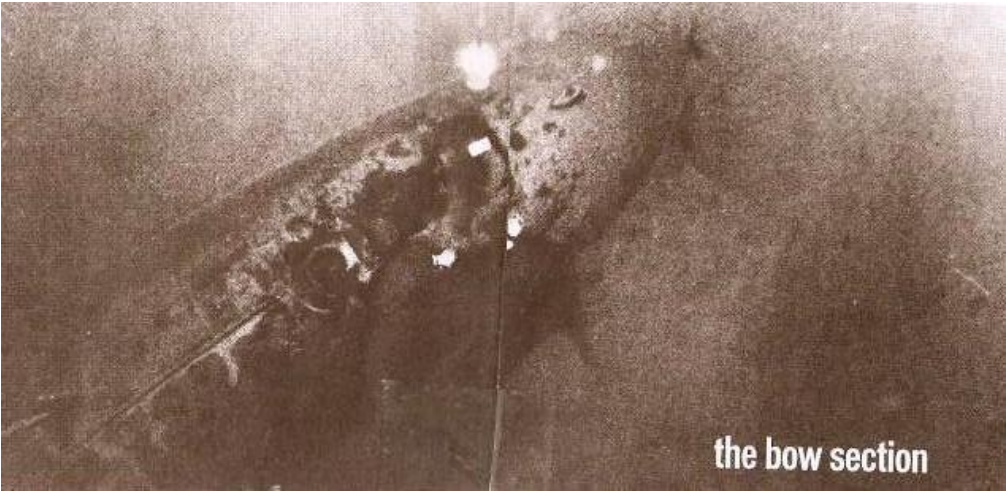
On Eternal Patrol



Bow section of the sunken USS Scorpion containing two nuclear torpedoes on the sea floor.

Scorpion SSN 589 – Rest in peace.





“No Scorpion cover up” (by Stanley L. Carmin, John J. Holdzkom, Ernest Castillo III, Edward K. Dalrymple, George Miller, Frank Gambino, C.L. Polk, Joseph C. Guilfoyle, Bruce Rule, Charles D. Harding, Ronald F. Smith, Frank Harwood, George P. Widenor, Louis E. Haskins and Donald B. Leach)

Ed Offley's book, *Scorpion Down*,” has serious credibility problems in areas that relate to acoustic data. (“USSR sank Scorpion,” Letters, Aug. 13). Acoustic analysis is our forte, so we, the undersigned, have focused our rebuttal on Offley’s allegations based on sound data.

Central to Offley’s conspiracy theory are his allegations that naval intelligence agents confiscated or destroyed all acoustic evidence of a hostile encounter between the Scorpion and a Soviet sub, and manipulated it to prevent the Scorpion Court of Inquiry from learning what actually had happened. He based his hostile encounter on a Sound Surveillance System, or SOSUS, recording that somehow surfaced some 14 years later at a Navy school that trained students in basic acoustic analysis. According to the claims of the students, this tape contained strong multi-source acoustic signatures of Scorpion and a Soviet Echo II submarine, and of a torpedo fired by the Echo II, sinking the Scorpion.

We who have a collective total of 400 years of experience with SOSUS and sound analysis, contend there was no conspiracy to confiscate, suppress, or destroy any data that could have been related to the loss of the Scorpion. In accordance with standing procedures, all data were sent to the SOSUS Evaluation Center in Norfolk, Va., where they were exhaustively analyzed. Analysis results were disseminated within Navy channels and beyond.

Most of the 15 signatories to this letter participated in that collection and analysis. No data were sent to the Office of Naval Intelligence, nor did “men in black” from the Office of Naval Intelligence visit SOSUS stations and make “all the usual threats” as Offley writes. Other than weak implosion signals, there was no SOSUS acoustic detections of Scorpion, an Echo II, or a torpedo, nor were any such detections made by the Canary Island sensors, which were at much closer range to the sinking. We conclude the tape was a composite of three separate events recorded, as commonly done, for training purposes.

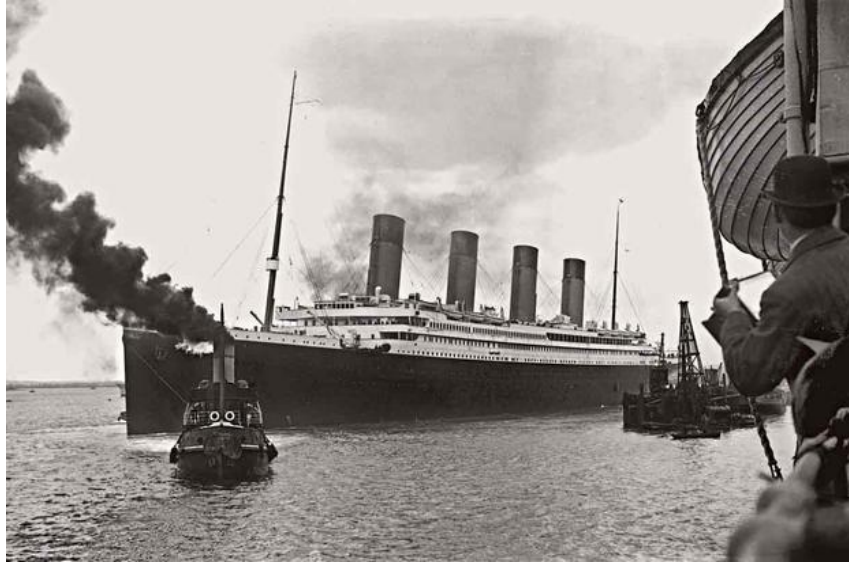
Ed Offley interviewed none of the 15 of us, nor, to our knowledge, any other ONI or SOSUS Evaluation Center personnel. Bottom line: Offley’s claim to conspiracy and taped acoustic evidence are total fabrication.

The condition of the Scorpion wreckage on the seabed in 11,100 feet of water indicates its pressure hull collapsed at great depth. This could not have happened if the hull had been penetrated by an explosion from a torpedo or other explosive event because the entire submarine would then have been flooded (pressure-equalized) before the hull sank to collapse depth. The Scorpion most likely sank to crush depth with pressure hull still intact because of an onboard problem the crew could not correct.

(Submitted to Navy Times by the 15 individuals named above, and posted 12 Nov 07)
(Ed Smock)

Sep 1985 Finding the Scorpion:

The US Navy Backed the Hunt for Titanic to 'Drive The Soviets Crazy,' Explorer's Book Reveals.



The man who found the Titanic did so with help from the US Navy, and he got that much needed support in part by convincing the Navy that finding the shipwreck would "drive the Soviets crazy," [renowned explorer Robert Ballard reveals in the new book "Into The Deep,"](#) which was co-written with investigative reporter Christopher Drew.

Over the course of his celebrated career, Ballard has discovered the wrecks of the Nazi battleship Bismarck, the US aircraft carrier Yorktown, and US patrol torpedo boat PT-109 (commanded by then LTJG. John F. Kennedy). But his most recognizable discovery was the British passenger ship Titanic that sank in the North Atlantic on April 15, 1912, ending more than 1,500 lives.

That famous discovery in September 1985 was backed by the US Navy, which offered its support for two reasons.

The search for the Titanic was a cover for a top secret Navy mission involving the use of undersea systems to explore two submarine wrecks. And Ballard convinced the service his discovery would play into a game of psychological warfare with the Soviets during the later years of the Cold War, ["Into the Deep" explains.](#)

Navy Vice Adm. Ronald Thunman, a top submarine officer, initially told Ballard that his dream of finding the Titanic was crazy, but he ultimately agreed to let the persistent explorer piggyback on the Navy mission and pursue the lost passenger ship using any time and funds that remained after looking into the two wrecks.

"You can do whatever you want, but you gotta do it within the time and within the money, and that's it," Ballard recalled the officer saying. The [search for the Titanic became cover](#) for the submarine investigation.

Although he had been given something of a green light to look for the Titanic from Thunman, Ballard wanted the support of Navy Secretary John Lehman. He decided to leverage the secretary and President Ronald Reagan's thinking on psychological warfare to gain that endorsement as well.

Both Reagan and Lehman were eager to confront the Soviets more aggressively, and part of that included rattling them psychologically, specifically making them believe the US had capabilities beyond their own.

Ballard, then a Navy reservist, invited Lehman, who had been behind Ballard since a talk he did on underwater terrain warfare, on an underwater excursion in an exploration and research submersible looking at what Ballard described as "the undersea battlefield."

Thousands of feet beneath the surface, he repeatedly made his pitch to search for the Titanic.

"The president wants to really play with the Soviets' minds," [Ballard recalled telling the Navy secretary in a paraphrased conversation presented in his memoir](#), "to make them think we can do far more than we're capable of."

"Let me find Titanic," the explorer said, explaining that with the gear in his possession, specifically a few robotic submersibles, he was sure he could find it in two weeks.

"I'll find it, and then we'll go public," Ballard told Lehman, "Show videos from the robots roaming through the ballrooms. It will drive the Soviets crazy. They'll think that if we're willing to publicize this capability, imagine what our Navy is doing in secret."

Lehman agreed to pass the recommendation on to Reagan, who, according to the Navy secretary, responded: "Absolutely, let's do it."

'May God bless these found souls'

The hunt for the passenger ship Titanic was the public face of a secret Navy mission to explore and take photos of the wrecks of the USS Thresher and USS Scorpion, which sank with all hands in 1963 and 1968 respectively. They were among the deadliest submarine disasters and ones the US Navy studied intensively for answers.

Ballard returned to active-duty status temporarily so that he could be read into classified material for the missions. He wrote in his book that "the Navy's investigation was my real mission." Searching for the Titanic, while a priority and long-time dream for Ballard, came second.

Sailing aboard the research vessel R/V Knorr, Ballard obscured the true mission from members of his crew.

"Given the highly classified nature of the mission, the Navy would only let me tell those with a need-to-know status what was really happening," he explained. "We told everyone we were testing equipment for the Navy."

"I wanted to do a bang-up job for the Navy, but I was also constantly thinking about how to find Titanic," Ballard wrote. As it turned out, the investigation into the submarine wrecks would prove beneficial to finding the Titanic.

Both the Thresher and Scorpion had debris trails almost a mile long. While some believed Titanic sank in one piece, there had been eyewitness accounts from survivors that it broke apart, which would leave a debris trail like the submarines that imploded.

"I visualized the ship not just breaking in two but falling to the bottom, with the heaviest pieces heading straight down and lighter ones drifting with the current, just as I had seen with Scorpion and Thresher," Ballard wrote.

"It played out like a film in my head, and, all of a sudden, it was clear as a bell," he said. "I shouldn't be searching for the ship. I should be searching for the debris trail. A mile-long trail would be easier to find than 833-foot ship."

Ballard and his team arrived in the area where the Titanic was believed to have sunk toward the end of August 1985 and deployed Argo, a ship-towed video camera sled designed to operate in deep waters that had just explored the wrecks of the Thresher and Scorpion, to scan the ocean floor.

Late one night after several days of searching for the Titanic, the team came upon the debris field, discovering a large metal cylinder over 15 feet in diameter.

"There it was, one of 29 boilers that had created steam for Titanic's engines," Ballard wrote in his book. "It was a signature piece. We'd found the debris field, about 12,500 feet down. Bull's-eye!"

Using the Knorr's onboard sonar, Ballard and his team detected a 100-foot-tall object to the north of their position. They relocated to the place the object was detected and deployed Argo to scan what turned out to be the wreckage of Titanic.

"We were drifting slowly. Titanic was unveiling herself to us," Ballard said of the moment the ship's hull came into view. "No one was blinking. Our eyes were drying out, because we were not going to close them for a nanosecond. It was an 'Oh my God!' kind of moment."

As the submersible passed over the hull, "everyone exploded," he said. "We'd done it."

In written notes on the place where Titanic sank, Ballard wrote: "It is a quiet and peaceful and fitting place for the remains of this greatest of sea tragedies to rest. May it forever remain that way, and may God bless these found souls.'

**Why the USS SCORPION (SSN 589) Was Lost 50 years Ago,
Revised from the 22 May 2018 Assessment.
Bruce Rule**

A technical assessment based on metallurgical analysis of recovered wreckage, analyses of acoustic detections of the event, and imagery/visual observations of the wreckage by the crew of the US submersible TRIESTE.

The author was the lead acoustic analyst at the US Office of Naval Intelligence for 42 years, testified before the THRESHER Court of Inquiry in April 1963, published major assessments of the losses of THRESHER and SCORPION (royalties declined) and has contributed pro bono to numerous books and articles on the losses of Soviet submarines including the GOLF Class SSB K-129 which was lost because two R-21/D4 missiles fired to fuel exhaustion (95.2s and 95.4s) within the pressure-hull. For access to more than 100 articles that discuss submarine related subjects including a probable Russian SSBN “dead-man” launch capability and the characteristics of the BOREY Class Russian SSBN hybrid propulsion system, search the Internet for Commentaries of Bruce Rule.

I. Acknowledgements

The writer gratefully acknowledges critical contributions by senior submarine officers (resources) and three civilian resources - including a consulting engineer - to the development of three assessments not previously provided in the 22 May 2018 edition of this document. These contributions consisted of SCORPION bulkhead, escape trunk and hydraulic system design characteristics, the SCORPION Structural Analysis Group report - without which this assessment could not have been written - and collapse depth and compressive force calculations. These new assessments are summarized immediately below in italics and bold.

II. Summary Assessment

This article - written in August 2018 - elucidates the cause of - and the temporal dynamics and forces associated with - the loss of the USS SCORPION 50 years ago.

The US nuclear submarine SCORPION (SSN 589) was lost on 22 May 1968 because the explosion at 18:20:44 Greenwich Mean Time (GMT) of hydrogen out-gassed by the TLX-53-A main battery created over-pressures that were more than several times the 100-percent fatal level in spaces ***forward of the reactor compartment and at lower, survivable levels in spaces aft of the reactor compartment. SCORPION was at periscope depth when the battery explosion - which did not breach the pressure-hull - occurred. At least one member of the crew successfully exited SCORPION through the after escape trunk.***

III. Analyses of Physical Evidence

Ten months after the USS SCORPION (SSN 589) was lost in the east central Atlantic on 22 May 1968, the US Naval Ships Command issued a change to NAVSHIPS Technical Manual, Section 9623.718, March 1969 Edition.

That Section - which discussed “Submarine Storage Batteries” - stated the following: “Do not enter the battery well of ships having open tank ventilation systems while a charge is in progress.” The Section further stated that “Experience has shown that all individual (battery) cell explosions have occurred while personnel were working in the battery tank during charge.” Note: a technical “resource” of the highest credibility found this 1969 NAVSHIP’s assessment to be “unsatisfactory” with respect to definition of terms and conditions extant during a charging event.

IV. Analyses of Acoustic Evidence

In 2008, Dan McMillin (1929-2015), an electrical and mechanical engineer who was part of the Bell Telephone Laboratory “brain-trust” integrally involved in the development of the Sound Surveillance System (SOSUS), and who also was extensively involved in the initial analysis of the Canary Island acoustic sensor (bottom-mounted hydrophone) detections of the loss of the USS SCORPION, provided the writer with a copy of a tape recording and graphic displays of the Canary Island and Sound Surveillance System acoustic data associated with the event.

In 2011, the writer published a detailed technical analysis of those signals (2). That analysis - the first reanalysis of the SCORPION acoustic data in 40 years - confirmed the SAG conclusions in 1970.

V. Analyses of Imagery and Visual Observations of the SCORPION Wreckage

SCORPION Was At Periscope Depth When the Battery Exploded.

These relative values support the SAG assumption that SCORPION was at periscope depth with three masts raised when the battery explosion occurred.

Some SCORPION Crew Members in Spaces Aft of the Reactor Compartment Survived the Battery Explosion

VI. Disproven Conjectures

SCORPION Reversed Course to Deactivate a Torpedo.

In 1968, Dr. John Craven (1925-2015) conjectured SCORPION had reversed course to disarm a Mk-37 torpedo that had become active in its launch tube. That conjecture was based on an estimated change of two seconds in the delay of signal detection times between acoustic sensors located to the east and to the west of the loss position over a 111.6s period. If valid, that change in the relative detection times of signals detected over that period would have required a course reversal by SCORPION from a course of 290 to an easterly heading for a distance of about 4900-feet in 111.6 seconds for an average speed of 26 knots.

To address that conjecture, Dan McMillin analyzed magnetic tape recorded from the Canary Island acoustic sensor located to the east of the SCORPION wreck site (Canary Island single hydrophone A) to achieve signal detection timing accuracies of 0.01s and high-time resolution VisiCorder displays to achieve a timing accuracy of 0.1s for the signals detected by a sensor system located to the west of the SCORPION wreck site: Sound Surveillance System (SOSUS) hydrophone array 3131.

McMillin's analysis - of the same data reviewed by Craven - established that the change in detection times was only 0.04s which equated to a speed of 0.5 knots, not Craven's values of 2.0s and 26 knots. McMillin's original data/calculation sheet is reproduced on the last page of Chapter 1 of reference (2). That sheet includes a note that McMillin called Craven at 2130 ETD on 18 July 1968 to inform him of the more accurate measurement.

Note: SCORPION was not capable - from a propulsion capability standpoint - of reversing course and achieving an average speed of 26 knots during a maneuver with a duration of 111.6s.

The writer's reanalysis of these SCORPION signals in 2008 confirmed McMillin's event timing values and also confirmed the SAG assessment that the signal at the start of the 111.6s period was produced by the collapse of the SCORPION pressure-hull. Additionally, it was determined in 2008 that collapse occurred at a depth of 466m (1530-feet) and that two of three other signals that occurred during the 111.6s period were produced by the collapse of two of the six SCORPION torpedo tubes at depths near 1027m (3370-feet) and 1143m (3750-feet).

In summary, during the 111.6s period conjectured by Craven to have involved a high-speed course reversal, the SCORPION wreckage was sinking vertically at a speed of 10-13 knots with a horizontal displacement of less than 15m (50-feet) over a vertical distance of about 670m (2200-feet) which is consistent with the conclusion that the third signal was also produced within the bow section of the wreckage.

14 Dec 1968 – COSP Comical "Get Smart" Locations

Before the move to Ford Island, HI, COSP was housed in Bldg 1 on Treasure Island, CA. The building was a beautiful "rotunda" type structure built for the 1939-40 world's fairs. As a matter of fact, the whole man made island (land fill) was built for this original purpose. The comical part was that the secure entrance to COSP was down the ramp, inside the parking garage - behind a "Dempsey-dumpster"... Then, when we moved COSP to F.I., COSP was located in the Navy Exchange building (yes, NEX) above the "barber shop"... (Right next to the spy school... Ha-Ha...) (Ed Smock STCM Centerville Beach)

1968-1969 - Barbados Wildlife

Anyone who has ever served on Barbados has at one time or another driven up Monkey Hill on the way to the NavFac. In the 16 months I was there I can only remember seeing monkeys once or twice on the way to work and I lived at the bottom of the hill. On the other hand, monkeys were often seen running across the road from the T-bldg to the upper base. And folks, these were not small monkeys. Now at that time it was permissible for the duty tech to go to the movies at night. Well, I was always a little apprehensive about walking that road at night because once you entered the dip in the road you were out of range of the lights illuminating the compound and boy was it pitch black. One night my worst fears were realized when one of those big guys came screaming across the dip in the road in front of me. Thought I would die on the spot he scared me so bad.

Not only were the monkeys an experience but what about those land crabs. I'll never forget the first time I saw them. Again, it was off to the movies. I came out the door from the second deck and the roof of the first deck was covered with them. Some of those guys were as big as dinner plates. Of course, they were more afraid of me than I was of them and they moved out of my way but it was quite a sight the first time I saw them. It was amazing that they would climb the steps to the roof. I never understood what motivated them to do it. (Rick Bolin ETN3/ETN2)

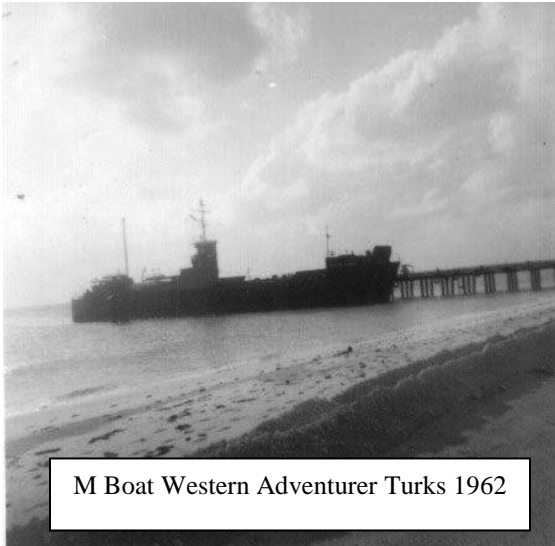
1968 - “M Boat” problems near San Sal

Called from my quarters to Comm one evening, I heard a most dramatic announcement over an international distress frequency from the skipper of a south-bound “M-Boat” that he had run his ship aground near San Sal on an uncharted reef, had ordered his crew to abandon ship and he was shortly to commit suicide.

I answered and assured him prevailing currents and winds would probably bring his crew ashore on the north end of the island and we would start a rescue party that way immediately. After another dramatic statement that he was to take his own life, the frequency became silent. Mustering a rescue party, we headed for the spot we thought his crew might drift ashore. After plowing through acres of limonea bushes we reached the spot only to see a ship grounded on a small beach with deck lights ablaze and crewmembers walking about.

Sure enough, it was the distressed ship and the skipper and his crew were as drunk as skunks. We went to the wheelhouse where the skipper showed us his “defective” chart. As he described his course and plot, it never occurred to him he was looking at it upside down. No mention was made of his threat of suicide.

We waited around until high tide and black coffee seemed to ease the situation. The last we saw of the vessel it was headed to sea toward a beautiful sunrise. Breathing sighs of relief and disgust, the “rescue” party returned to base and made a report to all concerned before hitting the sack



M Boat Western Adventurer Turks 1962

About 0830 the gate called to report that the local Constable wished to see me at once. I had him sent to the office where he informed me that the ship we thought was on it's way had returned and grounded again near the site he had gone aground the night before. Once again we found the ship and, sure enough, they had hit the bottle even more. This time we “ordered” the skipper to back down from the beach and head for the pier near the base. By this time captain and crew had sobered enough to listen to reason and complied.

Later, a north bound M Boat tied up alongside and its 1st mate took command of the wayward ship for the trip back to the Cape. (Baker Peebles, CAPT USN (Ret) CO San Sal 1968/69).

1968 San Salvador, Bahamas “Mayday! Mayday! Mayday!”

Most of our supplies came in via “Mike” boat, so it was a signature we all knew well. We were standing the Mid-watch. The “Mike” boat had arrived that day or the day before and all supplies had been neatly tucked away. The Comm Supervisor came running out of the Comm spaces saying the Mike boat was in trouble. He had picked up a Mayday from the Mike boat. They were saying they were going down. Granted, we pay much closer attention to the Mike boat on its way into the island, but no one had passed down that the Mike boat had left. We reviewed all the beams quickly and could not find the familiar signature. We had the radio turned up so we all could hear. “Mayday, Mayday, Mayday, we are going down!” We called the Coast Guard to make sure they were getting the Mayday calls. They were and they had no idea where the boat was. We decided to send someone to the harbor to find out when they left. On the way to the harbor the guy we sent called in to tell us he found the Mike boat. It was in the harbor going around in circles. The Coast Guard sent someone out to the boat and found the entire crew dead. Dead drunk that is. Needless to say we didn't see that boat captain again. (Mike Weir STG3/STG2 San Sal 1968)

Keflavik, Iceland 1968—1969

Arrived on 18 June 1968 and could not believe how cold it was when I got off the plane (Yellow banana at the time). Had a difficult time adjusting to the 22+ hours of daylight. And the other 2 hours it never got really dark.

Living off-base was quite an experience with the restriction on \$\$ amount of goods that were allowed to be removed from the base. I think it was something like \$30. per week from the commissary and probably the same from the NEX, and that was for a family of 4. We were required to go through a specific gate with the goods and receipts were checked by Icelandic Policeman/Customs. On one occasion the Icelander made an

individual provide their grocery receipt and had all items removed from their bags and checked off to see that there wasn't anything extra.

Fish Factory - passing that fish factory everyday on the way to and from the base was certainly no fun. I remember holding my breath and many times could not hold it long enough.

Restrictions on number of cigarettes and cigars to be taken off base.

No alcohol allowed to be taken off base.

NavFac road - unpaved dirt road---initially newcomers would drive the road at 15 mph the first week, 25 the second week and after a while what ever the road and car allowed.

F-104s being scrambled by the USAF in the middle of the night - probably because something showed up on the grams at the Fac - BEARS.

What a great place for NavFac'ers to really learn and practice their trade.

Lots of firsts - November 1-A, C-V-Y and Juliet. Remember the first deployment of the Yankee---really big secret - yet two weeks later in Newsweek magazine there was an article stating that there had a been a Yankee Class Submarine detected operating in the Norwegian Sea. I still have a copy of that article. (Nick VanHerpen STC, STCS)

1969 - San Nicolas Island – Another “good call”.

During the weekend I was the OWO. Had a solid contact on a Type I south of SNI. The EC said it was surface. I disagreed but to no avail. Asked if they had a problem if we flew on it. (We had a flight up.) Sent data to the P3 and they found a Hotel II. Saw good grams during the debrief. At the next Commodore visit we got to split a bottle of Champagne. Also got a nice letter from the Commodore. (STC Harding NavFac San Nic)

1969 - NavFac San Nicolas Island - Sacred Indian burial grounds

Having spent two years stationed at San Nic and having made numerous hikes around the area, I never found one trace of an Indian burial ground. The grounds were protected and of course digging was not allowed. The rule was that if you saw something - do not touch it... Contact the park service and they would come out and return it to the ground.

I had been transferred from COSP Treasure Island to the ROC at NavFac Centerville Beach and was called upon to conduct an ORI on NavFac San Nic. This finds me back on San Nic and seeing old friends again. As luck would have it, while taking a quick ride around the island for old time's sake - we noticed from the truck window a human skull along the high side of the road bed. We stopped, saw the skull, a grain grinding bowl and a stone awl used to grind the grain etc.. Reported same to the XO and he called the park service. (Ed Smock OTCM)

1969 – NavFac Centerville Beach “Another Act of Kindness by Ferndale”

We had a young OT3 whose young wife got killed driving out to the base. We were in the funeral preparation stage (her Mom was there to take her home etc.) when “her” Navy allotment check arrived in the mail. No direct deposit or bank account. In those days, one normally had to cash it in person at a local store or bank etc. The money was desperately needed... The dilemma, how to cash the check in town when everyone knew she had passed away... I took the unsigned check to see if I could convince anyone in town to cash it under those circumstances. I went into the first store that I saw was open (liquor store) – the man behind the counter heard me out and without hesitation, cashed the “semi-forged” check...(Ed Smock OTCM NavFac Centerville Beach)

1969 - NavFac Centerville Beach - Sheriff Charlie Goff delivers BM3 to me as a courtesy to the Navy

It was in the late-late hours of a Memorial Day celebration that the Sheriff comes to my door in Navy Housing; to deliver what he thought was one of our sailors to me rather than having to lock him up. The "sailor" was a little more than "over the limit" (no vehicle involved). I looked at the BM3 in his "dress blues" - he was "old as dirt".Ha-Ha.

He was just an old veteran who had celebrated Memorial Day to hard... Ha-Ha... I told Charlie "he's not one of ours"... But we have to help him. There was no place for him at the base. We laughed and Charlie said he would lock him up for safe keeping and let him go in the morning... (Like Mayberry RFD) I never saw the sailor again... Thanks Charlie... (Ed Smock OTCM Centerville Beach)

1969 and forward - "Seabees" Augment the watch NavFac Centerville Beach

To help augment the watch during hi-temp ops, the Seabees (normally referred to as "upper base" personnel throughout the system due to the T Bldg being "lower" near the water.) were cleared, trained, and would stand watch with us as plotters, DAC operators, message handlers (and they especially enjoyed learning to read the grams) etc.. There were normally 2 or 3 assigned to a watch section and when the word went out to augment they would report to the watch ready to go...



"This they did with great pride and professionalism." “They were - fired up”...

It was also a great morale booster to have the Ops and PW personnel share in this important endeavor. They used to ask me, "Do you need us - do you need us???" (Ed Smock STCM Centerville Beach)

1968-71 NavFac Centerville Beach, CA (more memories)

- Hunting, fishing and camping at Ruth Lake and South Fork Mountain...
- Family friendship of Elsie and Don Giacomini...
- The kindness of Gus Scalvini...

- The towns people - great people...
- Giant Redwoods - fresh air...
- NavFac Centerville Beach is second on my all time list, Shelburne is first but for different reasons... (Ed Smock STCM/OTCM)

1969-1970 - Bermuda - Rookie

Freshly emerged from the “green door”, one feels ready to “hit the mats” for the first time. I’ll never forget the absolute, debilitating, shock that facing real world LOFAR grams for the first time produced. They lied to us! None of the sanitized, single signature grams used for training gave any hint of the utter chaos coming out of that stylus and onto that paper. “Dog”, “Easy”, and “Easy II” they called them and it took some time before they no longer haunted my dreams.

OJT was, and probably still is, the only sure method to train the raw rookie. It was relatively easy to capture and regurgitate the A-school curriculum, but it was not presented in the context of the real world environment where every sweep of the stylus is different from the last. The job was recognition within this broad context and the context was always cluttered and changing. Formal training and section training were essential, but you always had to take it back to the beams to make it work. By the end of this tour, I had passed the “STO” exam for third class and felt reasonably confident that I could do my part.

Several interesting highlights of this period:

- Jack Thompson was my first LPO. I couldn’t have had a better start.
- Bermuda was the R&D site for the APOJI system. This system was built by COMDEV of Canada. It interfaced directly to the MDL and FQQ equipment and analyzed and annotated the array. Operator controls were provided via consoles hung from two I-beams above the FQQ banks and you slide the consoles up or down to the beam you were interested in. This was when I met Fred Jones who was the project manager. The operations evaluation of APOJI was conducted shortly after I was transferred and I got to come back to be an operator for the OPEVAL. The Navy was not too impressed with the broadband analysis, but was interested in the more detailed analytical capabilities. The follow-on project was named SPEAR.
- A new array was installed during my tour. During my first “roll” on the new array I noted that one of the FQQ consoles had a deeply scratched message on its side. It read “San Sal Sux”. Guess where the FQQ equipment came from.
- The new “OT” rate was announced but for the first two test periods the “STO” examination was used. (W. A. “Buck” Buchanan)

Kef - GOBI: Another “Barry Millard” Story.
“In Paul Harvey Format”

In our “IUSS Glossary” (that I maintain) we have an acronym definition listed for GOBI as:

GOBI: Generalized Oceanographic Bearing Interpolation.

GOBI was a procedure developed for and maintained at one site only; Kef.

- Over the years I searched for the actual definition for the term GOBI.
- From the various inputs – from those from Kef that had used the procedure - we came up with Generalized Oceanographic Bearing Interpolation as a good definition to use.
- However, my search took me to the contractor engineers that developed, installed, and trained the operators at Kef for the real answer – and this was their input:
- Their POC at Kef for this effort was “Barry Millard”.
- Initially, they did not really have a name for the procedure when it was delivered.
- They said “Barry Millard's” demeanor was “SO DRY” that he reminded them of the GOBI desert. So they called the procedure “GOBI” – named after Barry’s demeanor.

And now you know “The Rest of the Story”.

1969-70: Another “Barry Millard” Story

I have a short story to tell about “Barry” that very few people have ever heard. Allow me to share it with you.

- Timeframe circa 1969 -70.
- Place NAVFAC Centerville Beach in route to NAVFAC Coos Bay to provide 3-4 day ORI related training at Coos. OPS Officer LT Bruce Thunberg, PO2 Barry Millard and STCM Smock. We had elected to take Barry with us as he was an up and coming young analyst.
- It was the time of “Z” Grams and beards and longhair was permitted at that time.
- Barry really took to that “Z” Gram. His hair was very long and he had a pretty sad looking beard. He looked very much like a “San Francisco Hippie”
- Bruce and I were of course old school with very short military haircuts.
- Traveling rather late in the evening we decided that a pit break was required.
- We saw a dim light indicating café and beer. – We pulled in.
- Barry having the most need for the break went immediately to the rest room – Bruce and I proceeded to the bar.
- At the bar Bruce and I decided that when Barry came into view we would create a scene to the bartender about him allowing “G-D Hippies” in his café. – And that we should give him a G-D haircut...

- Things very quickly got out of hand. We did not notice that there were two locals (fishermen or loggers) at the bar that strongly joined in on our complaint. – The bartender also joined in and produced a pair of scissors... They were SERIOUS...
- We told Barry to run quickly to the car – and off we ran...
- Bruce and I missed out on the pit stop and none of us got any beer...

From that day on, every time Barry and I met (like at COSL, Kef, the 60th and 65th etc.) I would holler out “G-D Hippie” – We would hug and relive that frightful evening over again...

I have lost my “G-D Hippie” – but the memory remains.
Rest in peace my “Hippie” friend. - Ed Smock



9 Nov 1969 - Tragic Loss of a Shipmate and Friend at NAVFAC Guam

One of the duties outlined for the watch when NAVFAC Guam was commissioned in 1968 was Emergency Beach Guard. If a B-52 aircraft returning to Andersen AFB from strike missions in North Viet Nam had to ditch along the beach, the NAVFAC watch had standing orders to render assistance as necessary.

One of the STGs in the original crew was a young man named Robert John Koutelis, Jr. “Bob” had attended A-school and Green Door training with our class, was a good friend, and a certified Senior Life Guard. When we arrived on Guam he became one of the base lifeguards at the pool near the EM club on NAVCOMMSTA Finegayan. He loved that job and was a really dedicated life saver. As such, he was a senior member of the beach guard team.

As any NAVFAC Guam sailor knows, the approach to the reef on Ritidian Point Beach creates a real break that produces a perfect surfing wave, but which occasionally breaks on the main reef when the surf is high. The beach was constantly being invaded by Air Force personnel/dependents who relished rubber-boat surfing those waves.

The beach area was off-limits to that activity due to dangerous rip currents that were observed during array-cable termination activities in 1968. Although it was against regulations, these Air Force fellows would continually boat-surf the big waves after storms up north.

Two weeks prior to the arrival of the COSP ORI Team for Guam’s first inspection in November 1969, the Section Beach Guard was activated when three Andersen Air Force personnel/dependents, surfing the break off Ritidian beach, were dumped and thrown onto the reef. Only two were visible when the Beach Guard arrived on scene to commence lifeline recovery. Bob Koutelis was the No. 1 man on the line and proceeded to establish a lifeline to the men being rolled around and injured on the coral reef.

During that initial effort Bob apparently stepped into a hole in the reef and was sucked into it. When he dropped out of sight the watch team (STs, ETs, and RMs) pulled away on the lifeline to recover him. He was brought back to the beach and CPR was initiated. Medics from NAVCOMMSTA arrived and tried to resuscitate Bob, but were unsuccessful. The three Air Force personnel were never found.

STGSN Bob Koutelis was the first NAVFAC Guam sailor killed in the line of duty. He was a great fellow - unselfish, light-hearted, and friendly to everyone.

Bob was posthumously awarded the Navy and Marine Corps Medal, the second highest non-combat decoration awarded for heroism by the United States Department of the Navy. - Rick Matthews, OTCM, USN (Ret)

November 9th as “Bob Koutelis Day”

On November 9, 1969, on the Island of Guam, two rubber boats were observed in the rough waters in a restricted area between the NAVFAC TE-Building and Admin

Building. Suddenly one of the boats flipped over, dumping its three occupants into the sea. STGSN Bob Koutelis, an excellent swimmer and a lifeguard, volunteered to swim out to help them. He knew time was short and he was the most qualified person there. Bob drowned that day while trying to save them.

My wife Mary Lou heard me tell the story of Bob’s heroism many times, and years ago I had promised that if I ever got close to his home town I would try to connect with his family. I wanted to make sure they got the whole story from someone who was there. In August 2014, Mary Lou and I left New York, on our way to Iowa to spend a few days with friends. We had planned our route so that we would go through Peoria, IL, where the Koutelis family lived.

We managed to connect. Mark Koutelis told us he was only 9 years old when two Navy men brought the news that his big brother had drowned. Mark remembered that his Dad took Bob’s death so hard that, in the following years, they were never allowed to discuss it. For 45 years the family had never realized what a hero Bob was, in that he died while trying to save the lives of others.

In his memory, I will always think of November 9th as “Bob Koutelis Day”.
- Russ Oberlander, OT1, USN (Ret)



Oct 1969 - Vietnam War "Amputee" Deer Hunt - Eureka, Fortuna, Ferndale, CA



- **Of all my memories of kindness and love that I have experienced while serving in SOSUS/IUSS, none will rank higher than this one**
- **To the people of Eureka, Fortuna and Ferndale CA, I want to apologize for not having the ability to adequately articulate the true meaning of your act of Kindness and Love. Let me continue then with my meager effort.**

Nearly every year during the Vietnam War, the fine people of Eureka, Fortuna and Ferndale sponsored an appreciation weekend celebration and deer hunt for returning Vietnam War Veteran amputees from Oak Knoll Naval Hospital, Oakland, CA.

LT Angus McLean and I had the honor of participating in this moving event ... The weekend started with the arrival of a couple of large Navy aircraft from the hospital area with doctors, nurses, corpsmen, medical equipment (Mash type unit) and about "**twenty honored guests**". The entire group plus local helpers (about 100 people, including me and Angus) were taken to Lazio's Sea Food restaurant in Eureka for "any thing goes" full menu luncheon.

We were then taken to a ranch outside of Eureka for the deer hunt and festivities. Forgive me, I do not remember the name of the man who donated his property every year - the only hunt he allowed each year... There, they had the barns made up with medical beds and necessary equipment, trailers, campers etc.. A large BBQ was being prepared - tons of steak - refreshments, a band - the whole works... (It was awesome...) It is now early afternoon and we proceed to the deer hunt...

The governor had given permission for the veterans to ride and shoot while sitting in backs of pickup trucks etc. (An act normally against the law.). The locals had mounted large chairs, barber type chairs, and mounting brackets for wheel chairs in the trucks. The locals had even provided hunting license for the Vets. The pickup trucks formed a caravan and we proceeded into the rolling hills of the ranch looking for deer.

The privileged volunteers like Angus and me "played dog". Our job was to walk the woods yelling etc. To push the deer out of cover. The Vets would then, having taken position sitting in the trucks, have the opportunity to down a deer... This they did with great expertise... When darkness fell we returned to the barn area and everyone had "one fine BBQ", long into the night.

While back at camp Angus and I had the opportunity to talk to "our hunter". The young man was only 19 years old... He said he was hit within 10 minutes of jumping from the helicopter... And in 30 minutes he was back on the helicopter – leaving behind an arm and both legs... - Lord have mercy...
(Angus and I could hardly respond - and I am having a hard time writing this for you.)

In the morning breakfast was equally as great as supper was... Then it was back to the hunt until 1300. All toll the "hunters" got 21 deer, these we dressed and immediately sent them to the quick freeze plant in Eureka. The deer would be prepared and served later at the hospital. The group then headed to the Eureka Inn for an evening banquet and farewell.

I will always remember the comments made by one of the "Honored Guest" hunters. This young black man said:

"Two of the strongest words we know are "Love" and "Thanks" - and we "Thank" you for the "Love"..."

And I thank you Eureka, Fortuna and Ferndale for this memory.
(Ed Smock OTCM
NavFac Centerville Beach, CA)

**"Honored Guest" -
Vet Hunt
and Ed Smock**



**“Honored Guest”
20 truck caravan.**

Early 1970s - Us or Them: Almost a Disaster

On a trip to a NavFac that shall remain unidentified, I was shown a study that was on the verge of publication. It purported to show very high speed operations on a single shaft. When I pointed out that the contacts in the study were “us,” not “them,” the characteristics that had been used to separate “us” from “them” were enumerated. I agreed that the characteristics were valid discriminators if you reversed the “us” and “them”

Just then a “miracle” occurred and we had a chance to examine a ship’s log that proved beyond any doubt that some of the “thems” had been “us.” The study never saw the light of day which probably saved some reputations, if not careers. (B. Rule, civilian)

Early 1970’s - NavFac Adak: “Where’s the Plot?”

At the behest of CNO (Op-095), in the early 1970’s I went to NavFac Adak to determine why that site no longer provided effective early warning for EASTPAC SOSUS. The results of this apparently degraded capability were several unpleasant surprises, the repercussions of which went from Pearl Harbor to Washington, DC.

Upon arrival at Adak, I went into the observe/no comment mode. Having previously worked extensively at ONI with George Miller, an Adak plankowner, on data from the site, I felt like the 2111 beam and bearing numbers were old friends.

As I talked to the watchstanders, especially the readers on the mid-watch I avoided the obvious question: “Where’s the operational plot?” I concluded that, for security reasons, the plot had been sequestered in some limited access space I had yet to discover. Finally, after three days, I ventured to ask: “Where’s the plot?”

The astounding answer was: “At the last ORI we were ‘jigged’ because of the parallax created by the quarter-inch thick plastic we were using (instead of eighth-inch), so we got rid of the plot.”

Without the use of a plot, no one could DR a contact; hence, anything that wasn't really obvious “down the road” was not recognized - until it got to EASTPAC. I wrote up a 30-page report of this and several other shortcomings and, after about three weeks departed Adak for COSP to brief COSP one-on-one; no one else was present.

Such briefs can be onerous; however, in this case, I simply told COSP that Adak had significant problems because they were not complying with COSP procedures (operational directives).

The individual considered most responsible for the situation at Adak was "fired." Op-095 sent the report to every NavFac east and west with the name of the facility deleted. The deletion left a blank space four letters wide: big mystery! (B. Rule, civilian)

[Please proceed to Section 2](#)

Mid 1970's - NavFac Adak: “What Use is History?”

On another trip to beautiful downtown Adak (I actually thought the island had a beautiful austerity), I found the station library had no record of activity that had occurred before about 1970.

I had extensive discussions with many of the officers and watchstanders pointing out the value of such “history” because it provided important information on the geographical capabilities of the site. Often these were single occurrences (some dated back to 1963); hence, it was extremely important that the details of such events be known by the current generation of watchstanders.

I promised to send back copies of NAVSTIC (ONI) analyses of these events for inclusion in the station library. Later, I found out these reports had been destroyed upon receipt at Adak because they were “too old to be of any use.” So much for a sense of history.
(B. Rule, civilian)

1970s - The NITAKA MARU

Others may have more accurate details about "detections" of the NITAKA MARU by PACSOSUS sometime in the early- to mid-1970s; however, here is what I remember.

Prior to going through COSP on my return from NavFac Adak sometime in the early- to mid-1970s, I had been aware that an aircraft sent to investigate a PACSOSUS target of interest had found the Japanese surface ship, the NITAKA MARU, at some extreme distance (2000 nm?) out the line of bearing (from Barbers Point?).

The aircraft dropped on the NITAKA MARU and got "something" of a match for the SOSUS contact. After that, other similar SOSUS contacts on similar lines of bearing were evaluated the NITAKA MARU.

Upon arriving at COSP, I asked to see these NITAKA MARU contacts and was shown two or three detections, all of which were clearly threat targets. In fact, classic examples of threat targets. I provided that assessment to COSP analysis personnel, and that is where my direct knowledge ends.

I suspect there never were any PACSOSUS detections of the NITAKA MARU which may explain why the System wasn't doing very well against threat targets during that period. (B. Rule, civilian)

12 Apr 1970 – Soviet “November” Class SSN (K-8) Sinks

Soviet November Class SSN sinks in the eastern Atlantic
<http://www.mindfully.org/Nucs/2003/Russia-Submarine-Sinks30aug03.htm>

30 Jun 1970 - First US Navy women "STs" arrived at NavFac Eleuthera, TWI

(BWI?) Professionally they were welcomed however; they were met with mixed emotions by some of the crew. As they were provided a newly constructed air conditioned barrack with bathtubs etc... The men remained in the standard 80 man open

bay louver windowed non air conditioned barracks. But the men soon got over it... (Who would have expected the navy to build new barracks for both...? Probably today but not in those days.) Jump in here Nora.... You were there... Tell us about the early days... (Show us your age... Ha-Ha... Ed)

Aug 1970 – Dec 1971 - My SOSUS life begins – NavFac Argentina

Well my introduction to the system came in August of 1970. I was stationed at Long Beach Naval Station after returning from Vietnam. My orders arrived and the personnel man said, “You’ve got orders to Argentina. “. My first response was, were there really Seabees in Argentina. He didn’t know so I decided to go to the library and see where it really was. After more closely studying the orders, I realized I was headed for NAVFAC Argentina. While not Argentina, it sure beat going back to Vietnam.

Upon arrival I checked in and was assigned to the M & S Department and assigned to generators. What else would you do with a CM3? I had only been there a short while when I decided that I didn’t care what OTs did, I wanted to be one. They were working 2-2-2-80 in a building that was heated in the winter and air conditioned in the summer. I had just come back from Vietnam working 7 days a week in the open where the temperature was 126 F in the shade. (CM3 Sanborn NavFac Argentina)

Dec 70 - I worked in generators with ENC Ward, EN3 Joe Mora, EN3 Cooper, “Queenie and Greaser” and UT3 George Freer and Dick Powers worked in the A/C flats. At the time the CO was CDR Laux, the XO was LCDR J A D Smith. Lt Carmody was the Department head. My first incident occurred shortly after I arrived. Cooper and I were standing the mid watch on Christmas Eve, when the generator door opened and in walked CDR Laux and his wife Dolly. He came in and asked how we were doing and asked if we had fresh coffee. We assured him that we did and he promptly poured a flask of whiskey into our coffee pot. He and his wife stayed for over an hour just visiting. What a class act he was. (CM3 Sanborn NavFac Argentina)

Mar 71 - A little later in my tour on another mid watch with Cooper, I was sitting in the office and Cooper had gone to make a head call. We had just finished shining everything and washing and waxing because the ORI team was due in next week. I kept hearing a clicking sound but couldn’t figure out from where it was coming. Well all of sudden the boiler in the back room exploded. Cooper came running out the head with pants down around his ankles yelling, “What was that?” The blast had blown open both boiler room doors and the generator room door.

Everything and I mean everything was covered with this fluffy soot about an inch thick. I got down on the floor and crawled into the boiler room and reached the fuel shutoff valve and closed it. There were places in the overhead where there were cobwebs and they were immediately cover and looked like drooping black strings. The boiler had a cast iron door that was blown completely off and went through the tool cage. Needless to say the place was a complete disaster. We received a grade of SAT for the spaces, but only after we spent day and night attempting clean up.

We spent the next few days TRYING to clean soot that was floating around until it came in contact with moisture at which time it became mud. (CM3 Sanborn NavFac Argentina)

May 71 - After the inspection, we had to send someone to Security on upper base for 90 days. Your truly was “selected”. I stood gate guard for about a month before being promoted to vehicle patrol. I was really getting bored so I decided to set a speed trap on NAVFAC road. I knew that the watch bus “always was speeding”. I went out by the old incinerator building on the turn and waited for the eve watch to get off. Sure enough, here they come and proceed to pull them over. Guess who was driving. OT2 Gary Hart. He did not see anything funny about this at all. Neither did J.A.D. who promptly had me report back to generators, ending my blossoming career in law enforcement. (CM3 Sanborn NavFac Argentina)

Nov 71 - Shortly after this happened we got short handed so it was decided that we would go to just one watch stander. In those days, it was required to have two man watch sections around operating machinery. The only stipulation was that we had to call the CDO/OWO once an hour. Not sure if that would have done much good in the case of an accident, but it was better than standing port and starboard which we did for 1 month. Anyway it was winter time in Arg. In those days we got snow in Argentina. I was on watch one night when we got snowed in.

The overpass was solid snow and there was no idea when they would be able to get to us. The T building had plenty of C rations and so they gave me some as well. Well the first night I stayed up all night. But by the second day I was fading fast, so I called Chief Ward. I asked if I went into the generator room and slept between the engines so that I could hear if anything happened would be all right. He agreed and I promptly took the cushions (you know the type, plastic vinyl one off the couch) and went between engines 2 & 3 and took a much needed nap with Queenie and Greaser.

These were the dogs of generators. Well one day dragged into two, two into three, you get the idea; we were there for over 4 days. Finally we got relieved and taken back to the Q. We still had one more day watch before our 80. Well first the OT’s were told to take a 96, and then Comm let their guy go. So I called Chief Ward and asked for the day off. He said that he was sorry but he really needed me and would make it up to me. I said roger that. Shortly after that the CDO/OWO came to see me and make sure I had the day off. I only “worked” for them during the watch. I explained the situation and they said wait a minute. They got on phone with LT Carmody, my department head, and explained that everyone else was letting their people go. He didn’t want to be the bad guy so he said, “Yes” as well. I was loving life and promptly went to St John’s to party.

At the time I was in an apartment with VG Smith, Smalley, DD Martin, and Ronnie Faquen to mention a few that I can remember. I was having a great time until on the second day I got a call from Cooper saying that I had been written up for being UA, skipping the chain of command and direct disobedience to an order. I got a ride back to the NAVFAC and went to see the Chief. He read me the riot act and said that I was UA for 28 hours. I tried to explain what had happened but it was no use. The next thing I

know, I am standing in front of J.A.D. Smith at XO’s mast. I explained my side and he promptly chewed out everyone in the chain of command between me and him. It turned out I was right, DEAD RIGHT. Well after this I couldn’t do anything right and the Chief never got over it. (CM3 Sanborn NavFac Argentina)

Dec 71 - So about this time I decided it was time to leave generators and go into the T building. I submitted a chit asking to change to OT. OTCM Van Herpen was the acting Admin Officer. He sent my chit back to me denied saying, “OT’s are born not cross rated”. With my sterling career credentials I was completely shocked. Shortly after this I received order to CM B School and NMCB Three. (CM3 Sanborn)

During my tour I met a very lovely lady from Dunville named Theresa Walsh. We eventually got married after me finishing B school. We are still married today. (Sandy Sanborn)

1 Sep 1970 - Selected Sonar Technicians (ST) and Electronic Technicians (ET) change to Ocean Systems Technicians (OT)

Ocean Systems Technician (OT) rating became effective, incorporating (via selection board) personnel from the ST and ET ratings. (Ref: BUPERS Notice 1440 dated 17 Aug 1970) See list via:



<http://www.iusscaa.org/ide.htm> A lot of us "old-timers" were on that list. (Ed Smock STCM/OTCM Centerville Beach)

1970 - ITASS, Interim Towed Array Surveillance System
USS Van Voorhis (DE-1028)

This article is dedicated to the memory of Chief Thomas Fogarty, without whom, the program would have failed. (Edward “Greg” Dyer OTA1 USN (Ret))



USS Van Voorhis DE-1028

The ITASS equipment was designed by the Chesapeake Instrument Corporation of Shadyside Maryland. This was the first attempt at towing a large passive sonar array, and was the “grand daddy” of the TASS and SURTASS systems. The initial equipment was housed in an “off the shelf” artic survival van called a comex, and the winch used was 32 tons in weight. Neither was designed to be at sea, and caused numerous problems in upkeep and repair.

The initial crew consisted of:

Lt David Devine, Chief Thomas Fogarty, Chief Peter Johnson, STG1 Stan Carmin, STG1 James Schroyer, STG2 Paul Nix, STG2 “Skip Brandt. STGSN Lee Burch, STGSA Charles (Yogi) Lindquist, STGSA Harry Jones, STGSA Edward (Greg) Dyer, ET3 Kenneth K. Kiefer, RM1 Remer Ellis, RM3 Richard Erickson, SN Robert Kohl

All the senior members attended a 3 month course at the factory before reporting to the ship. The 4 seamen, attended “O” school in Key West, followed by an AQA5 operators class in Norfolk, and an Aural analysis course at the Sub base in Groton Connecticut.

In January [1970](#), Van Voorhis began preparations for conversion to a research and development platform to test the [Interim Towed Array Surveillance System](#) (ITASS). Late that month, her DASH equipment was removed to make room for the ITASS [submarine](#) detection gear. On [9 February](#), she entered the Bethlehem Steel Shipyards in East Boston to begin the actual conversion.

Over the next month, her new equipment was installed, and her DASH hangar was modified to provide a berthing area for the additional crew members necessitated by the ITASS. Van Voorhis completed the conversion early in March and, for the next four months, she conducted a series of tests on the experimental equipment in the vicinity of Bermuda. This included the Tech Eval in the Exuma sound and the Op Eval south of Bermuda. It was here that we managed to tie the entire cable (about 6000 feet) in a huge knot when the ship lost power.

From late June to late August, she prepared to deploy to the Mediterranean. She departed Newport on [26 August 1970](#), passed through the [Straits of Gibraltar](#) on [6 September](#), and arrived at Naples on the [9th](#). The destroyer escort operated with the 6th Fleet, conducting surveillance patrols with her new ITASS gear until near the end of November. During the intervening two months, she also called at such places as [Barcelona](#), [Mallorca](#), [Crete](#), and Naples. On [17 November](#), she turned the 6th Fleet ITASS responsibility over to her relief, [Lester](#) (DE-1022). (Edward “Greg” Dyer STGSA/SN, OTSN, OT3)
<http://www.newportdealeys.com/DE1028/Van%20Voorhis%20DE1028%20History.htm>

1970’s - It was the TASS ships for Fleet Ocean Systems Technicians.

There exists a small group of Ocean Systems Technicians (OT) who have served aboard ships. These OT’s were the Analysts and Maintainers that operated and maintained the SQR-15 Towed Array Surveillance System (TASS). These men rode the waves first on Mine Sweepers, then later on Frigates and Spruance Class Destroyers. Most of the 10 to 20 OT’s on board Naval vessels were volunteers who requested the shipboard life.

The opportunities for the highly specialized OT rate to go to sea were somewhat limited since there were only a select group of ships on both the east and west coasts that had TASS aboard. Their success in the area of passive ASW has been recognized Navy-wide. While systems similar to TASS have been employed for years on ships for research in areas ranging from depth charting to underwater surveillance to long range data collection, it was the OT rating on board that made the difference. The SQR-15 system has since been turned over to Sonar Technicians.

There are only a few OT’s left on board ships and when their sea duty tours are up and they transfer off their ships, there will not be another OT at sea.

The OT’s in ship’s company were usually attached to the Weapons Department. They took care of all of the SQR-15 systems equipment. From the deck equipment on the

fantail, to the winch which held the array assembly to the van which housed the heart of the operation, the OT's maintained the entire system.
When at sea and not on TASS operations, the OT's were a part of the deck crew.

The OT's would find themselves standing watches as Forward and After Lookouts, After-Steering and ASROC Rover. They were involved in all ship evolutions including underway replenishment, vertical replenishment, in-flight refueling of helicopters and handling of ammunition. During General Quarters an OT may be expected to be on the fire party or in Damage Control. You could also find OT's in the ship's gun mount or manning the 50 Caliber guns located above the bridge wings.

It was nothing to be in your favorite seat just before the 2000 movie call, with a coke and your favorite gee dunk when over the 1MC came the call, “Now. . . station the array handling detail.” The ship would slow and all knew that it was going to be a rough night of steaming at 5 knots. The OT's would make their way back to the van and don foul weather gear. It was always a dark, rainy and windy night when the array was deployed. The red lights would be lit on the fantail and the OT's would appear with tools and pump, squinting against the darkness. The winch would let out a long whine and the OT's were back in business.

You can usually tell the Fleet OT's. They are the ones with a chest full of ribbons, looking at the world map in deep thought. If you see two Fleet Tweets meet, just listen as they start naming off ports-of-call. When they hit on one they both have visited, they will look around, talk in a low voice and laugh as they walk away to a far corner of the room. What they discuss is classified “TASS EARS ONLY”. (IUSS 35th IUSS Anniversary Book – Ed Smock)

1970-1972- Argentia Newfoundland (Nick VanHerpen)

CDR Arno Laux as the CO later to be CAPT Laux - most remarkable CO I had in my 30 years of naval service.

- Z-grams - especially Z-57 which told COs to get rid of all the Mickey Mouse and Chicken Regs. Admiral Elmo Zumwalt was the CNO and he made many major changes to the Navy. Many people resented each and every Z-gram, but at Argentia they were generally well received - at least by the majority of the enlisted community and our CO CDR Laux. It seemed that these messages were coming in daily.
- Wives briefings - great foresight by the Commodore that instituted these briefings - finally the wives had an opportunity to see what their husbands had been doing for years. Super morale builder. Remember one wife asking, "Is the reason they build these NavFacs in enshrouded areas so that the Russians could not see them from satellites?" Do not remember the answer given.
- Liberty - nearest off-base liberty was 90 miles away in St. John's. Must have been pretty good liberty as there was probably one wedding per month during my two years there. Quite a few of Newfoundland ladies were present at the 50th Anniversary of SOSUS. You were great for the morale of those John's Runners.

- Rowing team---Newfoundland Champs - but oh, those early mornings and those blistered hands.
- Northeast Arms Recreation Camp.
- Weather - Salt water bay freezing over. Cold, wet winters and wet summers. But beautiful, just a few miles from the main gate.
- Open CO's Mast - Captain's Mast held in the conference room and open for all hands to attend. Was an enlightening experience for both the one going to Mast and those in attendance. A real eye opener for those that observed.
- Captains' Call - a time to attend a briefing by the CO and open for anyone to ask questions. If answers were not provided at that session, they were later put in the Captain's Call section of the POD. (Nick VanHerpen, OTCS, STCM, OTCM)

Circa 1971 - SECNAV Visit to NAVSTIC

When NAVSTIC evolved out of the original obscure branch of ONI known as OP-922F2 and began to hire acoustic analysts, there was an effort to locate "bright young engineers". Although the push may have been motivated by the desire to jump start the analytical effort one suspects it may have been more an attempt to buy instant creditability.

As it turned out none of the analysts had technical backgrounds and virtually all had former SOSUS experience. In the early 1970s, shortly after NAVSTIC moved to Suitland, MD we were visited by the Secretary of the Navy John Chaffee. I was given the task of giving him a tour of our acoustic lab and a briefing on high interest projects we were working on at the time. Accompanying him was the usual entourage involving dignitary visits, i.e. the DNI, CO, NAVSTIC, aides, etc.

The Secretary was obviously impressed with the sophistication of the lab equipment and our analytical techniques and asked at one point, "What type of technical backgrounds do your employees have?" My response, much to the chagrin of the CO and the DNI, was "None have technical backgrounds - I was a Physical Ed. major". Chaffee responded: "So you were a jock," and our conversation briefly diverted off into sports. I had the feeling that the only person in the room who wasn't dismayed by my response was Sec. Chaffee. (George Miller, Civ.)

Centerville Beach 1972 -1976 and Readiness Training Facility NFCB 1982-1984

What a truly great place to spend 6 years of my life. Ferndale is a wonderful community and we made many friends locally. As a matter of fact we have been back 3 or 4 times on vacation since retiring. Reflecting back, I think we may regret not having retired there. Certainly no traffic jams. Can remember the police putting in a four way stop sign at the corner of 5th and Arlington - most locals complained and ignored the sign.

- Earthquakes - will they ever end. Can still see people coming out of the T-Building and running up the hill. Lots of slides near the base at times closing the road south of the Facility.

- Humboldt County - Supposedly the marijuana capital of the US - I believe it. We sure had many incidents involving base personnel.
- Race Relations - Navy started having seminars on race relations and all hands required to participate.
- ROC - Regional Operational Commander - another title for the CO of NFCB. Not one of my favorite topics as I felt it was a total waste of time and effort. Can remember standing ROC duty officer watches I think it was 5 section duty or so and required to be on base - FOR WHAT???
- An Echo II circling all of the new arrays shortly after coming online.
- RTF - One of the most dedicated CO's I have had the pleasure to serve with. The courage of her convictions shown when she relieved the XO on the spot for conduct unbecoming. Not done everyday. (Nick VanHerpen OTCM)

1972 – NavFac Centerville Beach –“Gram Writers” **Feel the rush !!!**



1976-1978 and 1981-1982 NavFac Brawdy

An eye opener just getting there. Got on a train in London (fairly modern). Had to change trains twice and each time it went from old to older. Last one had to be WWII era. The conductor even made us a cup of tea.

- Gas rationing - price quite high in town especially compared to US prices
- Cows in the road holding up traffic

- Weather - one winter I bet it rained 9 out of every 10 days from October to April. It may have snowed some but the next day the rain would have washed it away. Base snowed in for 7 days in Jan 1982.
- SGTs' Mess - Lots of friction between USN and RAF personnel due to RAF regulations. We were members but never allowed any influence in decisions (when we did get something passed at a general meeting the RAF Group Captain would side with his OLD WOs) - coat and tie required in the bar after 8 at night supposedly in case females were in attendance but there were usually only two RAF WOs standing at the bar.
- Rooms - Many rooms were the size an American closet - only thing good about them was the price.
- Housing - Same comments on size especially some of the unit toilets and once again the price was right.
- Airman's Mess - getting eggs made to order was an experience - there would be a big pot of boiling grease and the cook would crack open the eggs and drop them in. When they finally bobbed to the top they were considered done. VERY GREASY. Think that most Americans stuck with cereal. (Nick VanHerpen OTCM)

Late 70s - Early 80s - The Chain-of-Command Wasn't a Two-way Street

Back when NAVSTIC (or whatever we were called at the time) was disseminating a major new ACINT-based intelligence position every couple of weeks - or so it seemed - we had a really great CO, CAPT Charlie Arnsdt, who did an enormous amount for the civilian side of the command. Whenever he got bored with paper work - which was quite often - he would come up and talk to George Miller and me about what we were working on. We were completely forthcoming and he always left with his tedium relieved. We thought it a great arrangement; however, the intermediate levels of military management weren't very happy about it - but he was the CO and we always filled in the “intermediates” after each discussion with the CO. They felt the chain-of-command should be a two-way street. Well, it wasn't and there was nothing they could do but accept the reality of the situation. (B. Rule, civilian)

Late 1970s - Very Bad Timing

Three weeks before NAVSTIC (or whatever we were) published information on the 40-knot speed capability of the ALFA Class Soviet SSN (it made the front page of the WASHINGTON POST), the official estimate was lowered from 32 knots to 28 knots because it was not thought possible to put the horsepower required for 32 knots into a hull as small as the ALFA. The discrepancy here was far greater than the number difference between 28 knots and 42 knots. An ALFA could have achieved 28 knots with about 12,000 shaft horsepower but 41 knots (the eventual official estimate) required 40,000 shaft horsepower

The missing term in this equation was the belief that ALFA used a water-cooled reactor when the system actually was a very high density lead-bismuth-eutectic plant. (B. Rule, civilian)

1970s - “I Don’t Believe You, But I Can Use the Information”

In the 1970s, I briefed KOG (the Kindly Old Gentlemen/ADM Rickover) that we thought the PAPA Class Soviet SSGN had a 39-knot speed capability. Contrary to what I expected (the worst), the Admiral said absolutely nothing until, at the end of the brief, he said: “I don’t believe you. but I can use the Information,” and he is reported to have gone to Congress to ask for more money.

The irony of this story is that we were wrong; the PAPA actually had a maximum speed capability of 44.7 knots and an installed horsepower of 80,000.

The Soviets were enormously proud of this capability and, in a circa 1990 open-source article entitled “Our Submarine Wins the Blue Ribbon,” described the acceptance trials of Project 661 (PAPA) as having been run in the White Sea on 30 Dec 1969 in 200 meters of ice-covered water for 12 hours at a sustained speed of 42 knots (on the race track course).

When Soviet naval engineers calculated that PAPA had achieved 42 knots on only 80 percent power, they authorized use of 100% power which produced a speed of 44.7 knots. (B. Rule, civilian)

1971 – Antigua – But It Didn't Look That Big

Before its demise, Special Services in Antigua had a pretty large boat that the different divisions or other groups used to fish, dive, or just have a good time. One weekend the Maintenance Division took the boat for a family outing and to do some snorkeling. In attendance were Chief Kilgore and Maria, ET1’s Jim Boetticher and Kurt Hasper and their wives, OT1 Randy Ginn and his wife, ETN2 Steve Webb and wife, OT2 Pete West, ETN2 Howie Kirk, and me and Glenda. If there was anyone else that I forgot I apologize. Anyway, on with the story.

The weather was hot and sunny as usual in Antigua and the water was like glass. The heat made snorkeling a very welcome relief. At the time one of the prize catches of any snorkeling trip was brain coral and everyone in the water was on the lookout for some. The water was crystal clear, and you could see several feet down. Now Howie was a pretty big guy. Tall and thin but without an ounce of fat and deceptively strong. At the time, I was on the boat and someone yelled Howie’s got a brain. Next thing I knew his head pops above the surface, and he is clutching this rather large brain to his chest. He gets it onboard and what a sight. His chest looked like he had lost a fight with a very angry cat. Of course, a few beers had taken the sting out of his conquest and all he could do was laugh about it and say “It didn’t look that big.” The next day it wasn’t as funny, but Howie being the kind of person he was just took it in stride. (Rick Bolin ET1/OT1)

1971-72 – Antigua – Honeywell Stories

Story #1 – This is kind of funny now, but at the time, laughing was the furthest emotion from my mind. I had taken over responsibilities for Honeywell maintenance from an ETN2 named Jim Mitchell I believe that had transferred. Now most maintenance techs of that era remember that, over time, problems developed with the vacuum column. As it

happened, we had been experiencing vacuum problems and had come to the decision to replace the entire column. So, I removed all of the hardware connecting the column to the frame. The column remained in place. I then pulled on it gently. Same result. Although not panic stricken, I did begin to worry a little. Did I miss a piece of fastening hardware? Close inspection and going to the manual told me that wasn't the problem.

Over the next several minutes I tried a number of methods to loosen the column. Now, we all remember how valuable a commodity RTV became. Every tech knew it must be guarded with their life because if not kept safe it would grow legs and walk off. Everyone used it for everything imaginable. Well, asking some of the guys in the shop, I was told that there had been prior vacuum column problems and that ETN2 Mitchell had RTV'd the column to the frame. Now I panicked. RTV was almost indestructible and once applied was next to impossible to remove. I knew I'd have to chisel the column free but had to avoid scarring the frame. It's a good thing this was before women were stationed there because many of my comments while attempting to free the column weren't meant for delicate ears. Nor would ETN2 Mitchell have liked to hear what I had to say. In the end, I won over the RTV and the vacuum column was replaced, BUT I had come to have an even greater respect for the strength of RTV.

Story # 2 – This story is a little embarrassing but since I gave ETN2 Mitchell a hard time in the previous story I felt it only fair this one be told. I had been the Honeywell tech for some time now and barely had to look at the PM book when doing maintenance. Well one Sunday when I had the duty, I began performing my scheduled PMs. Everything was going smoothly, and when I finished I did my normal run tests. They failed. Not thinking too much of it, I quickly ran through my maintenance again and found nothing. Again my tests failed. Thinking I might have missed something, I meticulously performed each step again reading each step of the procedures closely. Still doomed. Of course the watch section was getting a little anxious, and even I was getting a little edgy.

Fortunately, Chief Kilgore lived on base, and while I considered myself the shop expert on the Honeywell, I deferred to Jack as the master. Although calling him was the last thing I wanted to do, I got him to come down to see if he could figure out what was wrong. He began going over what I had done then began to perform a few checks on his own. After he'd been at it a while, I happened to glance down at the oscilloscope. IT WAS THEN I SAW IT. I had set the vertical deflection knob to the wrong scale so when adjusting one of the cards I had it totally misaligned. Although Jack never said a word, I couldn't help thinking he thought I was a dummy. Still, it was a lesson well learned, and I never made a mistake with my oscilloscope settings again. Rick Bolin (ET1/OT1)

1971-72 NavFac Bermuda: (more memories)

- Because we had 6 children, I was denied entry approval for my family (vehicles, quarters etc., were too small). A normal accompanied tour at Bermuda was 24 months. An unaccompanied tour (sailor's choice) was 18 months. Because I was "denied - not my choice", there is a provision in the Trans Manual called a differential tour of 12 months - so I applied for it. After 12 months I was assigned to COSL as MCPOC...

- Coffee always ready at Peg and George Widenor's home on Sunday morning after church - "ching-ching" announced my arrival on "old Mobe" ...
- The many times Peg and George had me over for dinner (spaghetti!!!)... They could have claimed me on their taxes. (Peg and George are like family to me...)
- Always falling asleep after dinner (thanks Betty) as Bert Soucy played his guitar...
- The time I told the Canadian sailor he had 10 seconds to get out of the Bermado club (I was the manager of the club) - he jumped out of the window - 2nd floor - two broken ankles, a free ride back to his ship and a bad hang-over...
- The time the Canadian sailors started a small war in the Bermado club - the Marine barracks was right next door - they got the word "Master Chief is in trouble" - they actually scaled the walls - the riot was quickly squashed ...
- The time a Canadian friend of mine Coxswain Jim Yarworski's (may he rest in peace) ship pulled in and we needed a ride to Hamilton - the only thing avail was the Marine's paddy-wagon (in back) - they gave us a ride. You should have seen the sailor's faces when they saw the two of us getting into the back of the paddy-wagon... They probably thought - "There is a God"...
- The time we were doing self-help and I was driving a large front end loader - pushing large rocks (to form a break wall barrier), when a rear wheel fell off... The water on both sides of the wall I was working was near 30 feet deep. Luckily, we didn't roll over into the deep... I don't think GEICO covered that... (Ed Smock OTCM)

Circa 1972 – Argentina, NFLD – Joint US and Canadian Forces site

NAVFAC Argentina was selected to become a joint US and Canadian Forces site. Two incidences surrounding the coming of the Canadians come to mind.

The first was one of the briefings at the NAVFAC provided to CANMARCOM (Canadian Maritime forces Commander) as part of the Canadian admiral's tour of the facilities prior to the deployment of the Canadian Forces to the site. The place was scrubbed, baseboards were cleaned, and the compound rocks were raked into random patterns. The watch section on duty had the task of setting up the big wall plot for the brief. It was noted by the day staff that our wall briefing board had some permanent data that was considered "sensitive" and that this should somehow be obscured. The section plotter thought that it would look bad (and probably insulting) if the top half of the board was draped, so instead they covered selective items with enough spare magnetic plotting symbols to obscure the information. The brief went off as planned and at the end, the briefing officer asked the admiral if there were any questions. The admiral's response was: "No questions – but those folks at Kef must be working their tails off! It looks like they've got the entire Soviet fleet right on top of their arrays!" The briefing officer had a stunned expression on his face and the admiral had a small grin on his as he departed the area.

The second incident was the day that the Canadian enlisted folks arrived. As everyone knew, the majority of the Canadian contingent consisted of "Women!". There was general anticipation among the unmarried sailors and consternation among the wives of the married. The Canadian's were to arrive on buses for lunch and a grand tour. I

happened to have “barracks” duty on that day and therefore I went to the galley for lunch. At least ten feet from the galley door, the air became thick with English Leather and as you got inside, the mixture of aftershaves was overpowering. The Canadians arrived and you could see many of them developing watery eyes and odd smiles. I thought it was the height of politeness, and cool, that none of them held their noses.

I assumed that the first group of Canadian Forces personnel were hand picked for this assignment and their professionalism was outstanding. (W. A. “Buck” Buchanan)

1972-1977 – Bermuda - SVM

With the SOSUS modernization program getting underway, the OT knowledge base slowly began to expand more into the science of acoustics – at least the practical application of that science. In addition to the fixed bandwidth processes, the operators were now introduced to new processing tools which were adjustable and required deliberate signal and capability matching. “Big Red” remained mostly on the shelf as new formats were documented and the job became “prosecute” (active manipulation of signal data) as well as recognize.

In 1975, the SVM final report was drafted and a suite of systems was selected for general installation at most sites. The follow-on modernization program was designated IUSS. As part of this effort, plans were drawn up for a support detachment located at NUC San Diego (soon to be NCOSS, then NOSC, then eventually SPAWAR) and a Readiness Training Facility (RTF) at Centerville Beach, CA. (W. A. “Buck” Buchanan)

Fall 1972 - NavFac Bermuda - New Ladies Head

While there were a few female Canadian civilians working at the facility, they used the first level men’s head with a sign to flip when in use. With the first female active duty due to arrive, the second deck gear locker was converted into a bright pink, green, and white female head. A minor drawback was the continued need to use the wall tap to fill buckets and such for field days. (Leslie Skowronek, ENS)

Aug 1972 – George Widenor known to always give good advice - (Not always).

The time is late Aug 1972 and George and I both have orders to leave NavFac Bermuda on 1 Sep 72. This finds us in Hamilton buying souvenirs to take home. George had his motorcycle and I had “ole Mobe”. The problem was that we had to find a place to park. George pulled into a space along side the curb and advised me to just pull along side him and park. I told George that this was not proper. George said “don’t worry, it will be alright... So along side I park and into the store we go. When we came outside there was a lady police officer writing a ticket. I asked her “what is wrong with the way we are parked? She replied “nothing with the motorcycle, it is parked legally against the curb. “Ole Mobe” is illegally parked and is getting a ticket...

Thanks George for your advice... (Ed Smock OTCM NavFac Bermuda)

And: George again - circa 1974

This time the two of us are in San Diego for a Navy ST/OT/AW/ET/ rating commonality conference. George from COSP and me from COSL. We had taken the bus to downtown San Diego for our favorite meal “spaghetti”. As we were walking back to the bus stop we came to a nearly deserted interchange and the little lighted sign said “don’t walk”.

I stopped and George proceeded into the interchange... I yelled “George – it says don’t walk. George replied “come on, no ones coming. So, off I go following George. Immediately we were lit up by the “blue light special” from one of San Diego’s finest. “Ticket – walking violation”...

It took us a while to convince the police officer that we were both wounded (numerous times) veterans of every war we ever had before he let us go with a warning... Thanks again George for your good advice. (Ed Smock OTCM MCPOC COSL)

1972 -73 COSL “Oil filled - Iron filing” continuous loop reusable Lofargram paper experiment

An experiment to save money on Timefax paper was presented to COSL to evaluate. Instead of burning the paper, the electrical current from the styli caused the iron filings to become magnetized and "bunch-up" where a normal "line" would be... Get the picture?? Then, hours later, as it passed a degaussing device the filings were scrambled for use again... The paper was made in a continuous loop (they said they could make the length to cover a 24 hour period etc...)

What they didn't have answers for were questions/comments like: How do we save grams, we normally cut the paper and send segments to CNO, signature library, data packages etc., how could we do this? - No answer... If it tears, what happens? - Answer: oil and filing pour out... Not doing so well at this point... The kiss of death came when I went to write a target number on the gram with a ball point pen.... All the filings jumped to where my pen point was - the signature was gone...

The Commodore, CAPT Charles E. Woods (his wife called him "Charlie Tuna" - because he was passed over so much - her words not mine, - he was a fine CO..), looked at me and asked, "what do you think Master Chief " ???... "I told him" - then, he "told" them to leave and take their device with them.... They never came back... We kept Timefax for another 20+ years... (Ed Smock OTCM COSL MCPOC)

Circa 1972 - COSL - OT1 William ("Bill") Tilley "One-on-one" with the Admiral

It was during a mid watch of high tempo ops that the Admiral decided to stop in on COSL MEC unannounced and have a first hand look at what is being reported to him. Bill Tilley is at the ECDAPS 3100 (light pen and all) doing what Bill did best - "he was on watch" and doing his magic like only Bill could do... The Admiral told the W.O. not to call the Commodore at this hour and that he would be fine with Bill.

Bill invited the Admiral to sit next to him for some "SOSUS 101" training... They spent hours there as Bill worked the Admiral through the process of evaluation, localization,

reporting etc... The Admiral was still there in the morning when the Commodore came in... Bill Tilley was truly an expert... He was respected by all who knew him.

Ed Haney said it best at Bill's funeral - "When (if) we get to the big NavFac in heaven, Bill Tilley will be there, and he will have the best trained watch section that you can imagine - and he will make all of us re-qualify"... Bill was my friend... May he and his wife rest in peace... (Ed Smock OTCM COSL MCPOC)



1972 -73 COSL "Briefer" Beware

CAPT Woods was known for his bluntness when it came to being briefed by anyone not fully knowing the subject matter... On numerous occasions I can recall him, early in a brief, asking the presenter a question. If the offered answer was insufficient, CAPT Woods would immediately say "This brief is over" - you go back and tell your boss that you do not know what the "heck" you're talking about.... He would stand and leave immediately - leaving the briefer standing there... The word got out to other presenters, they never looked forward to coming... - it sort of reminded me of the "Gong-show"... (Ed Smock OTCM COSL MCPOC)

1972 -73 COSL CAPT Charlie (Tuna) Woods

I always enjoyed CAPT Woods, he used to ask, "How am I doing Master Chief"?... To give you an idea, we were at a NavFac (will not use the name) for one of the Command inspections and CAPT Woods found reasons to dress down the CO. Issues we will not discuss however, I was in the room at the time - COSL, NavFac CO and me (as COSL MCPOC). The session was rather brutal and I felt bad for being there in front of the CO.

When it was over, we left the room and CAPT Woods immediately wanted to talk to me.... He looked around the immediate area and could not find an empty room... He opened a door - it happened to be a gear locker - equipped with swab-pale-etc... - He pulled me inside and closed the door (we hardly had room to stand without holding on to each other - and it was dark)...and he asked "How did I do Master Chief"?..... (I could only hope that when we left the gear locker, that the CO wasn't watching us....Ha-Ha) (Ed Smock OTCM COSL MCPOC)

1972 -73 COSL CAPT "Sleepy" Swadener (COSL CSO)

It was no secret; the CSO had a sleep disorder. At any time, you could walk past COSL's office and see CAPT Swadener sound asleep in his chair with his head back... Ms Cassel would just nod to us to acknowledge that he was asleep. On one occasion, the CSO was receiving a presentation by one of the developers. He fell asleep and the briefer continued for our benefit... When the brief was over, CAPT Swadener woke up and said to me, "that was the most boring brief I have ever slept through"....

Another time, we were at NavFac Bermuda for a Command inspection and it came time for the Command brief to be given to the CSO. I was busy talking to the troops and was not in the briefing area - they did it on the Ops floor at the time...CAPT Swadener fell asleep shortly after the brief started... the brief ended, everyone got up - CSO still sleeping - they left the CSO asleep in his chair at the front of the briefing area.... When I

got to him, he awoke and asked how long had he been sleeping??? - I replied - "only a few seconds"... (Ed Smock OTCM COSL MCPOC)

Circa 1972 - SURTASS established

The Undersea Surveillance System (USS) PME 124 Office was established in 1972. At that time, the concept of towing a long line of hydrophones from a surface ship was proving to be a highly effective method of detecting submarines at long distances. The Navy recognized its value both as a mobile augmentation to the Sound Surveillance System (SOSUS) fixed arrays and as a means of extending sonar coverage of combatant ships.

T-AGOS ships, especially designed SURTASS platforms, were painted white at first to keep them and their surveillance mission from being identified with the gray-ship Navy. After a year of operations it was determined that the ships were attracting more attention because they were white! They were repainted gray and remain that color today. (Gerry Kirwin (PMW 182A)

The RV Moana Wave was used to deploy the new SURTASS system before the T-AGOS SURTASS ships were built and commissioned. (i.e., USNS Stalwart T-AGOS 1)

The Moana Wave was built in 1973 and leased to the University of Hawaii, operating for four years off South America, the West Coast and Alaska. Then it was chartered in 1977 by the Naval Electronics System Command and operated by UH for six years out of the East Coast, deploying the Navy's Surface Towed Array System. The Moana Wave was overhauled in 1984 and returned to UH with an additional 30 feet in the middle and eight feet at the stern. Labs and scientists' quarters replaced shipboard containers.



SURTASS Memories (Initial System – at COSL)

- Rather shaky start.... SURTASS was originally installed at COSL (NH-95) (trivia – NH stood for Naval Hospital). The first time power was turned on there was an explosion and smoke... Evacuation was considered... It turned out to be a problem with a “diode” shorting out... Back to normal after replacement of the diode.
- SURTASS hardware was originally cooled via tubes filled with alcohol, water was used later instead of alcohol (ship and shore, ship could also heat the water if needed). Temperature had to be controlled for optimum performance.
- When installed at NOPF DN, the water system (under the raised floor) was located on the side that is now N2. SURTASS and the water system was later moved to the other side of the floor (where Coast Guard is now located).
- The original SURTASS grams were not well received (the BB), due to miss-match of data rate, scan rate and paper speed. This miss-match caused the grams to have a

“boxing – pixelized” effect, as scans were repeated about 3 times waiting for new data (the “bands” were done differently). (Ed Smock)

1973 – NavFac Grand Turk - Cow in the Swimming Pool

NAVFAC Grand Turk had managed to get a swimming pool constructed as part of its Special Services facilities. Due to the scarcity of fresh water on the island and corresponding conservation measures, it was always filled with salt water instead. Most of ship’s company seldom used the pool because of the beautiful beaches and warm ocean water surrounding the island. However, that doesn’t mean that locals didn’t take advantage of the pool.

Early one summer morning, one of the many cows that ran loose on the island (as well as other animals such as goats and donkeys) managed to get around the fencing and cattle grates protecting the NAVFAC and somehow managed to not only find the swimming pool, but fall into it as well. Ship’s company was awakened that morning by loud mooing coming from the unfortunate cow now floating in the swimming pool. The cow could not get out of the pool on its own because of the high sides of the pool and its inability to get firm footing on the floor of the pool.

After many failed attempts to pull the cow from the pool with ropes, an engineman came up with the plan that finally worked. The pool was drained and strong planks put into the pool that allowed the cow to finally exit the pool and be lead from the facility never to return again. (Jerry Mc Donald ENS)

1973 -74 Medical Support for Down Range Dependent Wives??

During one of COSL’s semi-annual support visits to the NavFacs, this one to NavFac Eleuthera, COSL CAPT Gerry Canaan, myself and NC1 Gordon Daly were having a meeting with the wives and gathering information as to their needs and what the possibilities were for us to assist. The wives expressed their concern that they did not have any means of obtaining female type medical exams without taking leave and returning (at their expense) to the states. CAPT “the Commodore” said he would arrange for a doctor to visit the facilities for this purpose. We thought “all was well” as we went on our merry way...

“Not so”... When we returned in about 7 months for our follow-up visit, we were met with violent hostility... We asked, what is the problem? The Commodore explaining that he in fact, had arranged for a doctor to visit...

It went down hill from there - the wives loudly exclaimed “but he was a physiatrist”... The Commodore replied “well that’s better than a sharp stick in the eye”... I said “Ooooh no, Commodore” - how can I protect you now... (That was one of the jobs of COSL MCPOC; to protect the Commodore from himself...) (Ed Smock OTCM COSL MCPOC)

1973 -74 “Sha-Zaam” - “you can use the Black and White sedan” - Grand Turk

It was on this same down range trip that finds me and NC1 Daly at NavFac Grand Turk for their Command Inspection. Their CO LCDR J.A.D. Smith asked me if I would like to

use his "black and white sedan" to tour the island. He said that I was not to worry about the two holes in the roof... He said that one of his JOs had used it for an evening out with a female companion and they were parked (for unknown reasons) in one of the surrounding pasture fields when a cow stuck her head into the opened car window - the female companion screamed - the cow raised it's head and got impaled to the roof... The more screams, the more the cow panicked, the more it shook the car etc., finally getting free of the roof. Thus the reason for the two large holes. J.A.D. (May he rest in peace) told this story many times - and I saw the holes; the cow hasn't been seen since... (Ed Smock OTCM COSL MCPOC)

11 March 1973 Southampton, Bermuda – “Person of Interest”

I was on the road to take the day watch at about 0500 when I was stopped by a Bobbie. I'd slept from 1900-2300 and 2400-0330 and was awake and sure I hadn't violated any driving regulations. He proceeded to search my scooter and my duty black purse and asked me where I was the previous night and what I was doing on the road at that hour on a Sunday. I could see he didn't believe my statement that "I was home alone all night". I continued on to watch to learn that Lord Sharples and Captain Sayers had been assassinated that night at Government House. I realized I was considered a "person of interest" when I was called for interrogation by Scotland Yard three weeks later! (Leslie Skowronek, ENS)

12 Mar 1973 NavFac Bermuda “Being Challenged by British Commandos” – for real

Three days after the assassination of the British Governor Sir Richard Sharples and his aide-de-camp Captain Hugh Sayers, (They had been killed as they strolled in the grounds of the Government House on Saturday evening 10 Mar 1973) I was entering the Governor's grounds to visit OT1 Ed Haney (I was there for a Command Inspection) Out of the dark the Commandos jumped out at me and shouted, "don't even breath"...

Thankfully, Ed had advised them that I was coming and he had also given me a heads up that they would "seriously" jump anyone entering the area...I had thought about just staying home... But Pat had prepared dinner so I had to go... Even being prepared didn't lessen the shock... (Ed Smock OTCM)

30 Mar 1973 – CAPT Joe Kelly Retires

CAPT Joseph P Kelly, USN, "Father of SOSUS," retired after 21 years as Program Manager for Project CAESAR

Sep 1974 - We officially celebrated the 20th Anniversary of SOSUS.

Dinner was held at Breezy Point Officers Club, NAS Norfolk

1974 - SOSUS detects it's first Delta

The Soviets built more Delta-class SSBNs – 47 in four variants – than any other class of



ballistic missile submarine. The first Delta I appeared in 1972; the last Delta IV was completed in 1992. The earlier boats displaced 11,750 tons submerged and carried 12 strategic missiles. The later variants added approximately 2,000 tons and four more missiles. SOSUS first detected a Delta at sea in 1974.

<http://www.chinfo.navy.mil/navpalib/cno/n87/usw/issue>

Circa 1974-1975 – Bermuda - Meeting the Admiral

For a brief time, SOSUS had an Admiral. OT1 Terry Babcock and I got to meet the admiral when we went TAD to Argentia. At this time, Argentia was the R&D site for the RTSP system. It was decided that some side-by-side analysis of SPEAR and RTSP data would be of interest for Navy evaluation of both systems. Since neither site could be outfitted with both systems, the next best approach was to take data tapes, run them in Bermuda using SPEAR and then take the same data set to Argentia for an RTSP run. Terry Babcock and I were the “lucky” ones assigned to make the Argentia trip.

Terry and I were lounging (since about 4am) in the McGuire AFB waiting area for the 8am C-130 milk run to Argentia. About 7a.m., an Admiral came strolling through the waiting room and spying us, made a course change and came over to us. He introduced himself as Admiral Early and said that he came over because he recognized the OT crew. After ascertaining that we were going to Argentia, he insisted that we join him on board so we could chat on the way. When they finally let us on the plane, I was trailing Terry in the hope that he’d be the one to have to sit with the admiral. Terry literally picked me up and put me in the seat next to the admiral.

The admiral was making a grand tour of the NAVFAC sites and wanted to chat about the living and services conditions he had encountered thus far. He seemed to feel that both Commodores (PAC and LANT) had a good handle on the operational and logistics end and he saw his role as an advocate for better living conditions for the troops.

I do not know how long the admiral’s billet lasted, but I never heard anything else about him or the position. (W. A. “Buck” Buchanan)

1974-75 - COSL Watch – Recall List

The watch section was not given advance notice of inspection schedules for security reasons. An emergency equipment situation arose and as per procedure, I started contacting the listed electronics personnel. By the second call, I realized the team must be out of town when an irate spouse informed me that her husband had better be on an inspection trip and I should know that. Soon after, the watch was notified when teams left town. (Leslie Skowronek, LTJG)

1974-75 COSL - NJP Investigation

A young seaman from COSL and her friend from SUBLANT were reported by Base police as having been performing inappropriate acts with their boyfriends in a vehicle. As investigating officer for COSL, I attended the XO screening and CO’s Mast which led me to work with CWO John Walker. Little did I then realize who this person was and what a dubious honor it would be to admit I had met him. (Leslie Skowronek, LTJG)

1974 -75 COSL CAPT Canaan previous Korean War POW

CAPT Canaan having been a previous Korean War POW was called upon to join the team of previous POWs gathered to meet and work with our returning Vietnam War POWs (pertaining to rehab issues etc...). One day while we were on a plane flying downrange to one of the sites, I asked him "CAPT, how did you find yourself to be a prisoner of war"? He looked at me and said - "They shot my ass down".... I never mentioned it again... (Ed Smock OTCM COSL MCPOC)

1974 - COSL CAPT Canaan and "LT" Smock take Military quarters in St Johns Newfoundland

It was while returning from NavFac Argentia (their command inspection) that finds the Commodore and me stranded in St. Johns due to flight problems. CAPT Canaan on numerous occasions had been offered a place to stay at the military base in St Johns if he ever needed it. We needed it now... To forego an awkward situation, CAPT Canaan said to me that we would identify me as LT Smock. Knowing how fussy they might be about a "person from the ranks" staying in officers quarters. I was very uneasy however, it had to be done - so, I became "LT Smock". They fed us, provided some liquid refreshments and - off to bed.

I was assigned a very nice single person room with toilet, shower etc... My bag was carried to my room, and all was fine... In the morning I got dressed and went looking for the Commodore... I came to this large public shower area with numerous sinks, toilets etc... There was my Commodore standing in his boxer shorts shaving- and he was not alone... He said good morning Master Chief - how was your quarters? I told him - "just fine", and explained to him how nice I had it... He replied "Mine wasn't that good"...

Then it came to us... In their outfit, LT is higher than a CAPT.... Ha-Ha... So I got the VIP treatment... CAPT Canaan got "open-bay-berthing". Ha-Ha... (Ed Smock OTCM COSL MCPOC)

1970-75 – Vietnam War Support

During the Vietnam War, In Shore Undersea Warfare SOSUS OT's (operating out of NAB Little Creek, VA) monitored the movement of NVA motor vehicles using small RF detectors (made to look like burnt foliage) dropped near the roads/trails (activated by pulling a small pin).



Recordings/lofargrams were generated which revealed the type of enemy vehicle in transit. We made a typical signature book for our library. (Ed Smock OTCM COSL MCPOC)

1974-77 NavFac Bermuda - " I arrive"

I was left to my own devices with no adult supervision. Bill Tardy, who was in my "A" school class in Key West, was also a new arrival. So it being the weekend and us being in a tropical paradise, we did what every red blooded sailor would do....**PARTY!**

We first rented two Mobys (Mopeds) the standard duty one each way to get around Bermuda. Since we were looking for the female gender, we went to the Half & Half Disco (this was the 70’s remember). This meant we were required to wear a coat and tie in order to get in.

After an evening of drunken debauchery we headed back to the base. Now let me first explain the lighting on a rented Moby is equivalent to a weak candle flame as far as illumination capability goes. After you went through the gate at the Annex, you had to go down a long hill and over a causeway that had a center median. We remembered the median and kept moving to the left edge of the pavement (in Bermuda you drive on the left).

What we didn’t remember was that the drive in movie theater parking lot was on the same area. There we were cruising at the dazzling speed of about 30 MPH and unknown to us veering into the parking lot at the end of which was a 4 inch curb. Bill was slightly in front of me, and I saw him launch into the air and gracefully fly over his suddenly motionless Moby. About the time I was able to think “What the #\$%^?”, I too was airborne... Upon our totally undignified landing we got up brushed ourselves off and went to examine our Mobys. The front rims of both of them were perfect except for the exact outline of the curb; Bill bent over and just barely touched his rim and the tube immediately burst with a loud bang.

The next morning the rental guy was highly annoyed and gave us a severe verbal reprimand to say the least. This was a harbinger of what life on two wheels was going to be for the next three years.... (OT3/OT2 Bob Eller NavFac Bermuda)

Adventures in Transportation

One night after departing from an Eve watch Bill and I were riding home side by side as we both lived in the Somerset area, by now we had graduated to motorcycles. As we approached the Somerset Bridge we passed two locals on “Super Mobys” (for those never stationed there, I was in traffic court and saw a local that got nailed doing 70 MPH on one, the island speed limit by the way was 20 MPH). As I knew we had to make a right on the Somerset bike path (illegal on a motorcycle, but hey it was late!), I slowed to let them pass before turning. Bill on the other hand either wasn’t thinking or forgot they were coming and turned right in front of them....it wasn’t pretty, they were not amused.

I had broken a bone in my foot playing volleyball on the NavFac team (don’t ask) and was in a cast. Bill had picked me up as I couldn’t shift my bike very well. I had the walking sole on the rear foot peg, when we hit a rather large bump. This caused my foot to bounce off the peg; I immediately discovered that I couldn’t hold my leg up due to the weight of the cast. This resulted in my toes impacting the pavement at speed removing the skin from the end of them. I must admit it....I swore. When we went to the duty corpsman, he said “Boy, I bet that must’ve hurt”. The man had a gift for understatement...

One of the more colorful accidents I saw while there occurred on yet another return home from an eve watch. In this case a guy named Dave Radcliff had purchased a used Moby that was a rental. It had a flat rack on the back over the rear fender. It's amazing how the vibration on a Moby loosens bolts....As we were riding along the rack suddenly broke loose and flipped around under his rear wheel....the sparks were amazing, Dave ended up hanging in the Oleanders lining the road with his Moby.

Finally, I was sitting on my bike in the parking lot of a store right by the approach to Somerset Bridge one bright sunny day. Suddenly four fifty something tourists appeared coming up the hill from the bridge. They were in a line husband, wife, husband, and wife and hadn't quite got the hang of driving them yet. They were all moving very slowly, front wheels wobbling like a flag in the breeze to keep their balance. The first guy loses it and goes off to his left into the Oleanders, his wife thinking he turned, followed him....as did the guy behind her.....who was followed by his wife. (OT3/OT2 Bob Eller NavFac Bermuda)

Circa 1975 - COSL we had two CSOs, one with hair and one without hair

One day a visitor asked me where he could find the CSO. He said he had been with him before lunch however, since returning from lunch he has not been able to find him. I told him that he would be in his office where he had been with him this morning. The visitor replied "but there is a different person sitting in there now".... I went with him to see what the problem was.... There sat CAPT Hryskanich ("Scratch") without his hair... Ha-Ha... He normally would wear his hair in the mornings, and would take it off for the afternoons. (Ed Smock OTCM COSL MCPOC)

Circa 1975 - COSL Navy Relief Fund Raising "Used Car" Raffle

NC1 Gordon Daly and NC1 Gertis told me that they would get a local car dealer to donate two used cars; that we could raffle off to staff members and raise money for Navy Relief. I shook my head in disbelief that any car dealer could be convinced to do such a thing... That proved I didn't know the powers of these two Navy Counselors... They got two relatively late model cars donated. The dealer had the cars checked out, inspected, and even had four new tires put on each.

Now the story - CAPT Hryskanich ("Scratch") won one of the cars... NC1 Gertis delivered it to his home... All is well.... About fifteen years later, "Scratch" and I were having a talk about the "old days"... We talked about him winning the car... "Scratch" said - yes, all I had to do was put on four new tires.... I laughed.... Gertis had switched his own old tires for the four new tires that were on the car Scratch won..... Brings a smile to my face even now... (Ed Smock OTCM COSL MCPOC)

1972-75 COSL (more memories)

- COSL campouts (for the past 28 or so years)...
- Dick Eberlie falling out of his canoe into near icy water (thanks to his son "Fang")...
- The humor and friendship of Dick Eberlie...

- Having served, in one capacity or another, under every Commodore that Ocean Systems Atlantic (COSL/CUSL/CUS) has ever had (twenty-five), and five Commodores for COSP.
- The friendship of NCC Gordon Daly - his arrangement for my retirement ceremony - CINCLANTFLT Headquarters, 24 piece Navy band etc "Thanks Gordon" - "Oh-PO")

"I will never understand why some of our Sailors refuse to have a retirement ceremony - "It was for my Family"... It wasn't for me... What was for me, was what I saw in my children's eyes during the ceremony... And that is the real memory..." (Ed Smock OTCM)

29 Sep 1975 COSL - OTCM Ed Smock retires from the Navy – and begins "contractor career" starting with SVM

At the time of my retirement from the Navy (after 22 years) at COSL, NavElex PMW-124 (Bob Mack) and the Navy were in the process of putting together the Modernization of SOSUS Program. It was called SVM (System Validation Model). Various contractors were solicited to work on different parts of the system (AN/UYK-20 & 7 based): AT&T had RTSP, SYSCON had CP/TDP, COMDEV Canada had SURTASS, SPEAR, FSPEAR, TUNA, ATUNA, and TSAR, GE had ABF, ENSCO and TRACOR had IAP etc... Bob Mack asked me if I would work with COMDEV (Fred Jones) in Ottawa while we got things moving... (Of course I said yes...)

A year later, Bob Mack sent me to COSL as his NavElex rep. (1 Oct 1976 - via TRW) TRW said - "Ed, you are on your own, you have at least a year, make what you can of it - regarding permanency".

This past 1 Oct 2007, I have basically been in the same position for the past 31 years, as an IUSS Fleet rep (contractor) assigned to COSL/CUSL/CUS/NOPF DN. Northrop Grumman (now my parent company) bought TRW about four years ago.

People ask me "Ed - when are you going to retire"? - I say, "Why?" - - "Like an old hunting dog, I will quit when they tell me "the hunt is over, go home"... (Ed Smock)

Circa 1975 COSL– What do you do when the computer is toast?

It was during the Christmas Holidays at COSL. Those of us assigned to the watchbill during this time of year had mixed emotions. Didn't want to miss time with our families, but sure didn't miss having the dayworkers around. Operations were normal, a Yankee in WESTLANT with its' relief on the way. Normal routine lately was for the turn over to be along the Mid-Atlantic ridge, just to make things interesting. This should happen within the week.

My section came into work for a Day Watch on a day after a big thunderstorm had passed through Norfolk the night before. The Chief I was relieving informed me the CDC 3100 must have been hit by lightning during the storm last night because it went down hard. They had called for technical assistance, but because of the holidays it was going to be later today before the tech would arrive. To make this story a little shorter, let me just

say that neither this tech nor the next tech from CDC was able to get the computer back up. It was about a week later before the CDC tech flown in from Minneapolis finally got the beast up and running.

In the mean time we had contacts to track. We had the WESTLANT Yankee turnover happening at the Mid Atlantic Ridge plus all the other contacts we were holding. We managed to find all the charts we needed plus all the other manual plotting tools we hadn't used for some time. Since the CDC 3100 was down for about a week, we all had the experience of doing our job manually. I can't speak for everyone, but I know I can speak for quite a few of us, these watches were probably the most fun and most challenging we had stood for quit some time. Somewhere during this time we even had to do a major track revision.

When the CDC 3100 came back up we had to enter in all the data from when it was down and rerun everything. The computer verified we all had done an outstanding job.
(Mike Weir OTC COSL)

Circa 1976 – Victor III off Carolina Coast

This was during my tour at COSL. I was the Watch Chief; OT1 Armus Jokenin was the Watch Supervisor. There was a V-III off the Carolina Coast. I don't remember the details of how long we had held it, whether it snuck in or any of that. What I do remember is Cape Hatteras reporting this V-III on back bearing one day and the ruckus it caused at COSL. There was a US out there close by (same beam in some cases). Eleuthera was also reporting these contacts. One other NAVFAC was reporting also. I don't remember who. Armus and I were trying to determine who was who. We had Data Relay coming in from the stations that were holding one or both of the contacts. We spent almost an entire watch carefully analyzing each line from each station holding trying to determine which line was the V-III and which was the US, with no help from SUBLANT I might add. Once we had it sorted out, we then had to convince each NAVFAC what they were holding, not always an easy task for COSL. The V-III “was” on back bearing from Hatteras sitting outside Charleston.

After all that work the watch relief for Armus, who shall remain nameless, walked onto the watch floor and announced “I got it.” About two hours later and after we were sure he understood who all the players were, we allowed him to take the watch. (Mike Weir OTC COSL)

1975-1985 After retiring from the Navy I joined NISC, as a contractor.

This was an exciting period as I was on the receiving end of all the great stuff the various collection platforms sent in for analysis. This is also where I was introduced to the world of computers. Thanks to people like Bruce Rule, Terry Patterson, Ron Smith, John Brubaker to name a few I became a better acoustic analyst. (Bob Farver Civilian)

Circa 1976 – Victor III – COSL Analysis

I was working in Analysis at the time and the event certainly caused much review. The whole analysis team came in and folks from Cape Hatteras drove to COSL with the

grams and tapes. There were many discussions with CDR Russell (Director of Ops) as we worked through possible scenarios and tried to get information from SUBLANT. (Leslie Skowronek, LTJG)

15 Aug 1976 – NavFac Keflavik Sailor saves two lives

OTSN David Beauchemin & wife Beverly were fishing in Keflavik when they saw some children, who had been playing near them, fall over the side of the pier. Immediately, Seaman Beauchemin shed his coat and dove 10 feet into the 46-degree water. For 10 minutes, he stayed afloat with two struggling, young Icelanders. His wife sought help; two Danish fisherman from a ship in the area pulled the threesome from the water, using a long pole... OTSN David Beauchemin received the Navy and Marine Corps Medal for his action. Dave is now deceased (Dec 1993). David L. Beauchemin CWO3 (ex-OTAC) USN 1975-1993.

This article about Dave was posted on the IUSS Alumni web site on 3 Aug 2006 by Gail Smith. I have taken the liberty to add it to “Our Book” as this story is part of our history and must be told... (Ed Smock)

1976-1977 - OSSD San Diego (Ocean Systems Support Detachment)

The OSSD was formed to provide NUC (now SPAWAR) with a cadre of OT expertise to support both ongoing research/development and the aggressive IUSS systems installation schedule. The original OSSD crew stood up in early 1976 and I joined them in September of that year. We were not the “best and brightest”, there just weren’t enough senior billets for that. We were drawn from the facilities that hosted the R&D and follow on systems. Our early experience with and on-site support of these new “IUSS” systems was the dominate factor in selection for these billets. It was envisioned that subsequent manning would be selected from the sharpest folks rotating at the time billets became open. This would ensure that a capable team of personnel would always be available to meet any needs the facilities and SPAWAR might have.

It was very rare that the detachment members were all in town at the same time. The installation schedule meant that we were on the road about 70% of the time. It was also rare that team members were at the same site at the same time. One of our roles was to fill out the contractor training teams supporting installations and this meant that two to three OSSD members at the most went on each trip. (I was the only member in town for OTC Max Morris’s retirement ceremony – they had to round up additional side-boys from the sub base.) (W. A. “Buck” Buchanan)

Oct 1977 - Readiness Training Facility, Centerville (RTFC) Established

Back in the mid 70's the SOSUS system was going through a major modernization. The original SOSUS beam forming, magnetic delay lines (MDL), and processing equipment that dated back to the start of the program were being replaced by new equipment called the System Validation Model (SVM). This consisted of COPS, RTSP, CP, CIC, TDP, SPEAR and a few others. Between OPNAV (OP-951) and NAVELEX (PME-124) it was decided that this new equipment could not be installed at all sites without a significant upgrade to our training capabilities.

At that time the "A" School had moved from behind the "green doors" in Key West, Florida to Norfolk but had very little equipment. Basic training consisted primarily of notebooks filled with gram displays and a few lofargram writers. Since it was prohibitively expensive to build a training facility from scratch, OPNAV decided to co-locate the new training facility with an operational site. That site was NavFac Centerville Beach (CVB). Thus the school became a tenant command and was called Readiness Training Facility Centerville (RTFC). It opened its doors in October 1977.

As OIC I reported to COSP, but worked closely with both COSL and COSP. The RTFC was somewhat unique in that it taught NEC granting courses and followed training command guidelines but was directly responsible to the Fleet for its performance, a practice that over the years proved beneficial to the Fleet. Because of the close relationship it was easier to adjust curriculum material to keep training current with Fleet operational procedures.

The school was given a part of the NavFac CVB equipment room to use as its laboratory. We paralleled the CVB processing and had two banks of writers to display the new RTSP lofargrams. We had several recorders that allowed us to inject contacts and run a canned scenario for the students. The school originally taught three operations classes on the new equipment; an officer's class for new officers coming into the system, a basic enlisted class for those OTs coming out of "A" school and going to an upgraded site, and an enlisted class for those individuals with SOSUS experience who were being transferred to an upgraded site. These courses included standing watches with the CVB watch teams.

When the school first started the courses were developed, taught, and maintained primarily by contractors (George Widenor) (SYSCON) with a few Navy instructors. The contractor instructors were gradually replaced by Navy instructors and after the first year the Navy was teaching and maintaining all courses. About this time the RTFC also began teaching Canadian students, not an insignificant undertaking since course material had to be sanitized and class schedules rearranged. A significant addition to the curricula was the Advanced Analysis course which was the first time the Navy documented the knowledge and experience of senior Ocean System Technicians and taught it to mid-grade OTAs.

NavFac Centerville Beach was an excellent host despite having to sacrifice several of their buildings. The base theater was turned into an instructor's office for the RTFC staff. The NavFac received some compensation for this when PME-124 build a nice gymnasium that both RTFC and NavFac Centerville Beach used. The RTFC took over one of the two base barracks. It became barracks for the enlisted students, an officer's course classroom, and an enlisted classroom and staff offices. Generally there were two enlisted classes in session which meant the classroom in the barracks and the lab in the TEB were double shifted. The officer students took over most of the rooms in the BOQ. We later took over an old transmitter building and renovated it to teach the Advanced Analysis course. RTFC was always looking for space and I think the Commanding

Officers (CDR Chris Robbins and CDR Will James) cringed whenever they saw me coming, wondering which space I was going to ask for next.

It was always an experience getting the new students there for their class. CVB is not the most accessible location and with the majority of students being new to the Navy and traveling from Norfolk, Va. we would quite often get calls from a student saying "I'm in Centerville, Ca. with no money and can't find the school". Centerville, Ca. was a few hundred miles from Centerville Beach, Ca. so we had to go and get them or wire tickets or money so they could get to CVB. Fortunately the Navy reimbursed us.

There were several people closely associated with IUSS who were instrumental in getting the RTFC started. CDR Larry Wilcher came to the RTFC as a brand new LDO ensign and was the first Navy instructor for the officer's course. LCDR Gordon Ratliff was a crusty OT1 who taught enlisted classes and coordinated lab activities. CAPT Jim Donovan was a new OT2 who started in the lab and became an Advanced Analysis course instructor.

My association with the RTFC did not end when I left CVB. A couple years later, while stationed at NAVELEX (PME 124), I was given responsibility for planning and installing the lab at the new RTF at Dam Neck, VA that was replacing the RTFC. With a great deal of help from Mr. Ed Smock (TRW) and Mr. Joe Palsha (AT&T) we set up the lab equipment, and created scenario tapes for lab exercises. (Bud O'Hara LCDR OIC RTFC 1977-80)

In order to provide as much realism as possible to the training facility, we duplicated the outputs of xx21, xx22, and xx23 by going to the site and gathering HDDR taped data for use as our background foundation. We used the same relative positions - we off set the Lat/Long for obvious reasons.

Then we developed the Ocean System Simulator (OSS) which allowed us to inject real analog data and/or Microdas type data into the background HDDR data. The result - we ended up with real "actual" items tracking, real background noise, and injections of anything we wanted. We could then re-record the output of that effort onto HDDR tape (remember Target Scenario Generator -TSG) etc., and repeat the cycle - to refresh the scenario...

We also utilized the Message Input Processor Simulator (MIPSIM) which was a test tool built and used by NOSC to generate "numerous" tellers and messages to load the CP and TDP systems during development and testing... (This was Max Morris's baby...). (Ed Smock)

A few years later the RTF was disestablished, training moved to FLTASWTRACEN and the building turned over as the new CUS headquarters. (Bud O'Hara LCDR OIC RTFC 1977-80)

28 Aug 1976 - Echo II - USS Voge FF1047 Collision. (Adm. Harry D. Train II)

An edited excerpt from the Naval Institute oral history of Admiral Harry D. Train II, U.S. Navy (Retired). “The Sonar that Brought up a Different Kind of Echo”.

When I took command of the Sixth Fleet in August 1976, I had some specific guidance from Admiral Jim Holloway, the CNO. He told me to ensure that when the ASW squadron came over, that they not be just scooped into the assets of Commander Task Force 60, but rather employed in a specific way that would keep them at sea, performing their mission of evaluating the towed-array sonar. The ASW squadron consisted of five towed-array frigates and command ships.

Two types of towed-array sonar are the TACTAS and the interim tactical towed-array sonar system, ITASS. The McCloy had the ITASS, and the Moinester and Connole had the TACTAS. TACTAS was the towed array that was streamed behind a variable-depth sonar buoy. ITASS was a long array with speed and maneuvering limitations. TACTAS, or tactical towed-array sonar, did not limit the speed or maneuverability of the ship upon which it was installed. The fourth and fifth ships were two more frigates that served as ASW command ships, Voge and Koelsch.

This was not in any sense a hunter-killer group. It was strictly a development group, and what Admiral Holloway wanted to do was get an up-or-down decision on whether the U.S. Navy should invest in towed-array sonar. He apparently believed that the previous employment of the ASW squadron had not worked, because it had just been swept into CTF 60 and used for plane guards and other chores. It wasn't easy to hold the line on that, but I understood those directions quite well. And while I had some fussing to do with people like Rear Admiral Dutch Schoultz, who was the CTF 60 commander, I held the line. The ASW squadron spent over 80% of the time at sea, doing their developmental work--and nothing else.

When we brought in this development group, I met with two of the Sixth Fleet's task force commanders, Rear Admiral Nick Nicholson and Rear Admiral Bill McLaughlin. McLaughlin had the land-based patrol aircraft, and Nicholson was the submarine task force commander. We created a new task force, CTF 66, which was the theater ASW force. I placed Admiral Nicholson in command of CTF 66 and made McLaughlin his deputy.

The thrust of this was that, between the two of them, they owned all the submarines and all of the P-3 aircraft. The problem with the previous tests of the towed-array sonar was that surface ship sonarmen did not know how to read lofargrams. They did not know when they had a target in the same way that submariners and P-3 aviators did. So we got the submarine sonarmen and the P-3 sonarmen to tutor the surface ship sonarmen on how to read lofargrams, and it worked pretty well. In addition, both Nicholson and McLaughlin provided days and days of submarine and P-3 services to the ASW squadron.

The ultimate success story of the ASW squadron was when a Soviet Echo II-class nuclear

submarine was picked up by an Atlantic Command submarine outside the Med, trailed through the Strait of Gibraltar without losing contact, and passed to the ASW squadron. Once in the Med, contact was alternately maintained by submarines, P-3s, and the ASW squadron. Contact was passed from the submarine to the P-3s to the ASW squadron and back to the P-3s. If the ASW squadron lost it, they would tell the P-3s and the submarines, and the submarine that was in trail would get the ASW squadron back on contact. They tracked them for ten days. The ultimate act was on 28 August 1976, when the skipper of the Echo II got mad and ran into the side of the USS Voge.

The Voge, the Koelsch, the McCloy, and P-3 aircraft were out there and had been tracking the submarine all the way from Gibraltar to the vicinity of Crete. Every time this Echo came up to periscope depth, he saw one of these ships around. For some reason, he thought that the ship that was tracking him was the Voge. The Voge was just a communication link. It wasn't a towed-array ship, but they all looked alike. So he decided the Voge was the ship that was causing him all this grief, and he came up to periscope depth and saw the Voge way off on the horizon. The Moinester, which was closer really had the array. But he didn't think the Moinester was his problem, because he hadn't seen it before.

When the Voge started to run, the Echo II came up alongside, about 600 yards out, ran with the Voge for several miles, and then just turned right towards the Voge and ran into it. Tore part of the propeller off the Voge and punctured the hull back there in one of the after compartments, after steering.

The only casualty on the Voge was that a sailor fell off the 01 deck onto the main deck from the impact. The Echo rolled over about 45 degrees from the impact and just went under and then didn't reappear. At the time that I was called, I was at home in Gaeta, Italy, the home port for my flagship. I felt I couldn't leave home, because I didn't want to get out of contact. Captain Ted Parker, my chief of staff lived right down next to the flagship, which was the cruiser Little Rock. So he ran over to the flagship. He and I were talking back and forth, and he was sending the messages from the flagship. He personally told the Koelsch to send a flashing-light message to Vice Admiral V. I. Akimov, the Soviet Mediterranean Squadron commander, who was in the same anchorage aboard a Soviet submarine tender.

Just for background, the third Incidents at Sea conference occurred shortly before I relieved as Commander Sixth Fleet. This collision between the Voge and the Echo II was one of the first things that happened after I got over there. It was fairly close to the anchorage off of Greece, where the Soviets used to anchor in fairly sheltered waters. The Koelsch was there in the anchorage with them, anchored alongside of all the other Soviet ships that were there in that open-water anchorage.

The purpose of the message I had Ted Parker send to Akimov was to tell him that the collision had occurred. I told him where the collision occurred, and I told him he better send a ship there, because their submarine hadn't come back to the surface right away. I didn't know what had happened to their submarine.

He said, "Thank you very much, I'm sending a ship. What happened?" He hadn't heard about the collision from his own channels, because he had no ships in the vicinity when it happened.

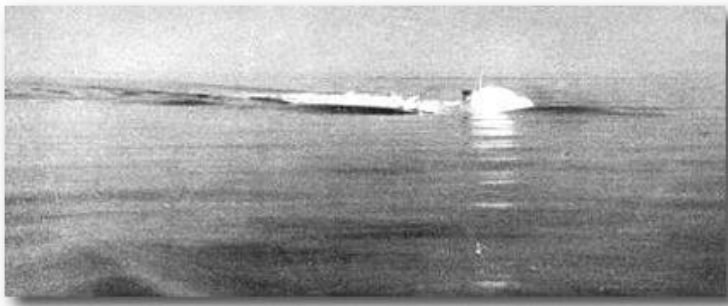
By that point, then State Department and everybody else were plugged into this and I felt I had to ask them, "Can I answer the question?"

I was told by the Pentagon, "No, State says don't answer the question." As a result, I think we missed a golden opportunity to set the record straight. Then we fiddled around trying to get the information to him that I could have given him, because I knew what had happened. It was the most photographed, recorded collision, I guess, in history. P-3 aircraft taping it, we had tapes of the Voge, we had photographs of the Echo II coming all the way in.

After the collision itself, the Echo finally came up. The whole front of the sail was stove in, and I don't know if they had any antennas or not, but Akimov's ship got there pretty fast, and they went away with him. My Soviet friends told me the skipper of the Echo was drunk.

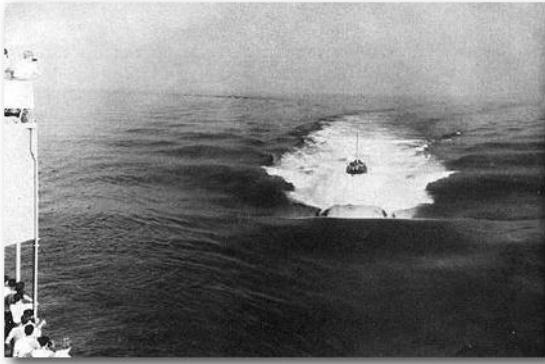
That collision was the most dramatic thing that happened during our ASW tests. Later during my tour as commander of the Sixth Fleet, there was a second deployment of the ASW squadron under a different squadron commander, but equally successful and with different ASW task force commanders involved. But by that time, the decision had been made that towed-array sonars were the way to go. And I am led to understand that it was those two deployments of the ASW squadron that resulted in a relatively early buy-towed-array-sonar decision on the part of the Navy.

The following photo's reproduced by permission: Aviation Week & Space Technology, March 14, 1977

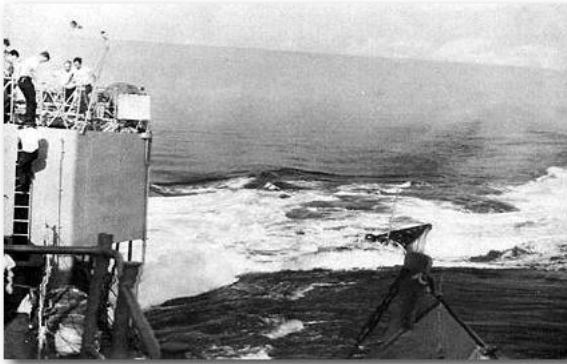


Soviet EchoII nuclear-propelled submarine, her sail partially above the surface has overtaken USS Voge, a Navy fast frigate, and is moving abeam on the Voge's port side. The Echo II's periscope was sighted intermittently for about an

hour before the submarine overtook the U.S. ship from the rear.

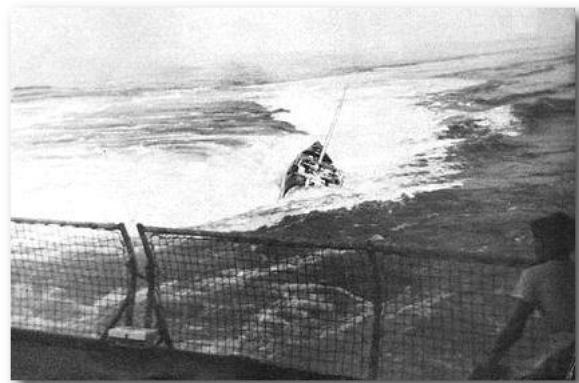


The frigate is steaming at 10 kts. and the submarine turns starboard towards the Voge and increases speed to more than 17 kts.



The sub collides bow-on with the frigate's port quarter and passes astern of the USS Voge. Note sailors scrambling for stations as they realize their ship has been struck.

The USSR boat wallows in the sea, suffering damage to her bow, sail, and forward decking. Further damage occurred to the missile ports for the SS-N-3 Shaddock anti--ship cruise missiles. The USS Voge suffered damage to her hull, propeller and shaft, with repair costs estimated at \$600,000. The Soviets are unwilling to admit any fault in the incident, even though the submarine was operating in the submerged mode and even though it overtook the Voge from the rear. Under international rules of the road, the Soviet submarine was the burdened vessel and required to remain clear.



The collision occurred August 28, 1976 in the Ionian Sea. Photographs have been withheld until now by the State Department because the USSR is unwilling to admit culpability. The U.S. has not filed an admiralty claim and has no plans to do so.

1977 - NavFac Cape Hatteras Support

As with other remote facilities, getting medical, dental, and counseling treatment for the complement was difficult, time consuming and expensive. Finally agreements were made with Naval Base Norfolk and Naval Hospital Portsmouth to have some sort of doctor (urologist, psychiatrist, etc.) to visit once a month. A chaplain came once a month. And a dentist visit was scheduled for every other month. Naturally, we had lots of volunteers to support us during good weather and fishing times. Winter we often went without. This definitely eased the duty driver trips to Norfolk saving on fuel and lost time. And the Chaplain regaled us with his tales of burials at sea sometimes using KFC buckets for the ashes. (Leslie Skowronek, LT)

25-27 May 1977 - NavFac Cape Hatteras

The CO thought the JOs could gain by seeing how the Army operated. So LT Skowronek took Ensigns Frank Labourer, Ed Torres, Toni Johnson, and Nancy Kosewicz to Fort Bragg to interact with Army junior officers. We met the Commander, General Emerson, learned about a rifle company, rode in a helicopter to see how the airborne works, and observed parachute jumps and mortar operations. I'm not sure what we gained from the experience but it was a nice break from the island and we got to improvise an “acceptable”, if not regulation, uniform for the females to wear (since only the Service Dress Light Blue uniform [skirt with heels] was authorized). (Leslie Skowronek, LT)

October 1977 - NavFac Cape Hatteras

New “technology” came in the form of a macerator. We ran it for the first time instead of the dirty job of burning the grams. (Leslie Skowronek, LT)

10 January 1978 - PME-124 brings TV to NavFac Cape Hatteras

Captain Dempster Jackson, PME-124, routinely came to Hatteras to fish with RMC Hampton. So, when the Chief was retiring, he asked then Captain Jackson to be there. After the retirement ceremony, Captain Jackson made arrangements for a large TV receptor antenna to bring signals to base. This was a great morale booster and only became a major concern in the blizzard of March 1980 when there was fear of the antenna falling on base housing. (Leslie Skowronek, LT)

February 1978 - NavFac Cape Hatteras

OTC Bolin found the EDL cans had built up enough oxidation over 22 years to cause signal degradation. Stanley Kloc worked with Rick to get the situation remedied. (Leslie Skowronek, LT)

September 1978 - NavFac Cape Hatteras

In the latest attempt to improve our contact rate, the BQR-23 was placed on watch for a three week OpEval/TechEval. Little benefit was found and the equipment later removed. (Leslie Skowronek, LT)

28 September 1979 - NavFac Cape Hatteras

Six children ate poisonous mushrooms and the BUC's daughter gave birth at home, taking all the ambulances and corpsmen off island the night before the 25th anniversary of the System. (Leslie Skowronek, LT)

Summer 1979 – “The CVB All Star Game”

(Some of you ladies may have been there, this is my recollection of the day.)

It was the summer of '79 and I'd lived in Fernbridge for almost two years. I would guess that besides the 10 or 15 people that live in my house, the entire population of the town was maybe 50 give or take a few. Of those, there were probably 8 or 10 kids ranging from 7 to about 15 years old. Over the years I'd gotten to know most of them, they were always hanging around the store or playing on the hill behind the house. They were poor kids but no bother really, they just needed something to occupy their time in a small town with absolutely no entertainment.

I was tossing a baseball with a few of them one day and had an idea to put together a scrimmage game in the potato field across the road by the river bank. We scrounged up some equipment I had, walked off a baseline and started to play. It turns out that these kids were actually pretty good, they just never had the chance to play a real game before. Over the next several weeks, when I was on my 96, they would pound on my door relentlessly until I gave in and had a game with them. This went on for a while until I had the idea to take them all up to CVB and let them play on a decent field for a change. I got permission from their parents and arranged for some additional transportation out to the base and away we went.

We made the trip out to Centerville only to find that Billy Herbert was using the field that day for practice. Seems Billy had put together a ladies team comprised of the Waves from CVB. Needless to say, the kids were really disappointed to find the field unavailable and we almost left until I decided to challenge Billy's ladies to a little pickup game of softball. Bill thought at the time it would be good practice for his team and figured my ragtag team of kids would be no problem at all. He had no idea what was about to happen.

The game started rather slowly until I noticed a few weak spots in Billy's defense and then the fun began...I decided to bat cleanup and told my kids to do whatever they could to get on base. It was really quite comical to watch these kids hit a ground ball and beat the throw to the bag. The opposition's defense was no match for the blinding speed of some of them. They would load up the bases and I would push one down the right field line for a grand slam. Bill's right fielder was playing so far off the line it really wasn't very hard to do. Before he knew what hit him, we were up by so many runs that Bill called the “Mercy rule” to end the game. I don't recall how many grand slams I managed but there was more than one. We played around on the field for a while but we'd had our fun. The kids went back to school in September but they talked about that game for months. I became a civilian shortly after that and said my goodbyes.

If any of you knew Billy, you know that he lived, ate and breathed sports and I’m sure somewhere out there, he’s bouncing a basketball and cursing me for that fateful day. It was all in good fun and on occasion I wonder what ever happened to all those kids. I hope I was able to imprint a good memory for them because it’s always been a good one for me. Hopefully, when they grew into young men and women, they remembered a skinny sailor who took the time to give them something to do during that summer and maybe, just maybe, it made a difference in their lives. I sure hope so....
(Timothy Bevins)

1977-1981 - RTF Centerville Beach, CA – Back as a Civilian

My transition to civilian life lasted about a week and then I was right back in it at the RTF. I did not find out that there was life after SOSUS until many years later. Most of the civilian staff came from the companies that had supported the IUSS site installations with a few of us X-OT’s filling out the classroom duties. We worked closely with the RTF military command, just staffing up, with the understanding that the entire staff would transition to the military within four years. (W. A. “Buck” Buchanan)

1981-1995 - Life as a Contractor After leaving the RTF, I moved back to San Diego to become a software tester for the IUSS systems being developed or maintained by SYSCON. This was more satisfying for me as I discovered that teaching was not my forte. As an integral part of the development team, I found that I could bring my OT experience to bear in the design phase and, knowing and identifying with the customer, had great concern that the software worked.

Another aspect of the job that I greatly enjoyed was being on the installation/training team for new or updated systems. This gave me the chance to renew acquaintances with “old” shipmates and to meet the new folks. These trips were often hectic, as I’ve yet to encounter perfect software, and there were some embarrassing moments on most trips. Being able to continue to “support the fleet”, however, made up for the problems along the way.

Once the Soviets became Russians, and our friends, SOSUS became a lower priority and lost out in the defense funding battles. At last, as SYSCON shifted the team to other projects, I found out that there is life after SOSUS. (I changed companies and moved into the joint services arena – so I’m still supporting our men and women in uniform.)
(W. A. “Buck” Buchanan)

Circa 1978 - NOPF Dam Neck "Pre-Operational Operations"

When I first started working at NOPF Dam Neck (working out of COSL), I wore a hard hat, shared a trailer office (placed across the street in the future parking lot) with LT Bradford and the civilian construction crew.

This was long before we really had operational use of our first array. At the time, we were connected to the array using a UQM-4 "small gram" to monitor array survivability, and to gather tape data for AT&T-BL to develop the beam former etc... My job was to monitor the UQM-4 and change tapes accordingly. (This allowed me time to go fishing

for catfish (between tape changes) behind the building in Lake Tecumseh. - Yes, large 15lb - 18 lb. catfish - in 3 feet of water - picture proof available...)

Later, but still in those early days when we had the array up and running; we did not have full communications (CP-later called UCP) with COSL. To alert on and report TOIs, OTCM Jack Holdzkom would call me at COSL and using "Fo", relay what they were holding. COSL staff members would then head out to D.N.

At NOPF's first change of command in Aug 1984, CAPT Hryskanich (Scratch) (1979-84) when being relieved by CAPT William E. Ratliff commented about the communication system that Jack and I had in those early days - and added, "I think it was faster and more reliable than now." - "CAPT Scratch - How did you get 5 years there"??? (Ed Smock)

1978-79 – Keflavik - Bucket of Grams – A Simple Enough Training Aid

For those OTs that have had the pleasure of “touring the beams” in Keflavik, you know that there are those times that you just have to stop and take in the sights. Watching something develop from a mere trace that “bears watching” into a full-blown multi-source signature was perhaps the most enjoyable experience of our trade. Once in a while, the presentation was so magnificent, it was clear that it needed to be preserved and enjoyed many more times in the future. At such times, the word would be promulgated, and a sign posted to “not annotate this beam for an entire 24-hour period”.

At the end of the (ZULU) day, this special roll would join others in a rusty old 3 lb coffee can and become one of my prized specimens. At some later date, at the conclusion of a successful (at least to this point) oral qualifications board, the coffee can would be slid across the table, and the candidate would be asked to “select at random”. Then, the gram would be stretched out between the candidate and the Master chief, unrolled slowly, hour-by-hour, and a dialog would take place about the what, why, how, etc.

Those were the most enjoyable and enlightening times of the qualification process. I had so much respect for these men and women who contributed hundreds if not thousands of hours getting to that point. They impressed me far more than they knew. This short article is dedicated to all of those folks who sat across the table from me, impressing me with their knowledge and poise. (George Widener OTCM NavFac Keflavik)

16 January 1979 – ALFA Class,

NAVFAC Keflavik detected an ALFA Class Soviet SSN conducting performance trials at 41 knots in the south-central Barents Sea.

Analyses of SOSUS detections of several Soviet state commission acceptance trials for VICTOR III Class SSNs during the 1979-1981 period indicated these submarines were capable of “crash-back” evolutions during which the propeller shaft speed could be changed from ahead to astern in 20 seconds. (B. Rule)

9 Feb 1979 - COMOCEANSYSLANT assigned to COMSECONDFLT (reversed)

COMSECONDFLT initiated this assignment action however, this action was strongly disputed by COSL (pounding on an Admiral's door) and reversed - (CAPT Douglas M. SIMON, USN COSL, 28 Oct 1977-18 Nov 1980) (Doug almost had to buy smaller pants after the butt chewing he received from COMSECONDFLT - "butt", he stood his ground... - pun intended...) (Ed Smock)

29-Sep 1979 - SILVER SOSUS, the 25th anniversary of the Oceanographic System

Was celebrated at the Omni Hotel, Norfolk by more than 230 attendees including CAPT Joseph P KELLY, USN (Ret), "Father of SOSUS," LCDR Fred Jones RCN (Ret), NAVFAC COs, and several past-Commodores (Birthday cakes with NavFac plaque decals adorned the tables.) (Ed Smock)



1978-1981 - Pacific Forward Area Support Team

One of the most exciting tours I had during my career was being assigned to CTG168.1/PACFAST (Pacific Forward Area Support Team) from 1978 - 1981 filling their billet requirement for an OT. In that position I flew with VP-4 - Special Projects, out of Barbers Point, HI as the sensor two operators; the sensor two station being an AN/BQR-22, an absolutely incredible piece of equipment. What made the tour so memorable were the missions where we actually caught a Soviet submarine on the surface. I can't describe the feelings I had the first time I was on a flight that did catch a sub on the surface, but that was when the entire job became so much more than lines on a piece of paper - **it became real!**

(Jerry Juliana OT1/OTC)

August 1980 - Misawa, Japan and patrolling the Bering Sea.

In August of 1980 we were flying out of Misawa, Japan and patrolling the Bering Sea. On a beautiful, clear day we caught an India SSAG on the surface, and dropped a sonobuoy filled with green dye marker near her. The India maneuvered to pick it up and crew members actually dragged it up on deck. We recorded every bit of noise possible, including conversation among crew members located near the hydrophone.

(Jerry Juliana OT1/OTC)

1979 - 1983 - Background of OT Detailing/Assignments (OTCS/OTCM P. Brown)

In the beginning of the SOSUS the personnel assigned to staff the system were under the control and decision of the ST community. Once we got our own Rating in 1971 we were given a detailer billet at BUPERS, but still under the oversight of the ST detailers.

When I became the OT detailer in 1979 I knew that to be the case but was dismayed to learn that the OT detailer only had control of the E-6 and below. All E-7 thru E-9 assignment decisions were at the discretion of the STCM. This was a personal problem for me as I did not want someone that could not spell SOSUS making decisions about the more senior people in our community. After the turnover period and I had taken control, I approached the STCM and tried to convince him of relieving himself of the OT responsibility. The attitude was “it’s always been that way and will stay that way”. I followed with a memo to the enlisted assignments director and received a hearing. The STCM and I presented our arguments, the rest is history. The real shame is that he was a fine Master Chief but was so upset about losing that battle that he submitted his retirement papers that day.

Now that we had control it was time to expand. I wanted to move from the Sea/Shore rotation and apply a more realistic assignment policy. I always worked with COSP and COSL before I moved on these issues. At BUPERS OP-08 approved my proposal we were now a system and rating stand-alone entity.

I worked with the TYCOMs and came up with the Preferred, Arduous and Neutral assignments. This gave us the flexibility to more effectively staff the system’s prioritized needs.

This new process worked so well that one of the Tycoms decided it would work better if they took control. Another battle, BUPERS maintained control for the betterment of the entire system. (Phil Brown)

August 1980 – Echo II on Fire - Casualties and injured crew members

Shortly after locating the India SSAG in the Bering Sea the mission was diverted to waters off Okinawa to take pictures of an Echo II that was returning to Vladivostok on the surface, apparently unable to submerge. The after deck of the sub was extremely charred, and it was apparent there had been a major fire on board. Several body bags were laid out on the deck, surrounded by injured crewmen. It was sobering sight, and the crew of VP-4 offered a prayer for those Soviet sub-sailors who died on that cruise and for a safe journey home for the surviving crew.

(Jerry Juliana OT1/OTC)

1980 – Orders to NAVFAC Barbers Point Hawaii (A Visitor’s Memories)

It was a cold black January night as the USS Ponce makes her way out of the North Sea into the North Atlantic. I’m sitting in Aux Radio, just completing the phone patch through Ham operators to my detailer in DC.

“Well Charlie, I received your dream sheet, there is no shore duty available in Norfolk” my detailer chuckles “over”. “But Ron”, I stammer, “You said I could have my pick of shore duty after five years at sea”. “Over”. “Charlie, I have this special deal for you, you are going to make Naval history as the first Chief Warrant Officer detailer”. “Over”. My mind races – me – Naval history? “What else you got?” “Over”. “Well, there is

something called a NAVFAC at Barbers Point Hawaii, I don't think that is what you want, call me when you get back to Norfolk”. “Out”.

Five months later in June 1980, my family and I are greeted at Honolulu International Airport by Commander Carl Gustafson, CWO3 Dale Painter, and their spouses. My mind races again (I have a bad habit of mind racing) – Boy, this beats the crap out of sea duty. I am duly indoctrinated into the NAVFAC System – “Never say SOSUS” was beaten into my racing mind at every turn. Life is good; I am the EMO at NAVFAC BPT.

I quickly forgot every Navy acronym learned in the last nineteen years, “the system” had its own acronyms that were pronounced the same but had entirely different meanings. BPT was undergoing numerous systems upgrades upon my arrival, my predecessor said not to spend too much time learning the existing stuff as it was to be replaced. Life is good; I am the EMO at BPT.

Two months into my tour, LCDR John Parrish (here after referred to as “JP”) relieves CDR Gustafson as Commanding Officer; life is good and getting better. BPT did not have a PWC Officer so the SUPPO was in charge of all Facilities; we had a courtesy pre-ORI. Life became challenging, I am now the Maintenance Department Head in charge of Electronics, Facilities, Building maintenance. And those PU-389 generators. Since I was a “Fleetie”, I had zero experience with the OT rating. I learned early in my tour that these folks were the “cream del la cream” in professionalism and creativity. The electronics maintenance part of my position (hard to call it a job, it was too enjoyable) was managed superbly by OTC Chuck Lohman, OT1 Bob Stuty, “DJ” Norton, Jim Quinn, and many others.

JP was instrumental in turning BPT into a model NAVFAC and we became COSP's testing facility for new ideas and equipment. COSP was located on Ford Island and the only way on or off the “rock” was by ferry or small boat. There were times where this worked to our advantage, although we were only ten miles from COSP, it took hours to make the transit to BPT and by the time “they” arrived, tempers were cool and we could have “meaningful dialogue”. Later, when JP transferred to Ford Island, he learned to use the ferry as a great excuse for Susie and him to leave any function - “Gotta catch the last boat, don't want to sleep at the landing all night”

JP was promoted to Commander and left BPT for Ford Island in June 1982. Enter LCDR Barry Einsidler (LB) as Commanding Officer. Remember way back when I said I was told to never say the “SOSUS” word out loud? At the change of command, LB's previous Wing Commander came as the guest speaker. LB was a P3 guy and the Admiral spoke glowingly about “target” prosecution and cooperation between the P3 and then – he said out loud “the S----“community”. Deb Gallo was the OPSO then and I thought she was going to pass out or get a gun – something!

Both JP and LB are stalwarts in the SOSUS community and have gone far in their respective careers. For those of you that have served with both – you may have noticed a slight difference in personalities. I learned much from serving with them and enjoyed my

three years and four months in the “community”. I feel honored to serve with so many professionals and used the standards learned at BPT to gauge successes in the remainder of my Navy career.

As an “oh by the way”, I am now a civil servant working at NCTAMS PAC. Yep, CAPT. Jim Donovan is the CO and we occasionally spend time together talking about the good old days. Jim was a young OTC that was selected for LDO at BPT during the time I was there and has done pretty well for himself. I went to the USS Spruance after I left BPT, the skipper was Commander Vern Clark, and he had a fairly successful Naval career as well. (Charlie Crews, CWO3/CWO4 at NAVFAC Barbers Point Hawaii.)

Circa 1982 COSL – Why one should always try to fly “under” the RADAR.

It was during a Commodore’s brief that the Commodore CAPT Jack Sabol being not pleased at all with the way “NavElex” was responding to his needs in what he considered a timely fashion, decided to download his aggravation to the on-site NavElex site rep. (me). In the course of his tantrum, words unprintable were loudly and without question exerted (in mixed company). After he had vented, he looked at me and yelled, “Do you hear me?” - I replied, “I Love It When You Talk Dirty”...

Total silence followed for what seemed to me to be a “very long time”. The group was waiting for the explosion... One day months later while having lunch with COSL CSO CAPT Bill Owens he told me that he had never seen CAPT Sabol so up tight and set back with so few words. CAPT Ernest John (Jack) Sabol passed away in Jun 2003. May he rest in peace. (Ed Smock COSL NavElex Rep)

Mar/Apr 1982 - Argentia NEX Burns

I had received orders for a second tour at Argentia, Newfoundland Canada, OTCS Ernie Kurtz was our sponsor and he called me in London, UK, to let me know the date of our ferry reservations from North Sydney, Nova Scotia, to Port Aux Basques, Newfoundland. Ernie had been the OOD the day before and informed me he had not slept all night as the NEX started burning on his watch and was still burning. Upon arrival at Argentia the NEX was nearing its new look, pavement marked for parking. (Dave Bailey OTCS)

March 1983 - NavFac Centerville Beach

There seems to be at least one nemesis per tour. I was on board a very short period of time before an exact replica of the “General Lee” flew off the road and into a trench on Rosemary Halley’s property surrounding the facility. The owner, a young OTA continued on to strangle cats and call in bomb threats routinely. Psychiatric evaluation merely made him unfit for overseas assignment. After much documentation and argument, the Bureau finally authorized his discharge in January of 1984. (Leslie Skowronek, LCDR)

17 May 1983- OSCAR I (SSGN)

An OSCAR I Class Soviet SSGN conducted extensive high-speed maneuvering trials in the Norwegian Sea. Using the Rotating Field Solution program several maneuvering features were identified. (The use of refined Doppler measurement techniques such as the

Rotating Field Solution to derive classification of targets and operational intelligence remains one of the most under utilized data exploitation capabilities available to IUSS.)
(B. Rule)

August 1984 - NavFac Centerville Beach Protesters

Protesters gathered at the gates to base. The gates were closed and locked and guarded on both sides of the road and the fire truck stood by in case anyone tried to climb the fence. The protest of the base was in memory of the US dropping the A-bomb on Hiroshima. (Leslie Skowronek, LCDR)

March 1985 - NavFac Centerville Beach Bids RTF Goodbye

I must admit that the students were quite a handful and there were the typical problems that arise between tenant and base. Most of the base turned out to see the trailers head down the road and gave a cheer as they disappeared out of sight. (Leslie Skowronek, LCDR)

1962-1982 - More Than Just an ASW Surveillance System

What the system data told us about the design and capabilities of Soviet nuclear submarines was as important a contribution as the real-time surveillance and the overall assessment of detectability. The decision to build the 688 Class was heavily influenced by system data.

We were forced to call the Soviet nuclears “unconventional” until their demonstrated speeds and endurance made any propulsion system other than nuclear impossible. Finally, in 1966, we were allowed by ADM Rickover’s people (NAVSEA 08) to use the word “nuclear.” We now know that while NAVSEA 08 was refusing to admit the Soviets could build a nuclear submarine with more horsepower than NAUTILUS (15K), the NOVEMBER with 35K had been operational for about six years, the PAPA with 80K was under construction and the TYPHOON with 100K was in the concept phase.

An article in a Soviet shipbuilding journal (“Our Submarine Wins the Blue Ribbon”) provided a detailed discussion of PAPA (Soviet Project 661). In Dec 1969, PAPA conducted Soviet State commission acceptance trials on a test range in the Northwest corner of the White Sea. PAPA ran a racetrack pattern at a sustained speed of 42 knots for 12 hours in 200m of water under ice. When naval engineers determined 42 knots was achieved on only 80% power, PAPA was later permitted to operate at 100% power: 44.7 knots, still the world’s record.

The article stated PAPA deployed from 25 Sep 71 to 4 Dec 71 and conducted a 40 knot intercept of a US carrier battle group returning from the Med. When I found this reference about 1998, neither I nor anyone else remembered any system detection, and, of course, all records had been destroyed. During the 1969 trials, PAPA was configured, according to the article, with special 8-bladed propellers. My conclusion is that there were many detections of this event but was dismissed it as a surface unit.

The ALFA with a lead-bismuth-eutectic plant is just as interesting. What the Soviets

finally built was a reduced capability (only 41 knots) version of the initial design: single-hull, 1500 tons, 12-man crew interceptor with a 45 knot capability. (B. Rule, civilian)

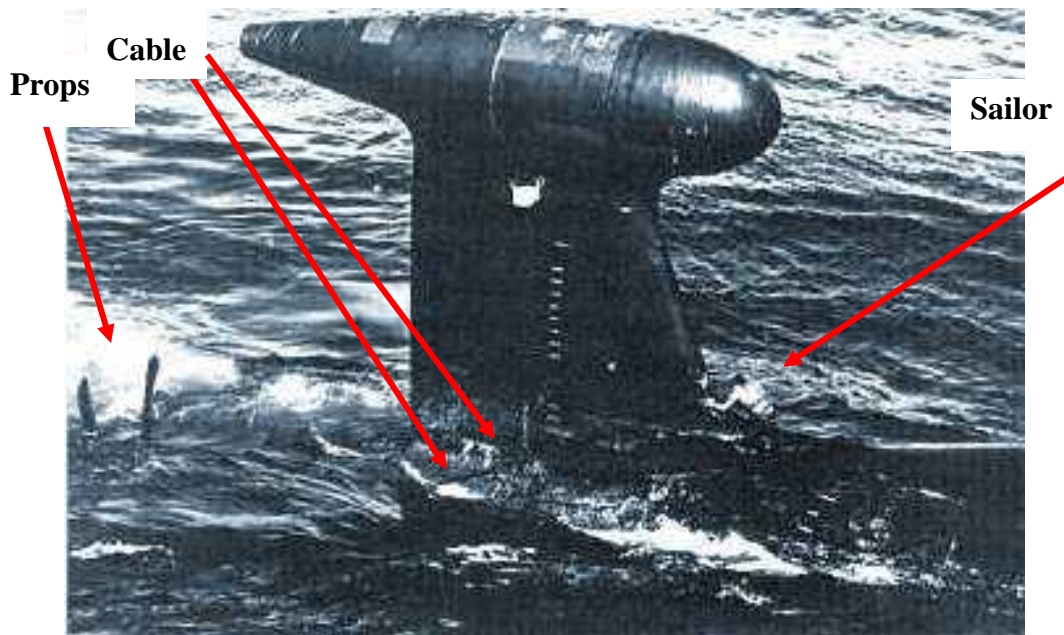
3 Nov 1983 – Soviet “Victor III” tangles with USS McCloy

Soviet Victor-class SSN sighted wallowing on surface, east of Georgia, two days after becoming fouled by USS McCloy's TASS array.

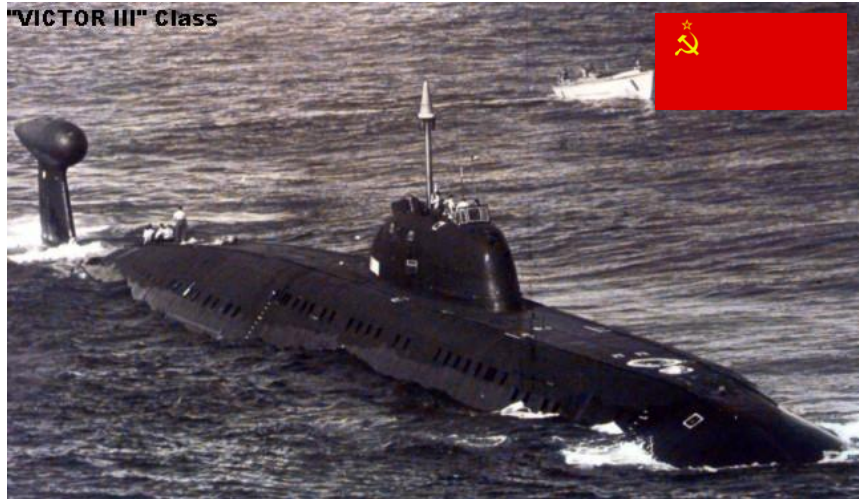


The USS McCloy is towing a sonar array when suddenly the cable goes slack. The next day a Soviet Victor III - class nuclear-powered attack submarine is sighted motionless on the surface 282 miles west of Bermuda and 470 miles east of Charleston, SC, by a US P-3 Orion patrol aircraft. US Navy officials believe that while the submarine was following the McCloy, the sonar array caught in the submarine's propeller. There is no indication of leaking radiation, according to a Navy spokesman. On November 5, the submarine is taken under tow by a Soviet salvage ship in the direction of the Cuban port of Cienfuegos. Further observations while the submarine is under tow leads the Navy to believe the damage is relatively minor and relates to the submarine's propeller.

<http://navysite.de/ff/ff1038.htm>



A Russian "Victor III" class submarine displays her towed array pod atop her vertical fin. This particular submarine had fouled the towing cable of a U.S. towed array, and her crew was trying to break the cable. The submarine was trimmed down by the bow, so her unusual double propeller (two four-bladed propellers in tandem, turning together) is visible



Victor III crew working on snagged cable



USS McCloy FF1038



Soviet Victor III



Victor III and Soviet Escort

Early 1984 – COSL morning brief delayed.

One morning while headed to the ops floor for the morning operations brief (for the Commodore), I encountered, in the passageway, four of our female officers. It was sort of a tradition that we greeted each other with a friendly “hug”. As I was received a hug from each of them in turn, CDR James Gompper happened to walk out into the passageway and observed this activity. With a look of surprise on his face he said “What is this, I never get a hug”... At this point I hugged him...HaHa. We then proceeded to the ops floor and upon entering we were met with total silence followed by total laughter. It appears that our actions were being shown on the closed circuit TV. The Commodore directed that the brief not start until “the show was over”... Sorry to add that CDR Jim Gompper suffered a fatal heart attack while officiating at a local high school basketball game in Nov 1984. May he rest in peace. (Ed Smock COSL NavElex Rep)

1984 and 1985 - Keflavik 2.5” x 3.0” Calling Card Club

Do you remember them? - Do you have one? (“Some do.”)

July 1984 - OTASN Jeanne T. Heinzen passed away

I checked in at Pacific Beach on Friday, July 13, 1984. On Monday the Skipper CDR Les Parsons asked if I would supervise the packing of Jeanne’s personal effects to be shipped to her home of record, she had been in a coma following an auto accident at Carlise, WA, and had passed away as a result of her injuries. (Dave Bailey OTCS)

28 Sep 1984 - Thirtieth Anniversary of the Oceanographic System

Was celebrated at the Cavalier Hotel on the Hill, Virginia Beach, VA; Guest speaker was RADM B T HACKER, USN, former Operations Officer at NAVFAC Argentia and former CO of NAVFAC Barbados.

Having been impressed with the Admiral’s apparent knowledge and recall about “Our” history, I happened to mention it to Master Chief John Ellis... I said to John “He did a nice job with his presentation – didn’t he ??” John replied – “He read it just like I wrote it”. Ha-Ha - “old silver tongue John” - I should have known. (Ed Smock)

Plans were made that evening to return to Shelburne in June 1985 to celebrated Shelburne's thirtieth anniversary - which the wife and I did. Master Chief Ellis was “again”, a-no-show... They asked about you John. (Ed Smock)

12 Jan 1985 – USNS Stalwart (T-AGOS-1) began the first operational SURTASS patrol.

“”Sound Surveillance System (SOSUS)”” is now integrated – becomes known as Integrated Undersea Surveillance System (IUSS)...

1985 (early winter – Jan/Feb) – NAVFAC Kef “In the Money”

LT Larry Wilcher, OPSO at the time, came out to the watch floor very early on a day watch and told me he needed all of the volunteers I could spare from the watch team for a working party. Of course, nobody immediately stepped forward to volunteer for a working party, especially since it was nearly a “Charlie Condition” outside (cold,

blowing snow, and very dark). I knew it must be important because the watch team was usually spared from these tasks since manning was at a minimum and workload was very high. When I asked what was needed he responded “the Pay Master just rolled his truck on NAVFAC road and there are \$100 dollar bills lying all over the rock field!” Immediately, everybody within earshot ran and grabbed their coats! (Tim Cornett OTA2)

1985 – NAVFAC Kef “Honest Competition”

OTA2 Dave Berglund and OTA2 Tim Cornett were sitting in the lounge of Barracks 748 early one morning decked out in our best “Dress Blue” rig. We were competing for the 1985 NavFac Kef Sailor of the Year and knew that the competition was going to be fierce. Another OTA2 competitor (who will remain nameless –“she knows”), arrived and removed her flashy NavFac Parka. Bergy and I immediately exchanged grins as we both instantly noticed that she had placed her ribbons on the wrong side that morning. After another exchange of grins we both shook our heads and told her of the mistake. We all wanted to grab that coveted SOY award, but we wanted to earn it head to head in even competition. (Tim Cornett OTA2)

14 Feb 1985 - Readiness Training Facility Dam Neck "Acoustic Data Base"

My next major collateral assignment was to work on the "acoustic data base and signal processing equipment" development and installation at RTF Dam Neck, VA. In order to provide as much realism as possible to the training facility, we duplicated the outputs of xx21, xx22, and xx23 by going to the site and gathering HDDR taped data for use as our background foundation.

We used the same relative positions - we off set the Lat/Long for obvious reasons. Then we developed the Ocean System Simulator (OSS) which allowed us to inject real analog data and/or Microdas type data into the background HDDR data. The result - we ended up with real "actual" items tracking, real background noise, and injections of anything we wanted. We could then re-record the output of that effort onto HDDR tape (remember Target Scenario Generator -TSG) etc., and repeat the cycle - to refresh the scenario...

We also utilized the Message Input Processor Simulator (MIPSIM) which was a test tool built and used by NOSC to generate "numerous" tellers and messages to load the CP and TDP systems during development and testing... (This was Max Morris's baby...) (Ed Smock)

Readiness Training Facility Dam Neck, VA

**Dedicated in memorium to
CDR William E. James USN**

CDR James' career was dedicated to the Oceanographic System and to the premise that a cadre of well qualified career oriented personnel was the key to its optimum performance.

March 1, 1985



1985 Who has the “Ceremonial Cannon” now? U.S. or Canada

It all began in 1985 when the new CO of NavFac Argentina, Captain Payne asked the wardroom about “the cannon” no one knew what he was talking about. It seems that when LT Payne was stationed at Naval Air Station Argentina as a P-3 aviator in the 1960’s there was a U.S. Navy ceremonial cannon that was stolen back and forth between the

Canadian Forces and the U.S. Navy.

My watch officer, Ensign Iverson decided to take it upon herself to find out where it was. Her investigation led to the Canadian Forces base in St. John's, and she concocted a plan to get it back. She asked the watch section for volunteers for a secret mission into enemy territory. The volunteers were Chuck Matthews, Tim Swaim, Al (Seabag) McCarthy and myself.

The cover was ENS Iverson was in charge of a party to be given in honor of the Canadian Forces CO by Captain Payne at the Canadian base. She contacted a LT at the Canadian base to set up a day to “check out” the facilities, she would bring cooks and other personnel helping with the party. The trip to St. John's was uneventful and we arrived before noon. The Canadian LT meet us and walked us down a long hallway to the kitchen, we all acted like we were impressed with the facilities and assured the LT everything looked good.

Then ENS Iverson asked to see where the party would be. The LT led us back down the hallway to a locked door. He unlocked the door, turned on the lights and there it was! All our eyes lit up, the cannon was sitting on a table directly across the room about 15 feet from the door. We all looked around the room for a few minutes telling the LT this would be fine, and then ENS Iverson said she needed to look at the kitchen again with the cooks. The LT led ENS Iverson, Chuck and Tim back to the kitchen and left Seabag and me with the cannon. As soon as they were gone I took off my jacket and draped it over the cannon. The cannon was only 2 feet long but was cast iron so it was heavy. I took a hold of the barrel and Seabag got the heavy end. We walked back down this long hallway with offices on both sides.

I clearly remember passing an office and a guy sitting at a desk, he looked up at me and then returning to his work, not even noticing we were carrying something. We made it outside and about 30 yards to ENS Iverson's truck. We ran back inside back down the hallway just as the others were leaving the kitchen. I gave ENS Iverson thumbs up and she told the LT that everything looked fine, she would contact him to make final arrangements. As we started to leave the LT walked back into the room where the cannon was, he looked around, turned off the lights and locked the door.

We could not get out of there fast enough! I think we saw ten police cars on the way back to Argentia. ENS Iverson had the cannon sitting on Captain Payne's desk when he came back from TAD. The next time we had a CO's brief he thanked all of us for returning the cannon, and added he wish he could give us all a medal. I remember seeing many small brass plaques on the cannon's barrel. Each time the cannon was stolen, a plaque was added to the barrel with the names of who stole it.

When the cannon was unveiled in front of the Q, sunk in cement, all the plaques were consolidated into one new shiny brass plaque, the last line was “Returned to the U.S. Navy by section Bravo”.

ENS Iverson said the LT that lost the cannon was in a world of hurt. He called her asking her to give it back. He even asked about the party.....she just laughed and told him, there

is no party!!! Does anyone know what happened to the cannon after Argentina was decommissioned? (Randy Brown)

More on the “Ceremonial Cannon” (Mar 1970)

Randy, Loved your story. It definitely brought back some memories for me. I was an OWO (Ensign, then a LTJG) at NAVFAC ARG from 12/68 through 06/70 (and at NAVFAC NAN from 06/70 through 08/71).

In March of 1970 a lot of the officers from the NAVFAC, NAVCOMSTA, and NAVSTA were invited up to Fort Pepperell for a Formal "Dining Out" put on by the Canadian Forces. After a multi-course meal (accompanied by copious amounts of alcohol with each course) we finally retired to the bar for even more drinks and a friendly competition involving the ceremonial cannon that you described. At the time we were told that it came from the HMCS Cabot.

Anyway, the competition involved the cannon, ash-can firecrackers (the propellant), tennis balls (the ammo) and a colorful target across the room (a poster sized picture of a pirate with the bulls-eye at a tender location). Various three member teams (CF, US Marines, NAVSTA, NAVCOMSTA, and NAVFAC) competed for the highest "score", with one man lighting the ash-can and dropping it down the barrel, the 2nd stuffing the tennis ball in the barrel, and the 3rd lying prone on the floor and aiming the cannon at the target. Please remember that everyone is wearing Dinner Dress Blues (or equivalent).

I am proud to report that the NAVFAC ARG team (LTJG J.J. Ohara the ash-can lighter, ENS Bob Peterson the tennis ball stuffer, and myself - cannon aimer) won the competition with a bulls-eye. I don't recall what prize (if any) was received. But now that I know (thanks to you) the real background of the cannon, I think that it's only fitting that it ended up at ARG!!!!

PS - The drive back to ARG the next day was painful for this very hung-over LTJG. I was late to an OPS dept meeting and got into a bit of hot water; but that's another story! (Bob Hickman)

1985 - John A. Walker Jr. is arrested for spying for the Soviets.

Grave damage has been inflicted to SOSUS and the nation. (He operated right out of CINCLANTFLT/COSL NH95 Norfolk, VA building where we were. - Ed Smock)
http://www.crimelibrary.com/terrorists_spies/spies/walker/1.html

19 Dec 1985 – CNO Cancels SOSUS Monthly Report Requirement

This originated in Sep 1959. "Our own" LCDR Steve A. Conn USN (OP951F3) was action officer.

1985/1986 - OTC Ed Silver saves retired Marine Darrell Elliot's life

Ed was an avid fisherman, and the Humptulips was a favorite spot to catch Steelhead. Darrell and Ed were drift fishing on the “Hump” with the water level up a bit due to rain, the boat overturned and Ed could not find Darrell, just then Darrell passed Ed face down

in the river and “big” Ed grabbed him and pulled him to the bank, both were wet and cold when they returned from fishing, but alive and happy with a fish story.
(Dave Bailey OTCM)

29 Jun 1985 - CFS Shelburne Thirtieth Anniversary Banquet and Ball

The occasion was celebrated 28, 29 and 30 June 1985 at CFS Shelburne Nova Scotia. The Toast to the 30th Anniversary (CFS Shelburne) and the 75th Anniversary (RCN) was given by LCDR Fred A. Jones RCN (Ret). The Guest Speaker was CDR Mike Ciz RCN (Ret). Address by Commanding Officer LCDR E.F. Smith

It was such a pleasure to return to Shelburne for this celebration... Many old friends were in attendance. Shelburne had provided me a great start in my life long tenure in SOSUS/IUSS. And, having gotten married in Shelburne 28 years earlier, it rekindled many fond memories of the good times and fine people Leola and I had met there....

You ask me "which was my favorite NavFac"??? - I would say NavFac Shelburne - Joint RCN/USN Oceanographic Research Station Shelburne Nova Scotia - HMCS Shelburne - CFS Shelburne or, what ever name they change it to... It's still Shelburne (Ed Smock)

USN Navy Unit Commendation (NUC) and Two Meritorious Service Citations (MSC)

To my Canadian friends "Near the end of this document is a list of SOSUS/IUSS Unit Citations... Although Shelburne is not listed as a recipient on this list of U.S. NavFac awards - rest assured, you are listed in the eyes of your SOSUS/IUSS brothers and sisters". And, you are an official recipient of these three same awards from that list:

- USN, Navy Unit Commendation - for Exceptionally Meritorious Service from 01 Aug 1969 to 31 Aug 1972
- USN, Meritorious Service Citations - for continuing Excellence in Performing ASW Operations from 01 Oct 1975 to 31 Dec 1978
- USN, Meritorious Service Citations - for continuing Excellence in Performing ASW Operations from 01 Jan 1984 to 31 Dec 1984.

I have taken the liberty of adding these Shelburne awards to the list at the end. (With Highest Respect, Edwin K. Smock USN (Ret))



"Friends Old & New"

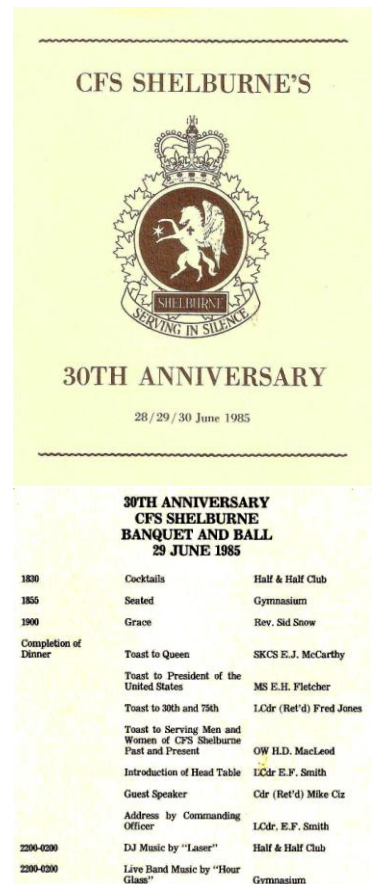
*30 years of land and sea
 Let's get together, you and me
 Friends anew and friends of old
 So many stories to be told*

*A time to remember why,
 How often have you thought?
 What are they doing? Where are they now?
 Some things you hear could make you cry*

*So it's a time to laugh
 And a time for a tear
 We're all so happy
 That you are here*

*You look around and what do you see
 I know you, and you know me
 People coming from near and far
 By ship and plane and some by car*

*New acquaintances and lots of old friend
 We'll always remember, until the end
 So, just drop anchor and stay awhile
 When it's time to go, leave with a smile*



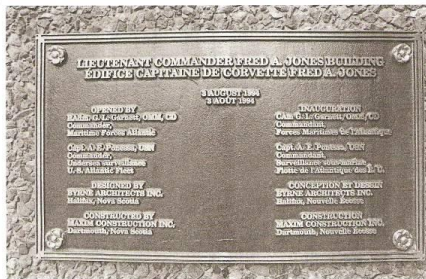
Arlene M. Acker June 30, 1985 (30th Anniversary of CFS Shelburne)

6 Feb 1986 - LCDR Fred A. Jones RCN passed away (20 Mar 1919 – 6 Feb 1986)

Sad day for SOSUS as he and his friend Joe Kelly helped make SOSUS what it is today. Joe Kelly covered the logistical aspects and Fred covered the operations/analysis aspect. I served with Mr. Jones in 1955-57 at Shelburne (we used his sword to cut our wedding cake), was associated with him throughout his tenure in SOSUS/IUSS (he was a member of COSL staff 1960-63 and CO of HMCS Shelburne 1963-69) and, worked for him in 1976 at CDC Ottawa, Ontario Canada.

Upon his retirement from the RCN, Mr. Jones's IUSS background aided his success in the position of CDC's Project Manager for Automatic Processing of Jezebel Information (APOJIM), Signal Processing Evaluation and Reporting system (SPEAR) and Time Series Acoustic Recall (TSAR). During his civilian employment he was also involved in implementing the SIGMA 7 processor for detecting Soviet Charlie, Victor and Yankee class submarines at Naval Facility Bermuda and had input into the development of Wide Band Acoustic Recall (WBAR).

“In recognition of his service as Canada’s diplomat to SOSUS, LCDR Frederick Alun Jones has been officially recognized as Canada’s “Father SOSUS” to the men and women of Trinity. In his memory we salute LCDR Jones for a job well done and take pride in continuing his work in undersea surveillance.”



**LCDR Frederick Alun Jones RCN
20 March 1919 – 6 February 1986**



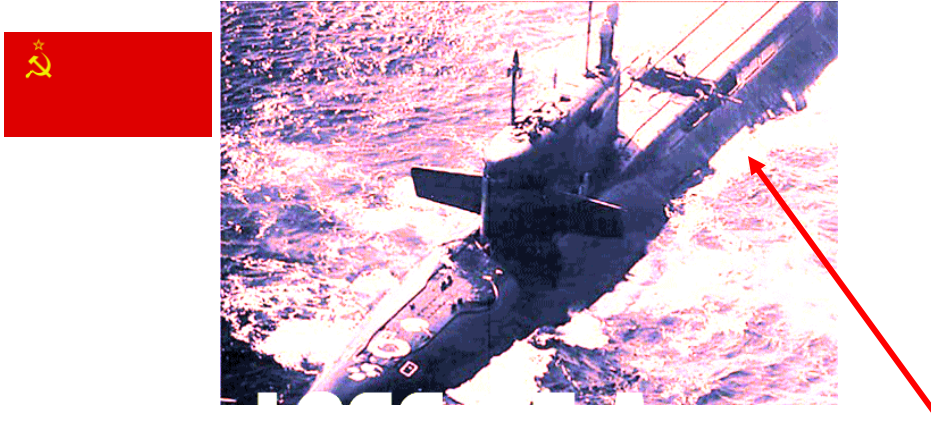
Upon commissioning (3 August 1994) “TRINITY” CFB Halifax was dedicated as the “LCDR Fred Alun Jones Building” - celebrated at the Opening Ceremony of “TRINITY” on 5 May 1995. I was honored to be in attendance - **He was my mentor and my friend.** (Edwin K. Smock OTCM USN-Retired)



6 Oct 1986 - Soviet YANKEE-class SSBN sinks

East-southeast of Bermuda, three days after a missile-tube explosion.

http://www.chinfo.navy.mil/navpalib/cno/n87/usw/issue_28/yankee.html



K-219 running on the surface on Oct. 5, 1986 following an explosion in missile tube number six. The damage can be seen amidships just aft of the sail. K-219 sank the following day, 680 miles North East of Bermuda.

Circa 1986 – COSL – "Baby in a drawer" – We are growing our replacements

One day I happened to walk into the office I shared with some of the COSL sailors and sat down at my desk. In the office was a young married Navy couple. As I started to work I thought I heard a baby whimper ever so softly. I looked around and toward the sound. The faces of the young couple became blushed. They smiled as I walked toward them. – They opened the drawer and there laid the cutest little baby – no bigger than a full roll of TimeFax paper... They said “We hope you don’t mind, we had baby sitter problems”... Now, how could I mind that... - To Mr. and Mrs. xxxx, I want to thank you for that “warm memory” – Ed Smock

3 March 1986 - NOPF Whidbey Island - NavFac or NOPF?

My next major collateral assignment was to work on the operational equipment installation and testing at "NavFac Whidbey Island" - "Hard hat again".... John Henley TRW (CE) was in charge of the building complex and I was involved in the "processing" side... Yes, I did say NavFac - It was originally called a NavFac before the introduction of SURTASS to that site... In those days, it was decided that the distinction between NavFac and NOPF was SURTASS capability. Some of the "old timers" still have Zippo lighters, stationary etc. as NavFac W.I.

It was on the day (actual date of 3 March 1986 provided by George Ballow) that we were pulling the cable ashore, the Zeus having done her thing etc. - divers were in the water, the bore hole was drilled, the bull dozer was fired up, and the trench to the T-Bldg had been dug... I was on the grassy knoll watching this very interesting activity... The "shore boss" (he has clout) yelled toward me - "get that damn civilian out of here"... - everyone looked at me... "As he came running towards me" - I could see the big grin on his face - it

was "George Ballow" (AT&T) an old shipmate and fishing partner of mine from COSL - years past... He said "how the "hell" are you Smokie"??? We had a great reunion...

As proof of how deep the trench was (required), George and John Henley had me get down into the trench - and they took pictures... What proof is this I ask??? Only if they know how tall I am would it make any sense... They didn't care...Ha-Ha (Ed Smock)

1987 – PAPA Class SSGN

A detailed history of the PAPA Class Soviet SSGN was published in “History of Shipbuilding,” an open literature Soviet document. This article included information on the development and design characteristics of the PAPA that have been confirmed by classified U.S. Intelligence assessments. The Soviet article states that PAPA deployed from 25 September to 4 December 1971 and, while in the central North Atlantic, conducted an extremely high-speed successful chase of the USS SARATOGA (CVA 60).

The article further states that the U.S. Navy was aware of this event which created great concern over a new Soviet challenge. Although it is highly probable this event did occur, the U.S. Navy was not aware of any high-speed chase of the SARATOGA. Since the chase event probably involved speed in excess of 40 knots, the failure of SOSUS to detect blade rate sources probably in excess of 170-180 dB is anomalous. The most probable explanation is that PAPA may have been equipped with the original tandem, four-bladed propellers during the deployment and the multiple- harmonic signature was classified non-submarine. Unfortunately, no data remains by which this conjecture can be examined. (B. Rule)

1987 – NAVFAC Whidbey Island “First OTA’s”

I drove into Island County, well- rode the Mukilteo Ferry, for the first time in early January 1987. The next morning I reported to PSD to check-in thinking I was the first OTA onboard. After a few minutes of exchanging glances with a CPO at another desk, he walked over and introduced himself as OTAC Ed Ashcraft. We shared the honor of being the first OTA’s aboard what would become NAVFAC Whidbey Island, and later NOPF WI. At that time we had a few offices in the BOQ overlooking the construction of the majestic facility (the upper deck admin area was modeled from the plans of a Public Library) and were issued “hardhats” to wear when we were in the building. It looked very out of place at the time of the construction because all the other facilities were World War II vintage. Naturally, rumors were rampant and the one heard most often was a Women’s Brig, due to the double fence surrounding the building. We were routinely asked if it was true that guard dogs would be roaming freely in the space between the fences to attack intruders, or in this case, escapees. (Tim Cornett OTA1)

1988 – NAVFAC Whidbey Island “First combined USN/CF(N) CPO Initiation”

CPO Lucy Carew	OTAC John Huntsburger
CPO Bruce McNoughton	OTAC Tim Cornett
PO2 Kim Prentice	
PO2 Amy Holmes	
OTAC Tracy Cox	

6 Nov 1988 – Capt Joe Kelly passed away

CAPT Joseph P Kelly, USN (Ret) "Father of SOSUS" passed away at Bethesda Naval Hospital at the age of 74 (another very sad day for SOSUS). <http://www.cus.navy.mil/kelly.htm>



Circa 1988 – COSL Site Rep hits PD80 in the head with a hammer

The time was 0330, Jim Boyett (PD 80 - present day PMS 485 title) and Ed Smock are busy trying to finish removing a bath room wall in Jim's house in preparation for the shower installers due at 0800. A 2"x4" wall supporting member was in the road and needed to be removed. "Ed told Jim - you hold the ladder, I'll climb up and hit the board"... Ed made his best swing of the hammer - it slipped from his hand and hit Jim square in the forehead... Down went Jim (board still in place) blood flowing down his face... - 0430, off to emergency ward in Annapolis...

Night nurse asked "what happened to you"??? Jim replied "he" hit me with a hammer. She said abruptly "you mean he accosted you"? (As she looked toward the security officer) - No Jim replied as he told the true story... Next day a bandaged Jim reported to work... The word got out... "Ed sure does fight for his program - did you hear what he did to Jim Boyett" ???... Jim was my friend, may he rest in peace. (Ed Smock)



1 Apr 1989 - Navy baby greets world while underway (COSP - Pearl Harbor)

When most newborns come bouncing into the world, relatives pace nervously in a hospital waiting room

—When Rebecca Kaye Hampe came bouncing into the world, 30 sailors performed a similar pacing routine at the shelter at Merry Point Landing Pearl Harbor, Hawaii. Rebecca's mother, Ocean Systems Technician 2nd Class Jami Hampe of Commander Oceanographic Systems Pacific, glanced out the window of her Ford Island home towards Pearl Harbor and recalled the "blessed event".

At 3:30 p.m. on April Fools Day, Hampe and her 22-month-old son David were in a park close to their home. 'Around 4 p.m., I felt sharp contractions and told David we needed to go home,' she said. By the time they got home, the contractions were close to five minutes apart. Jami started making telephone calls for help and found that the Ford Island doctor had just left the island. She finally called the island quarterdeck, where LTJG Thomas O'Dowd quickly made the necessary arrangements. Since the Halawa Ferry was on the Pearl Harbor side of the bay, the ambulance sped toward Ford Island's Alpha Landing where a small boat was docked for the 3:30 p.m. passenger run. The boat was "hijacked" and departed for Pearl Harbor's Merry Point Landing at 5:23 p.m.



Hampe’s contractions quickened. About halfway across the bay, it was obvious the baby wasn’t waiting to reach shore.

At 5:36 p.m. on April Fools Day, an 8-pound 3-ounce bundle of joy took her first peek at the world from a Navy small boat. The sailors at Merry Point Landing finally stopped their pacing when HM3 Tod Bohlman, who assisted with Rebecca’s delivery, carried the baby to the ambulance “I heard clapping and shouts of, “Is it a boy or girl?” Bohlman said, “I shouted “It’s a girl!” And from inside the boat, Jami in a tired but elated voice shouted” and her mother wears Chukka boots.” (Story by JO1 Gayle Colasurdo, Naval Station Pearl Harbor PAO - July 1989 “All Hands”)

7 Apr 1989 - Soviet MIKE-class SSN sinks

Northwest of Norway, following an explosion and fire in the reactor area.

<http://www.aerospaceweb.org/question/weapons/q0268.shtml>

7 April 1989 - The MIKE Class Soviet Nuclear Submarine, Unintentionally Sunk by a Conscript

When Mikhail Gorbachev introduced *Glasnost* (openness) in 1985 as part of his program of reforms called *Perestroika*, he liberalized freedom of the press in the Soviet Union. Because of this change, the Soviet press reported the loss of the MIKE Class Soviet nuclear submarine (Project 685) in great detail. Coverage included interviews with survivors. The following is a summary of the information reported by the press and in Soviet technical sources.

The MIKE was an experimental prototype nuclear submarine that employed many new technologies including a titanium hull that provided a test depth (normal maximum operating depth) of 1022m (3350 ft). Maximum submerged speed was 30.6 knots.

As the result of an onboard fire, the MIKE sank in the northeastern Norwegian Sea on 7 April 1989 while returning from an out-of-area deployment.

The fire began in the last compartment (9) where a conscript was known to have been alone working with a lathe to produce items he could sell when his military obligation ended. The MIKE was submerged at this time at about 200m (660 ft)

When central control realized the temperature in compartment 9 had risen to several hundred degrees F, they tried and failed to contact the conscript. Compartment 8 reported conditions normal there. Central control delayed flooding compartment 9 with an inert gas because they knew that would kill the conscript were he not already dead. Within minutes compartment 8 reported bulkhead temperatures rising rapidly. Compartment 9 was then flooded with inert gas; however, temperatures continued to rise in other after compartments and smoke began to filter forward.

The MIKE surfaced and the after compartments were evacuated. Several deaths occurred. The reactor was shut down and the emergency diesel was started. The submarine had taken on some water and was down by the stern however, the situation appeared to be under control. While a meal was being prepared, a crew member in the

sail noticed the sea water around the stern was boiling and the submarine was settling in the water. Further attempts to blow ballast were unsuccessful.

A reconstruction of events by a Soviet Board of Inquiry indicated temperatures in compartment 9 had become hot enough to melt plastic valves in both the compressed air and hydraulic fluid lines. The fire was thus being fed by high pressure air and oil; hence, the inert gas fire-suppression system was ineffective and the fire raged unchecked. Temperatures rose to at least 2000 degrees F, hot enough to breach the titanium pressure hull and admit sea water.

The crew assembled on the deck and launched an inadequate number of life rafts. The rafts could not be controlled and some drifted away from the submarine. Most of the crew jumped into the water which had a temperature no higher than 38-40 degrees F. Forty-two of the crew of 69 eventually perished.

Five persons remained onboard including the CO and XO. The last man on the deck closed the hatch in the sail as the MIKE sank. Inside, the CO, XO and two others entered the escape sphere in the sail but not before the air pressure in the submarine had risen because of the flooding. This rise in pressure increased the lethality of the smoke contaminants in the atmosphere. The fifth man, locked out of the sphere, was knocking on the bottom hatch for admission; however, before any decision could be made, there was a loud noise and the knocking ceased.

Two men inside the sphere successfully put on breathing masks connected to oxygen sources. The CO and XO did not do so in time and lost consciousness. Attempts to release the sphere were unsuccessful because the MIKE was sinking stern-first at an angle too great to permit release.

Upon impact with the bottom at a depth of about 5500 feet, the submarine “leveled,” releasing the sphere which rose to the surface at an estimated speed of 20-25 knots. Upon broaching, the top hatch of the sphere was blown free because the air pressure in the sphere exceeded atmospheric pressure. (The top hatch was a pressure seal only; it was not latched: dogged down.)

One of the still conscious men was killed when he was blown out the hatch; the other survived to tell the story. The sphere filled and sank with the bodies of the CO and XO still within. The Soviets later reported the sphere on the bottom about 100m (330 feet) from the MIKE. (B. Rule, civilian)

11 May 1989 – 30 year SOSUS/IUSS Service Award – CAPT Robert (Jake) E. Jacob

5000 Ser PMW 183—3/330A 11 MAY 1989

MEMORANDUM

From: PMW 183-3

To: PD 80

Subj: 30 YEAR IUSS SERVICE AWARD ICO ROBERT E. JACOB

1. This is to request and justify that a 30 year IUSS Service Award be presented to Robert E. Jacob (Captain, USN retired; Principal Scientist, Planning Systems Inc, retired; and currently an independent consultant and attenuating (in the IUSS fashion of “old soldiers never)

2. Bob, or “Jake” as he is sometimes better known, started his IUSS career in December 1957 when then CDR Joe Kelly gave him a tour of NavFac Pt Sur and suggested he might like to be the guinea pig student for a proposed PG School course on ASW/Underwater Acoustics. Bob accepted and agreed to the 1-tour payback requirement. That one-tour has been continuous ever since.

3. As briefly as can be done, his 31+ years in SOSUS/IUSS included JO tours as instructor in underwater acoustics and patrol aircraft/SOSUS coordinator with NavFacs Cape May and Bermuda. This was followed by assignment as CO NavFac Ramey in 1963. While at Ramey his complaints about analysis personnel assignments led to his being placed in charge of a small study group which proposed the current OT rate. Upon departing Ramey for supposed duty as OPS officer at COSL, Jake was literally sidetracked enroute to become part of VADM Martell’s new ASW unit (OP-095) in OPNAV. It was during his first tour there that he successfully proposed and directed the assignment of the first women into IUSS. This first group at Eleuthera included then ENS Susan Canfield, now Captain and Chief Staff Officer at COSP. During this same tour, Jake also initiated the program for Interim Towed Array Surveillance Systems, with which you are very familiar with now as SURTASS (escort surface ship arrays were passed to NavSea for further development). However, his major accomplishment in this 1965-68 time period was the preparation of and getting approval for the largest IUSS effort in many years: the development of the Pacific expansion at Adak, new stations at Barbers Point, Midway and Guam; the Atlantic expansion at Keflavik, Argentina, and Bermuda; and, the development of digital systems and the SD-C cable for SDC-1 and -2 (now Centerville and Brawdy). As a matter of interest, this budget document was prepared, presented and approved by Op—095, the SecNav and the SecDef in less than one-week, and subsequently briefed by then LCDR Jacob to Congressional committees which also granted their approval. This 1967 effort resulted in stations being on the air initially by 1970 (Barbers Pt), with Brawdy going operational only 7 years after the digital systems R&D program initiation, a time schedule we can only envy today. It was during this tour at OPNAV that SCORPION was lost; Bob initiated a series of phone calls to Navy and AFTAC acoustic friends to save all data in the suspected time frame and with CNO/ASSTSECNAV verbal approval organized a small analysis group to try and identify any potential acoustic anomalies to indicate the loss of SCORPION and assist in finding her. The success of this is well documented. He was also the primary action officer for all foreign efforts in IUSS, and successfully negotiated a number of joint projects, including the US/UK agreement, and several other of our major special projects.. One of his projects that took slightly longer than expected was obtaining approval of a new cable ship. All told, Bob says the ‘ZEUS’ was placed into the budget cycle 12 times before it finally passed all hurdles and made it to approval by the President and Congress.

4. Following this first OPNAV tour, Jake reported to the new NavElex command as Deputy CAESAR Project Officer under CAPT Kelly. His primary responsibilities were to execute the cable and digital processing systems R&D he had proposed and obtained approval for while at OPNAV, and to oversee the systems procurement and the construction of the new facilities, with emphasis on the major new site at Brawdy. In those days IUSS was EPO-3, now PMW 181, and consisted of a total of some 15 people (many of whom are still here - Boyett, Dasinger, Gambino, Trabue, Smalfelt). His six year tour was successful in that all systems were delivered on time and within budget. He relieved Joe Kelly in 1973 as CAESAR Project Officer when Joe retired. In 1974, VADM Shear, then OP-095, selected Jake (now CAPT) to be the commissioning CO at Brawdy, with the statement “You developed it Mr Engineer, now go make it work”. In 1975, ADM Shear (then CINCUSNAVEUR) visited Brawdy and advised Jake he would be returning to OPNAV in ‘76 as Director Undersea Surveillance Systems, and orders arrived a week later, nearly one year before his tour was over at Brawdy.

5. Jake’s final active duty tour was as OP-954/954F (IUSS). While there he again pushed through a program expansion, which took a little longer this time due to the increased ‘support’ and visibility being given IUSS. The expansion program included the NOPFs, re-activating the LFA effort which had gone dormant in the early 60’s, initiation of FDS efforts using new technologies, and approval in principal for the deployment of the ‘last’ array system and the first FDS. He was also successful in expanding foreign development efforts. Although not exactly successful, Jake did develop an IUSS officer career pattern for IUSS. That effort is still being debated within the Pentagon.

6. During his Navy career, Bob Jacob was awarded the Navy Commendation Medal for the initiation of the SCORPION acoustic analysis effort and the successful development of her location; the Navy Meritorious Service Medal for his accomplishments in EPO-3/PME 124, and the Legion of Merit while at OPNAV for his successes in the development of IUSS efforts within the US and foreign nations.

7. Upon his Navy retirement in 1978, Bob went to work for PSI. His most notable efforts there have been the establishment of the IUSS Data Reduction Center, the complimentary maritime air data base, and his study on the SPEAR system which revealed the discrepancies of the fundamental algorithm and resulted in it being cancelled, saving IUSS considerable embarrassment, and the Navy and the taxpayers a great deal of money. He developed the SURPASS operational orders and organization plans for the fleet commands, and was instrumental in an ASW communications study which demonstrated the need for, and helped cause, improved fleet battle group communications with the IUSS. He has been a long term fixture both within OPNAV and P14W 180, providing programmatic support for many years as well as proving to be a most valuable source of historical record, the corporate memory. For several years, Bob worked directly within OP-095 and OP-951F at their request when there was a need for an experienced person with both OPNAV and IUSS background to prepare point papers for the CNO and SECDEF.

8. Bob was awarded his 20 year IUSS service pin in 1978 and his 25 year pin in 1983. With a rapidly approaching final retirement, his continuous, dedicated and exemplary support to IUSS since 1958 is deserving of special recognition and the presentation of an appropriate 30 year service award. Your approval of this award and the subsequent presentation is most appropriately requested. /CARL R. ANDRIANI (11 May 1989).

October 1989, SURTASS Program Office Crystal City, VA:

Mike Nelson (PMW 182-1) promises the JTG team that the next person to find a critical failure during SURTASS R12 software testing would be rewarded with a case of beer. Keith Smock (TRW) boldly announces “That case is mine!”

November 3, 1989, CCM San Diego, CA: Fatal software fault in the SURTASS display processor is found by Keith Smock, resulting in termination of the test. Mike Nelson faxes a certificate to Keith - by way of the developer’s (SYSCON) program manager - acknowledging the accomplishment. The certificate reads ***“This certificate entitles Mr. E.K. Smock Jr. (alias SmockMoe) to one case of beer of his choice in recognition of his heroic efforts in junking SYSCON’s R12 software during JTG.”***

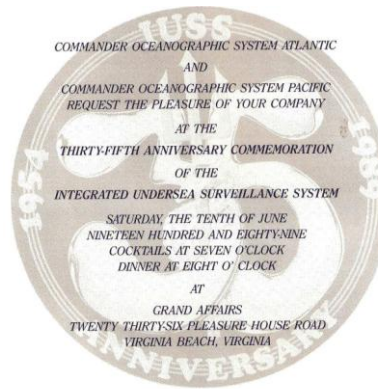
November 1989: Upon Keith’s return to Crystal City, Mike makes good on his promise and delivers the case of beer - carried in a suitcase on the Metro during his morning commute.

10 Jun 1989 - IUSS 35th Anniversary was celebrated

At Grand Affairs in Virginia Beach, dedicated to CAPT J P Kelly, "Father of SOSUS"; guest speaker: VADM D L Cooper, USN, ACNO for Undersea Warfare; 400 guests included most NAVFAC COs, and several past-Commodores and Commanding Officers

“To All Who Read These Presents Greetings”

The Integrated Undersea Surveillance System, having completed thirty-five Years of distinguished service is hereby honored “First in Anti-Submarine Warfare”. Acceptance of this title requires that this system will uphold all expectations, laws governing the depths of oceanographic research, and the traditions of those men and women who have served in past years. Good hunting! In Confidence and Reliability, Neptunus Rex



1989-91 SPAWARSYSCOM

PD-80 decided that engineers should spend time on watch at NOPF to better understand the demands on the watchstanders, their rotating hours, and responsibilities. This was so future installations and upgrades would be designed to ease the load, not increase the workload. (Leslie Skowronek, CDR)

July 1991-June 1993 NOPF Dam Neck

For all of my two years, few weeks didn't include special briefings to dignitaries and rare the day that installers were NOT onboard. UPS came in September 1991. ASW/Globix, Copernicus, WAWS, DAMA WSC-3, FSPDM, DSVC, SIMON, WADR, WBAR, and the list went on. TRE was installed and went with and without funding for the next two years. The SDRs were turned off February of 1992 with the introduction of the SWS. Meanwhile the HEMP room was being created. Antennas and dishes were added wherever there was space. Gremlins ran daily from one piece of equipment to another. There was no such thing as a “dead” duty day for facilities, electronics, or communications technicians. We started working the Bermuda remote in 1991 with many glitches as the switchover occurred by late 1992. (Leslie Skowronek, CDR)

1990 – TAD to NavFac Keflavik – “New York to Iceland – via Luxembourg”

In early January 1990, while stationed at NavFac Whidbey Island, I executed a set of TAD orders from SPAWAR to travel to NavFac Keflavik, along with Ed Smock (OTCM-Ret/TRW) and Jacque Lowe (OTA1/NOSC). Our objective was to gather information on the use of the Interactive Acoustic Display (IAD)/Wideband Acoustic Recall (WBAR) to capture strengths and weaknesses that could be applied to the SOSUS Workstation (SWS), which was already under development. We were to review operational procedures, monitor actual operations, interview sailors and administer a survey.

While I was checking into the Iceland Air ticket counter at JFK I felt a tap on my shoulder, when I turned there stood Ed. He had a seat in Saga Class (Business) which allowed him access to the lounge. We later found Jacque and proceeded to partake of the free nuts and beverages they had to offer. The flight was delayed and needless to say, we were not shy about helping ourselves to their open bar. At around 11:00PM (6 or more hours later), a stewardess approach us and asked “aren’t you flying to Iceland?” We replied “yes” and she got all flustered and told us the flight had already boarded. We grabbed our carry-on belongings and rushed to the gate under her accompaniment. They had to extend the jet way and open the door to get us on the plane, and no one onboard was the least bit amused by our late arrival.

Once airborne, we were treated to an occasional gift of small bottles from Ed, who would wander by frequently to empty his pockets in our laps. After a long flight, and several circles around the Keflavik airport, the pilot announced that we would not be able to land due to “white-out” conditions and would be diverting to Glasgow, Scotland for fuel. After sitting on the tarmac in Scotland for some time, the pilot announced that we would be flying on to Luxembourg for a change of crew. After another several hours in the air we landed and were finally allowed to leave the plane...only to find that we would not be traveling on and would have to spend the night there. We ate our free lunch at the airport, and then were bussed to our hotel accommodations that were provided by the airline.

Now, I have not previously mentioned that this happened to be on Super Bowl Sunday – and while not a diehard fan of my home town team, the Cincinnati Bengals had finally made it to the promise land – so I was very interested in seeing how they fared. Jacque and I decided to grab a cab downtown (the town IS the country) and see if we might find a pub that might be showing an American football game...figure the odds on that! We also figured that since you don’t get to Luxembourg everyday, especially when you are traveling from New York to Iceland, we might also want to try some of the local pub grub. Ed decided that he was too tired and would stay back at the hotel. After wandering around town for a while and finding no game, we grabbed some food and went back to Ed’s room. He nearly bent over double laughing when we returned with a “Pizza Hut” pizza in lieu of the local cuisine.

The next morning we bussed back over to the airport and finally arrived in Iceland. Ed picked up the rental car and we settled into the Transient Barracks for our weeks stay.

The next morning we started our trek out to the NavFac, which was no trouble since I had just finished my first tour of 2 years there just a couple of years earlier. However, about the time we hit the LOKS Plant a whiteout hit and you could tell it was going to be around awhile. We felt our way down NavFac road, from snow stake to snow stake, and just as I thought we were coming up to the site we looked straight up and discovered we were directly under DIE 5. So we turned around and crept back to the NavFac.

Now, after living there for more than 5 years (over 2 tours), I would have to say that it was the worst full week of bad weather that I had ever seen. We did make it to work a couple of days, but ended up spending most of the week in the barracks. And thank goodness for the USO, or we would have starved. One night after dinner, the 3 of us locked arms and tried in vain to make it the 500 yards or so from the USO to the barracks. The wind was blowing so hard that we were going backwards and finally had to hunker down behind a truck. We literally crawled to the doors of the Chiefs barracks and muscled the door open enough to squeeze in, then went to the end of the hall and out the fire door and finally struggled the last 10ft or so to the Transient Barracks. That was pretty much our entire week.

As I had mentioned earlier, we were due to land on Super Bowl Sunday and still had not heard the score when we arrived at Keflavik. We prefaced every greeting with “we do not know who won the Super Bowl so do not tell us, and do you know anyone who might have a tape of the game?” Soon enough, someone came forward with a tape and we were ready for an evening of football and pizza. As we were leaving the Fac that evening, with tape in hand, we told the COPSO that “we did not know who won the Super Bowl and we were heading back to watch the game!” She stated “Oh, well enjoy the game, I did, I really thought that the Bengals were going to pull it off in the end!” We almost died right there on the spot!!!

At some point around mid week the rental car had become totally buried in snow by the endless plowing. On Saturday morning, our last day, we went to breakfast and found a beautiful blue sky day waiting. Ed and I decided to dig out the car and take it back to the airport, just to get rid of it. We dug for what seemed forever, with Ed coming close to several cardiac events, but finally broke it free of the wall of snow that had been plowed behind it. Our plan was to do a quick “gas & go”; however, when we turned the corner at the commissary we found that a huge line had already formed at the gas station. We decided that we would circle around the O’ Club and scoot out the back gate. We reasoned that, since we had barely driven the thing, the top off charge was better than waiting in that line and chancing a change in the weather. Well, by the time we went the 3/10 tenths of a mile to the corner at the O’ Club, the snow started flying again and it was all we could do to feel our way past the elementary school. At that point we decided the trip to the airport was not worth it, and we knew that the parking lot at the Transient Barracks was a loblolly, so we took the only reasonable course of action and slide the car into a snow drift behind the bowling alley. We then grabbed onto the hand rail that led across the rock field and back to the safety of our barracks.

When we returned to the barracks we found about 30+ reservists in the lobby waiting for a bus to the airport. We again reasoned, I use this term loosely, that we should grab our bags and get a cab to the airport before the weather got any worse, and before we had to stand in line behind all of those weekend warriors. And besides, Ed still had access to the lounge, so we could enjoy ourselves and not worry about the weather anymore. So we found Jacque, called a cab and raced over to the Keflavik Airport. Upon our arrival, we slinked up to the rental car counter and sheepishly told the agent that we had left the car at the base, buried in a snow drift. She replied, “that’s okay, it happens all the time.”

So, we now found ourselves in the same place that we started our trip, in an airport lounge. We laughed and laughed about the adventures of the week and looked forward to boarding our plan for home. It was about this time that it was announced that the plane would be delayed for several hours due to the worsening weather. We remained carefree, surely due to the free refreshments, and only later realized what impact our late departure would have on our journey. Following another 6 hour delay, we left Iceland and were enroute to JFK. We became more sullen during the long ride back to America because we either came to realization, or finally accepted the fact, that we had all missed our connecting flights and it would be too late to get anything else for the evening.

Sure enough, we found ourselves stranded at JFK and haggling for some time with the respective airlines for follow-on tickets the following morning. For some reason all of our new connecting flights were out of LaGuardia the next morning, so we stayed at a hotel that was halfway between the two airports.

After some dinner and some much needed sleep, we met the following morning in the lobby for transportation to the airport. We had to buy a ticket at the desk, and each was a different color based on which terminal you were to be dropped off at. Jacque and I received one color and Ed another. We then boarded two old “converted” school busses for the trip to LaGuardia. Somewhere on a freeway overpass, with LaGuardia in site in one direction and Shea Stadium in view the other way, the busses stopped. It seemed that Ed’s bus had lost the rear end differential and had grinded to a halt. After a short conference between the two bus drivers, we departed; with our last vision of Ed standing there on the curb with suitcase in hand and what appeared to be a tear in his eye that sparkled in the morning sun. It made for yet another memory which was par for this trip! (Tim Cornett – OTAC/Whidbey Island)

About 1990 - Mindless Projections

As late as about 1990, briefs were still being given at high levels within the Navy/contractor community that projected the Soviet submarine order-of-battle (through 2010) to include new classes of SSNs/SSGNs and SSBNs every few years and only the slow retirement of older classes, i.e., a good, healthy threat for the foreseeable future: just what the audience wanted to hear.

Even though the political/economic situation evolving within the Soviet Union at that time made such projections seems increasingly unlikely, briefers continued to prattle on and the audience, anxious to be able to support budget requests and contracts, was

mindlessly accepting until:

Upon the completion of one brief, the briefer was asked one especially penetrating question: “What Navy are you talking about?” The briefer responded: “The Soviet Navy.” The response to that was: “In 2000, the Soviets won’t have a Navy.” The nonplused briefer paused for a moment, then recovered and went on with his summary statements about the status quo. As we now know, the questioner was more nearly correct than anyone in the audience would have believed. (B. Rule, civilian)

15 Mar 1991 - Our Original Cover Story Changes

Official explanation of Oceanographic System mission was changed from original cover (oceanographic research in support of ASW) to actual undersea surveillance for detection of threat submarine contacts.

Between 1400Z and 1500Z on 13 March 1991, IUSS arrays across the North Pacific began to detect unusual low-frequency narrowband signals that ramped up over 12-90 second periods. The origin of this energy was time- difference fixed near 54.1S, 140.5W, a position within measurement error of a known underwater volcano (guyot) located at 52.9S, 140.3W. (B. Rule)

1 Oct 1991 – COMOCEANSYSLANT (COSL) was changed to COMUNDERSEASURVLANT (CUSL), COMOCEANSYPAC (COSP) to COMUNDERSEASURVPAC (CUSP) (Neither really changed Logo’s at that time.)



March 1992 - NOPF Dam Neck Golden Anchor

One day this huge anchor arrived at our door. It was to honor the retention results the NOPF had realized. It was off the decommissioned USS Wisconsin. (Leslie Skowronek, CDR)

Spring 1992 - NOPF Dam Neck Medical Support for SURTASS ships

Through an agreement with George Washington University Medical Center, any medical emergencies at sea could be relayed to doctors who replied with desired courses of treatment. (Leslie Skowronek, CDR)

Fall 1992 - NOPF Dam Neck Whale Watching

Dr. Chris Clark (Cornell—whales) and Dr. Clyde Ishimura (NRL—seismic) provided equipment for Whales-93. NOPF would be helping Dr. Ishimura learn about acoustic propagation transmission loss, look at Inter- and Intra plate activity, and at volcanic and tectonic earthquakes to the Mid-Atlantic Ridge and Caribbean margin. There was hope of finding the North American/South American plate boundary. Dr. Clark provided basic frequency ranges for communication for Right, Finback, and Humpback whales. We were to try to locate them and track them in hopes of determining what the animals were doing, where they mate, how they detect food, how they navigate, etc. It was thought that the A-train was the Minke whale. Commas were unknown, but possibly the Finback. We actually had assigned ATARF codes for the various signals we'd detect. Chuck Gagnon successfully tracked “Old Blue” from off the Grand Banks to the Bahamas and back. (Leslie Skowronek, CDR)

1991-1992 - SOSUS Work Station (SWS) Replaces Paper Grams - End of an Era

After some thirty-eight (38) years of reading paper Lofargram, SWS is replacing paper grams throughout the system. NavFac Bermuda will be remoted to NOPF Dam Neck via this transition. (Ed Smock)

Only part of the AT&T-BL, AT&T-T and Navy SWS team.

(L to R) James Earl, Barry Isley, Paul Guley, Don Grell, Jeanette Moore, Dick Hopper, Roy Lunney, Larry Allen, Marty Glienna, Ed Smock, Jeff Wallace, Jerry Lawson and Isaac Cruz (coat). Jeanette, Jeff and Roy were AT&T-Bell Laboratories (BL). The rest, except for Marty and Ed, are



AT&T-Federal Systems Advanced Technologies (FSAT). The picture and an accompanying article appeared in the September 1992 issue of FSAT Attitude.

Dedication of SOSUS Workstation's (SWS) Success - "To Mr. George Hansen"

I would like to take this opportunity to dedicate the success of the SWS to Mr. George Hansen (NavElex/SPAWAR SWS Program Manager). It was George who allowed the fleet operators to have such an in-depth involvement in the SWS regarding its capabilities, features and overall OMI. George's attitude, which he quoted many times, was that if the fleet operators and Ed say they need and want a certain feature and it should work this way etc., then we/you (AT&T-BL and AT&T-T) will build it that way. I would ask that when you read comments made toward the SWS, that you direct your thoughts to George Hansen. George fell ill in Dec 1995 and never fully returned to the

program. He passed away before he had a chance to see the final product. May he rest in peace. (Edwin K. Smock USN (Ret))

1992 - SOSUS Consolidation Ushers in Workstation Era

Consolidating the displays from remote arrays into already congested processing facilities is one of the greatest technical challenges facing the SOSUS Modernization Program. Currently the focal point for consolidation is NOPF Dam Neck. This site will be receiving remotely transmitted signals from NavFac Bermuda in Sep 1992. SOSUS Modernization Program using SWS includes the knowledge gained in developing the Fixed-Beam Workstation and the Full Spectrum Processing (FSP) Development Model. The experience we gained with the Fixed-Beam Workstation definitely helped define what an operator needs to do and how to do it in a paperless processing facility, “explained Edwin Smock who is the designated on-site SPAWAR agent for SOSUS Modernization”. Ref: IUSS Spectrum - May 1992 Vol. 1 No. 3 (Charles Knutson)

"SWS" - Fleet Perspective NOPF Dam Neck "View from the Floor" (1994)

LCDR Jim Donovan Ops: I'm very impressed with it. The SWS was "born" here. Our operators were involved from the beginning in designing a "box" that would meet their acoustic analysis and reporting needs. This was unlike the "old days" when a new piece of equipment showed up on the display floor, and we were told to use it. Many of those systems were never really embraced by the IUSS operators. The SWS allows us to do our job more efficiently - - with fewer people -- and virtually, with no mistakes. In fact, we're still learning tricks with the SWS that enable us to understand the ocean environment better...

LCDR Chuck Gagnon: SWS has placed us on a steep learning curve - nearly as steep as when we first turned-on the system forty years ago. Almost everyday includes some kind of "discovery"...

OTA3 Beth Frye: For awhile we worked with both SDRs and SWSs on the floor. It was a great time to be here because we saw our suggestions included in the new equipment - we felt that we really contributed to making SWS what it is today... I love the SWSs! they give the analyst so much more to work with. They have capabilities that make our job of tracking submarines much easier. The new SWS allow me to hold a target longer and do it with more accuracy...

OTA1 Roy Robertson: SWS improved our skills dramatically. This was the direct result of two things, improved ease of operation and increased capabilities of equipment. The analysis tools that are now available in SWSs are the kind of tools that the OTA community dreamed of for years... Ref: IUSS Spectrum - Sep 1994 Vol. 3 No. 4

SWS introduced: XRAY, HEQ, NSE 2, dual normalizers, compression/expansion, 1-2 second response times, recall at 900:1, high TRES recall, endless recall directory/auto save, remote access, save screen, save screen archive, continuous archive of BTS and display level data, high performance of reliability/availability, noise field plots - beam and freq, duplicate annos feature, copy and playback of any "system/site" tapes at 100:1 etc., - but most of all it had "Operator Acceptance" - as they were directly involved in it's development, features and OMI.

Circa 1992 - NOPF Ford Island - Keith Smock challenged by M16

This day finds Keith Smock at NOPF F.I. for a SURTASS upgrade installation. He and the upgrade team are in the building preparing to do the Command in-brief. As Keith and the team are proceeding down the passageway to the briefing area, there comes a loud "yell" from the CO's office area - "Keith Smock" the voice of CAPT Maybaumwazknewski (M16) resounds... - "Yes Mam" replies Keith... "Are you really Ed Smock's son? - yells M16... - "Yes Mam" replies Keith... Tell him I said "Hi" yells M16... (Keith tells team - no problem, she knows "Pop"...)

Jan 1993 - NOPF Whidbey Island - "Anticipated meeting with the CO"

It is the time of the SPAWAR SWS management teams visit to NOPF WI. The team, CDR James Sweet and George Hansen (SPAWAR), Jerry Lawson AT&T-T and I were there to brief the Commanding Officer and the crew on the SWS installation, remoting, and various other related subjects. The CO, CDR Mary Mosier was away at the time and was not available during the first two or three days of our visit. As time went on, the "other" team members grew anxious in anticipation of the meeting as they had never met her and of course that carried with it a degree of uncertainty as to the reception they would receive.

When she did return we were ushered to her office accordingly. As we walked into her office, "Mary" got up, came to me, and gave me "an old friends hug" and strongly said "Smokie - welcome to NOPF WI.". The look on the "others" faces said it all... They said later, what did we have to worry about? - Ed, why didn't you tell us you knew her so well....Thanks Mary for the memory (and the hug...)... (Ed Smock)

1993 - Lack of PCS Funding

Due to a lack of funding, detailers were extending the OTs and billets were being cut toward the future downsizing of the System. (Leslie Skowronek, CDR)

May 1993 - NOPF Dam Neck - SOSUS Modernization

This introduced changes to ABF, SWS, and replacement of WBAR. (Leslie Skowronek, CDR)

June 1993 -NOPF Dam Neck - SURTASS Manning

It was determined that the SURTASS LFA manpower would be drawn from NOPF. (Leslie Skowronek, CDR)

30 Sep 1993 – NavFac Adak Decommissioned

The United States National Ensign flown over NavFac Adak the day of decommissioning was presented to LT Tim Cornett.



Naval Facility Adak, Alaska

Certificate of Flag Presentation

to

LT Timothy L. Cornett, USN

Naval Facility Adak was commissioned on 4 December 1962 as an integral part of the United States Navy's fixed underwater detection system or Sound Surveillance System (SOSUS). For nearly 31 years the "Best Fac in the Pac" proudly provided vital strategic and tactical antisubmarine warfare support to Pacific Fleet operating forces.

The United States Flag accompanying this certificate represents the commitment to antisubmarine warfare excellence and outstanding professionalism demonstrated by the men and women who loyally served Naval Facility Adak.

This flag was flown at Naval Facility Adak's decommissioning on September 30, 1993.



J. M. Fremba
Commander, U.S. Navy
Commanding Officer

28 Dec 1993 - CNO message 281420Z DEC 93 provided guidance for the closure, consolidation, and merger of IUSS commands.

Circa 1994 – COSL Undisputed Fishing Champion – “Fred Schwanz”

It has been (and continues – as of May 2008) a tradition (30-31 years) for the COSL group to campout each Memorial Day weekend. It was during one of these campouts (circa 1994) that a discussion arose, after the evening meal of fried venison, about who was the best fisherman, Fred Schwanz or Ed Smock? By the end of the evening it was decided by the group that a fishing tournament, along with appropriate prizes, would be held to decide. Fred was very-very vocal as to how bad he was going to beat “Smokie”.

The next day finds Keith and me fishing together and Fred in a boat by himself. It happened around 1030, Keith and I had just broke out of a cove that we had been fishing in and we saw Fred at the right hand edge of the same cove.....Fred had gotten a snag and in the process of pulling hard on his line - to try and free his lure (plug), it happened, the plug came loose and flew back toward and hitting him – his reaction caused him to fall overboard. When we got to him he was all wet and was trying to remove the plug from his shirt. He had to cut the hooks out of it.... when he was done his shirt had several small holes.

As soon as it obvious that Fred was not hurt Keith and I started to laugh -“as expected”. He had lost some of his rig but other than that he was all right... Except for his pride... I told Fred “You win Fred I am not going into the water just to catch a fish”... You win... You are the “Fishing Champion”.

Keith and I continued to fish while Fred headed for the pier... As it was near lunch time and with all the excitement of Fred falling overboard we decided to go in for lunch. When we got to the pier Fred was in the process of drying everything out... He had spread the contents of his wallet on the pier to dry etc... Just then a gust of wind came up Fred’s money – now dryer than when he laid it on the pier started to “fly” away... Out onto the water went \$20 bills etc... Keith and me to the rescue (of the money), laughing so hard that it hurt...

Fred said “Now Smokie – don’t you go back and tell them guys”.... Of course I said I wouldn’t – however, I could not stand it any longer... I had to tell... Keith and I headed for the camp. (Keith says I was hanging out of the driver’s side door yelling the story as we drove in)... By the time Fred returned to the camp everybody was waiting for him... You know the rest of the story... Fred only returned for the campout one or two times after that, and then only to golf... He couldn’t stand the flax...

HA-Ha. Thanks Fred for a memory we ALL relive every Memorial Day. We miss you... And you will never be forgotten ole friend.... (Ed Smock)

24-25 June 1994 - CFS Shelburne sadly gathered for a Closure and Reunion Ball (nearly 40 years SOSUS/IUSS service) - LCDR P.O. Gaynor Commanding Officer.

CPO2 Andrews CF (may she rest in peace) gave me her copy (#24 of 140) of the CFS Shelburne Commemorative Closure Book while I was attending the opening ceremony of "TRINITY". - As she knew how much Shelburne meant to me... It saddens me now as I review the Shelburne book gathering factual data for "Our Book". - Gone but not forgotten... (Ed Smock)



2 August 1994 – CFS Shelburne “Decommissioning”

USN Personnel

OTA1 Julie Mayo

SK1 John Callis

OTAC Linda Hackleberg

LT Gail Calandrino

LT Tim Cornett

Visitors: Commodore Ponessa, LCDR Ken Guire

CO: LCDR(N) Peter Gaynor OPSO: LT(N) Jerry White

15 Aug 1994 - COMUNDERSEASURVPAC was disestablished. CUSL and CUSP were merged to form Commander Undersea Surveillance (CUS).



Now =



17 Sep 1994 - IUSS 40th Anniversary celebrated

At Grand Affairs in Virginia Beach; guest speaker was RADM M D HASKINS, USN, COMFAIRKEF/ICEDEFOR. Master of Ceremonies CDR Steve Conn says - "We keep closing NavFacs - I never thought I'd have more ex-wives than we have NavFacs"... If our group gets any smaller, we will have the 45th at the Holiday Inn room 123"... (Ed Smock)

5 May 1995 – CFB Halifax "hot" during the Opening Ceremony of "TRINITY"

My next major collateral assignment was to work on the SOSUS Work Station (SWS) "remote" activities/installation pertaining to Canadian Forces Intelligence Center (CFIC) Halifax, Nova Scotia and NOPF Dam Neck, VA.

This day finds me and Marty Glienna in Halifax for the Opening Ceremony of "TRINITY" and dedication of the building as the LCDR Fred Alun Jones RCN Building. Commander E.L. Tummers, (CD) Commanding Officer "TRINITY" and his entire crew can be very proud of the dedication ceremony they provided.

As great luck would have it, an hour or so before the ceremony started, we gained contact on an out of area Soviet submarine and continued to hold it throughout the day. How gratifying it was to have just installed and checked out the SWS and the remote interface and to have such a TOI to exploit. And, "In front of such a distinguished audience" - "Fred's wife Mona and family".

Like all of us, Fred was never allowed to tell his family what he really did in the Navy... I talked for hours with Mona and her family during this visit about what Fred had done for SOSUS.

In addition to the memories I write about here in "Our Book", I told them the story of how Fred made the original "Jones Computer" (you really old-timers will remember the plastic circular slide rule that told you the class of submarine you were holding - if you dialed up the information properly)... Fred started with three pieces of cardboard from the backs of tablets, and had me cut out curved rectangular boxes at certain points where he directed... I didn't have a clue where he was going with this...

He would make some calculations (by pencil in those days), and then say "cut here" etc... Then he put the three pieces of cardboard on top of each other and centered them on a "nail". "Dial up the appropriate "lines", align them to the proper harmonic number, and read the "class" through the hole... It worked!!!. His final work was accepted by the Navy and it became an ASW tool - "The Jezebel Computer"... We had it in our WO library (pub/tool #18) for many years, and it was carried on MP aircraft as well.

This was a very proud day for SOSUS/IUSS (and me)... My thanks again for those who helped build SWS - and for making me feel so tall... "Surround yourself with great people and others might think that you too are great"...(Ed Smock)

Return to Shelburne 1995 (40 years later)

The original “T-Bldg” and two generator shacks.



Return to Shelburne 1995 (40 years later)



Entrance to the “T-Bldg”



**This is where we had the “big wooden arrow” to give “MP aircraft direction”.
And, the burn barrel to burn the grams – every night regardless of the weather.**

Return to Shelburne 1995 (40 years later)

Inside the main entrance and up the ladder to the photo lab. (It was totally dark inside, the only light we had came from Tim Cornett’s camera flash.) (T-Bldg last used for storage.)



Comm “tellers” “RTTFs” went in here - to the Comm vault.

Return to Shelburne 1995 (40 years later)

Shhh... “The cable” don’t tell anybody...



It made me sad to see it all closed up... (Ed Smock)

Jun 1995 - Soviet Akula class submarine encountered off the southeastern Atlantic coast.

"BZ Dam Neck" - I'll give you credit, you desire it - as we know the truth... One sad thing about SOSUS/IUSS, you could never be given credit (in public) for what you did... That's another reason that "Our Book" is so important to do...(Ed Smock)

<http://www.naval-technology.com/projects/akula/>



Akula

Russian submarine is spotted off coast. Boat was closest to U.S. since 1987

Bill Gertz - The Washington Post 23 June 1995

A Russian attack submarine shadowed U.S. nuclear missile submarines near U.S. coastal waters in the Atlantic earlier this month in operations not seen since the Cold War, according to Navy officials.

In one encounter, the USS Tennessee a Trident missile submarine based in Kings Bay, Ga., detected what Navy officials believe was an Akula-class attack submarine following it during a routine mission, said officials who spoke on the condition of anonymity.

The encounter occurred early this month off the coast of the southeastern United States in international waters, the officials said.

It was the first time since 1987 a Russian submarine had operated within several hundred miles of the U.S. coast and has raised new concerns among Navy officials about expanded Russian submarine operations.

“We’re aware of the deployment of a Russian submarine operating along the East Coast from late April until early June,” Cmdr Stephen Pietropaoli, a Navy spokesman, said. To the best of our knowledge, we think it was an Akula, which is their most-modern and most-quiet: submarine.”

The Akula operates more quietly than U.S. submarines, a key advantage in underwater warfare and one reason the Navy wants to move ahead with its submarine modernization

program. Pentagon officials said it is difficult to say if the Russian submarine activity is a trend.

“What it does say is that they are still operating and still building submarines.” one official said. “It says they still have a good-sized sub force that is still capable of worldwide operations.” A second official said it was very unusual for the Russian boat to be operating so close to the U.S. coast

“We knew where it was but not all of the time’ one admiral said.’
The last close encounter between U.S. Navy ships and a Russian submarine took place in July 1994 in the mid-Pacific, when an, Oscar II-class submarine capable of firing cruise missiles operated near two U.S. aircraft carriers, the Kitty Hawk and the Independence.

According to the Office of Naval Intelligence (ONI), Russian submarine operations in 1994 were limited to areas near Iceland and Greenland, in the Norwegian and Barents seas, the Sea of Japan, the Sea of Okhotsk and the Bering Sea.

During the mid-1980s, Soviet submarines operated routinely off both U.S. coasts. The Russian attack submarine has several missions, including hunting down and blowing up U.S. nuclear-missile submarines during war, and providing protection for Russian missile submarines from U.S. attack submarines. The submarines also can lay mines and take part in covert military and espionage operations.

Navy officials said the detection of the Russian attack boat bolsters their argument to Congress for continuing funding of the new Seawolf attack submarine which was cut in the House defense budget bill earlier this month,

The first Seawolf attack submarine will be christened tomorrow in Groton, Conn. Secretary of Defense William Perry and Gen. John Shalikashvili, chairman of the Joint Chiefs of Staff, wrote to the Senate Armed Services Committee on Monday asking that funds for submarines be restored in the Senate defense spending bill.
(Bill Gertz - The Washington Post 23 June 1995)

Sep 1995 – CFIC Halifax light bulb implosion localization effort

We were doing an array localization (CALOPS) investigation at CFIC Halifax, Nova Scotia. In addition to the mega bucks we were spending, we were also using standard off the shelf light bulbs as implosion devices. As we were monitoring the implosions (yes, we could see them on SWS) I asked the lead engineer from TRW (Tamas DeSalanky) if the sound would be stronger if we used a 100 watt bulb instead of a 60 watt bulb... - it took him a few moments to consider his answer...(Ed Smock)

29 Aug 1996 – "Dunderfunk Society" - "Finding Red October"

The "Dunderfunk Society" associated with the Hampton Roads Naval Museum (Hunt Lewis - Director) hosted a luncheon, at "Crackers" in downtown Norfolk, for all those interested in Naval History. The Guest Speaker, invited by CAPT Mary Mosier USN

(Ret) (the curator for the USS Wisconsin Memorial) was OTCM Edwin K. Smock USN (Ret) who discussed "Finding Red October - The history of undersea surveillance".

It was an honor to be called upon to speak to this distinguished audience. Subsequently, I was invited to attend the SOSUS/IUSS Exhibition opening ceremony at the Hampton Roads Naval Museum. Thanks Mary... (Ed Smock)



“The Stars and Stripes” - Thursday December 12, 1996
Navy tracking center in Iceland being shut down after 30 years.

As a Navy petty officer third class, Jim Donovan remembers shoveling a lot of snow out of assigned parking spaces on his first assignment to the U.S. Naval Facility Keflavik, Iceland in the 1970s. Twenty years later, Donovan now a Lieutenant Commander, is clearing the way for the shut down of the facility, the oldest operating site in the Navy’s Integrated Undersea Surveillance System. A disestablishment ceremony will be held in Naval Air Station Keflavik’s chapel at 10 a.m. today to observe its passing.

“It’s a bittersweet situation,” said Donovan, who has overseen the site’s draw down since he assumed its command in September. “I’m glad to be going home.... But I’m not looking forward to relinquishing command.”

The Keflavik facility’s mission was to detect, track and report acoustic data in the Norwegian Sea during its 30 years in business. Today, the mission can be carried out at other sites that serve as central hubs for the gathering and dispersing of information. “It just won’t be at Keflavik,” Donovan said. “This is one of the last outlying facilities.”

At its peak, 166 enlisted personnel and 16 officers were assigned to the facility, according to a base spokesman. In early 1995, 144 were assigned. Some members who held support jobs are being transferred to other units at Keflavik. Ten are moving to ships. Others are going to assignments at Dam Neck Fleet Combat Training Center in Virginia, and Whidbey Island Naval Air Station in Washington. A few will teach new sonar technicians their trade.

“I’m the last person to have a desk,” Donovan said. Since the facility’s drawdown swung into full tilt this fall, its staff has dismantled 51 tons of sophisticated electronic equipment and accounted for or destroyed 4,000 documents containing sensitive information.

In addition, the departures of nearly 300 people associated with the facility – sailors and family members – had to be staggered from October on so as not to entirely disrupt holiday travel prospects for other Americans based at Keflavik, Donovan said. Plus, an extra C-9 aircraft out of Dallas was added to Keflavik’s incoming air traffic this month to move about 30 people. (Jim Donovan)

November 23, 1996

LCDR Donovan
Commanding Officer
U.S. Naval Facility Keflavik
FPO New York 09728

James H.R. Brady
Rt.1, Box 1696
Lopez Island, Wa. 98261
(360) 468-4311

Dear Captain Donovan,

My wife, Sarah, and I are in receipt of your disestablishment invitation. Our reaction was first one of shock and dismay fading to a mix of pride and sadness. The latter feelings are due to the tremendous accomplishments and contributions made over the years by the officers, men and women of NAVFACKEF and the realization that that will be no more. Borrowing from the words of the late Winston Churchill “Never have so few done so much for so many!”. Kef has stood in the front line of strategic warning, tactical ASW support and technical intelligence collection. The organization has been recognized far and wide with multiple Presidential and Navy Unit Citations, Command Es, the CINCLANTFLT Golden Anchor for retention excellence and many personal BZ’s for operational successes from the likes of CINCLANTFLT, COMSUBLANT, COMOCEANSYSLANT, and CO’s of VP-10, VP-11, VP-26, VP-49 et al.

The distinguished visitor’s list reads like a who’s who: The Prime Minister of Iceland, The Secretary of the Navy, Chairman of the Joint Chiefs and CNO to mention a few. I recall vividly the visit of Adm Ronald Hays, then the VCNO in 1984. When I asked Adm Hays why he had come to visit, did he just want to see a NAVFAC?, his response said it

all: “I’ve seen NAVFACS, I wanted to see NAVFACKEF!” To say that this facility stood apart and above all others is an understatement. It was, indeed, one of the very most important organizations in the Navy, and the people who served there the best, always rising to the occasion, always willing to give more. “Never have so few done so much for so many!”

I worry from afar about the long term wisdom of this decision. Assuming the sensors are terminated elsewhere, how is the close relationship with the OPCON/VP to be maintained? The honest answer is it cannot. Face-to-face liaison is irreplaceable. If remoted, in addition to the previous question, how is the physical security to be preserved? The answer is it cannot. So, sadness with the decision and the reality that what was, will never be again. The few, the best the proud, the professional will be gone. God bless the officers, men and women of the world’s best Naval Facility. “Never have so few done so much for so many!”

Respectfully,
CDR James H. R. Brady
USN (Ret)
Ops ‘70-72
XO 72-74
CO ‘82-84
cc: COMFAIRKEF, COMOCEANSYSTEMS

To:
Mr. and Mrs. Joseph C. Murray
103 West Colliery Ave
Tower City, PA 17980

Ref: “RM2 Murray award”

Our disestablishment ceremony will be held at the base chapel here in Iceland on Thursday morning, 12 December 1996. If you so desire, I can make remarks at the ceremony on your behalf. I can be reached at the above address or by phone at 011-354-425-2106; home number 011-354-425-4990. Please let me know if I can provide any further information.

Sincerely,
J.M. Donovan
Lieutenant Commander, U.S. Navy

J.M. Donovan
Lieutenant Commander
U.S. Navy
P.S.C. 1003, Box 7
FPO AE 09728—0307

Dear Lieutenant Commander Donovan:

I am the father of Michael Murray, a sailor stationed in Keflavik who died in 1981. Although he died in his home town while on leave, his memory has been honored twice a year by your recognizing a sailor who has exhibited both honor and courage.

Words cannot express the appreciation that Michael’s family has for your having remembered him all of these years.

I wish everyone who hears these words could have known Michael. He was the fourth child in a family of thirteen, nine sons and four daughters. Of these thirteen children, we have lost Michael and one daughter. Michael’s mother passed away five years ago.

To say that Michael was personable would be an understatement. Although not large in stature, he commanded a room the moment he entered it. Anyone who underestimated him paid a heavy price. His athletic ability was matched only by his wit.

I regret that I am unable to be present with you today. I can only hope that these words can express to all of you at this ceremony not only our continued love for a fine sailor but our great respect for those who serve our country. You have given us yet another reason to remember him fondly, which is how we shall remember the naval facility at Keflavik.

Sincerely yours,
Joseph C. Murray

JOSEPH C. MURRAY
103 W. Colliery Avenue
Tower City, PA 17980
November 12, 1996



RM2 Murray Award
XO LT Denny Harrington, CO LCDR Jim Donovan, CSC OTACS Tim Herman

300910Z Sep 1996 – NavFac Keflavik, Iceland – “Cease Operations”

This actual message sent by NavFac Kef Commanding Officer LCDR Jim Donovan was provided by Tim Cornett.



[4] From: NAVFAC KEFLAVIK /30/96 12:17PM (2094 byte. 54 ln)
To: 30A, 30E, 20c, 60, 005, 30, 33B, 32, 31, 213, TACWO, CO, 60a, 62, 20b
Subject: R 300910Z-SEP-96 NAVFAC KEFLAVIK-CEASE OPERATIO
----- Message Contents -----

Text item 1: Message

ADMINISTRATIVE MESSAGE

ROUTINE

R 300910Z SEP 96 ZYB

FM NAVFAC KEFLAVIK IC//00//

TO COMUNDERSEASURV DAM NECK VA//00/01/N3//

INFO CNO WASHINGTON DC//N874//
CINCLANTFLT NORFOLK VA//00/01/N3//
COMICEDEFOR KEFLAVIK IC//00/01/J3//
COMFAIR KEFLAVIK IC//00/01/N3//
NAS KEFLAVIK IC//00/01//
JMF ST MAWGAN UK//00/01/N3//
NAVOCEANPROFAC DAM NECK VA//00/01/N3//
NAVOCEANPROFAC WHIDBEY ISLAND WA//00/01/N3//
TRINITY HALIFAX//00/01/N3//

UNCLAS //N03100//

MSGID/GENADMIN/NAVFAC KEFLAVIK IC//

SUBJ/NAVFAC KEFLAVIK-CEASE OPERATIONS//

RMKS/1. AT 300900Z, ACTUATORS WERE STOPPED AND THE CABLE WAS POWERED DOWN AT THE OLDEST AND FINEST NAVAL FACILITY IN THE HISTORY OF THE SOUND SURVEILLANCE SYSTEM (SOSUS) AND INTEGRATED UNDERSEA SURVEILLANCE SYSTEM (IUSS).

2. FOR 30 YEARS, 6 MONTHS AND 29 DAYS, NAVFAC KEF PROUDLY STOOD AT THE FOREFRONT OF OUR NATIONS DEFENSE, LEADING THE PACK IN ANTISUBMARINE WARFARE AND UNDERSEA ACOUSTIC INTELLIGENCE GATHERING. WITH 16 COMMANDING OFFICERS AT THE HELM, SOME 200 OFFICERS AND 3700 CREW SILENTLY PERFORMED THE NAVFAC'S MISSION WITH TREMENDOUS PRIDE, PROFESSIONALISM, AND "ESPRIT DE CORPS" THAT IS, PERHAPS, COMMON ONLY TO NAVFAC KEF.

3. WE WILL NEVER FORGET: ENDLESS RIDES ON THE NAVFAC BUS...THE LOX PLANT...S-CURVES ON NAVFAC ROAD...WHITE OUTS...SPRING OPS...HALL PARTIES AT BARRACKS 748...THE TOP OF THE ROCK...THE BRASS NUT...CHOW TRAYS, SLIDERS, BANANA PIZZA...11S BEAMS 8 AND 9. BUT PRIMARILY - THE TRULY UNIQUE EXPERIENCE OF SERVING WITH THE FINEST PROFESSIONALS, IN THE MOST DEMANDING WORK ENVIRONMENT, IN THE ASW CAPITAL OF THE WORLD.

4. THE FINAL PAPER CHANGE (OF 44,288) HAS BEEN ACCOMPLISHED, BUT NOT DOCUMENTED. WE STAND PROUD AT THE END OF THIS ERA, THE LAST OF 22 ASW WARRIORS KNOWN SIMPLY AS "NAVFACS". LCDR J.M. DONOVAN, COMMANDING OFFICER SENDS.//

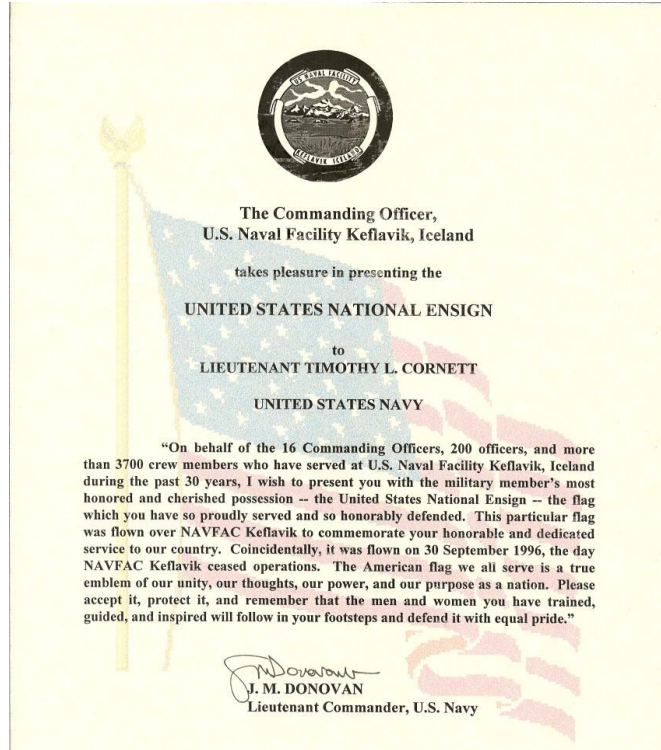
BT



JM

300910Z Sep 1996 – NavFac Keflavik, Iceland – “Cease Operations”

The United States National Ensign flown over NavFac Keflavik the day of “Cease Operations” was presented to LT Tim Cornett by the Commanding Officer LCDR Jim Donovan.



1 May 1997 – ATARF Dies

IUSS ceased using the digital, common language used for contact reporting for more than 30 years, currently called ATARF, and RAINFORM SOSUS REDs, which were replaced by SITREPs and GOLDS/LOCATORs, respectively. (Ed Smock)

1 Oct 1997 – Ocean Systems Technician (OT) reverts to Sonar Technician (ST)



OT Rating is disestablished after 27 years and 1 month of dedicated service; The IUSS Watch in the Sea is again assumed by the ST Rating.



1 Oct 1997 – Sonar Technicians (ST) Resume Watch in the Sea (NOPF DN time capsule)

Under a bright, sunny sky the participants were appropriately adorned with black ribbons for a “memorial funeral service” for the OT rating. CDR Eola Lewis SCOTT, USN, NOPF commanding officer, officiated at the 1 October ceremony held on facility grounds adjacent to the generator building. Her eulogy reviewed the history of the rating, from its birth on 1 September 1970 to its death on 30 September 1997 highlighting significant IUSS events and the OT contributions to national defense.

Following her comments, members of the gathering shared personal anecdotal experiences, and contributed memorabilia that were placed in a time capsule. These items included OT rating badges, a listing of the original 900 plank owners who were converted from ST and ET, a history of IUSS during the OT’s watch, a Venus Unique #2 red pencil, “10”-point dividers, command ball caps from NAVFAC Keflavik and NOPF Ford Island, Sonar Data Recorder stylus and stylus tension gauge, a piece of 5111 sea cable, USH-20 magnetic tape, and a TDP track-ball.

Almost unnoticed during the proceedings, angry looking clouds rolled in. While the time capsule was being buried, two F/A-18 Hornets from NAS Oceana flew overhead at low altitude, as if in a prearranged salute. As the last few shovelfuls of earth were thrown in the grave, the clouds shed a few tears. “Rest in peace, Ocean Systems Technician; Carry On, Sonar Technician!” (Jack Holdzkom, OTCM USN (Ret))

1 Oct 1997 - Open Letter to all OTs as rating is disestablished (LCDR Jim Donovan)

1 October 1997

From: LCDR Jim Donovan

This is an open letter to the Navy's premier "**Ocean Systems Technician**" rating from a former member of that elite group of submarine hunters.

No doubt it is hard for you, as it is for all of us, to come to terms with the disestablishment of our rating. For 26 years this **thing** called OT was one of the best-kept secrets in the United States Navy. The OT not only enjoyed a "total shore duty career" on some of the best islands in the world; the likes of Antigua, Barbados, Bermuda, Guam, and Eleuthera (O. K. so we also had Adak, Keflavik and Midway). But, unlike any other rating in the entire United States Navy, **the OT faced his enemy each and every day, on each and every watch.** And we were sooo... good. We were damn good! We became so proficient at tracking Russian submarines that we beat them at their own game. In the end it was the OT that ended the Cold War with the former Soviet Union. In an ironic twist, our perfection probably helped to seal our own fate as a rating. And so we come to today, October 1st, 1997.

I have been associated with the Ocean Systems rating ever since I arrived at OT A-school in Key West, Florida on September 21st, 1973. I was trained by Masters of the OT rating (Ed Silver, Doc Zeek, Phil Blauvelt, Dwayne McCracken to name a few). Throughout the past 24 years I have come to know some of the finest men and women

this country has to offer. I was honored to have known Bob Hart, Johnny Ellis, Barry Millard, Gary Peterson, V.G. Smith, Cindi Utterback, Dave Mustian, Tom Uecker, Mark Villarreal, Janet and Scott Glover, Larry Wilcher, Stan Carmen, Ed Snyder, JoAnne Gilchrist, Tim Cornett, Dave Berglund, Kathy Donovan, Denny Harrington..... I could go on and on all day, but you get the point.

Perhaps my favorite OT was George Widenor. Everyone in today's Navy has a mentor. Back in 1976 we called it the "Fair Haired Boy Syndrome". I suppose I was one of George Widenor's "Fair Haired Boys". Master Chief Widenor was the reason I stayed Navy, he was the reason I grew to enjoy the art of acoustic analysis and he was the reason OT1 Donovan aspired to be a Limited Duty Officer. In honor of our rating, and in honor of a great OT, I'd like to quote a few sentences (with poetic license of course!) from the Master Chief's retirement letter. I think it fits the occasion:

QUOTE "We reach this point once, and its brevity is overwhelming; a juncture where the past shakes hands with the future and the present seems not to exist. Perhaps the most comforting element is that one which is most familiar; I suppose that's why we OT's dwell so much on the past. My shipmates and I have responded to many challenges, and we have been equal to them. We have answered the demands of our profession, and have tasted the rewards. To every man and woman who has worked in this rating, I offer the profound gratitude of our nation. We have achieved that to which we have aspired. We have shared disappointment, humility, despair accomplishment and reward, but professional envy is unknown to us.

All too often, the word **pride** is brandished about with vague meaning. We refer to service pride, command pride, section pride and self pride. When the pen is incapable of adequately describing that feeling swelling up within, you have made the muster, you feel what is difficult to describe, you have stood the mid!

The foe has been transparent during our years of service. We have deterred him through our training and daily performance. We have cost him dearly, in both time and money. We have limited his capability, and denied him the advantage of surprise.

To ensure that what we have accomplished prevails in the years ahead, I have trained my relief. Your task remains the challenge of the future; it will not get easier. You must meet the challenge of new equipment, upgraded procedures, dwindling budgets, and a rating merger. The mid watch may get tougher, but it can never be meaningless. If you do nothing else in this career; Train your relief". **END QUOTE.**

I am proud to have served in the Integrated Undersea Surveillance System, proud to have been a Naval Officer and a Chief Petty Officer and **perhaps proudest of all to have been an OT.** I found it so much more than just a rating; it was a dedication that few outside our community can understand. To all of those still serving, God Bless you, good luck in your new ratings and best wishes for a successful naval career.

LCDR Jim Donovan (Jim Donovan CAPT USN)

Circa 1998: Humpback Whale Heartbeat

While working with some unique single suspended hydrophone data from the South Central Atlantic that included a very close submerged Humpback whale CPA, I identified a low-frequency pulse at a rate of 3.5 times per minute. The probable source was the whales’ heart beat. B. Rule (civilian).

18 Sep 1999 - SOSUS/IUSS 45th Anniversary celebrated

The SOSUS/IUSS family gathered at the Sheraton Hotel Waterside, Norfolk, VA to commemorate 45 years of SOSUS/IUSS service. Introduction - CDR Jim Donovan, Master of Ceremony - CAPT John Parrish (Ret), Remarks - Commodore Neil Rondorf, Guest Speaker - RADM Ray Witter (Ret).



"This occasion, the forty-fifth anniversary of the beginning of the Sound Surveillance System, is dedicated to the late "Father of SOSUS" and the following Captain Joseph P. Kelly Award recipients":

- 1992 CWO4 Thomas Uecker USN (Ret)**
- 1993 J. Hicks Ford**
- 1994 CAPT John M. Parrish USN (Ret)**
- 1995 OTCM Edwin K. Smock USN (Ret)**
- 1996 LCDR Fred A. Jones (RCN) (Ret) (post.)**
- 1997 CDR Larry Wilcher USN (Ret)**
- 1998 (no recipient)**

12 Aug 2000 - Russian OSCAR II- SSGN KURSK K-141 sinks.

During exercise ops in Barents Sea with 118 men lost.

<http://www.fas.org/news/russia/2000/A25157-2000Aug14.html>



Kursk Recovered

The nuclear-powered [Project 949A Antey](#) (Oscar II class) submarine [Kursk](#) (Russian: Project 949A Антей *Atomnaya Podvodnaya Lodka "Kursk"* (APL "Kursk")) sank in an accident on 12 August 2000 in the [Barents Sea](#), during the first major Russian naval exercise in more than ten years, and all 118 personnel on board were killed. The crews of nearby ships felt the initial explosion and a second, much larger,

explosion, but the [Russian Navy](#) did not realize that an accident had occurred and did not initiate a search for the sub for more than six hours. Because the submarine's emergency [rescue buoy](#) had been intentionally disabled during an earlier mission, it took more than 16 hours to locate the sunken boat.

Over four days, the Russian Navy repeatedly failed in its attempts to attach four different [diving bells](#) and submersibles to the escape hatch of the submarine. Its response was criticized as slow and inept. Officials misled and manipulated the public and news media, and refused help from other countries' ships nearby. President [Vladimir Putin](#) initially continued his vacation at a seaside resort; he authorized the Russian Navy to accept British and Norwegian offers of assistance after five days had passed since the accident. Seven days after the sinking, British and Norwegian divers finally opened a hatch to the [escape trunk](#) in the boat's flooded ninth [compartment](#) but found no survivors. The [Government of Russia](#) and the Russian Navy were intensely criticized over the incident and their responses.

K-141 Kursk was a Russian nuclear cruise missile submarine which was lost with all hands when it sank in the Barents Sea on August 12, 2000. It was named after the Russian city Kursk, around which the largest tank battle in military history, the Battle of Kursk, took place in 1943.

The Kursk sailed out to sea to perform an exercise of firing dummy torpedoes at Pyotr Velikiy, a Kirov class battlecruiser. On August 12, 2000 at 11:28 local time, the missiles were fired, but an explosion occurred soon after on Kursk. The only credible report to-date is that this was due to the failure and explosion of one of Kursk's new/developmental torpedoes. The chemical explosion blasted with the force of 100-250 kg of TNT and registered 2.2 on the Richter scale [1]. The submarine sank to a depth of 108 meters, approximately 135km (85 miles) off Severomorsk. A second explosion 135 seconds after the initial event measured between 3.5 and 4.4 on the Richter scale, equivalent to 3-7 tons of TNT [2]. Either this explosion or the earlier one propelled large pieces of debris far back through the submarine.

Kursk was eventually raised from her grave by a Dutch team using the barge Giant 4, and 115 of the 118 dead were recovered and laid to rest in Russia. Russian officials have strenuously denied claims that the sub was carrying nuclear warheads. When the boat was raised by a salvage operation in 2001 there were considerable fears moving the wreck could trigger explosions.

2002 -SOSUS Work Station (SWS) removed (Sad Day for IUSS)

The IUSS SOSUS Work Station (SWS) signal processing and display system “**designed primarily by the fleet operators**”, developed and installed by AT&T-BL and AT&T-T in 1991-92 has been removed. SWS has been referred to as the premier IUSS Lofargram processing and display system to date, a standard to which all subsequent IUSS processing systems will be judged. It is no secret, it has been and still is missed by those who have used it...Anyone who has ever been associated in the SWS development can take pride in what they did...

There were no FOSOs, SCRs, PTRs or associated wish-list items written against SWS when it was removed. It was stated (and not by me) that the SWS had to be wrenched from the operator's hands. But we must understand, "that it was removed in the name of progress"... (Mine, SWS 9 was the last to go - they removed it while I was on travel - an act of kindness by the maintainers...)

It goes without saying, "That I was, am, and always will be proud of the SWS"...
(Ed Smock)

27 Feb 2003 - FY03 T-AGOS Deactivations

ADMINISTRATIVE MESSAGE
ROUTINE
R 271316Z FEB 03 ZYB PSN 434742I24
FM CNO WASHINGTON DC//N774/N77/N43//
TO COMUNDERSEASURV DAM NECK VA//00/NN3//
INFO COMLANFTLT NORFOLK VA//N3//
COMPACFLT PEARL HARBOR HI//N3//
COMSUBLANT NORFOLK VA//N3//
COMSUBPAC PEARL HARBOR HI//N3//
COMSCLANT NORFOLK VA
COMSCLANT NORFOLK VA
COMSPAC SAN DIEGO CA
COMSPAC SAN DIEGO CA
COMSC WASHINGTON DC//N3//
COMSC WASHINGTON DC//N3//
CTF 12
CTF69
CTF 84
CTF 74
NAVSEA INCTSHIPOFF PORTSMOUTH VA
NAVSEA INCTSHIPOFF PORTSMOUTH VA
PEO LMW WASHINGTON DC
PEO SHIPS WASHINGTON DC//PMS333//
COMSPAWARSYSCOM SAN DIEGO CA//PMW182//
COMSPAWARSYSCOM SAN DIEGO CA//PMW182//
IUSSOPS SUPP DET PEARL HARBOR HI
IUSSOPS SUPPCEN LITTLE CREEK VA//FOSO//
MSC TAGOS PROJECT OFFICE LITTLE CREEK VA
UNCLAS //N09462//
MSGID/GENADMIN/CNO 774//

SUBJ/FY03 T-AGOS DEACTIVATIONS//

REF/A/MTG/CNO/28JAN2003//

AMPN/REF A IS MEETING BETWEEN COMUNDERSEASURV, CNO N774, AND PMW 182 WHICH IDENTIFIED USNS PREVAIL (T-AGOS-8), USNS ASSERTIVE (T-AGOS-9), USNS BOLD (T-AGOS-12), AND USNS ABLE (T-AGOS-20) FOR DEACTIVATION.// POC/FERD DIEMER/CAPT/CNO N774/LOC:WASHINGTON DC/TEL:703-604-7390//

RMKS/1. FUNDING FOR FOUR SURTASS VESSELS WAS ELIMINATED AS PART OF NAVY FY04 BUDGET PROCESS. DEACTIVATION OF THESE VESSELS WILL COMMENCE IN FY03 AND WILL BE FUNDED FROM FY03 OMN. DEACTIVATION WILL BE COMPLETE BY THE START OF FY04.

2. COMUNDERSEASURV IS DIRECTED TO PROMULGATE DEACTIVATION SCHEDULE AND COORDINATE WITH COMSC TO ACCOMPLISH DEACTIVATION OF VESSELS IDENTIFIED IN REF A.//
BT

24 Apr 2003 - USNS Prevail (T-AGOS-8) Decommissioning

Today marks the day of decommissioning for the USNS Prevail. For the sake of those that don't know about the Prevail, a short story...

USNS Persistent and USNS Prevail were once members of the premier ASW cadre assigned under the Operational and Tactical Control of CTF 66 (Med ASW). Their contributions in providing direct support to all ASW components in theater were vital to achieving sea superiority in the 6th Fleet AOR. The late 1980s and early 1990s brought IUSS "out of the closet" as it were, and Persistent and Prevail were on the leading edge of demonstrating the value of effective cuing in a potentially hostile environment.

They were key to IUSS being presented with the "Hook-Em" award, and provided countless hours of tactical reporting to the ASW Commander and his components. Once the Cold War came to closure, both assets were released back to CTF 84 for their use.

Persistent ended up relegated to non-IUSS duties. Prevail stuck-it-out, doing missions throughout the Atlantic (during some extremely adverse weather conditions) until just a couple of months ago. Prevail was the platform that sported the JHU/APL developed A180R array as well as the test platform for IUSS ARCI evaluation and testing. The Prevail's contributions to acoustic data collection, research and development, and to seeing the Cold War come to end are noteworthy.

I just wanted to share this with all of you, and let you know her day has finally come. I will fondly remember the USNS Prevail, and the excitement of working with her on her CTF 66 deployments. (Cyndi A. Utterback LCDR USN (Ret))



USNS Prevail T-AGOS-8

24 Nov 2003 – TSV-1 Prevail Ready to Support the Fleet

(By Journalist Seaman James Kusher, Commander, Naval Surface Force, U.S. Atlantic Fleet Public Affairs) (in part)

NORFOLK, Va. (NNS) -- Commander, Carrier Group (COMCARGRU) 4 and Training Support Vessel Prevail (TSV-1) hosted an open house at Naval Station Norfolk Nov. 18, to showcase the Navy's only dedicated training support ship.

The open house presented commanding, executive and operations officers with an opportunity to view in detail the capabilities Prevail can deliver in support of fleet exercises, group sails and unit level training.

"We planned the open house so that we could orient the local commands and staffs with our ship's capabilities, and also so that we could illicit input to improve training," said Capt. Mark Nold, COMCARGRU 4 Assistant Chief of Staff for Training.

Prevail master of the ship, retired Capt. G.W. Fleck, said he feels the ship provides training that is integral to the current Navy operations pace.

"With the implementation of the Fleet Response Plan, training outside of the traditional cycle is becoming critical," he said. "Prevail represents the ability to maximize training efficiency in the at-sea environment without the impact (by use of) other fleet vessels."

Before being directed by U.S. Atlantic Fleet for conversion to a training support vessel in April 2003, the ship previously served as USNS Prevail (T-AGOS 8), an ocean surveillance ship operated by Military Sealift Command.

11 Jun 2003 – SURTASS End of an Era

06 Aug 1985 - USNS Stalwart (T-AGOS 1) became the first SURTASS unit to conduct operations in the Norwegian Sea.

11 Jun 2003 - USNS Loyal (T-AGOS 22) became the last SURTASS unit to conduct operations in the Norwegian Sea.

(The gram shows – "abrupt stop" - "ceased processing at 111134Z Jun 03") (Ed Smock)

Aug 2003 – NOPF Whidbey Island ARCI-I Install – Install is easier than the travel.

This travel finds me and my son Edwin K. Smock Jr. (Keith) traveling to W.I. for ARCI-I install. Unfortunately for me, Keith leaving from Dulles arrived in Seattle before I did. Having the same names, I find out at the rental car desk that I did not have a rental car. EKS had already picked up the car. (My reservation – same name - had been pulled as suspect duplicate reservation when EKS (Keith) picked up his car...

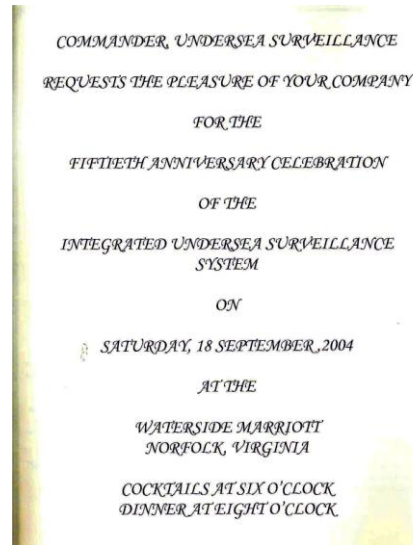
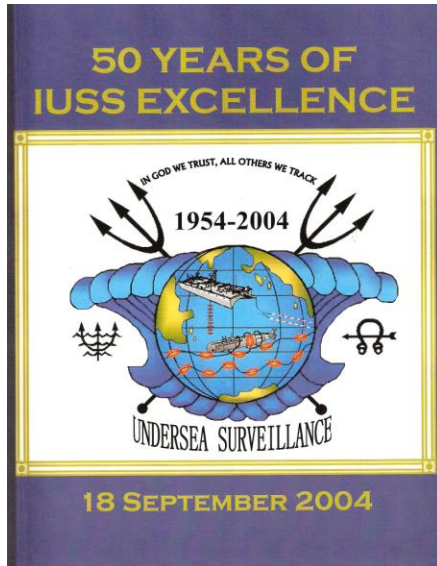
I finally get a car and proceed to the Coachman Inn W.I. When I arrive I get greeted by Marsha with “we almost gave your room away”... Marsha said she told her desk girl that “Keith” was not the E.K. Smock that she knew – so luckily she kept my reservation open. Good luck here, but it soon turns...

I get to the NOPF and I do not have a clearance.... Mind was thrown away as being a dupe... They kept Keith's and threw mine away as a dupe.... More delay – call to TRW/SPAWAR etc.. I finally get in... Keith say's - “Where you been Pop ? ” The next time we head out to do an install – I will start out a day earlier than Keith”...(Ed Smock)

Please proceed to Section 3

18 Sep 2004 – SOSUS/IUSS Celebrates its 50th Anniversary (1954-2004)

The SOSUS/IUSS family gathered at the Marriott at Waterside Hotel, Norfolk, VA to celebrate 50 years of protecting freedom through undersea surveillance. The Guest of Honor was Captain Joseph Paul Kelly’s daughter Mrs. Mary Jo Kelly Wilhelm. A grand time was had by all and many memories and relationships were rekindled. Highlights of the evening included comments from the quest speakers, retirees CAPT Bob McWethy, LCDR Ernie Castillo, OTCM Nick VanHerpen, LT Randy Scott, and CAPT John Parrish, <http://www.IUSScaa.org/homen.htm> (need yours Nick - Ed)



IUSS/SOSUS DINNER SPEECH, 50TH ANNIVERSARY

18 SEPTEMBER 2004

By CAPT Bob McWethy

Politics in Promotion (or how I became COSL) Ancient history. It’s 1953 and I am providing submarine services off Bermuda. My first meeting with LT Joe Kelly, later dubbed “father of SOSUS.” I was a LCDR.

Fast forward to 1960. COMSUBLANT operations staff moved from New London to Norfolk. I was Operations Officer and I set up shop in the OpCon Center. It was my job to route our submarines in the Atlantic. Regularly I walked across the street for the morning SOSUS brief. I played the role of enemy, working to avoid detection. It was good competition as the System worked hard to justify its existence In 1961 I was promoted to CAPT and sent to “exile” in the Pentagon. Three years later I went to a deep draft command out of Norfolk. We were deployed to Europe when the Major Command list came out. I was not on it, my first non-selection, and no doubt due to a disagreement with my Pentagon boss at that time. My Naval Academy classmate and good friend Roy Robison was COSL. When we returned up Norfolk, I made a trip to Wash DC to look for an assignment - or maybe put in to retire. In BuPers I met with the CAPT detail officer. Thinking “Oceanographer of the Navy” I asked “How about something to do with oceanography in the Washington area? He looked thru his files and said, “I have this

Oceanographic System, but it’s in Norfolk.” With no hesitation I said: “I will take it!” He did not have a clue about what it was, a well kept secret. The System had no Clout. My orders came to the ship while we were in the Caribbean for an exercise.

On reporting in Norfolk, I learned VADM Weakley, COMASWFORLANT, was put out with my assignment because BuPers had failed to check with him. Fortunately his Chief of Staff was a War College classmate, and he vouched for me. It was an exciting time. The Soviets had just started sending nuclear submarines into the Atlantic. We moved into plush quarters in the OpCon center and acquired our first computer, a monstrous thing. My excellent Chief Staff Officer, John Davis, got me pointed in the right direction. One of us visited each NavFac quarterly. Each visit an adventure. I found two troublesome projects to work on. NavFac C.O.s were LCDRs and it was a dead end for promotion. Our T-buildings were manned by STs Sonar Technicians. Their promotion exams did not cover the secret things they were doing, so they had to waste a lot of time studying shipboard SONAR. It was a long fight but we got that one resolved with the OT rate. About 1966 the Navy created a so called ASW Czar, VADM Martell. We were producing results. Now the System had clout, lots of it. We took up the promotion problem, and ADM Martell arranged for me to give the CDR selection board a classified brief. The Board had never seen the classified addendums to the LCDR fitness reports. All of the NAVFAC COs were selected for CDR that year. We acquired dedicated phone lines to all NAVFACs. I recall our phone bill was a million 1966 dollars a month. We could repeat any display from a NavFac at HQ in the OpCon Center.

One day it happened that a visit by the SecNav coincided with a November class Nuke snooping around Bermuda. With the time it took the sound to reach the hydrophones, he could see what the submarine was doing and where it was. The SecNav was impressed. We had Clout. CAPT Joe Kelly and his cable ships laid hydrophone arrays north of Iceland, unbeknownst to the Soviets; and NavFac Keflavik was established. I considered Ernie Castillo was uniquely qualified to take charge, but he did not have adequate seniority. Nevertheless, he was assigned to command and lived up to highest expectations. We had Clout. RADM Ralph Weymouth was SOPA in Iceland. He said no way was this LT going to get senior officer quarters handy to the T-building. The words he used were: “Over my dead body” We got the quarters. We had Clout. In my situation, I floated recommendations up the chain of command that my tour be extended for a 3rd year and that OSL be designated a major command. I got the 3rd year and would love to have stayed longer. The major command idea was tabled.. Toward the end of that 3rd year, BuPers put me on the major command list after my year group was no longer being considered. I completed my 30 years in style with command of a guided missile cruiser. We had Clout. Note: I understand OSL later was designated a Major Command so I scored double in that regard. (Bob McWethy CAPT USN (Ret))

IUSS/SOSUS DINNER SPEECH, 50TH ANNIVERSARY

SEP 18, 2004

By Mr. Ernie Castillo

Good evening.

First, I would like to thank Jim for asking me to say a few words this evening, and I promise it will be just a few words.

When I was a Watch Officer at NavFac Ramey, in January 1958, the system was not even 3 ½ years old. At that time, there were just 10 NavFacs from Barbados to Shelburne, and all of the NavFac buildings were Quonset huts. The stations resembled WWII sites. As much as we thought that we knew operationally, trust me, we were really in the dark ages of the system. We were actually still learning what the system could do and how best we could do it. One predicament was the fact that there were two Evaluation Centers, one in New York City, and the other in San Juan, Puerto Rico. You won't believe the problems we had with two Centers. New York was suppose to handle the northern facilities contacts and San Juan the southern facilities, but invariably the southern stations held contact in the north and the northern stations held contact in the south, and each Center would put out it's own evaluation, and they usually never agreed. What a night mare. By mid 1958, it was decided to create a single Evaluation Center in Norfolk, VA., and that eliminated those problems.

One story from when I was stationed at Ramey.

We received a message telling about one of the U.S. Navy people stationed in Shelburne, Nova Scotia, that lived in a trailer. He had gone on leave and returned to find all of the water pipes frozen. His solution to the problem was to get under the trailer and heat the pipes with a blow torch. Well, as you might expect, he wound up setting the trailer on fire. Everyone really felt sorry for him and his family. What a horrible thought to live in Nova Scotia in a burned trailer. My wife and I were so thankful that we had a house in sunny Puerto Rico. In July 1960, I received orders to Shelburne. Now, when Shelburne was first built, it had been a joint US-Canadian station with half US Navy personnel and half RCN personnel. They had two Commanding Officers for the one facility and the two didn't necessarily agree on many decisions. By 1960, it had been determined that Shelburne should be entirely Canadian manned and the name was changed to HMCS Shelburne. I was sent there to be the Liaison Officer and I would now be the only American at that facility.

My first problem was finding a place to live for my wife and 11 month old daughter, who had been born at Ramey. Unfortunately, Shelburne was not like Ramey where everyone had government quarters. Finding a place to live in Shelburne was most difficult and we finally discovered that the only place available was a trailer which had been used by one of the U.S.Navy people earlier. Yes, you guess it. That was the same trailer that had burned. Well we moved in even though they hadn't made any major repairs, but we managed until we were able to rent Janet McKenzie's little cabin by her motel. We still stay in contact with some of the people I worked with in Shelburne back in 1960. We exchange letters with Mike & Glenn Ciz. Mike was the Operations Officer at Shelburne, and later came to Norfolk to the Staff. Mike eventually returned to Shelburne as Commanding Officer. Several years ago, while we were in British Columbia, we saw

Mona Jones, the wife of Fred Jones, who was one of the system pioneers serving on the COSL Staff and later Fred was Commanding Officer in Shelburne. Some great memories from years ago. As I finish I would like to say that I spent a total of 38 years working in SOSUS and IUSS and during all of those years I found that, without exception, we were most fortunate to have, year after year, some of the most talented and dedicated people in the U.S. Navy working in the system. What a joy to have been associated with so many highly qualified and talented individuals whose primary goal was to make SOSUS and IUSS such an outstanding and respected Navy command. You are all real professionals and it was because of you that this system was able to achieve the remarkable success that it did. Thank you. (Ernie Castillo LCDR USN/GS (Ret))

IUSS/SOSUS DINNER SPEECH, 50TH ANNIVERSARY

18 SEPTEMBER 2004

By LT Randy Scott

Good evening everybody.

I would like to take this opportunity to tell all of you that I am honored to be able to speak to you for a few minutes, honored to be in your presence and honored to have served with many of you over the years. I have known some of you here tonight since I was 19 years old and I am now 53. I find that amazing and quite special! Captain Donovan asked me to briefly address some special moments or duty stations I had and that's really difficult. I left for the Navy 28 days out of high school and by the time I retired in 1991 I had essentially spent every minute of my adult life in SOSUS. Summarizing highlights is therefore formidable - the very nature of what we did and the wonderful professionals who did it made most of my career a highlight for me! That said, just let me tell you this. It's hard to go wrong when at my first NavFac (Argentina) I learned from people like Otto, Pfeifer, VanAlstine, VG Smith, VanHerpen, Masciangioli, Holdzkom, Harwood, Matthews and others. I learned so much from that tour and it really did set the tone for the rest of my career.

Keflavik for my first tour in the 75-78 time-frame.

All of you know that that was always a busy place but I recall SpringEx of 77 as being special. In a target rich environment, I worked 80 hour weeks alongside people who were weary but all had huge grins on their faces...they loved what they were doing. I treasure my days there with Widenor, Williams, Peterson, Donovan, McConnel, Wisdom, Hood, Millard, Piwko, Rentner, Sanborn, Curtis. We were like a family during that time frame, bonded by the inspiration we each drew from one another. Shortly after that event I remember being totally awed one Saturday morning when we were all mustered in the Display Room in dress blues, where we were given a wonderful and heartfelt thanks by the CINC, Admiral Isaac Kidd. He had all of us in tears with his spirited speech! I went back to Kef from 81-83 as a newly commissioned LDO and it was different faces but the same dedication. (one exception to the different faces...Barry Millard was still there. He spent so much time in Kef that he was the only person in the Navy with dress blues made of Icewool) We made a number of firsts that tour and once again I was blessed to serve with the best. Giants like Mustian, Brady, Otto, Custer, Wright, Gyure, Devers, Azznara, Kriebel and so many others.

Two memories that stand out...One morning after the brief, during which time I assured Commander Mustian that we were on top of everything, we walked the beams and as always he paused at 11's 07. He pointed out a signal and asked what it was and...well...it was an Alfa we hadn't seen yet. Embarrassing for the CO to do that but in recognition of it we mounted that gram on a plaque and gave it to him before his change of command.

The second occurrence was with Commander Brady. I called him at 0100 in the morning one night to let him know of a really nifty thing that was going on and that I was on the way to the upper base to go out on a P3. He made me detour on the way to the hanger to his BOQ room, with about 10 LOFARGRAMS...we spent an hour with them spread out on the floor, on our hands and knees. He may have been the CO but was just as excited as any of us about what we were looking at. Those grams were unclassified by the way...well, they had some red marks on them, and maybe some target numbers...can't recall if any Lima numbers were involved! I was once again blessed to be at the right place at the right time at COSL in the 83-86 timeframe. Unparalleled Soviet activity in the Atlantic kept us extremely busy but, as always, we responded. In fact the entire ASW community came together in a way I had never seen. Naturally, we still can't go into details of what occurred but for those of us that were there never forget the number 13, the pop-ups, the Caribbean, or the one we snagged. Catalano, Porter, Maulsby, Conn, Olkowski, Shanley, King, Castello and others stood tall during that time frame and I will always be grateful I was there with them. I want to tell all of you that I had a wonderful life in the Navy and it was simply because I had a job I loved and was surrounded by the very best of people. When Jim first asked me to speak tonight I was grateful for the chance but as I started thinking about all the talented people who served the system, I started feeling a bit self-conscious about it; it is certainly a humbling experience to stand in front of such accomplished people.

Thank you all for creating a glorious 22 year span of my life and for your noble service to our great nation. Few knew what we accomplished or could appreciate it, but by God we sure know, don't we? (Randy Scott LT USN (Ret))

IUSS/SOSUS DINNER SPEECH, 50TH ANNIVERSARY

18 SEPTEMBER 2004

By CAPT John Parrish

I reported for duty at COSP in July 1968, then located on Treasure Island, in the middle of San Francisco bay. Four Months later, COSP was moved to Ford Island in Pearl Harbor. For the next 25 years and 18 moves in the navy, Project Caesar, SOSUS, the IUSS ...we just called it the System ... was my professional life. After COSP, I received orders to NavFac Adak as Ops. Susie and I wanted to see what Adak was like, so some of our friends at COSP had us over to look at their slide pictures of Adak. (All of us older folk's remember what slide pictures are). Adak was beautiful... magnificent mountains, beautiful lakes and rivers, great fishing and hunting. Only after we had been there for a year, did we realize that all those beautiful pictures were taken on the one day of the year that it wasn't raining or the wind blowing 30 kts. Everyone on the island was out taking pictures with us on that one beautiful day of the year. We used to say that the wind didn't

blow on Adak ... it Sucked!! In the end, I had four tours of duty in Pac IUSS, and four tours of duty in Lant IUSS. There always was this debate between the Pac and Lant, about which was the best. Maybe I can settle that argument once and for all since I had an equal number of tours in both. I think that the quality of work in both oceans was equal. The Pac had fewer sites, a larger ocean, and no chokepoints. It's not that one was better than the other; it's just that the Pac was harder than Lant, so therefore Lant seemed better. I have been asked to also say a few words about the 1980's. ... I consider the 1980's to be the most interesting and rewarding decade of the system. The 80's are when the IUSS introduced SURTASS, and went to the digital age. New acronyms such as COPS, RTSP, IAP, and TDP became common terms. The dirty paper was being replaced by crt displays. NOPF's were commissioned using new underwater technologies and satellite relays from remoted sites and ships. Older, small facilities were being closed and their data remoted and processed at large consolidated sites. We got our own training facilities, and the SURTASS Support centers were created. The name of the game was change, change, and more change.

Also, the 80's were when the IUSS really started to get the recognition in the ASW world it deserved. Many outside the system, who were previously not aware of the IUSS now had access to the data, and this resulted in some bad news, and some good news. The bad news was that Wentworth and Walker compromised the secrecy associated with the IUSS. The good news was that conversion rates were up, tactical support had never better, and our OT's were getting promoted and selected for LDO and warrant officer, and our officer's were being promoted because, for the first time those who were sitting on promotion and selection boards, both for the OT's and Officers knew what we were doing and therefore could fairly evaluate us against those from other communities. We had achieved a measure of the respect we had for so many years been denied.

Also in the 80's we were on the leading edge of the integration of women into the operating force. Because of the success of our women in the IUSS, we gave our leaders the confidence to go forward and integrate women into the fleet. We also attracted the attention of the adversary. In an attempt to build faster and quieter submarines, they poured more and more rubles into their subs in an attempt to “beat SOSUS”. They couldn't do it, and in the end their economy collapsed under the weight of the expenses of their defense building programs. So was the recognition in the 80's really good news or bad news?? I think in the final analysis, it was good news. I believe that those of us who were a part of the IUSS in the 80's, were the front line warriors of the cold war. Every day we encountered the enemy and kept them at bay. We often had more exposure to the enemy in one-week (sometimes in one day) than most others in the navy had in a 20-year career. We could take pride in knowing that every day we were directly contributing to the preservation of our country and the protection of our citizens. After the cold war was over and our intelligence community debriefed many of the top Admirals of the soviet navy, the common comment was, “we just couldn't beat SOSUS”. In my opinion, our 50 year history in its totality continues to deserve due recognition. There are few communities in the military that have contributed so much with so few, or for so little cost. I believe that nothing less than the Presidential Unit Commendation would be the appropriate level of recognition for the past 50 years of achievement. I

challenge those of you who currently have the watch, to embrace the systems heritage and accomplishments and see to it that these past 50 years don't go unrecognized.
(John Parrish CAPT USN (Ret))

18 Sep 2004 – SOSUS/IUSS 50th Anniversary Service Recognitions (1954-2004)

At the conclusion of the guest speaker's presentations, it has been the tradition for the audience to stand and receive recognition for their individual" Total years of service in SOSUS/IUSS"; and to sit down when the number of years representing their contribution is called (i.e., 10 yrs, 20, 25, 30, 35, 40, 45, 50 etc...). And, out of this has grown another tradition - "Ed Smock is always the last person standing" with the maximum total available this time of 50 years... (Will he never quit???)

Ed received recognition for his lifetime of service to SOSUS/IUSS. Presentation reads:

"Integrated Undersea Surveillance System 50th Anniversary Longevity Award presented to Edwin K. Smock 18 September 2004 in recognition and grateful appreciation for a lifetime of service to the Integrated Undersea Surveillance System 1954-2004."

K.H Donald Vice Admiral, U.S. Navy Commander Submarine Force U.S. Atlantic Fleet

Ed summed it up in just one brief comment -

"The Good Lord has blessed all of you with many SOSUS and IUSS memories. The Good Lord has blessed me "more"”. Thank You... - Ed Smock (1954-2004

2 Apr 2007 USNS Able (T-AGOS 20) Reactivation.

Shipyard modification period (MSC) 2 April – 7 Sep 07
Commence SURTASS Operations Center (SOC) outfitting
14 Sep 07.

22 Jan 2008 USNS Able (T-AGOS 20) At Sea

Preparations are underway for making Able CLFA (Active) capable as well as Passive.



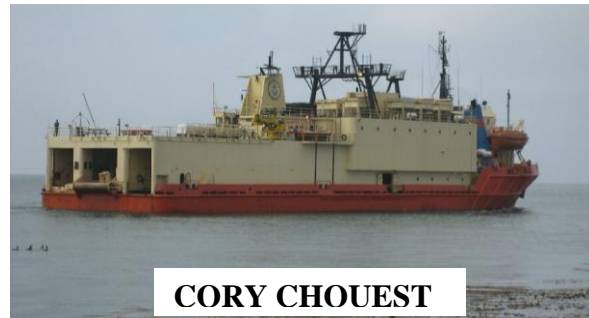
26 May 2008 Memorial Day Tradition – COSL

This year marked to 30th year that we have gathered for a Memorial Day Weekend camp-out. The tradition which was started in 1978 by members of COSL staff has continued throughout the years and through command name changes of “COSL”, “CUSP” and now “CUS”. Some 60 adults and 20 children attended this year’s affair. Numerous members (old-timers) have attended all 30 events. Most all have attended for as many years as they have been associated with Undersea Surveillance. All are welcome and invited to attend. (Ed Smock)

17 Aug 2008 MV CORY CHOUEST Deactivation

The deactivation of CORY CHOUEST in Port Hueneme is complete.

CORY departs Port Hueneme on schedule on 17 August 2008



9 Mar 09 - USS Impeccable T-AGOS 23

Five Chinese vessels "shadowed and aggressively maneuvered" towards the USS Impeccable in the South China Sea -- at one point closing to within 25 feet. Pentagon officials said the incident followed "increasingly aggressive" acts by Chinese ships against the Impeccable on Wednesday and Saturday and against the USNS Victorious surveillance ship on Thursday while it operated in the Yellow Sea. The Chinese ships included a Chinese Navy intelligence collection ship, a Bureau of Maritime Fisheries Patrol Vessel, a State Oceanographic Administration patrol vessel and two small Chinese-flagged trawlers. The Impeccable informed the Chinese ships by radio that it was leaving the area and requested a safe path to navigate. That's when two of the Chinese vessels stopped directly in front of the American ship and dropped pieces of wood in its path.



USNS Impeccable T-AGOS 23

27 Mar 09 – CUS realigned to COMSUBPAC

Effective this day, Commander, Undersea Surveillance reports directly to Commander, Submarine Force Pacific (COMSUBPAC). For the past 2 years CUS was realigned under Commander, Naval Meteorology and Oceanography Command. CUS currently operates 5 SURTASS ships - all are in the Pacific area. Approximately 600 sailors man the CUS/NOPF/MILDET staffs.

27 May 09 – JMF Remoted to NOPF Dam Neck, VA

All of JMF’s surveillance assets were remoted to NOPF Dam Neck Virginia. NOPF DN at that time became a joint United Kingdom and United States Naval Command. A joint flag raising ceremony was held on 27 May 2009. CAPT Peter R. Lintner Commanding and Wg Cdr Guy Bazalgette Senior British Officer presiding. Accordingly, JMF has been disestablished.”

12 Sep 09 – SOSUS/IUSS 55th Anniversary Celebration

Approximately 320 past and current members attended the celebration at the Waterside Marriott Norfolk, VA. The master of ceremonies was LT Stephen Rose. Reflections were offered by Commodore Paul Heim, Steve Coon, Janet Glover, Scott Glover, Jim Brady and V.G. Smith. A great time was had by all. Many memories were rekindled. All were presented with a DVD of “Watch in the Sea.”



4 Nov 09 – A Very Special Afternoon

Life offers many blessings. Yesterday was a great day in my life, and I want to share the highlights with you. My grandsons George (5th grade) and Christopher (4th grade) were performing in a school program in Meridian, Idaho. As they normally do, the school has a matinee performance, and as usual, Peggy and I were in the front row. We got there an hour early to ensure that grandpa and his video camera would have a good vantage point.

The musical program had a "life in the US" and overall "patriotic theme", with a focus on "thanking a Vet" if you enjoy your freedom. Following a song that praised our veterans, an adult read the story that John McCain tells about a fellow Hanoi POW that made an American flag out of scraps of cloth, and how much that flag meant to the POW's.

He then led the audience in a very inspired "Pledge of Allegiance". Immediately following the pledge, he asked for any veterans in the audience to stand. Each Vet was presented with a scrolled copy of John McCain's story secured with a neatly tied red, white and blue ribbon. Each copy also contained hand-written expressions of appreciation from 4th and 5th grade students. While I was standing, a lady sitting next to me who I do not know tugged on my sleeve and whispered "thank you". Have you ever seen a grown man cry? I can assure you that I will treasure that piece of paper for the remainder of my life, and I have already placed it safely next to my "retirement box".

The program ended with the audience singing the National Anthem.

On the way home, Peggy and I stopped for our normal mid-afternoon coffee, and then on to the polls to vote in the local City Council race. Somehow, voting seemed to be the perfect way to end the afternoon. Thanks for reading! (George Widenor)

SOSUS words of great meaning to us.

If you have ever stood a watch, these words will kindle some of your deepest memories: (If they don't, you have missed something...Ed)

Walking the mats, venus unique, 10 points, parallel rulers, dividers, grease pencil, burn detail, grinding the styli, paper tension, styli fly-back, mid rats, chow run, swing back, paper change, standby, 2-2 -2 and 80, voice announcement, WWV, plus side - minus side, WECO rep, down-de-road, field day, buffer, green tile, carbon, carbon tetrachloride, on the roller, over the hill, cal marks, time fax paper, SOSS, liberty run, intruder alert, spring ops, horizontal plot, morning brief, WTH-kkk, Int ZYC, ZUG ZYC, POS, skeefy, gungy, anno, re-submit, ZEL, DEMP/DEL, PGD, 1106, FQQ, rolling grams, un-rolling gram, then again re-rolling grams, time late, jez monster, jap sheet, gut feeling, turn-over, special request chit, vacuum system, range liner, bunny tube, white-out, black ice,

ENSGN, paper tray, out of phase, phase drill, lift the rollers, drop the trays, actuator, 3 styli belts (originally), 5 inch grams (originally), 9 inch grams, tape recorder, analog recording, heifer, birdie, flash, nugget, down range, the bird, mobilette, turn-over, time late, call them back in, you missed "this"?, TDFs using string, didn't happen on my watch, menu boards, SOSEX, CORMSO, OSS, COLD project, rainbow, spray grams with liquid krylon to save them (originally), photo lab, soup break, yellow book, big red, DPU, love point, Pro Pay P1 and P2, repeaters, ORI, we're here to help, NavFac FPO #s (no names), station designators Able - Fox etc., 5 digit crypto message thru the comm. window, RTTF, TARF, TARFX, ATARF, MB, KAC 8, KAC 132, authenticate, roman numeral time code on grams, pilot tone, maintenance head phones, station P's, cutting/making styli from standard wire brush when supply was out, 40 quad - how many pairs in 40 quad = 42 - two were for temp and depth, how many points on 10 points = 11, weak magnetic plot symbols on vertical plots - (not to bright), iron filings-oil filled continuous loop paper experiment 1972 (not to bright), no music allowed in T Bldg, USO shows, operations people not allowed to berth with "upper base" crew - PW/Admin etc. - fear of talking in our sleep, San Juan Ferry, Cape Verde Ghost, M-Boat, Tillamook,

Mississinawa, tellers, light pen, ECDAPS 3100, IEC/FTA, HP 9830, system drill targets via tellers, 3-3-3-72, JIG, ZYA, ZYJ, ZYK, MILS-BOA, SitReps, SitSums, eye integration, freq scale, reader's cart, harmonics chart, parallel rulers, slide rule, beam numbers, hot beams, reference library, Lloyds Merchant Vessels, WECO Naval Ships Catalog, cable watch on beach, back room, diesel engine handbook, VP-SOSUS, galloping ghost of the African coast, "oollie", NEGDEF, "Bernie", plotting with grid system, data relay, UQM-4, DAC, MEC, ROC, "Watch in the Sea" (movie), bearing ladders, but Chief!, NESB, Sammy SOSUS, mark-on-top, convergence zones, "Bermado", Spring break, Bermuda frogs, HYRADS, Precipitron, GS19640, sand fleas, sand burrs, 64521, Harder, Darter, Trigger, Trout, Permit, Pomfert, blow away targets, sound-channel axis, SPA, LOB, SLOB, FLASH IT! "Z", Emergency "Y", ZEST, signature categories, GOBI, SUBNOTES, SSOAs,

Band 13, Aeolus, Myer, Neptune, , Kingsport, Mizar, Long Line, Zeus, TAT-1 BFRM=214:1, 8X arrays, shallow water. King deep, NAN, elbow array. Honeywell 7600's new in the DAC center, roach coach, Change of Command in Norfolk - attention at the DAC center in Arg. LTs from the Fleet, TTY, ZDK, CR, CR, Line feed, don't lose the phase. Zoomies, VP tigers, 1st

EAST TO WEST coast data relay, correlation, conversion, A18-UP. PDCs, SCAT, SNIFFER, P2 V, P3 A, Chiefs (untouchable), 1st Class (LPO; GOD; etc), 2nd Class (Array Supervisor; best pay-grade in the Navy), 3rd Class, (A Petty Officer at LAST, Assistant Plotter; where all the s--- landed). “Leadership Exam.” Tears on the watch floor 1968. Comm chad, mice, dead this/that in bunny tubes, Sea Daddy, quick look/long look, Range liner, John’s run. Moose in your back yard, DEFCON, BDA storm bunkers, west end, east end, Annex. Pie in the face day, destroying old car for cash for Welfare & Rec, Electronic repair, “Black boxing”. “Dead Ants” We are here to help, Open Book, Closed Book, Oral Board, Plank Owner, Site closure, remote, FiFo, HJs, Copy Data Base, Check-Point, “Secure all non-secure lines...”, “Hey, check this out”...smoking actuators, beam-rolling contests, making BIG roman numeral time code on grams, phase-drills, “that can’t be a xxx”, upper-base, DART, SPEAR, “I need a SOWO Data Sheet”, “ASWOC, ASWOC this is NAVFAC”, “Red to go”, “in the trough”, sanding the stylus, GDF (Ground Defense Force), “I am data selecting” – “I am data selecting” you million dollar “POS” (on-watch lingo for how things don’t always work so well when they are new), mondo (rubber mat-stuff on the watch floor in Kef), BEQ 748 (Kef), Bering Hill, Bunker Hill,. ,...etc., just to name a few...

Each of you has a story about some of these words. Bring them out...Share them...

(Ed Smock) (Jack Holdzkom) (Denny Conrad) (Chuck Cable) (Cyndi Utterback)

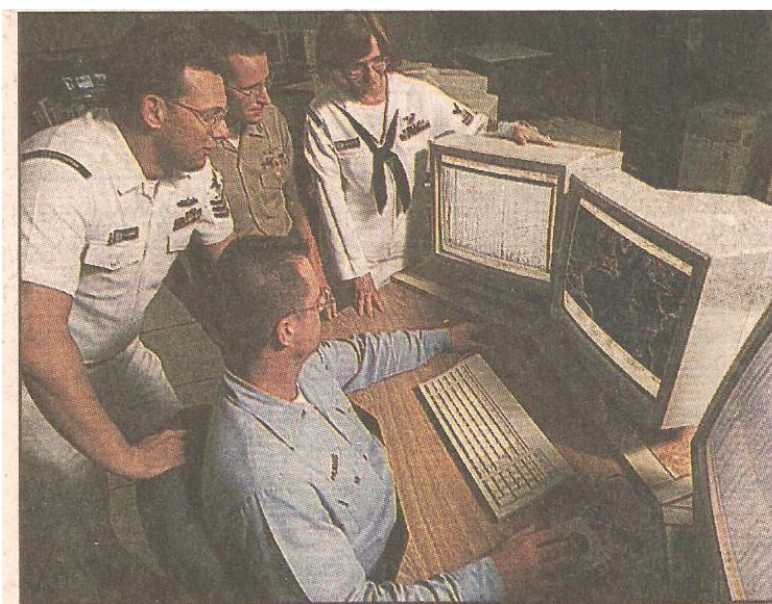
Related Published SOSUS/IUSS Articles

20 Sep 1999 – Their mission: find enemy subs \ sworn to secrecy during cold war, technicians read undersea sounds

Published: September 20, 1999, Virginian Pilot, Section: Front, page A1 Source: Dave Mayfield, staff writer.

They stood watch at some of the Navy's loneliest outposts, from Eleuthera in the Bahamas to San Nicholas Island in the Pacific.

They were sailors who didn't go to sea and didn't wear warfare pins. To people who asked about their work, they were oceanographers or communicators. The truth is they were listeners.



D. KEVIN ELLIOTT/The Virginian-Pilot

Kelly Hubbs, seated, monitors undersea sound data at the Naval Ocean Processing Facility at Dam Neck. The computers isolate submarine and ship sounds from the jumble of ocean noise.

They listened with their eyes.

Forty-five years ago, in a tiny building at Ramey Field, Puerto Rico, one of the Navy's oddest and most secretive communities began. Its members went by the designation **SOSUS**, Sound Surveillance System. A new front line in the Cold War, they had one mission: to find submarines.

But they didn't wear sonar headsets. Hour after hour, night and day, they “listened” by looking at lines on paper. Each squiggle or scratch was a sound from the sea - everything from waves to whales to waterspouts, with tremors and trawlers in between.

Collected by hydrophones and pumped to shore by underwater cables, the sound signals were a chaos, at first. But from the jumble, and with the help of high-powered computers, the landlocked sailors slowly culled the patterns of their prey: the RPMs of a generator, the

frequency signal of a pump, the order in which equipment turned on, how long each piece operated.

Eventually, there were thousands of men and women applying this arcane knowledge at two dozen stations around the world. At the Cold War's peak, they were constantly staring down the barrel of the Soviets' nuclear guns.

Which is what made them important: They knew where the guns were.



Ed Smock, a retired master chief, was a pioneer of the sub detection program. “We didn’t miss many,” he said.

“Even when they would quiet their submarines in one area, we would pick on another area and find them again,” recalled Edwin Smock, a retired Navy master chief living in Virginia Beach who was one of the pioneers of the surveillance program. “We didn't miss many, put it that way.”

Once sworn to secrecy, Smock and his colleagues are now allowed to publicly celebrate their craft, as about 200 veterans from **SOSUS** and other submarine-surveillance programs did this weekend at a reunion in Norfolk. But only to a degree.

Dates and locations of sub sightings and the details of how they located them are still largely classified.

What emerges most clearly in interviews with veterans of the cat-and-mouse game are a deep pride in their work and a conviction that it helped the United States to victory in the Cold War.

Smock first got an inkling of how important his job would be soon after graduating from sonar school in 1954. Proud of his achievement, he mailed his graduation certificate to his parents in Belle Vernon, Pa. Within days, a Navy detail was on their doorstep, demanding the certificate back.

The course name and number were secrets, he was told. “That's how fanatic we were.”

To keep their work clandestine, some constructed elaborate cover stories - that they studied marine mammals or ocean currents.

Knowing no better, recruiters fell into the ruse. As a result, “we got some naive kids who came in and thought they were going to be another Jacques Cousteau,” said Ed Dalrymple, a retired Navy commander who heads the undersea surveillance alumni association.

Instead of deep-sea diving, **SOSUS** enlistees spent day after day holed up in windowless rooms, walking up and down long rows of machines displaying sound signals.

There might be hundreds of the machines, known as “gram writers,” in a room. Their styli sweeping in unison across rolls of paper each showed the sounds within a separate sonar beam.

The stronger the signal, the darker the pattern of lines.

Because the lines were burned into the chemically coated paper by an electric arc, the display rooms smelled too many like smoldering tires. The **SOSUS** crews dreaded orders to wear whites and tried not to touch their faces while on duty. At many a shift's end, they went home smudged black from the paper.

Smock was assigned to a facility in Shelburne, Nova Scotia, in July 1956, when the gram writers there suddenly began showing huge noises at every frequency across the sound spectrum. The watch crew had no idea what was happening.

The next day, they learned from news accounts that the luxury liner Andrea Doria had collided with the Swedish liner Stockholm off Nantucket, Mass., and sunk. Fifty-one people had died.

“We knew right then exactly what we had been looking at,” Smock said. “That was her when she was breaking up and going down to the bottom, the explosions of her boilers and all.” The sounds had been picked up by their hydrophones.

In the early years, **SOSUS** didn't “catch” any Soviets. Its main contacts were U.S. submarines. By learning their own boats' noise signatures, Navy leaders hoped to field stealthier subs against potential foes.

Some prideful U.S. submariners, however, didn't much appreciate being spied upon. A rivalry developed between the sub force and **SOSUS**.

Smock said that when the Nautilus, the nation's first nuclear-powered sub, went to sea in the mid-'50s, “they told us that, ‘you probably won't see her’ . . . Well, when she came out, we watched her like we did with any of the other boats.”

That, he said, “is what really started our submarine quieting program, when they saw how easily we could see them.”

It wasn't until 1962 that a **SOSUS** station had a confirmed detection of a Soviet sub. It was a fortuitous event because that same year, the Cuban missile crisis loomed.

Soviet subs were crossing the Atlantic, armed with nuclear missiles that could devastate dozens of American cities. At the **SOSUS** facilities, men like Smock had a front-row view of the crisis.

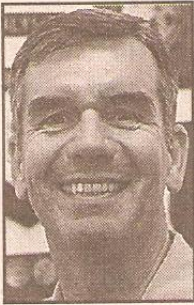
“They weren't there just for practice,” Smock said of the Soviet subs. “they were totally ready” to launch, if authorized. “The Cuban crisis, some people say, ‘No big thing.’ That was a big thing. Very big.”

That showdown with the Soviets left the Navy's secret surveillance corps with a heightened sense of urgency.

From then on, they pounced on the faintest hint of a Soviet sub, piecing together a virtual encyclopedia on Soviet submarine tactics and sound signatures.

Dalrymple said that many times, he or his colleagues took paper rolls from the gram writers from previous days and stretched them down a hallway. “A lot of times you were trying to reconstruct something . . . looking for patterns, something they did at certain times of day, those sorts of things,” he said. “We’d get down on our knees and look at everything we had.”

The hardest thing for him and the other watch standers was imagining themselves in the subs they were tracking. “All we had was lines on paper,” he said. “We’d have guys who’d look at that and they’d have things jumping all over the place. You’d have to say, ‘No, stop and think. That submarine out there is not changing course every 15 minutes by 10 degrees, changing positions all over the place.’”



When Cmdr. Jim Donovan was a young operator on a sound surveillance team, he detected hostile subs every day, he said.

Not that there was any shortage of “targets.” When Cmdr. Jim Donovan was a young operator at a **SOSUS** station 20 years ago, he said, “I recall having contacts on hostile submarines every day that I was working - at least one submarine.”

On any given day in the 1970s, the facility in Keflavik, Iceland, might track a half-dozen or more Soviet subs as they passed in and out of the Norwegian Sea.

As their prowess at detection grew, one glaring weakness in the system became evident. It could take hours for a **SOSUS** message to reach the air squadron or surface ship chosen to “prosecute” - or search for - the contact. By that time, the data was sometimes of little value.

Donovan, who now commands the Naval Ocean Processing Facility at Dam Neck in Virginia Beach, said many of the steps, such as encryption of messages, had to be done manually. Over time, he said, the Navy streamlined reporting procedures and allowed secure voice phones to be used to report contacts.

“Time-late” incidents steadily declined. The biggest breakthroughs, technologically, came in computing. **SOSUS** had some of the world's first supercomputers. Crunching away at billions of calculations per second, they processed the signals coming into the ground stations. The result: clearer and clearer displays of the sound patterns.

All this processing power let the watch standers amplify signals without distorting them, and view narrower slices of the frequency spectrum in ever-increasing detail. “You could look further down into the grass,” Dalrymple said.

As time went on, it wasn't just men at work. In 1970, two decades before the Navy did away with most of its combat exclusions, the first woman was assigned to an operational billet in **SOSUS**. Undersea surveillance became the one place in the Navy where women had a front-line role. But outside their community, few knew because of the secrecy of their work.

By this time, however, the Soviets were piecing together what they were up against. They knew about the hydrophone arrays. And they had an idea of how easily their submarines were being detected, thanks largely to a Norfolk private detective named John A. Walker Jr.

Walker's family-and-friend spy ring had been passing top-secret information about U.S. military operations, including the Navy's anti-submarine efforts, to the Soviets since the late '60s.

How much about **SOSUS** Walker disclosed is unclear. But each generation of Soviet subs was harder to find than its predecessor, and detection ranges narrowed dramatically. When the Walker spy case broke in 1985, men like Smock, who'd devoted their careers to sifting out the Soviet subs, were naturally outraged.

“We all had the typical redneck American response,” he recalled. “Hang him. Hang him. Hang him.”

The Walker disclosures gave a lift to efforts already in the works to develop new ways of listening for subs.

A fleet of sensor-towing surveillance ships had already gone to sea in the early '80s. With the SURTASS - Surveillance Towed Array Sensor System - ships, “we can drive anywhere we need to in the world,” said Capt. Neil Rondorf, commander of the Navy's Undersea Surveillance Command. It's a “much more cost-effective way” to track the occasional submarine movement, he said.

Meanwhile, the Navy pushed development of a new bottom-fixed hydrophone system for pinpointing contacts in a smaller area.

These arrays, known as the Fixed Distributed System, “just saturate the area with sensors, basically: a killing field,” Donovan said. “It might be a very short detection, but you have the cue to further prosecute.”

With their new tools, the sub hunters were ready to keep ferreting out Soviet boats well into the next millennium.

And then a funny thing happened: The Wall came down. As the Soviet empire crumbled and the Cold War drew to a close, the undersea spooks came in for a heavy dose of downsizing.

Only three shore stations remain from a peak of 25, including one at Dam Neck that processes both **SOSUS** and SURTASS signals. The umbrella organization, now known as the Integrated Undersea Surveillance System, has fewer than 1,000 people - a quarter of the community's Cold War peak.

The once-insular community is slowly meshing with the rest of the fleet. With its own enlisted rating eliminated a few years ago, sonar technicians from destroyers and frigates have begun manning the consoles in the watch room at Dam Neck. The paper-roll “gram writers” are gone, replaced by computer workstations.

For sailors such as Petty Officer 1st Class Tucker Rosenberry, a supervisor at Dam Neck, coming from the fleet has been eye-opening.

As a sonar technician on destroyers and frigates, he had only a vague awareness of **SOSUS**.



Capt. Neil Rondorf leads the Navy Undersea Surveillance Command, which adapted to post-Cold War conditions.

“There was somebody whispering in the background, ‘Go over here.’ We might be circling for three or four days and we didn’t have a clue why,” Rosenberry said. After only a few days at Dam Neck, he said, it was clear where such leads were coming from.

Truth be told, old-timers at Dam Neck say, there aren’t many contacts these days. American and Russian sub numbers have sharply declined; the boats spend less time at sea. A watch stander can go weeks without seeing a boat “of interest.”

That’s a challenge for **SOSUS** veterans such as Petty Officer 1st Class Melody Clarkson, who, as a watch coordinator at Dam Neck, must help train new operators.

“The newer people, it’s hard to get them excited,” she said, “because we don’t see that much. They want that instant gratification.”

Rondorf, the undersea surveillance commodore, said that in spite of the trend, his community’s sensors still produce the vast majority of initial submarine contacts. Determined to hold onto that claim, it’s developing systems that can be deployed in crises and close to shore, where the Navy has in recent years been concentrating its forces.

Meanwhile, it’s tinkering with ways to get information to deployed forces faster, maybe even online.

There are still countries unfriendly to the United States that have submarines, Rondorf noted. Ever-quieter diesel-powered subs are on the market at prices affordable to countries that could become enemies.

Dalrymple, the retired **SOSUS** officer, said it’s vital to keep the surveillance effort going. “I like to use the analogy of a burglar alarm,” he said. “Just because you haven’t been robbed doesn’t mean you take the system out.”

2000 - IUSS: America’s Eyes and Ears to the Undersea World

By LTJG Jenifer A. George, USNR NOPF Dam Neck, VA Public Affairs

Until 1991, almost forty years after its inception, the black-box secrecy of the Navy’s premier undersea surveillance program required its mission be classified to protect some of the most

sensitive secrets of the Cold War era. Tracking Soviet submarines miles off the coast of the United States became a top priority for national defense in order to maintain the delicate balance of power existing in the post-WWII landscape. To shield U.S. territory from another surprise attack, this time from beneath the waves, the United States Navy spent millions of dollars installing Sound Surveillance System (SOSUS) shore facilities in remote locations off the coasts of North America.

Tasked with a constant vigil of the Atlantic and Pacific oceans, highly trained acoustic technicians identified and reported accounts of the underwater power struggle between the Soviet Union and United States for over fifty years. Today, changing naval priorities and strategies have left only a handful of these shore facilities under the Integrated Undersea Surveillance System (IUSS). Naval Ocean Processing Facilities (NOPFs) at Dam Neck, VA and Whidbey Island, WA and the Joint Maritime Facility (JMF) at St Mawgan, UK are still standing the watch to monitor areas of responsibility throughout the world’s oceans via fixed and mobile undersea acoustic sensors. Twenty-first century research and development coupled with the menacing reality of the submarine threat ensure that these facilities will remain manned twenty-four hours a day, as long as submarines deploy.

THE ORIGINS OF SOSUS

Reeling from Japan’s surprise attack on Pearl Harbor in 1941, America first realized that its isolation would no longer be its protection. This offensive on U.S. territory inaugurated a refocusing of military planning into Indications and Warning, guiding U.S. thinking and military progress well into the 1970’s. One of the prime early warning ventures to provide territorial protection was the implementation of the Sound Surveillance System (SOSUS) to cue the Navy to approaching foreign submarines. Post-WWII, the only potential enemy with capability to mount a surprise attack against the continental United States was the Soviet Union with either long-range bombers or diesel-snorkel submarines. With a credible counter to the air threat consisting of a line of radar stations stretched across northern Canada, known as the Distant Early Warning (DEW) Line, the submarine menace became the primary focus of research and development (R&D). The prevailing theory held that Soviet diesels, carrying 200 NM-range cruise missiles, similar to the U.S. REGULUS missile system, might transit the ocean undetected to launch their missiles at the United States from distances of less than 100 miles. Government-sanctioned “think-tanks” proposed two potential solutions to this looming threat: patrols by long-range radar aircraft that had turned the tide against German submarines in the Battle of the Atlantic; or low-frequency bottom-mounted passive sonar networks. As constant surveillance flights would quickly become prohibitively expensive, the decision was made to direct federal funding into the development of passive arrays which could exploit oceanic acoustic phenomena to detect sound from vast distances away.

During the 1940’s, Bell Laboratories’ creation of a sound spectrograph to create visible speech patterns and Western Electric’s technology for accurately surveying ocean topography and laying telephone cables, were critical in laying the groundwork of the first SOSUS array construction. Instead of trying to differentiate between incremental changes in sound levels while searching for submarines, trained technicians could actually study visual depictions of the ocean noise, increasing acoustic discrimination exponentially. In 1951, the first test array was installed at Eleuthera as part of Project Jezebel.

During the eight years following 1954, facilities to track and report threat submarine activity were established in remote locales down the East Coast – from Nova Scotia to Cape May to Cape Hatteras out to Bermuda. The Pacific coast watch stood in facilities from Adak, Alaska to Coos Bay, Oregon; and from Midway Island to Guam. The facilities did not track Soviet submarines exclusively. Discovering the telltale signatures of our own submarines allowed military contractors to ‘quiet’ the noisy machinery during overhaul and incorporate changes in new construction design. In the mid-1950’s, when the America’s first nuclear-powered submarine deployed, submariners proudly boasted that she would not be detected. “When she came out, we watched her like we did with any of the other boats,” recalled Edwin Smock, a retired Navy master chief and ‘plank owner’ in the IUSS community. As for the submarine community, it set course on a heightened submarine quieting program.

As tensions escalated between the two superpowers, SOSUS truly demonstrated the importance of its unique ASW mission. During 1962’s Cuban Missile Crisis, SOSUS recorded its first Soviet submarine detection. A Foxtrot Class diesel boat, armed and capable of initiating another world war, was located by SOSUS off the East Coast of the United States. SOSUS was critical in the location of K129, a Golf class Russian submarine that sank off the coast of Hawaii and assisted the CIA’s Project Jennifer and the Glomar Explorer’s retrieval of the submarine from the ocean bottom. Essentially, Navy Ocean Systems Technicians (OT’s) manning the ASW shore facilities were tracking the entire Soviet submarine arsenal, and knew exactly what to look for. “Even when they would quiet their submarines in one area, we would pick up another area and find them again,” says Smock.

In the late 1960’s and early 1970’s, it became evident that Soviet intelligence knew of the hydrophone arrays and the weaknesses in Russian submarine design SOSUS was detecting. It was not until 1985, with the arrest of internal Navy spy, John A. Walker, Jr., that the government realized the true magnitude of the compromise. Walker, a Warrant Officer and career submarine communications expert based at Norfolk’s Atlantic Submarine Force Headquarters, used his ring of espionage to sell Top Secret military information, including the Navy’s anti-submarine warfare programs. In a 1986 affidavit, Rear Admiral William Studeman, then Director of Naval Intelligence stated that the implications of the Walker spy ring “had the potential, had conflict erupted between the two superpowers, to have powerful war-winning implications for the Soviet side.” It is impossible to tell how much Walker disclosed about SOSUS in particular, but every subsequent generation of Soviet submarine was quieted in ways to dramatically reduce detection vulnerabilities. Walker has been tied in recent years to the SCORPION sinking and the capture of USS PUEBLO, a Navy communications ship.

One positive result of the Walker scandal was that all efforts to develop a new methodology of acoustic detection were given a push to the production line. Surveillance Towed Array Sensor System (SURTASS) was designed to provide mobile monitoring of known submarine transit areas as a much more cost-effective way to track submarine movement. SURTASS, essentially a long string of mobile hydrophones attached to the stern of a Military Sealift ship allows for passive detection of submarines at significant ranges in areas not covered by fixed bottom mounted arrays.

UNDERSEA SURVEILLANCE IN THE YEAR 2000

With only three shore stations remaining to process acoustic data from SOSUS and SURTASS, the Integrated Undersea Surveillance System (IUSS) has found itself in the same predicament as the rest of the military – doing much more with much less. Manned at one quarter of its Cold War peak, the three remaining IUSS facilities have experienced many changes since the mid-1990.

A rating merger of Ocean Systems Technicians (OT) with Surface Sonar Technicians (STG) has provided prior-OT's their first opportunity to go to sea and brought STG's from destroyers and frigates into this once insular community to man the watch billets ashore. Chief Petty Officer Dan Kowalsky, one of the first STG's to qualify as an IUSS specialist, has tracked more Russian submarines during his tour at NOPF Dam Neck, Virginia than he had during his entire navy career at sea. “Instead of focusing on just your ship's acoustic sensors and passing information to another tech in your battle group, here you can interact with all facets of the ASW community – from Maritime Patrol Aircraft to submarines to international commands. Further, the interaction is at all pay grades. Operators can compare notes on a contact even if they're thousands of miles and several time zones apart.”

Recently added to the IUSS ranks are Aviation Warfare Operators (AW) and Submarine Sonar Technicians (STS), bringing fresh perspectives on ASW and experience with submarine tactics and capabilities. “Although AW's have always interfaced with STG's, STS's, and former OT's, May 1999 was the first time in Navy history that we were combined under one roof. This allowed for the exchange of information and perspectives daily from each ASW facet,” noted AW1 Bill Dixon, one of the first AW's in over a decade to arrive at NOPF Dam Neck.

Integration has not been restricted to the enlisted ranks. IUSS Specialists now include Intelligence Officers (designator 163x), Operations Technician Warrant Officers (designator 712x/718x) and a variety of Limited Duty Officers (primarily designator 612x/618x). The Wardroom diversity has meshed warfare qualifications and experiences in the junior officer ranks. IUSS has bragging rites to a breadth and depth on their watch floors unmatched in the rest of the Fleet. Various communities assign sailors to IUSS sites but the lack of centralized detailing has made advertising vital to the ASW community as few outside the community know more than vague generalizations about the acclaimed operations in the heyday of the Cold War. But on-going prosecutions, new technology, and future initiatives require a constant feed of highly qualified analysts to do this critical, highly specialized job.

Though the continuing dilution of the prior OT expertise with Fleet sonar technicians has required give and take, the payoff for this once closed community has been significant. Some of the best advertisement IUSS gets is from “fleet STG's” returning to the waterfront with extensive ASW knowledge and training gained ashore.

FUTURE OF THE IUSS COMMUNITY

Though the Soviet threat crumbled with the Berlin Wall and the expansion of the global market, Russian shipyards are still building and enhancing submarines to cushion its destitute economy. Additionally, a plethora of countries are procuring submarines from Russia, Sweden, Germany, and Italy; most notably, the stealthy diesel submarines. By Navy account, twenty one Third

World nations, including North Korea, Iran, Libya, and Pakistan have more than three hundred submarines, although often stripped-down and in states of disrepair. In 1999, former Chief of Naval Operations Admiral Jay Johnson reported that, “undersea warfare remains a tough business where the only acceptable position is one of absolute operational primacy,” affirming the operational requirement to exploit IUSS as a national ASW asset.

The progression of submarine quieting technology has required the Navy to take steps to sustain operational primacy in ASW in other ways. One such endeavor is Low Frequency Active (LFA) enhancement to SURTASS which adds the ability to *actively* broadcast specialized sounds and use echo detection methods to maximize the range that submarines can be detected and tracked. SURTASS LFA sonar would mean greater detection ranges, providing adequate time to react to and defend against potential submerged threats. The first and only ship planned of this new class of SURTASS vessels, the USNS IMPECCABLE (T-AGOS 23), is designed to support LFA operations. The NOPF Dam Neck military detachment, now known as IUSS Sea Component East (ISC-E), will build up to a total complement of 56 personnel to support a Blue Crew/Gold Crew concept of deployment for both SURTASS and SURTASS LFA. One of the issues currently under litigation is the effect of LFA sonar on marine mammals. Studies to date indicate that the number of animals potentially injured would be so small as to have negligible impact on the affected species’ stocks or upon the availability of the species for subsistence needs, though the equipment is still undergoing testing and modification. Despite the expense (upwards of \$350 million in research, development, and testing) and controversy attached to the LFA sonar program, it is one of the most promising answers to the reality of the quieter submarine threat.

Mobility and flexibility have been critical in the evolution of undersea warfare since its inception. SURTASS has allowed for submarine tracking coverage in areas not equipped with bottom-mounted arrays. In an effort to keep pace with the changing underwater environment, in 1992, a program known as the Advanced Deployable System (ADS) was initiated to adapt undersea surveillance technology to ASW in the littorals. Testing conducted in 1994 by Space and Naval Warfare Systems Command (SPAWAR) Integrated Undersea Surveillance System (IUSS) Directorate (PD 18), affirmed the feasibility of detecting quiet diesel-electric submarines and mine-laying operations in shallow littoral waters using bottom-mounted arrays. The first at-sea test of a deployed ADS array occurred in 1998 with impressive results. Currently, ADS is in the Engineering and Manufacturing Development phase and is expected to be fully operational in the near future as the next generation of IUSS.

FINAL THOUGHTS

The continuously changing environment in the military/political world has forced the IUSS community to reinvent its mode of thinking and its role as part of an ASW network of capabilities that help to provide the in-depth integrated defense required of the present post-Cold War interlude. The next greatest national security concern may not be from missile-carrying submarines but from small turboprop airplanes flying close to the water to deliver chemical agents or from small surface vessels unloading mines into our littorals to prey upon perceived weaknesses. The existing flexibility to tailor the current undersea warfare system will pay enormous dividends as the tools and the faces of the enemy change. The foundation for global power protection rests upon our ability to control the sea. The IUSS community’s diligence in

modernization to counter a slew of possible future threats has helped to ensure a bright future as both a strategic and tactical tool of national policy and implementation.

July 2005 – 121,000 Tracks - Where are the world's merchant vessels? What are they doing? The Navy is honing its sensor systems to track them minute by minute.

Ref: Navy League of the United States July 2005 - By David W. Munns, Assistant Editor.

The Navy and other U.S. government agencies intend to identify and track the world's 121,000 merchant vessels with the same persistence and precision that characterized the Navy's location, identification and tracking of Soviet submarines during the Cold War era.

The nascent long-term effort is indicative of the many steps the U.S. military and other government agencies are taking to create a detailed situational awareness of merchant shipping throughout the maritime domain as a means of protecting the nation from another attack by terrorists.

Vice Adm. Joseph A. Sestak Jr., deputy chief of naval operations for warfare requirements and programs, told Seapower that one of the Navy's responsibilities "is to ensure that the United States is not endangered" by terrorists "via merchant maritime approaches." To achieve that end, the Navy will use current and future surveillance and tracking resources to create a database on the world's merchant fleet, similar to the database once compiled on every Soviet sub.

The threats merchant vessels pose directly to U.S. borders is huge. "Almost 25,000 seagoing containers arrive and are offloaded at U.S. seaports each day. That equates to 9 million cargo containers annually. Because of the sheer volume of sea container traffic and the opportunities it presents for terrorists, containerized shipping is uniquely vulnerable to terrorist attack," Robert C. Bonner, commissioner of U.S. Customs and Border Protection, told Congress this year.

During the Cold War, the Navy tracked Soviet submarines in order to identify them based on their propulsion signatures. Over time, the Navy compiled a database that became so specific that the service often could determine the location and identity of every Soviet sub at sea from its sound signature.

Sestak said the current effort to identify and track merchant vessels would make use of SOSUS, the Sound Surveillance System that for more than 40 years was a key element of the Navy's sub tracking successes during the Cold War.

The Navy is beginning to use SOSUS "in a very appropriate way with just a little bit of additional investment for the global war on terror," he said. The long-range detection system is laid out in long fixed arrays in deep ocean basins. SOSUS uses faint acoustic signals to detect nearby vessels.

The service is assessing the feasibility of updating SOSUS with faster processing units to expedite sorting through the volume of data that needs to be assessed, higher storage capacity and improved, "cleaner" computer codes. Additional updates would include bolstering its ability to detect and distinguish merchant vessels in littoral areas.

Information from SOSUS would be combined with data from other sources, such as space-based surveillance systems and the existing Automatic Identification System, which every merchant vessel is supposed to use to identify itself. Information from the Navy's present and future sensor systems would be collated in an intelligence fusion center able to convert the information into knowledge about the location and cargo of merchant vessels. This would enable the Navy to create a complete picture of seagoing transport "much as we used to have a comprehensive operational picture at sea" of Soviet submarines, Sestak said.

Much of the operational responsibility for monitoring merchant vessels lies with the Office of Naval Intelligence (ONI), whose Civil Maritime Analysis Department reports and analyzes merchant ship activity linked to maritime aspects of weaponry and technology proliferation.

Wherever a threat occurs, "we can detect it, we can analyze it, we can disseminate it," Rear Adm. (Sel.) Tony Cothron, commander of ONI, told Seapower. ONI's current activities are focused around "looking at everything we can detect that's important," he said. "As we evolve down the road we'll get closer to tracking all [merchant ships] that are in the world on a minute-by-minute basis."

In a briefing on the maritime industry given to senior Navy officials, the Navy identified the world's nine top seagoing choke points through which 95 percent of maritime trade volume travels. These include the Strait of Malacca, the Arabian Gulf and the Horn of Africa. One particular area of concern is Singapore, where a ship passes every three minutes every day, and through which 39 percent of all containers transship, according to the briefing.

More than 90 percent of global trade moves by sea, comprising a value estimated at nearly 85 percent of global commerce, according to the briefing given in early May to Adm. Robert F. Willard, vice chief of naval operations, and Paul McHale, assistant secretary of defense for homeland defense. There are more than 121,000 ships of more than 300 tons in the merchant fleet and more than 10,000 cargo destinations.

The Soviet Union, in contrast, had a fleet of a little more than 700 submarines of all types during the Cold War era, according to *Cold War Submarines* by Norman Polmar and K.J. Moore. By comparison, the job of tracking merchant vessels and compiling a database is massive.

"In terms of numbers, it is very ambitious," said Sestak. "But one of the strategies that we have to focus on [in the war against terrorism] ... is finding the needle in the haystack."

The Navy can summon myriad resources to accomplish that goal. In conjunction with the Applied Marine Physics Division of the University of Miami, the Navy has been developing and experimenting for a number of years with a host of sensor technologies at a naval acoustic observatory in Fort Lauderdale, Fla. The Naval Surface Warfare Center, Panama City, Fla., is

using a series of cables installed between Fort Lauderdale and Palm Beach to better understand how sound propagation in shallow water can be monitored in a busy port like Fort Lauderdale.

The Space and Naval Warfare Systems Command tentatively expects to finish work by September on the second phase of a deep-water system to provide acoustic surveillance in the open oceans and areas with high ambient noise, such as ports or littoral regions. With a potential value of \$153 million, the project would upgrade or complement SOSUS capabilities, and is being completed by Lockheed Martin Corp., according to the Pentagon. Navy spokespersons declined comment on the project.

In addition, the Navy is developing a new class of sensor systems for antisubmarine warfare that might be applicable to the global war on terror. Mobile and rapidly deployable, they are designed to help the Navy move toward greater reliance on distributed sensor systems, and reduce its reliance on platforms such as attack submarines for underwater surveillance.

Chief among these systems is the Advanced Deployable System (ADS), a sensor package in development through the Space and Naval Warfare Systems Command in San Diego with a potential contract value of more than \$239 million. This contract was awarded to Lockheed Martin's Maritime Systems and Sensors division in Manassas, Va., and all work is expected to be complete by October.

ADS will be launched from the Navy's future Littoral Combat Ship. The package sinks to the bottom of the sea after launch, and a small robot vehicle swims out of it and strings cables that have acoustic sensors attached to them out over the ocean floor. These cables then come to rest on the bottom and spread out like a spider's web from the main package. The sensors listen to the environment and collect data, such as information about passing submarines or other vessels.

The Centurion system, an all-fiber-optic variant of ADS, was used in a major fleet exercise in the Western Pacific last November that involved Japanese submarines and elements of the Pacific Fleet's Destroyer Squadron 15. This exercise demonstrated substantial success using such a sensor system, Sestak said. "Also, we tried to see how well it would work tracking surface craft as well as undersea [targets]."

The results in taking underwater sensor technologies and using them to track surface vessels indicated, according to Sestak, that "it's very doable."

Other sensor systems being developed are the acoustic Advanced Extended-Range Echo Ranging System and Deployable Autonomous Distributed System, which uses acoustic and electromagnetic nodes. These systems rely on a network of buoys that emit and relay acoustic signals and employ triangulation to locate undersea or surface craft.

The Defense Advanced Research Projects Agency is interested in developing a persistent ocean surveillance program. This system is intended to enable naval forces to conduct maritime operations in the presence of submarine and surface threats capable of launching anti-access weapons, or weapons that can target and destroy these sensors. When developed, these sensors will be "smart," meaning they will be able to observe the ocean environment at a known location

over an extended period of time and be able to evade rapid kill and anti-access defenses. Proposals are due July 29.

Some of these sensors will be deployed from ships, aircraft and other platforms. The sensors' size and method of deployment are being assessed. Capt. Tom Abernethy, director of Task Force ASW (antisubmarine warfare), said that a P-3 aircraft has 80 slots for the dispersion of current sensors, but "if we come up with a distributed field that takes 15 aircraft to drop, then that's not going to be operationally feasible. Either a bigger aircraft or smaller buoys - one of those two things will make that work."

Sestak said future Navy budgets will favor continued development of distributed sensor systems and other resources, such as data mining software capable of assessing huge volumes of information for trends or anomalies in the travel patterns of merchant vessels and the cargoes they carry.

The entire effort is interagency, said Sestak. "This is never going to be successful unless you have the interagency union with the Coast Guard and homeland defense agencies, and allies and friends around the world. And that's the kind of effort I think we need to see, because their concerns are similar. They have problems from the sea ... therefore this can also be of utility to them."

Evolution of SOSUS/IUSS Signal Processing (provided by AT&T)

Fourteen shore stations were installed in the initial phases of the CAESAR program, implementing the fixed sonar R&D designs of Project Jezebel and the Hartwell Report in Atlantic Ocean regions. Beginning with the first 40-hydrophone array terminated at Eleuthera in the Bahamas (April 1953), these first systems were officially designated AN/FQQ-1(V) Sonar Sets. The (V) suffix signifies that the equipment configuration for the FQQ-1 was variable - dependent upon the requirements of the underwater plant and the desired analysis and display characteristics.

The AN/FQQ-1(V) Sonar Set consisted of diesel engine alternators supplying basic 60 Hertz power, two motor-generator sets furnishing 400 Hertz power, 66 cabinets of electronic, electromechanical and power units, interconnecting wiring, and of course the multipair cable connected to an array of 40 hydrophones on the ocean bottom. In the shore equipment, there were 441 separate electronic subassemblies and over 2000 vacuum tubes. Two cabinets of 40 vacuum tube amplifiers boosted the very low level incoming signals (acoustic data converted to a minute electrical voltage by the hydrophone) and spectrum equalized them for correlation into 40 directionally-oriented geographic beams radiating out from the array location. This "beam forming" was performed by an Electrical Delay Line (EDL) group of 24 cabinets, containing 960 Inductive-Capacitive Delay Networks and 192 Delay Line Amplifiers. The incoming hydrophone signals were delayed by a pre-determined amount of time in order to form directional "beams". Each directional "beam" was then sent to a group of Spectrum Analyzers that extracted acoustic frequency components from the delay line outputs through the use of an electromechanical, bifacial recorder-multiplier. One spectrum analyzer and recorder-multiplier were required for each beam, and the acoustic data was displayed through the process of a

sweeping, electrically-charged stylus that physically marked a continuously-moving electro-sensitive chart paper (one display chart for each of the 40 directional beams)

The second phase of CAESAR saw the first major change in shore processing. The first six Pacific-based systems (beginning with San Nicolas Island in March 1957) received this equipment¹ designated AN/FQQ-2 (V). The primary benefit of FQQ-2 was replacement of the 24 equipment cabinets of Electrical Delay Lines with two Magnetic Delay Line (MDL) Cabinets (one active and one standby or spare). The MDL's main features were a large rotating drum containing 40 continuous recording tracks, 40 magnetic recording heads, and 1600 signal pickup heads. Thus the directional beamforming was again performed through a delay and sum technique, this time produced by a physical recording process rather than an electrical interaction.

Phase III introduced the second generation of CAESAR undersea cable systems, the SB coaxial system which was based on a multiplexed commercial telephone suppressed carrier using a single wire circuit for all data instead of a separate pair of wires for each hydrophone channel. The AN/FQQ-9 Sonar Set prototype was installed at Eleuthera in May 1962. Production models installed at Adak, Alaska, in August 1962 and Argentia, NFLD, in September 1963 included another upgrade to shore processing. The original spectrum analysis equipment was replaced by a new form of processing called “Digital Spectrum Analysis” or DSA. DSA took advantage of the then-state-of-the-art advances in electronics to move from an electromechanical signal multiplication (analysis) process to a more accurate and stable beam sampling and delay time compression process. The electro-mechanical Sonar Data Recorder was maintained as the gram display device, however, an updated model was installed along with DSA. At this same time (1962-64), the entire system installed to date was back fitted with DSA and the station designators were changed to AN/FQQ-1A(V) and AN/FQQ-2A(V). The improved Sonar Signal Processing Groups received separate designators: AN/FQA-4(V) for the FQQ-1A systems, and AN/FQA-5(V) for the FQQ-2A systems. With DSA backfit, the SOSUS system entered CAESAR Phase IV.

A further enhancement to signal processing occurred with the Vernier Backfit program in 1966-67. This backfit added more complete and flexible auxiliary signal processing and display features and added flexible tape recording and data transmission capabilities through installation of the AN/FQA-7(V) Data Analysis Central.

The third generation cable system had been under development at Bell Labs during the late 1960's, and in September 1972, the first SD-C coaxial system was terminated at Centerville Beach, CA. This system (SD-C1) was officially designated AN/FQQ-11(V) Shore equipment was composed of an AN/FQA-15 High Voltage Power Supply (for the sea cable), an AN/FQA-12 (V) Receiver Group to demultiplex the hydrophone signals, the then-standard FQA-5(V) DSA signal processor, and the FQA-7(V) Data Analysis Central.

When SD-C2 was operational at Brawdy, Wales, in July 1973, it included an improved AN/FQA-14 Power Supply (where improvements were made to the site power generation and distribution equipment, none to the cable power plant), a standard AN/FQA-12(V) Receiver Group, and significantly, a major update to signal processing. This signal processing suite was

called the G642170 Sonar Signal Processing Group. It was the first true digital processing system, but since it did not include the computer aided detection system then under development by Bell Labs, it was called the Manual Array Processor (MAP) - This processing suite included the Computer-Oriented Partial Sum beamformer (COPS I) and the Real-Time Signal Processor (RTSP I) . Both systems used digital computer technology to form directional beams and extract acoustic signals for display, but at this point, the technology was “hard-wired” so to speak and not readily adaptable (programmable) for varying configurations. Brawdy also had an AN/FQQ-12 SOFAR Monitoring Set (CORMSO) which was intended to monitor and record seismic or transient-type acoustic events.

Between 1976 and 1978, COPS I and RTSP I systems replaced the MDL beamformers and DSA processing systems at the forward area stations (Argentia, Keflavik, Centerville Beach, and Adak). (Basically, from this point, SOSUS shore system technology was changing at a rate that outpaced the AN/FQQ-FQA military numbering assignment process. As a result, subsequent installations and upgrades do not clearly subscribe to the Army- Navy nomenclature scheme.) Beginning in 1981, all SOSUS sites were backfit with the second generation of true digital processing systems, the COPS II and RTSP II (replacing the DSA equipment but retaining the electromechanical paper display consoles). The COPS II and RTSP II systems were based on the Synchronous Distributed Processor (SDP), the first general purpose, programmable digital signal processing computer specifically designed for SOSUS/IUSS applications. The SDP was a programmable computer with a large through-put capacity and architecture specifically designed to facilitate signal processing. Software loaded in memory chips controlled the algorithms to be performed by the SDP, consequently, the SDP performed COPS beamforming or RTSP analysis functions by proper selection of software, memory, and input/output interfaces. The RTSP II systems also included the first system-wide implementation of automatic detection of acoustic signature components of submarine contacts. The Bell Labs Computer Alerted Surveillance System (COMPASS) was loaded as an algorithm in the AN/UYK-20(V), a U. S. Navy general purpose computer system. The SDP backfit (1981-84) was the first SOSUS use of standard military computing hardware. This major upgrade to all sites also replaced the 60’s vintage (vacuum tube) hydrophone channel shore amplifiers with Solid State Hydrophone Amplifiers (SSHA’s) that were based on integrated circuits and offered improved amplification and performance characteristics. Tape recording equipment was replaced with the AN/USH-31(V) Navy ASW standard analog magnetic recorder, and previous, limited data transmission facilities were replaced with a four-channel, Secure Acoustic Data Relay (SADR) system for transmitting acoustic data grams to the Main Evaluation Centers at Norfolk, VA, and Ford Island, Hawaii. At the completion of the SDP backfit in 1984, SOSUS shore processing equipment had been upgraded from the point that the hydrophone signal left the cable transmission system to the input of the display device. That display device continued to be the DSA-era Sonar Data Recorder with its moving stylus and electrically-sensitive “dirty” paper (so-called because of the carbon black residue from the gram writing process)

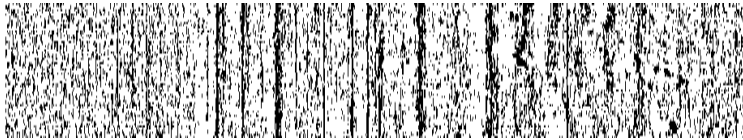
In the interests of saving money through reduced military manning and downsizing of facilities, SOSUS system consolidation was begun in, the early 1980’s. Military funding would be saved when the data processing and analysis functions at several SOSUS facilities were relocated from the shore terminal site to a regional processing facility. The first Wideband Acoustic Data Relay (WADR) system was installed at Midway Island in January 1982, to transmit the acoustic data

received on the two SB coaxial systems to the Naval Oceanographic Processing Facility (NOPF) at Ford Island. This WADR I system is an SDP system programmed for wideband data transmission. Additional facilities were later downsized and remoted to NOPF's: San Nicolas Island (1984), Barber's Point (1985), Pacific Beach and Coos Head (1987), Bermuda (1992). (A second generation remoting system WADR II (based mostly on commercial hardware) has been used to link additional sites to processing facilities: Adak (1993) and Argentia (1995).)

The fourth generation of Sonar Sets came with the installation of the Lightweight Undersea Components (LUSC) system at Dam Neck, VA, in March 1984. LUSC technology is a lightweight, improved capacity cable transmission system that utilizes the SD-C shore High Voltage Power Supply and Receiver Group along with, a LUSC-specific channel demultiplexer cabinet. The COPS II/RTSP II signal processing was maintained, but in the early 1990's, paper gram displays were finally replaced by the SOSUS Workstation (SWS), which is a graphical display system based on Navy standard Desktop Computer equipment (DTC-II). The prototype Fixed Beam Workstation (FBWS) was installed at Dam Neck in February 1990, and the first production SWS replaced the FBWS in February 1992.

The current generation Sonar Set, the fiber optic based Fixed Distributed System (FDS/UWS, also known as Undersea Lightwave Surveillance System - ULSS) was first installed at a Special Project in June 1994. In a subsequent installation at a Joint Maritime Facility in the UK, the COPS II/RTSP II processing systems were replaced by the present state-of-the-art SDS/SSIPS systems. SSIPS has subsequently been installed at other selected facilities, however, for the majority of the SOSUS sites that remain operational, the SDP-based processing systems and SOSUS Workstations are still in use.

(Note: The SWS was removed in 2002)



**Gram Writers
NavFac
Centerville
Beach
1972**

**Venus
Unique**



10 Points



USS Weatherford EPC 618



Good Guy



Juliett



Typhoon

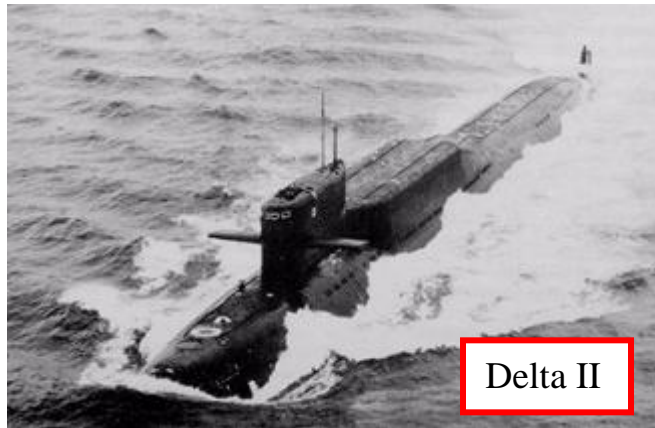


Papa



Akula

We were involved in detecting and tracking these submarines for over 65 years, from the very first detection... Ed Smock



Detecting and tracking these submarines was our life.... We loved our job.... Ed Smock



Kilo



Oscar I

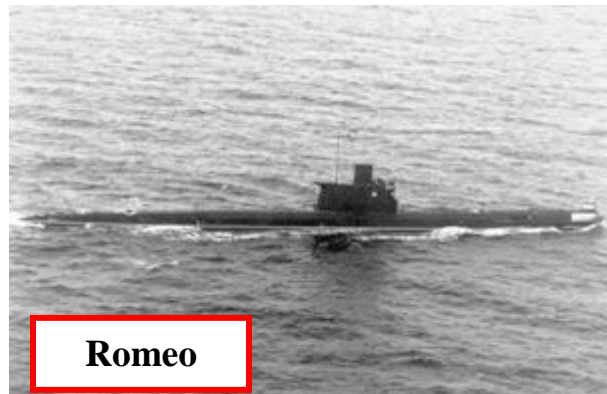


Sierra

**Job satisfaction Yes...
The hard part, “serving in silence”**



Foxtrot



Romeo

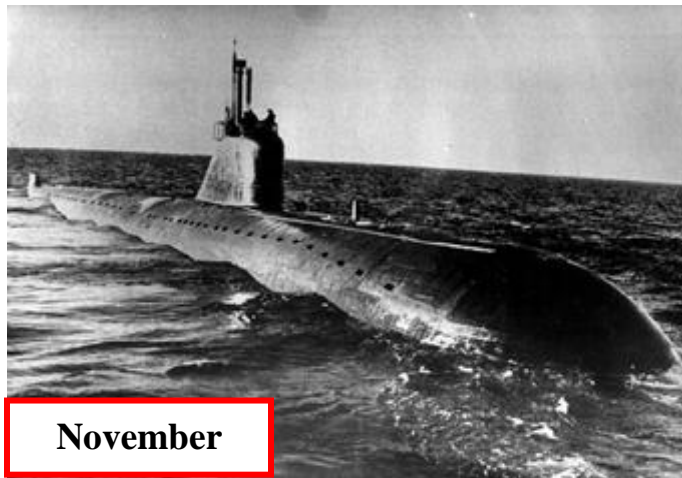


Victor I

Pride ... Yes. However, our “Pride” could not be shared, not even with our families, as we were sworn to secrecy... Ed Smock



Victor III

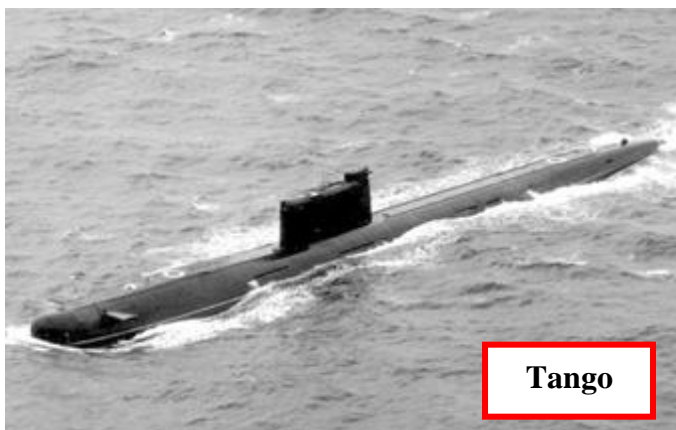
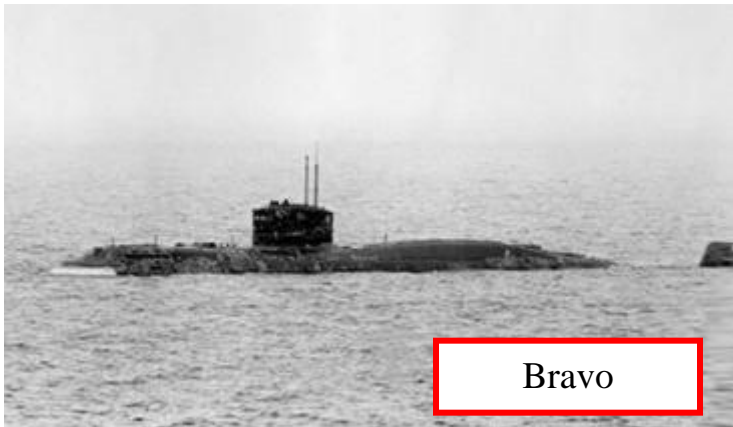


November

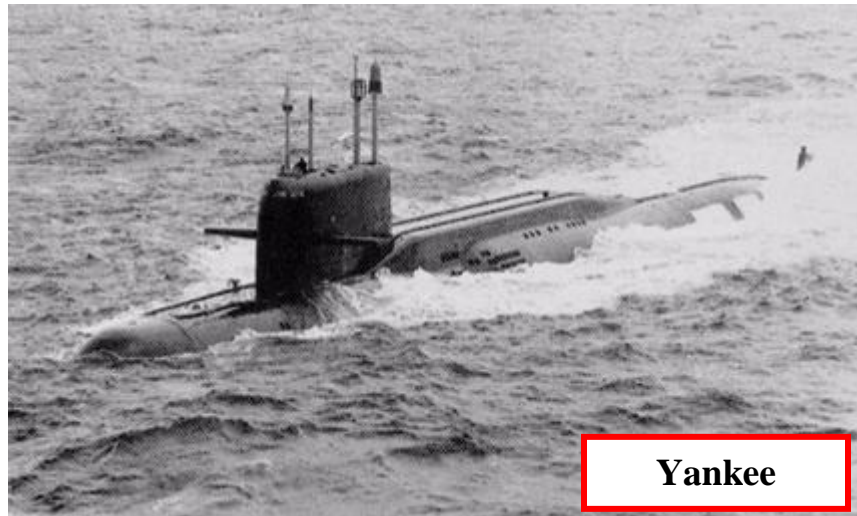
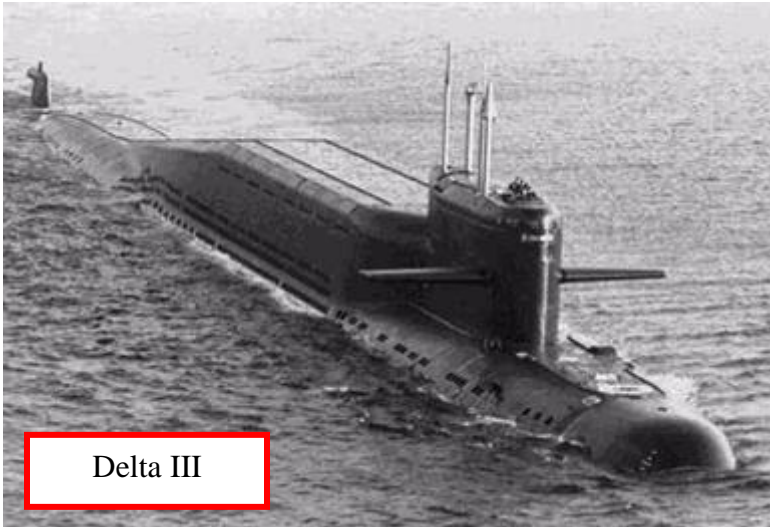


Delta IV

What “Pride” we had, when you consider the sailor holding contact on any given submarine was the only person in the world (at that moment) knowing what the submarine was doing and where...Ed Smock



To “hold contact and track” these submarines as they patrolled the oceans (thinking they were undetected) gave us great pride and satisfaction... Ed Smock



The Soviets ran out of money trying to make their submarines quieter so SOSUS/IUSS could not detect them. This forced them to give up and forced the end of the Cold War... Ed Smock



Only part of the SOSUS/IUSS “Survey, Cable Laying and Repair Team”



USNS Kingsport T-AG-164



**USNS Neptune T-ARC 2
laying cable (backwards)**

Cable Repair Ships

USNS Neptune (T-ARC 2) USS 1953 -USNS 1973-92

USNS Aeolus (T-ARC 3) 1973-85

USNS Thor (T-ARC 4) 1973-74

USNS Albert J. Myer (T-ARC 6) 1963-94

USNS Zeus (T-ARC 7) 1984-Present



USNS Neptune T-ARC 2



USNS Zeus T-ARC 7

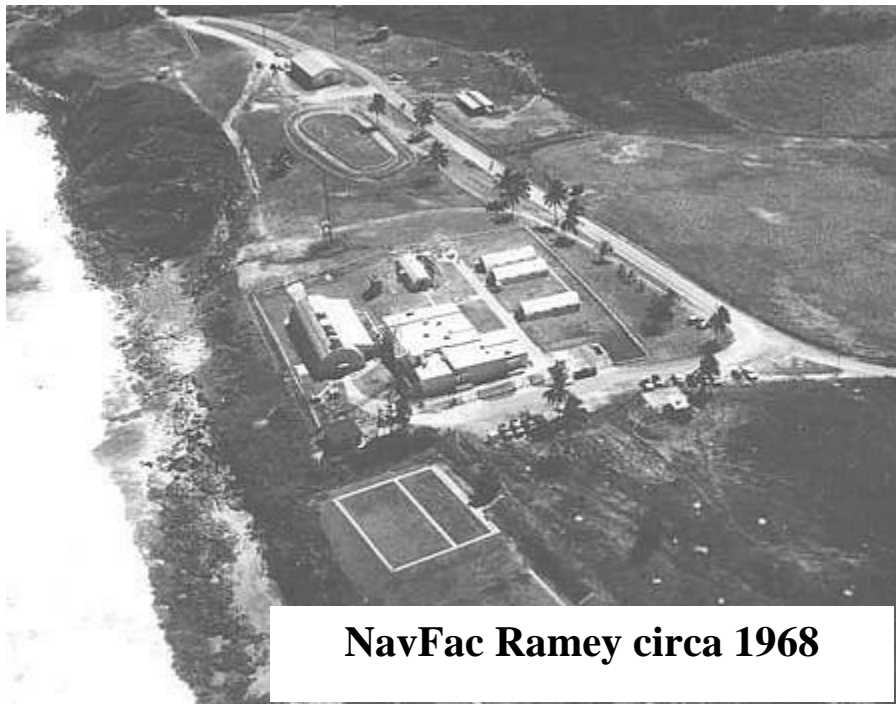


USNS Albert J. Myers (T-ARC-6)

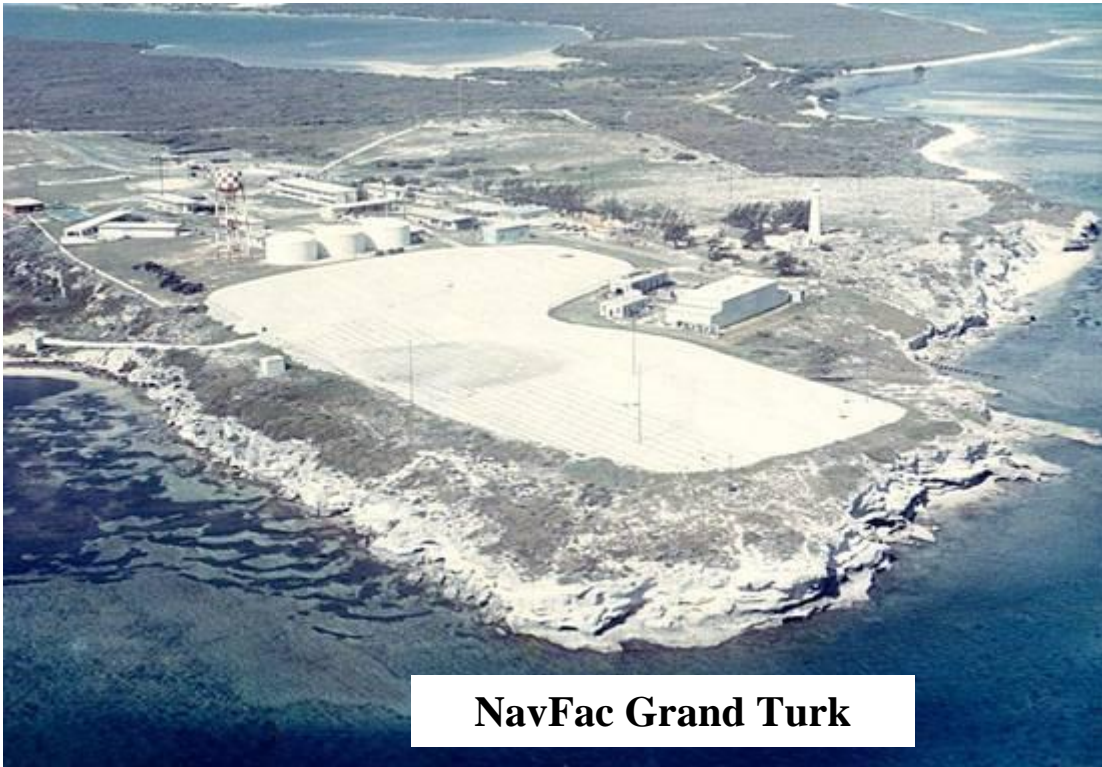
First 7 NavFacs



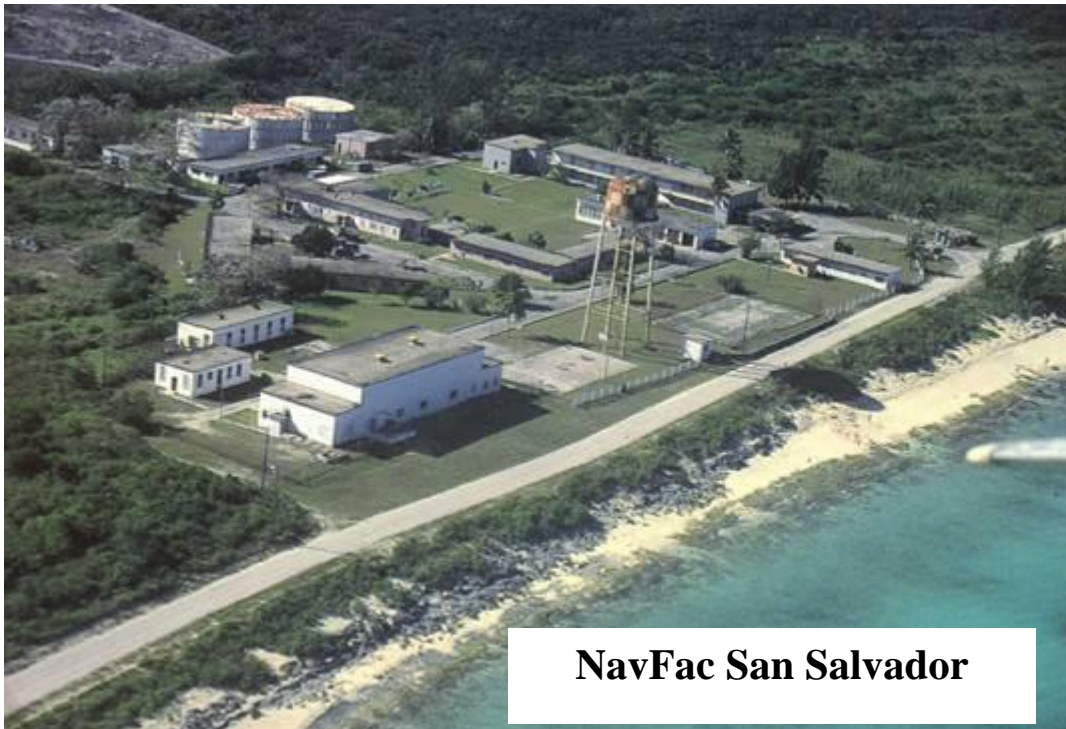
NavFac Ramey



NavFac Ramey circa 1968



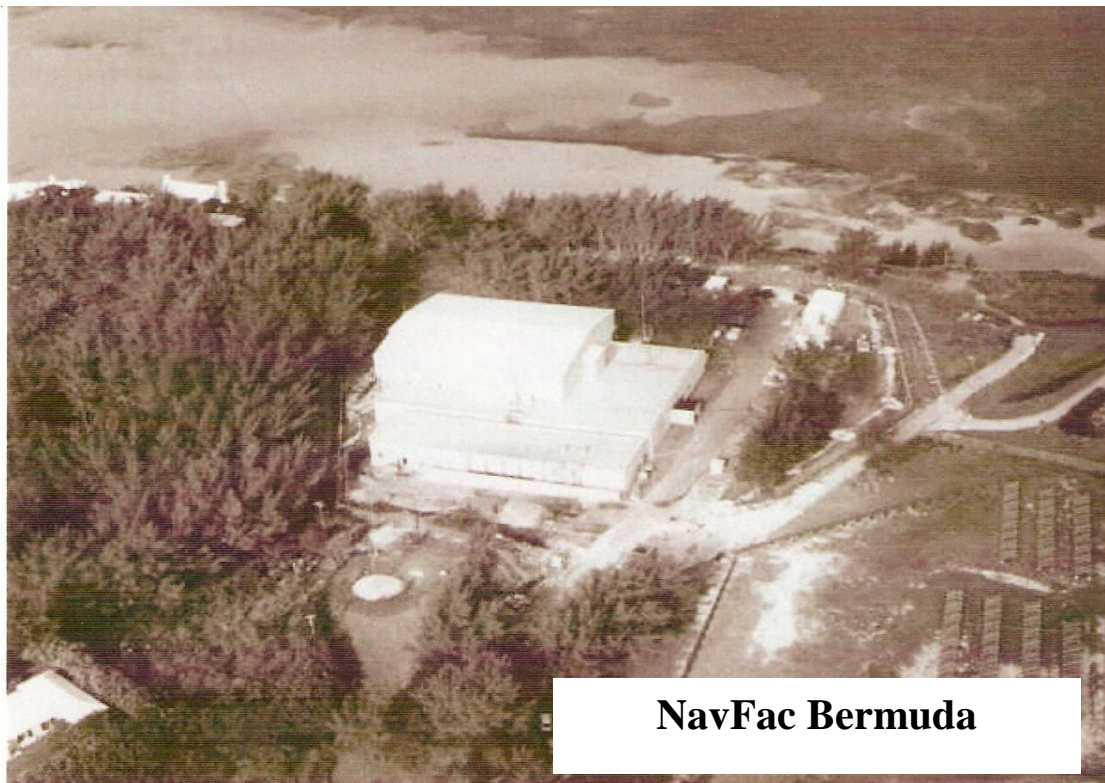
NavFac Grand Turk

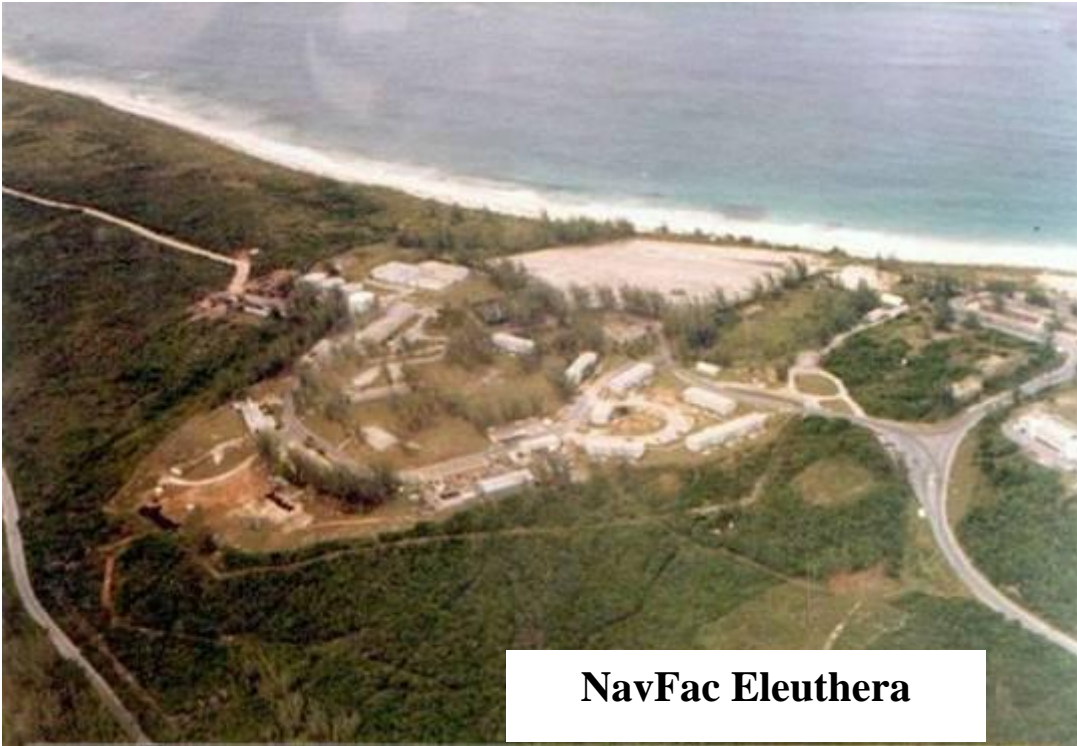


NavFac San Salvador

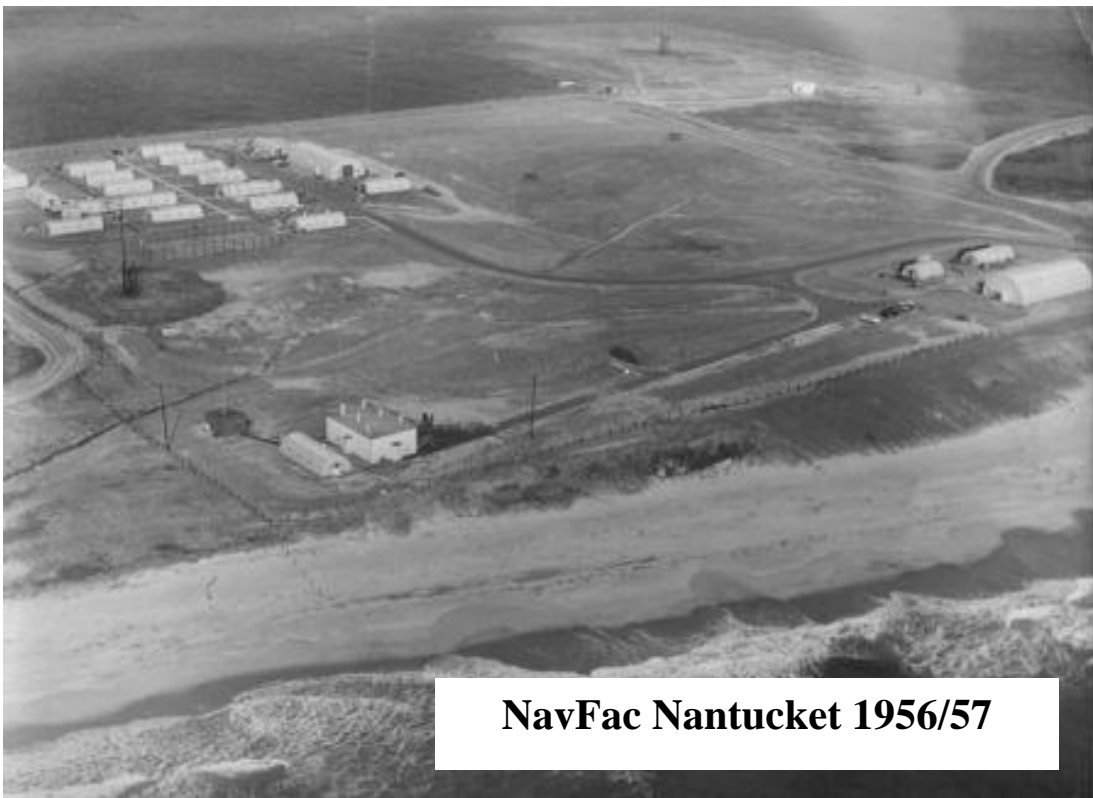


**Joint RCN/USN Oceanographic Research Station
Shelburne Nova Scotia Canada 1955**





NavFac Eleuthera



NavFac Nantucket 1956/57



System Plaques

<u>SOSUS Sites</u>	<u>Established</u>	<u>Disestablished</u>	<u>Name change</u>
NavFac Ramey AFB, PR	18 Sep 1954	30 Apr 1976 (Punta Borinquen 01 Jan 1974)	
NavFac Grand Turk, TWI	23 Oct 1954	31 Mar 1980	
NavFac San Salvador, TWI	18 Dec 1954	31 Jan 1970	
NavFac Shelburne, Nova Scotia	01 Apr 1955	01 Aug 1994 (HMCS Shelburne 01 Jul 1958)	
NavFac Bermuda	01 Jun 1955	30 Sep 1992	
NavFac Nantucket, Mass.	02 Aug 1955	30 Jun 1976	
NavFac Cape May, NJ	15 Aug 1955	6-8 Mar 1962 (Ash Wednesday Storm-to Sea)	
NavFac Cape Hatteras, NC	11 Jan 1956	30 Jun 1982	
NavFac Antigua, TWI	09 Aug 1956	04 Feb 1984	
NavFac Eleuthera, TWI	10 Sep 1957	31 Mar 1980	
NavFac Barbados, TWI	01 Oct 1957	31 Mar 1978	
NavFac San Nicolas Island, CA	31 Oct 1957	02 Mar 1984	
NavFac Point Sur, CA	08 Jan 1958	01 Oct 1984	
NavFac Centerville Beach, CA	25 Mar 1958	30 Sep 1993	
NavFac Coos Head, OR	13 May 1958	30 Nov 1987	
NavFac Pacific Beach, WA	14 May 1958	01 Sep 1987	
NavFac Argentia, Newfoundland	01 Oct 1958	27 Sep 1994	
NavFac Lewes, Del	01 May 1962	30 Sep 1981 (replacement for Cape May)	
NavFac Adak, Alaska	01 Dec 1962	30 Sep 1993	
NavFac Keflavik, Iceland	01 Mar 1966	Dec 1996 (shut down 30 Sep 96)	
NavFac Midway Island***	29 Apr 1968	("operational via tape"), (first Soviet Sub-13 Dec 1968 - we were playing her tapes at NavFac Centerville Beach - Ed Smock)	
NavFac Guam, Mariana Islands	03 Dec 1968	Sep 1992 (disestablished Oct 91)	
NavFac Midway Island***	13 Jan 1969	30 Sep 1983 ("now commissioned")	
NavFac Barbers Point, HI	11 Dec 1970	01 Oct 1985	
NavFac Brawdy, Wales	05 Apr 1974	30 Jun 1995	
RTFC Centerville Beach, CA	Oct 1977	01 Mar 1985	
NOPF Ford Island, HI	01 Oct 1981	30 Sep 1994	
RTF Dam Neck, VA	01 Mar 1985	Sep 1994	
CFIC Halifax, Nova Scotia	Jun 1994	circa 2002?	

Still Active

NOPF Dam Neck	29 Feb 1980	
NOPF Whidbey Island, WA	13 Jul 1987 (originally as NavFac)	
JMF St. Mawgan, UK	18 Aug 1995 (now remoted to NOPF Dam Neck)	

USNS Stalwart (T-AGOS 1)	09 Apr 1984	11 Jun 1992
USNS Contender (T-AGOS 2)	29 Jul 1984	01 Oct 1992*
USNS Vindicator (T-AGOS 3)	20 Nov 1984 (Jane's)	30 Jun 1993*
USNS Triumph (T-AGOS 4)	19 Feb 1985	06 Jan 1995*
USNS Assurance (T-AGOS 5)	01 May 1985	(decom)
USNS Persistent (T-AGOS 6)	14 Aug 1985	12 Oct 1994*
USNS Indomitable (T-AGOS 7)	01 Dec 1985	02 Dec 2002*
USNS Prevail (T-AGOS 8)	05 Mar 1986	24 Apr 2003
USNS Assertive (T-AGOS 9)	12 Sep 1986 (Jane's)	22 Aug 2003
USNS Invincible (T-AGOS 10)	30 Jan 1987	04 Apr 2000*
USNS Adventurous (T-AGOS 13)	19 Aug 1988	05 Jun 1992*
USNS Titan (T-AGOS 15)	08 Mar 1989	31 Aug 1993*
USNS Worthy (T-AGOS 14)	07 Apr 1989	05 Oct 1992
USNS Audacious (T-AGOS 11)	18 Jun 1989	06 Feb 1997*
USNS Capable (T-AGOS 16)	08 Jul 1989	14 Sep 2004*
USNS Bold (T-AGOS 12)	20 Oct 1989	22 Aug 2003
USNS Tenacious (T-AGOS 17)	08 Nov 1989	10 Oct 1996*

USNS Relentless (T-AGOS 18)	08 Mar 1990	17 Mar 1993*
USNS Able (T-AGOS 20)	12 Feb 1993	22 Aug 2003
MV Cory Chouest		17 Aug 2008

Still Active

USNS Victorious (T-AGOS 19)	05 Sep 1991
USNS Effective (T-AGOS 21)	27 Jan 1993**
USNS Loyal (T-AGOS 22)	01 Jul 1993**
USNS Impeccable (T-AGOS 23)	22 Mar 2001**
USNS Able (T-AGOS 20)	2 Apr 2007 Reactivated

* Placed out of service -- Source: <http://www.navsource.org/archives>

** Delivered to USN (may not be same date as commissioning -- Source: as above)



CAPT Kelly Award



**OT Breast
Insignia**



**COSP Expert
Oceanographic Analyst**

**COMNAVELEXSYS
SOSUS/IUSS
Service Award**



**SOSUS/IUSS
50th
Anniversary
Coin**

**USN
Retired**



**NOPF DN
CO's Coin**

SOSUS/IUSS Unit Citations

Provided by the IUSS Alumni Association web site. <http://www.IUSScaa.org/homen.htm>

Location	Award Title	Start Date	Stop Date
NAVFAC Adak	Meritorious Unit Citation	Spring 1967	Spring 1967
NAVFAC Adak	Meritorious Unit Citation	01 Dec 68	01 May 68
NAVFAC Adak	Meritorious Unit Citation	01 Jul 69	01 Nov 69
NAVFAC Adak	Meritorious Unit Citation	19 Oct 70	23 Dec 70
NAVFAC Adak	Meritorious Unit Citation	01 Jun 71	20 Jul 71
NAVFAC Antigua	Humanitarian Service Medal	15 Mar 84	18 Jun 84
NAVFAC Antigua	Meritorious Unit Citation	01 Oct 75	31 Dec 78
NAVFAC Antigua	Navy Unit Citation	01 Aug 69	31 Aug 72
NAVFAC Antigua	SECNAV Letter Of Commendation	24 Oct 83	06 Nov 83
NAVFAC Argentia	Meritorious Unit Citation	01 Oct 75	31 Dec 78
NAVFAC Argentia	Meritorious Unit Citation	01 Jan 84	31 Dec 84
NAVFAC Argentia	Navy Unit Citation	01 Aug 69	31 Aug 72
NAVFAC Barbados	Meritorious Unit Citation	01 Oct 75	31 Dec 78
NAVFAC Barbados	Navy Unit Citation	01 Aug 69	31 Aug 72
NAVFAC Barbers Point	Meritorious Unit Citation	19 Oct 70	23 Dec 70
NAVFAC Barbers Point	Meritorious Unit Citation	01 Jun 71	20 Jul 71
NAVFAC Bermuda	Meritorious Unit Citation	01 Oct 75	31 Dec 78
NAVFAC Bermuda	Meritorious Unit Citation	13 Feb 77	22 May 77
NAVFAC Bermuda	Meritorious Unit Citation	01 Jan 84	31 Dec 84
NAVFAC Bermuda	Navy Unit Citation	01 Aug 69	31 Aug 72
NAVFAC Brawdy Wales	Meritorious Unit Citation	01 Oct 75	31 Dec 78
NAVFAC Brawdy Wales	Meritorious Unit Citation	01 Jan 84	31 Dec 84
NAVFAC Cape Hatteras	Meritorious Unit Citation	01 Oct 75	31 Dec 78
NAVFAC Cape Hatteras	Navy Unit Citation	01 Aug 69	31 Aug 72
NAVFAC Centerville Beach	Meritorious Unit Citation	Spring 1967	Spring 1967
NAVFAC Centerville Beach	Meritorious Unit Citation	19 Nov 70	23 Dec 70
NAVFAC Centerville Beach	Meritorious Unit Citation	01 Jun 71	20 Jul 71
NAVFAC Coos Head	Meritorious Unit Citation	Spring 1967	Spring 1967

NAVFAC Coos Head	Meritorious Unit Citation	19 Nov 70	23 Dec 70
NAVFAC Coos Head	Meritorious Unit Citation	01 Jun 71	20 Jul 71
NAVFAC Eleuthera	Meritorious Unit Citation	01 Oct 75	31 Dec 78
NAVFAC Eleuthera	Navy Unit Citation	01 Aug 69	31 Aug 72
NAVFAC Grand Turk	Navy Unit Citation	01 Aug 69	31 Aug 72
NAVFAC Guam	Humanitarian Service Medal	23 Apr 75	02 Sep 75
NAVFAC Guam	Meritorious Unit Citation	01 Jul 69	01 Nov 69
NAVFAC Guam	Meritorious Unit Citation	19 Oct 70	23 Dec 70
NAVFAC Guam	Meritorious Unit Citation	01 Jun 71	20 Jul 71
NAVFAC Keflavik	Navy Unit Citation	01 Mar 66	31 May 67
NAVFAC Keflavik	Meritorious Unit Citation	08 Apr 70	15 Apr 70
NAVFAC Keflavik	Navy Unit Citation	01 Aug 69	31 Aug 72
NAVFAC Keflavik	Meritorious Unit Citation	01 Oct 75	31 Dec 78
NAVFAC Keflavik	Meritorious Unit Citation	10 Oct 76	20 Oct 76
NAVFAC Keflavik	Meritorious Unit Citation	16 Mar 79	12 Apr 79
NAVFAC Keflavik	Meritorious Unit Citation	01 Sep 80	30 Apr 82
NAVFAC Keflavik	Meritorious Unit Citation	01 Jan 84	31 Dec 84
NAVFAC Keflavik	Meritorious Unit Citation	05 Mar 84	06 Apr 84
NAVFAC Keflavik	Meritorious Unit Citation	09 Nov 89	10 May 90
NAVFAC Lewes	Meritorious Unit Citation	01 Oct 75	31 Dec 78
NAVFAC Lewes	Meritorious Unit Citation	01 Oct 77	30 Sep 80
NAVFAC Lewes	Navy Unit Citation	01 Aug 69	31 Aug 72
NAVFAC Midway Island	Meritorious Unit Citation	01 Jul 69	01 Nov 69
NAVFAC Midway Island	Meritorious Unit Citation	19 Oct 70	23 Dec 70
NAVFAC Midway Island	Meritorious Unit Citation	01 Jun 71	20 Jul 71
NAVFAC Nantucket	Meritorious Unit Citation	01 Oct 75	31 Dec 78
NAVFAC Nantucket	Navy Unit Citation	01 Aug 69	31 Aug 72
NAVFAC Pacific Beach	Meritorious Unit Citation	Spring 1967	Spring 1967
NAVFAC Pacific Beach	Meritorious Unit Citation	19 Oct 70	23 Dec 70
NAVFAC Pacific Beach	Meritorious Unit Citation	01 Jun 71	20 Jul 71
NAVFAC Point Sur	Meritorious Unit Citation	Spring 1967	Spring 1967
NAVFAC Point Sur	Meritorious Unit Citation	19 Oct 70	23 Dec 70

NAVFAC Point Sur	Meritorious Unit Citation	01 Jun 71	20 Jul 71
NAVFAC Punta Borinquen	Meritorious Unit Citation	01 Oct 75	31 Dec 78
NAVFAC Ramey	Navy Unit Citation	01 Aug 69	31 Aug 72
NAVFAC San Nicolas Island	Meritorious Unit Citation	Spring 1967	Spring 1967
NAVFAC San Nicolas Island	Meritorious Unit Citation	19 Oct 70	23 Dec 70
NAVFAC San Nicolas Island	Meritorious Unit Citation	01 Jun 71	20 Jul 71
NAVOCEANPROCFAC Dam Neck	Meritorious Unit Citation	01 Jan 84	31 Dec 84
NAVOCEANPROCFAC Dam Neck	Meritorious Unit Citation	01 Jan 84	31 Dec 84
Shelburne	Navy Unit Citation	01 Aug 69	31 Aug 72
Shelburne	Meritorious Service Citation	01 Oct 75	31 Dec 78
Shelburne	Meritorious Service Citation	01 Jan 84	31 Jan 84
NOFF Dam Neck, VA	Meritorious Unit Commendation	01 Jan 09	31 Dec 12

Last Update: 10 Nov 2002 & 23 Dec 2013



CAPTAIN JOSEPH P. KELLY AWARD

The Pioneer of Undersea Surveillance

The “Captain Kelly Award” is presented in honor of Captain Joseph P. Kelly who is acknowledged as the most important figure in the development of the Sound Surveillance System (SOSUS). Although he died in 1988, Captain Kelly is still referred to as the “Father of SOSUS”, and his twenty-one years association with the oceanographic system still influences the Integrated Undersea Surveillance System (IUSS) today. The award was initiated in response to a growing awareness of specific contributions initiated by key military and civilian personnel who continue to benefit the undersea surveillance program today.

The recipient of the Captain Kelly Award is selected on the merit of major lifetime contributions to the IUSS Program. The impact of these contributions must have had a profound effect on both current and future IUSS operations and must support the heritage that Captain Kelly left to IUSS.



Wood base



Lapel Pin



Marble base

CAPTAIN JOSEPH P. KELLY AWARD

The recipient of the Captain Kelly Award is selected on the merit of major lifetime contributions to the IUSS Program. The impact of these contributions must have had a profound effect on both current and future IUSS operations and must support the heritage that Captain Kelly left to IUSS.



Captain Joseph P. Kelly was the father of undersea surveillance. Through innovation, creativity, tenacity, and leadership, he exploited emerging technologies to make undersea surveillance a reality, enabling defense of United States and its allies against undersea threats.



The plaque base reads >

Wood from the main base of “Old Ironsides”
The U.S.S. Constitution
Commissioned October 21, 1797 – present
Certified by Mr. Henry Vadnais,
Curator of the Naval Historical Center
Washington, D.C.

Recipients

1992	Mr. Henry S. Aurand	2004	Mr. Jerry McDonald
1992	CWO4 Thomas Uecker USN (Ret)	2007	LCDR Chuck Gagnon USN (Ret)
1993	Mr. J. Hicks Ford	2008	Dr. Harry Cox (CAPT USN) (Ret)
1994	CAPT John M. Parrish USN (Ret)	2013	Mr. Bruce Rule
1995	OTCM Edwin K. Smock USN (Ret)	2014	OTCM George P. Widenor USN (Ret)
1995	CAPT Kirk E. Evans USN (Ret)	2014	OTACS Michael D. Weir USN (Ret)
1996	LCDR Fred A. Jones (RCN) (post.)	2014	Mr. George Miller (GS-Ret)
1997	CDR Larry Wilcher USN (Ret)	2015	OTCS William E. Tilley USN (Ret) (post.)
1997	RADM Dempster M. Jackson USN (Ret)	2017	LT Timothy L. Cornett USN (Ret)
1999	LCDR Ernest Castillo III USN (Ret)	2018	CAPT James M. Donovan USN (Ret)
2000	Mr. Ragnar Schaug-Pettersen	2019	Mr. Inge Dahl
2001	OTCS Stanley L. Carmin USN (Ret)	2021	Mr. Jeffrey D. Cleary
2002	Mr. Henry Stanton Fleming	2021	LCDR Cynthia A. Utterback USN (Ret)
2003	Mr. Roger Harris		

Sep 2010: A Legend Walks Among Us (by Chuck Gagnon)
(IUSS Alumni Association Newsletter – Fall 2010).

If you are a recipient of this newsletter, somewhere, somehow you know my friend Ed Smock. I still have the pleasure of seeing Ed nearly each workday at NOPF Dam Neck and it's an honor to work alongside him after all these years. I was first introduced to Master Chief Smock in 1971 when I was a scruffy reader on Easy II. I was still so wet behind the ears that when I saw Ed walking the beams in my direction I couldn't remember stars and ranks for CPO's and broke into a sweat worrying about addressing him correctly. I figured that out and asked him about a tough target I was analyzing. "Master Chief, what do you think this contact is?" He looked at me, gave a wee smile as he stood there ramrod straight, slid the scale up and down a few times and said, "That's your job, I'll come back and you can tell me what it is." He just smiled and walked away. It was the first time I witnessed how great he is with people and I still learn people skills from him today.



STCM E.K. Smock 16 Aug 1968

It's a rare day that Ed and I don't spend several minutes on the grams together figuring out a target, a phenomenon, a software or hardware issue, or just comparing notes on what we see. There are several ways to navigate the new gram system (ICP) to find the temporal and spectral resolution you desire to optimize the display. Ed's gram navigation goes clockwise whereas mine goes counter-clockwise and we laugh while thinking that our own way is better!

When I joined this organization Ed already had about 15 or more years looking at grams. He's been part of the many equipment improvements and transitions that the system has gone through. Although he's getting long in the tooth, he remains as keen as any other analyst, is sharp and eager to learn, and he keeps an open mind. He's methodical and you can still watch him go through the steps of analysis as he engages a gram. I wouldn't want to be a submarine and try to get past Ed. He's a hunter and he's going to get you.

Once you know him, it becomes apparent that his IUSS family is as important to him as the one on his home front. He has always been there for us. Whether it is camping at Cheatham Annex, being on an inspection team, being the night manager at the Bermadoo Club, testing software, CMC, or coaching a reader, Ed has been there for the system. Ed has advised everyone from seaman to admiral, from programmer to program manager and probably every Commodore since the 60's. He has served on both coasts with distinction.

Just look at what Ed did for us in creating Our Book. With that action he pulled together the story of our system, the story of us. Once you read Our Book you recognize his direct

contribution to our many successes. Ed was there from the start. He probably painted the green doors! Ed is likely the guy that said the people are the system. He still lives by that concept and I witness it every day. Many topics on the IUSS Caesar Alumni message page have a positive or humorous contribution from Ed. He’s like the system’s first responder!



On occasion I get to work at NOPF Dam Neck before Ed does. On those days, I watch him enter the QA space and it is always with a smile. He gives a small hand wave and a greeting to everyone. He’s eager to get right on the grams with a “what’s been happening” attitude. If he’s wearing his red sweater, watch out. He’s trying to find something of interest and all the operators best be aware of that challenge.

In many ways Ed is the system, its heart and spirit. We are very fortunate to have had him working with us for these many years. We have a legend walking among us.

13 Jul 2012: NOPF W.I. - Classified Navy facility celebrates silver anniversary.

(By Kathy Reed Whidbey News-Times Tuesday, July 17, 2012)



A downpour by Mother Nature didn’t dampen spirits Friday at a 25th anniversary celebration for the Naval Ocean Processing Facility on board Naval Air Station Whidbey Island, but it did make for a slightly abbreviated ceremony.

Fifteen original plankowners were honored guests at the ceremony, which got underway with a VIP reception inside the classified building’s atrium. Retired Lt. Cmdr. Jack Moody and his wife, Patricia, who were also celebrating their 44th wedding anniversary, made the journey from their home north of Spokane to attend the celebration.

I was the original maintenance officer,” Jack said, recalling the work required to build and transfer the facility from Pacific Beach. “The first time I saw it, it was just a slab.” It was the first time since Jack’s retirement 23 years ago that the couple had returned to Oak Harbor.

“The town has changed, but it looks good,” Jack said. “This place was a part of my life for three and a half years, so this is a good opportunity to come back and see it.”

“And it’s a great opportunity to reconnect with people,” added Patricia. “Plus, we were looking for something to do to celebrate our anniversary.”

The NOPF, one of just two such facilities in the country, is one of NAS Whidbey’s best-kept secrets. The best description of what goes on inside the high security facility is that it processes information it receives through a series of fixed and towed acoustic arrays throughout the Pacific Ocean. It is the duty of the nearly 400 personnel — including 40 from the Royal Canadian Navy — stationed there to monitor these listening posts 24 hours a day, seven days a week.

“The pace is a little slower than it is on a ship,” said Logistics Specialist 2nd Class (AW) Ryan Falconer, who has been at NOPF two years. “But it’s got to be — there’s not a lot of room for error.”

“My challenge is managing the personnel issues with the vast mission load of today’s Navy,” said Sonar Technician Submarine 2nd Class Christopher Adkins, Watch Supervisor. “I take pride however, in our ability to accomplish every mission.”

As the official ceremony got under way, thunder rumbled and the drizzle turned to steady rain. NOPF Commanding Officer, Cmdr. Jason Vogt, talked about the enduring mystique of the facility.

“What also endures is the camaraderie and teamwork,” he said, acknowledging the plankowners and encouraging young sailors to seek them out to share stories.

“We share a common bond of the IUSS (Integrated Undersea Surveillance System) mission,” Vogt said.

Special guests, Capt. Charles S. Rauch, Commander, Undersea Surveillance, and Rear Adm. James F. Caldwell Jr., Commander, Submarine Force U.S. Pacific Fleet, each expounded on another important part of the NOPF’s mission — the partnership with Canadian Forces who also serve at the facility.

“While the facility is quite different than it was in 1987, the missions are very similar,” said Rauch. “We are dedicated to that mission and to our Canadian partnership.”

“Our partnership with your country is very important,” Caldwell told the Canadian contingent present for the ceremony.

Despite cutting remarks short due to the weather, the presentation of a 25th anniversary trophy was another highlight of the ceremony. A model of symbolism, the silver trophy features Poseidon driving a sea shell chariot pulled by two sea horses, which represent the two forms of data collection — SURTASS (Surveillance Towed Array Sensor System) and SOSUS (Sound Surveillance System). The whole statue is mounted on wood, to represent the plankowners.

Following a traditional Navy cake cutting ceremony under cover from the elements, those attending were allowed a rare tour of a small part of the facility. (Photos were not allowed.) Visitors got to see the watch area, which was a little reminiscent of NASA’s mission control.

Large video screens along one wall featured facts and statistics about NOPF and each individual station had three computer monitors. All computer screens and monitors were “scrubbed” for the tour while personnel continued actual surveillance in another part of the facility.

To illustrate the change in technology from 1987 to present, personnel showed off a 300 megabyte hard drive from 1987, which was about the size of a small chest freezer, versus the size of a small CD player today. Visitors also got to see the massive armored cables strung across the ocean floor to collect acoustic data.

While the equipment and the facility have changed over the past two and a half decades, the mission is essentially the same, a bond these sailors of different generations still share.

“This organization toils in obscurity because of the classification of our mission,” Caldwell said. “What started 25 years ago continues. You are part of freedom’s vigilant eye.”

You are a model for the Navy,” said retired Ocean Systems Technician Master Chief David Hinshaw. “You were the right people at the right place doing the right thing, just like now.”

(CAPT Jason A. Vogt USN - COMSUBPAC N36).

NAVFAC/NOPF W.I. Commanding Officer history (since 1998):

(CAPT Jason A. Vogt USN - COMSUBPAC N36).

26 Jun 1998	CDR Barrett relieved CDR Concannon
14 July 2000	CDR C.A. Wilder relieved CDR Barrett
19 July 2002	CDR G.L. Mayer relieved CDR Wilder
27 May 2004	CDR L.A. Brault relieved CDR Mayer
29 June 2006	CDR Steven Tripp relieved CDR Brault
17 October 2008	CDR David Skipworth relieved CDR Tripp
10 June 2010	CDR Marc Eckardt relieved CDR Skipworth
11 August 2011	CDR Jason Vogt relieved CDR Eckardt
18 June 2013	CDR Sean Bartlett relieved CDR Vogt
20 February 2015	CDR Thomas Karney relieved CDR Bartlett
13 July 2017	CDR Shane Burns relieved CDR Karney
4 October 2018	CDR Craig Hempeck relieved CDR Burns

18 Jun 2013 - NOPF Whidbey Island Award:

At the 2013 change of command, NOPFWI was presented a Meritorious Unit Commendation by COMSUBPAC Admiral James F. Caldwell Jr. for the period of 1 January 2009 - 31 December 2011. (CAPT Jason A. Vogt USN - COMSUBPAC N36).

3 May 2013: NOPF DN Conference Room is dedicated to Edwin K. Smock

Mr. Smock – Ed, “In appreciation for all that you have done and continue to do for SOSUS/IUSS over the past 59 or more years, we are dedicating the NOPF DN Conference Room in your name. From this day and forever more it will be known as the Edwin K. Smock Conference Room. - CDR Daniel McGuinness, Commanding Officer NOPF DN (3 May 13).

This wooden plaque is now mounted on the wall at the entrance to the Conference Room.



“For some of you older people - you may remember that in the early days when you went to Disneyland, you would buy a “book” of tickets. These tickets had

letters on them. The best ride in the park was the “E” ticket. – The past 59 years has been an “E” ticket ride for me. Thank you very much.” – Ed Smock.

60 years ago - 22 Mar 1954 (22 Mar 2014) (Ed Smock)

On this day - 60 years ago, 22 March 1954 - I joined the “U.S. Navy”. Boot camp was at Bainbridge, MD. - I begin my journey toward the “Green Door”. My basic pay: E1 (under 4 months) \$78.00 per month. Then it went to \$83.20 a month “WOW” what a pay raise!!!

The Year is 1954:

The population of the U.S. is now 163,025,854. Women can expect to reach the age of 73 years while men can expect to live to an average of more than 66 years. The median salary is \$3,200. A loaf of bread costs 22 cents, a pound of butter goes for 79 cents, a dozen eggs costs 57 cents and a quart of milk costs 24 cents. The average price of gasoline is 28 cents per gallon.



President Eisenhower is our leader.

On 21 Jan 1954 the USS Nautilus (SSN 571) was launched. She was commissioned on 30 Sep 1954. Nautilus signals a whole new way of patrolling the World's oceans. (I “watched” some of her sea trials – 1955.).

Hit Parade: Doris Day is riding high in the charts with “Secret Love” and “If I Give My Heart To You”. Also very popular, the McGuire Sisters with such hits as “Mister Sandman” and “Teach Me Tonight”, the Four Aces singing “Three Coins In The Fountain”, “Let Me Go, Lover” by Joan Weber and “Little Things Mean A Lot” with Kitty Kallin.

“Hey There” by Rosemary Clooney, “Wanted” by the Ames Brothers, “Young At Heart” with Frank Sinatra and “Need You Now” and “Oh My Papa” with Eddie Fisher are all part of the regular fare on AM radio. Then there is Nat King Cole singing “Answer Me, My Love” and the Ames Brothers crooning about “The Naughty Lady of Shady Lane”.

Swanson & Sons introduces a nifty new idea,” the T.V. Dinner”. It's not exactly gourmet food, but the idea catches on.

TV Prime Time: The Jack Benny Show, The Ed Sullivan Show, I Love Lucy, December Bride, Disneyland, You Bet Your Life, Dragnet, Ford Theater, Jackie Gleason Show, and the George Gobel Show.

“And that’s the way it was 60 years ago” when I joined the Navy.

23 Mar 2014: I continue my journey with IUSS – (Ed Smock)

Continued working with the Signal Processing Working Group (SPWG) and related system developers on future capabilities for delivery in the Aug 2014 timeframe:

- Architecture Changes
- Array Signal Processing Beamformer Improvements
- Bearing Confidences and Combined Bearing Tool (CBT) Updates
- Geo-Related Updates
- Contact Follower Improvements
- FLEX Processing
- Display Group Editor and Search List
- T-SPED/N-SPED Processing
- Priority Search Agent (PSA)
- Acoustic Profiler Mitigation (APM)
- Virtual Operator Acoustic Correlation (VOAC)
- Learning Management System (LMS)
- Single Face Plate Functionality
- Twin-Line Array Shape Estimation (ASE) Enhancements
- TL29A Back Lobe Rejection
- TL29A Common Active (Playback)
- Digital Data Collection System (DDCS)

- ARAPS
- NFX Laptop – File Transfer Protocol (FTP)

“As you can see, this is not your father’s Oldsmobile.” – Many changes have taken place since the “days-of-paper”. (Ed)

20 Sep 2014: IUSS 60th Anniversary Reunion.

The Integrated Undersea Surveillance System (IUSS) commemorated its 60th anniversary during a celebration held Sept. 20 at the Marriott in Norfolk, Virginia.

The celebration was hosted by the Integrated Undersea Surveillance System CAESAR Alumni Association (IUSSCAA).

"As the director of IUSSCAA, I am proud that we host these IUSS anniversaries every five years," said Jim Donovan, a retired Navy captain. "The IUSSCAA is about 690 active members strong since being organized 20 years ago. Our undersea warfare contributions spans the years from 1963 to the present. The IUSSCAA hosts these anniversaries to honor the service of those Cold War warriors as well as today's undersea surveillance warfighters."



IUSS 60th Anniversary Reunion 20 Sep 2014



The Integrated Undersea Surveillance System (IUSS) commemorated its 60th anniversary during a celebration held Sept. 20 at the Marriott in Norfolk, Virginia.

The celebration was hosted by the Integrated Undersea Surveillance System CAESAR Alumni Association (IUSSCAA).

Vice Adm. Michael Connor, commander, Submarine Forces was the featured speaker. "I want to thank all of you for your service in support of undersea surveillance around the world," said Connor. "As a community, you do more than many know and others take credit for your hard work. When it was first suggested over 60 years ago as a means of exploiting contemporary oceanographic findings and state-of-the art-technology for wide-area undersea surveillance, the Sound Surveillance System was an audacious concept. Its successful implementation was one of the most impressive engineering feats.

"As the world situation evolves, it is important to note the role each of you have played in our nation's continued success. Our Navy can adapt and design new systems and alter our way of doing business to meet modern challenges as they arise. What can never be

replaced is the type of Sailors it takes to carry out our mission."

The mission of IUSS is multi-faceted. Operationally, they support anti-submarine warfare and tactical forces in detecting, classifying, and providing timely reporting of information on submarines and other contacts of interest. In addition, they conduct the maintenance needed on the processing and communications equipment used to carry out the operational mission.

IUSS provides the U.S. Navy with its primary means of submarine detection, both nuclear and diesel. The integrated system is made up of fixed, mobile, and deployable sensor detectors that provide vital tactical information to anti-submarine warfare forces.

Retired Navy Rear Adm. Gretchen S. Herbert, whose last assignment was as Commander, Navy Cyber Forces at Joint Expeditionary Base Little Creek-Fort Story, Virginia Beach, Virginia, was another guest speaker. During her early assignments, she served within the Integrated Undersea Surveillance System at Naval Facility Bermuda; at commander, Oceanographic Systems Atlantic; and at Naval Ocean Processing Facility, Dam Neck, Virginia.

"Each of our personal experiences and careers in IUSS were unique," said Herbert. "Some of us served only a handful of tours with SOSUS/SURTASS, while others like Master Chief Ed Smock began their careers at the start of the Cold War and saw the IUSS grow, shrink, and change as our mission and contributions to science and National Security changed over the ensuing decades. But we all shared a common thread - the knowledge that we were investing our time, energies and intellect to a mission that had silent but far-reaching impact to our National Security. Our experiences shaped us...not only during our time in the IUSS, but for the years and careers that followed."

20 Sep 14 CAPT Joseph P. Kelly Awards

A highlight of the IUSS 60th Anniversary Reunion was the presentation of the CAPT Joseph P. Kelly Award to OTCM George P. Widenor USN (Ret), OTACS Michael D. Weir USN (Ret) and Mr. George E. Miller (absent, Jim Donovan accepted the award for him).

CAPT Joseph P. Kelly Award recipients George Widenor 2014, Ed Smock 1995 and Mike Weir 2014 with the master list of recipients. - 20 Sep 2014



SOSUS/IUSS Years of Service Recognition – 20 Sep 14

“THE LAST PERSON STANDING”

At the conclusion of the guest speaker’s presentations, it has been the tradition for the audience to stand and receive recognition for their individual” Total years of service in SOSUS/IUSS”; and to sit down when the number of years representing their contribution is called (i.e., 10 yrs, 20, 25, 30, 35, 40, 45, 50, 55, 60 etc...).

And, out of this has grown another tradition - “Ed Smock is always the last person standing” - with 60 years service this time (the maximum available). (Will he ever quit ?)

Ed received a standing ovation at the IUSS 60th Anniversary Reunion for his 60 years of service with SOSUS/IUSS.



*“Ed standing to accept recognition for his 60 years of service to SOSUS/IUSS”
20 Sep 2014*

“Ed returning recognition to all his many friends and shipmates for their many years of service to SOSUS/IUSS” - 20 Sep 14



26 Oct 2017 - Creation of the Acoustic Technician Warrant Officer designator:

NAVADMIN 259/17 26 Oct 2017 announced the establishment of 25 billets specifically designated to provide acoustic experience and leadership to IUSS Per the NAVADMIN (see msg below) - "...This program provides a deliberate means of identifying and commissioning technically proficient Sailors to provide superior acoustic analytical support to Fleet and Task Force Commanders, primarily via the Integrated Undersea Surveillance System (IUSS)". Once approved, nine Warrant Officers assigned or previously assigned to IUSS immediately transferred to the designator.

UNCLASSIFIED
ROUTINE
R 261312Z OCT 17
FM CNO WASHINGTON DC
TO NAVADMIN
INFO CNO WASHINGTON DC
BT
UNCLAS
PASS TO OFFICE CODES:
FM CNO WASHINGTON DC//N1//
INFO CNO WASHINGTON DC//N1//

NAVADMIN 259/17

MSGID/GENDAMIN/CNO WASHINGTON DC/N1/OCT//

SUBJ/REDESIGNATION OF CHIEF WARRANT OFFICER SUBMARINE ELECTRONICS
DESIGNATOR 728X AS ACOUSTIC TECHNICIAN//

REF/A/DOC/OPNAV/14DEC09//
REF/B/MSG/CNO WASHINGTON DC/131346ZAPR17//
REF/C/DOC/COMNAVPERSCOM/3AUG14//
NARR/REF A IS OPNAVINST 1420.1B, ENLISTED TO OFFICER COMMISSIONING
PROGRAMS APPLICATION ADMINISTRATIVE MANUAL.
REF B IS NAVADMIN 090/17, FY-19 ACTIVE DUTY LIMITED DUTY OFFICER AND
CHIEF WARRANT OFFICER IN-SERVICE PROCUREMENT BOARD.
REF C IS MILPERSMAN ARTICLE 1212-020, REDESIGNATION PROCEDURES FOR
LIMITED DUTY OFFICERS (LDOS) AND CHIEF WARRANT OFFICERS (CWOS) WITHIN
THEIR RESPECTIVE COMMUNITY.//

RMKS/1. This NAVADMIN announces redesignation of the 728X Submarine
Electronics Technician to Acoustic Technician and supplements
references (a) and (b) soliciting applications for the FY-19 Active
Duty In-Service Procurement Board.

2. Applications from highly qualified and motivated active duty and
Full-Time Support chief, senior chief and master chief petty officers
will be considered for commissioning as acoustic technicians by the FY-
19 Chief Warrant Officer (CWO) In-Service Procurement Board. This
program provides a deliberate means of identifying and commissioning
technically proficient Sailors to provide superior acoustic analytical
support to Fleet and Task Force Commanders, primarily via the
Integrated Undersea Surveillance System (IUSS).

3. References (a) and (b) provide current policy and application procedures for the CWO program. Paragraphs 5 and 10 of reference (b) are modified for 728X applications to be postmarked no later than 30 November 2017.
4. In addition to requirements outlined in reference (b), applicants must be in the sonar technician (STG and STS) or Naval Aircrewmen Operator (AWO) ratings with one or more of the following Navy Enlisted Classifications: 0416, 0417, 0501, 0507, 0551 or 0553.
5. Current CWOs that meet the requirements in paragraph 4, or hold Additional Qualification Designators BA4, BA5 or BA9, may apply for redesignation without board action to 7281 in line with reference (c). Personnel meeting requirements and that are endorsed by the IUSS Type Commander and Limited Duty Officer/CWO community manager will be redesignated by Military Community Management (BUPERS-3). Sample re-designation request may be obtained by contacting the LDO/CWO Officer Community Manager as provided in paragraph 7.
6. Current 728X submarine electronics technicians will continue to be detailed by Submarine/Nuclear LDO/CWO Manager to electronics billets based on their technical skills.
7. Point of contact is Mr. Mitch Allen who can be reached at (901) 874-3044/DSN 882, or via e-mail at mitchell.allen(at)navy.mil.
8. This NAVADMIN will remain in effect until superseded or 30 September 2018, whichever comes first.
9. Released by Vice Admiral R. P. Burke, N1.//

BT
#0001
NNNN UNCLASSIFIED//

7 Nov 18: One of the first “new” Acoustic Technician Warrant Officers

To: Mr. Donovan and Mr. Smock,

First, thank you both for providing a great deal of knowledge on the IUSS Community. It has been helpful in my endeavors to explain to the folks at the uniform board the origins of the new Acoustic Warrant Officer specialty device (below). I think as we move forward building this community we must honor those who have served before us and laid the very foundation of what we are.

I was offered the honor to be one of the first few Acoustic Warrants when the program was opened up. I knew I was joining a rich history that has come a long way over the last 65 years. I challenge myself and my fellow Acoustic Warrants each and every day to keep the history of our system alive and venture into the future. I look forward to keeping contact with you both and sharing the growth of the acoustic community.

Again thank you for enhancing my knowledge of the past to help build the future!
(CWO3 Eric Heim COMSUBPAC N362, IUSS OPS/Plans, SURTASS Officer).

The globe represents our dominance of the global undersea environment.

The trident represents the Ocean Systems Technician rating (OT) which spanned from 1970 -1997 and was merged with the Sonar Tech rating. This was the core rating of Integrated Undersea Surveillance System (IUSS) when it was established. IUSS is the core career path for an Acoustic Warrant. The trident also represents the three disciplines of IUSS - fixed, mobile, and deployable systems.

The sea horse or Hippocampus has been associated with Integrated Undersea Surveillance System (IUSS) since the first NAVFAC was opened in the 1950's. All of these NAVFAC's in their command crest contained one or more elements displayed by this collar device. Many feature the seahorse as a predominate feature.
(CWO3 Eric Heim COMSUBPAC N362, IUSS OPS/Plans, SURTASS Officer).



27 Apr 2018: Keith Smock (Edwin “Keith” Smock Jr.) retires after 25 years of IUSS support related service.

Keith was hired by TRW Inc. in October 1984 and began supporting SURTASS just as USNS Stalwart (T-AGOS 1) completed IOC. For the next twelve (12) years he provided test and evaluation support of hardware and software development and integration. As a member of the Government Joint Test Group (JTG) he supported hardware and software acceptance testing, including SURTASS software releases R9, R10/11, R12, RJ1, Block Upgrade, and T(x).

Note: 12 Jan 1985 USNS Stalwart (T-AGOS 1) began the first operational SURTASS patrol – SOSUS became IUSS.

Hardware and software installation milestones supported:

- SURTASS R12 installation at NOPF Ford Island
- Initial SURTASS installation at NOPF Whidbey Island
- Initial installations aboard JDS Hibiki (J-AOS 1), JDS Harima (J-AOS 2), and the ASWC, Yokosuka
- Initial SURTASS installation at JMF St. Mawgan

In July 1996 he received the SURTASS Achievement Award from SPAWAR. The award, rarely given to contractors, was in recognition of the excellent level of support provided to SURTASS over many years.

From November 2000 through March 2003, employed by Digital System Resources, Inc., he returned to SURTASS and provided software development test support to SURTASS ARCI-I.

In July 2007, employed by the Johns Hopkins University Applied Physics Laboratory, he returned to IUSS and as a member of the Government on-site IV&V test team at Lockheed Martin Manassas, VA provided software acceptance test support to the Integrated Common Processor (ICP) program; conducting acceptance testing of all delivered ICP builds.

Keith retired in April 2018 after a combined 25 years of service to IUSS.

(Yes, I trained my relief however; I did something wrong as my relief retired before I did.
– Ed Smock)

24 Jan 2019 - Va. Beach’s NOFP Dam Neck helping US, UK expand undersea surveillance capabilities (By Mass Communication Specialist 2nd Class Sarah E. Horne, Commander, Submarine Force Atlantic Public Affairs.).

New technology that is helping the U.S. and a long-standing ally, Great Britain, integrate their undersea surveillance was celebrated at Naval Ocean Processing Facility (NOPF) on January 24.

Maritime surveillance is key for providing critical information through the two countries open communication lines, and this Hampton Roads project is certainly going to play a big part in making things safer and more collaborative for both countries.

According to the Navy, the state-of-the-art Integrated Undersea Surveillance System (IUSS) operations floor expansion comes equipped with improved surveillance technologies for faster input and analysis of international waters, providing vital information for homeland security in the United States and for our allies in the United Kingdom.

“The new operations watch floor is a fantastic addition to our capabilities,” said Cmdr. Aaron Holdaway, commanding officer NOPF Dam Neck. “This is cutting-edge technology that has been years in the making between the United Kingdom and the United States to develop and to get installed into this building. It comes along with new software, new hardware and new mission capabilities marking a true achievement between our two countries.”

NOPF Dam Neck, a component of IUSS, was founded 40 years ago to support anti-submarine warfare and tactical forces by detecting, classifying, and providing timely reporting of information on submarines and other contacts of interest, said the Navy. The NOPF international team also has direct links to associated surveillance towed array sensor system (SURTASS) ships, gathering long-term acoustic, oceanographic, and hydrographic information.

“The Sailors and Airmen, both U.S. and UK, are what makes NOPF Dam Neck such a formidable asset in the battle for undersea dominance,” said Rear Adm. Paul Halton, OBE, Commander, Maritime Operations Royal Navy. “While the future holds many challenges, there is also cause for great optimism; the mettle of our men and women will always be a deciding factor in the Anti-Submarine Warfare campaign.”

The Navy added that The NOPF team works tirelessly, 24/7, 365 days a year, to monitor the ocean night and day in the spirit of the undersea warrior motto, “Nyns Us Convy a Y’n Downder,” which translates from Cornish to “No Sanctuary in the Deep.” The ceremony of the expansion of NOPF is considered a true celebration of the U.S./UK partnership.

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international team also has direct links to associated surveillance towed array sensor system (SURTASS) ships, gathering long-term acoustic, oceanographic, and hydrographic information.

24 Jan 2019: NOPF DN: Ribbon Cutting Ceremony at which Naval Ocean Processing Facility Dam Neck officially transitioned into its new Integrated Undersea Surveillance System Facility. Officiating:

CDR Neil Botting, Senior British Officer NOPF DN; CDR Charleese Sampa, XO NOPF DN; CDR Aaron M. Holdaway, CO NOPF DN; CAPT (RN) Nicholas Wheeler, JFC C4I SR Dep. Head; CAPT Scott Luers, Commander Undersea Surveillance; Commodore Andrew Betton, OBE, Naval Attaché British Embassy, Wash. D.C. – Guest Speakers: Rear Admiral E. Andrew Burcher, Vice Director Navy Staff, Deputy Commander Submarine Force, Atlantic and Pacific; Rear Admiral Paul Halton, OBE, Commander, Operations Royal Navy.





They honored me by having me stand in the center.
Ed Smock 65 years with SOSUS/IUSS

REAR ADMIRAL PAUL HALTON, OBE
Commander, Operations Royal Navy

REAR ADMIRAL E. ANDREW BURCHER
Vice Director Navy Staff, Deputy Commander Submarine Force, Atlantis and Pacific



“This British Defence Staff coin was given to Ed Smock by COMMODORE ANDREW BETTON, OBE
Naval Attaché British Embassy, Washington D.C. in appreciation for his 65 years service to Undersea Surveillance”.

History of Naval Ocean Processing Facility, Dam Neck

Naval Ocean Processing Facility (NOPF) Dam Neck was established in October 1979 with a crew of approximately 8 officers and 50 enlisted. The facility emerged from a need to consolidate undersea surveillance sites along the eastern seaboard of the United States. With the 1985 installation of Surveillance Towed Array Sensor System (SURTASS) shore equipment and the introduction of USNS STALWART (T AGOS 1) to the Atlantic Fleet, NOPF Dam Neck became the first undersea surveillance command to operate both fixed and mobile surveillance systems. As additional T-AGOS ships became operational and manning concurrently increased, NOPF Dam Neck grew to become the largest undersea surveillance facility, both in terms of manpower and operational capability, in the Atlantic and Pacific Fleets. At the height of the Cold War, NOPF Dam Neck was comprised of 500 personnel.

As one of the few remaining Integrated Undersea Surveillance (IUSS) facilities, NOPF Dam Neck has become the premier undersea surveillance site, conducting operations throughout the Atlantic Ocean and Norwegian Sea. In May 2009, NOPF Dam Neck officially became a Combined Command, welcoming the United Kingdom Detachment and an increased area of responsibility. This expansion also made NOPF Dam Neck the largest contingent of United Kingdom personnel in the United States. In 2018, NOPF Dam Neck experienced another expansion, this time in capabilities, opening a new building featuring a new watchfloor and processing center that showcases the latest IUSS technologies. This expansion is consistent with the renewed importance both countries place on the capability IUSS provides to their nations.

NOPF Dam Neck proudly boasts its mission, "To provide timely and accurate acoustic cueing to operating and supporting forces, and to conduct continuous maritime surveillance for homeland security 24/7/365." It is comprised of approximately 18 Officers, 271 enlisted, and 3 civilians from the United States Navy, United Kingdom Royal Navy, and Royal Air Force. Together, they are the cornerstone of the IUSS community.

NOPF Dam Neck January 2019



21 Sep 2019: IUSS 65th Anniversary Reunion.

The Navy’s Integrated Undersea Surveillance System (IUSS) celebrated its 65th anniversary at the Norfolk Waterside Marriott on 20 and 21 September 2019. The celebration was hosted by the Integrated Undersea Surveillance System CAESAR Alumni Association (IUSSCAA).

The guest speaker for the event was Vice Admiral Charles A. Richard who is the Commander, Submarine Forces; Commander, Submarine Force Atlantic and Commander, Allied Submarine Command.

IUSS 65th Anniversary Keynote Address – 21 September 2019 Vice Admiral Chas Richard, U.S. Navy

Introduction and Special Recognition

- Fellow Admirals, Commodores, Commanding Officers, families, friends, international partners, active and past operators of the US Navy’s best secret – what an amazing gathering of so many who have contributed so greatly to the defense of our nation and our allies!
- It is an honor to be with you tonight, as we celebrate the 65th anniversary of this incredible jewel we know as IUSS. I know, I know – the IUSS mission was declassified decades ago, but whether you’re operating the system now, or operated it 65 years ago like Mr. Ed Smock... let me digress a second. 65 years! Mr. Smock, I understand you have three children who have recently retired from successful careers? Yet you continue to work on in the system you love. That dedication is simply beyond words. You truly are the institutional knowledge we so badly need throughout our Navy. Let’s give him a round of applause...
- But you and I all know that this very exclusive and covert society you are a part of remains little known to the American public. If only that were more true for our adversaries as well!
- You know, I’ll tell ya, following the Cold War, the IUSS community and



system as a whole was in flux – experiencing a significant reduction in focus and resources. But I am here to tell you, and Admiral Converse and Commodore Luers can attest to this, as our nation returns to Great Power Competition, now with two potential adversaries instead of one, IUSS and its value are absolutely well known to our nation’s top defense officials, your system is very much in the spotlight and on the ascendancy. But I get ahead of myself – let me reflect for a minute on the remarkable history which has brought IUSS to where it is today.

IUSS History and Importance

- In 1954, the same year Ed Smock graduated from sonar school and reported to IUSS, Naval Facility Ramey was commissioned under a program then classified as Project CAESAR.
- The entire concept of the Sound Surveillance System, or SOSUS, was audacious – working to exploit low frequency sound waves that travel long distances in the ocean in order to track the growing Soviet ballistic missile submarine threat. It was also highly secretive – Sailors thought they were reporting to oceanographic research stations to learn about whales and conduct ocean floor surveys.
- As the Father of SOSUS, CAPT Joseph Kelly, shepherded the system along, NAVFAC Ramey was joined by more acoustic processing facilities worldwide. Many of you in this room operated in these geographically dispersed places, like Keflavik, Iceland; Argentia, Canada; Guam; Brawdy, United Kingdom; and Adak, Alaska, just to name a few.
- You contributed to the Fleet’s anti-submarine prosecutions during the Cuban Missile Crisis, helped pinpoint USS THRESHER when that ship experienced catastrophic problems and perished on the ocean floor, as well as several Soviet submarines when they experienced similar fates, but, most importantly, you tracked numerous Soviet submarines on an almost daily basis, giving national leadership the confidence that we could locate and sink those dangerous units in time of hostilities. Your contributions played a significant role in our Nation’s triumph in the Cold War, something for which you have never been given enough credit.
- In the 1980s you added a fleet of Surveillance Towed Array Sensor System (SURTASS) ships to your arsenal. These assets provided a mobile capability to fill gaps where no fixed systems existed, and soon proved so invaluable that additional ships were added until they peaked at 14 operational SURTASS in the U.S. Navy.
- At all points you were innovative, working with the acquisition community to develop and field new technology, better sensors, improved processing equipment, and smoother communications gear so you could make faster and more accurate reports to Fleet commanders.

- Many of you started in this business by “walking the beams” – literally standing watch by walking down rows of graphite scrolling displays, resembling paper EKGs, with each piece of equipment accounting for one beam of the array. We eventually progressed to scrolling those beams at a computer terminal; but the acoustic analysis art you perfected – and it is still an art – remains the foundation of the excellent performance that we expect from IUSS.

The Future is Bright

- Today, that innovation continues. As I previously mentioned, senior leadership in our Navy and our defense department recognize the crucial importance of wide area maritime surveillance as the first step in the undersea kill-chain. As a result, we are seeing significant investment IUSS, something that has been unmatched since prior to the fall of the Berlin Wall. My own Submarine Force Commander’s Intent, as well as other Pentagon resource documents clearly identify that expanding IUSS is one of our top priorities.
- The acquisition community is continuously working on a whole host of new technology. They recently perfected the most advanced man-made acoustic sensor ever fielded, and that sensor has been incorporated into our first new fixed systems in this century.
- As these new systems provide us a larger quantity of data – i.e., making a larger haystack, so to speak – we are simultaneously working on artificial intelligence to create machine filters so that our analysts have a greater chance of finding the needle – allowing them to apply their acoustic expertise to finding submarines and not tracking biologics or surface merchants.
- We are also standing up a deployable family of sensors as a full program of record in this next fiscal year – taking some of the great prototype work which has been done to expand the IUSS toolkit with a series of expeditionary passive, active, and mobile sensors.
- As we speak, we are experimenting operationally with an expeditionary SURTASS concept by which we take a twin line passive array similar to what is deployed in our SURTASS Fleet, and place it on a contracted vessel of opportunity.
- Frankly speaking, we simply have not had the quantity of SURTASS ships we would like to cover all the gaps we need. SURTASS-E, as it is called, should add capability and alleviate that quantitative shortfall while we work to build the next version of SURTASS ships in the late 2020s.
- In addition to SURTASS, we are working to network the ocean floor, taking advantage of our IUSS infrastructure by adding active capability, nodes to charge and communicate with a fleet of unmanned undersea vehicles (UUVs), and

improve communication with all undersea assets. The future of IUSS is bright, and I am excited for, and look forward to seeing the progress we make as we reinvest in this crucial system.

Importance of Our People

- But regardless of any technology we bring to bear, or the amount of money we invest in new systems, our people remain the backbone of our IUSS capability.
- Since 1954 you have stood the watch, seeing us through the many long decades of the Cold War. Now, as we face our this era of Great Power Competition, we are grateful for the leadership of the people in this room – Mr. Ed Smock, former IUSS Commodores and Commanding Officers, CAPT Kelly award winners, our international partners, and all who have walked the beams – either literally or figuratively.
- That leadership has produced today’s IUSS masters of the undersea domain – a talented mix of young Sailors through senior civilian warriors who recognize their vital role in improving the lethality of our anti-submarine forces by leveraging their acoustic expertise and vigilance.
- As I prepared for tonight’s event, I was impressed to see how many women have been a vital part of the IUSS leadership team. Long before women were significantly integrated into our Navy, they were taking commanding roles within the IUSS community. Women like Norah Taylor-Brown, the first woman in an IUSS operational billet at NACFAC Eleuthera in 1970.
- LCDR Peggy Frederick, who became the first female Commanding Officer of a NAVFAC when she took command in Lewes, Delaware in 1977.
- CAPT Marnee Finch, who was the first female IUSS Commodore when she relieved as Commander, Undersea Surveillance, Pacific, in 1993, back when we had two Commodores, one on each coast.
- In an unprecedented first for both IUSS and the U.S. Navy, then CDR Kathy Donovan relieved her husband, then CDR Jim Donovan, as Commanding Officer of Naval Ocean Processing Facility Dam Neck in 2001.
- Tonight I’d also like to recognize the first Intelligence Officer and first African-American woman to command a NOPF, CAPT Charleese Hasan, who currently serves as the Commanding Officer at NOPF Dam Neck.
- Thank you to CAPT Hasan and all of our IUSS leaders for your dedication to providing “continuous maritime surveillance for homeland security 24/7/365.”

- The women and men of the IUSS community share in a proud heritage of undersea expertise. When I relieved as the Submarine Force Commander last year, I told our team to Prepare for Battle. Our Navy must be ready for combat today. When the shooting starts, no one gets a few more years, months, or even days to prepare. We fight with what we have. That includes our level of training and expertise.
- So, my challenge to those of you operating the system today is to prepare well, as our time may be short. Work to ensure that your systems and your people are at the highest levels of preparedness possible. Think creatively, as you always have, and work to optimize new technology as it comes to you. Take pride in the global excellence for which IUSS is renowned, but be on guard for any slips from that high standard.
- I am confident we will prevail in any conflict, but the sacrifice which the American people and military are forced to make will be inverse to the quality of the preparations we make today.

Closing

- Let me close by saying that I am extremely proud of the IUSS community. Thank you for your hard work, dedication and support of your shipmates.
- I'd like to extend a special thank you to CAPT Jim Donovan and the rest of the unsung heroes of the anniversary committee for putting together such a splendid event. The IUSS heritage that is represented by the people in this room is simply remarkable.
- You do yourselves and your nation a service by conducting these events and keeping alive such a unique community and camaraderie. Thank you for the opportunity to join you tonight, and my best wishes for the continued success of the CAESAR Association.
- You are truly Masters of the Undersea Domain! God bless the Submarine Force, all Undersea Warriors, and the United States. Thank you – good night.



21 Sep 19 CAPT Joseph P. Kelly Award

A highlight of the IUSS 65th Anniversary Reunion was the presentation of the CAPT Joseph P. Kelly Award to Mr. Inge Dahl by Commander Undersea Surveillance (CUS) CAPT Scott C. Luers USN.



Also in attendance were six previous CAPT Kelly Award Recipients: (left to right) Inge Dahl, Jim Donovan, Ed Smock, Ragnar Schaug-Pettersen, John Parrish, Jerry McDonald, and Tim Cornett.



Wood base is from the “original building” – specially made by Jeff Cleary.

CAPT Kelly Award Recipient lapel pin.
Seahorse-Gold, Trident-Silver



SOSUS/IUSS Years of Service Recognition – 21 Sep 2019

“THE LAST PERSON STANDING”

At the conclusion of the guest speaker’s presentations, it has been the tradition for the audience to stand and receive recognition for their individual” Total years of service in SOSUS/IUSS”; and to sit down when the number of years representing their contribution is called (i.e., 10 yrs, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65 etc...).

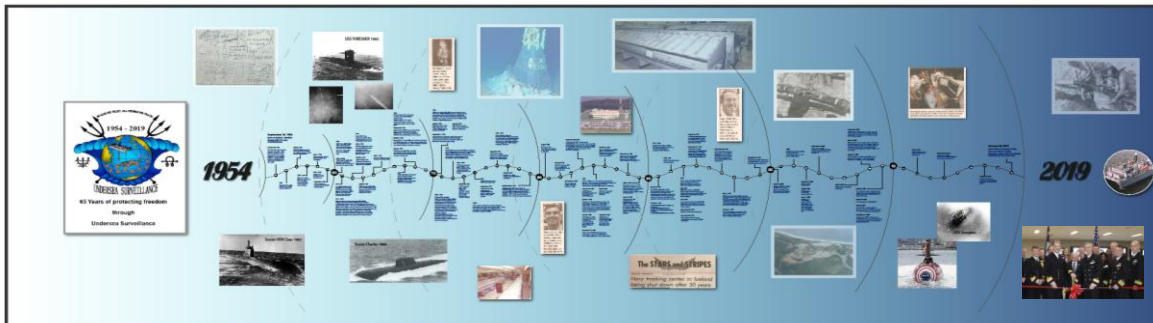
And, out of this has grown another tradition - “Ed Smock is always the last person standing” - with 65 years of service this time (the maximum available). (Will he ever quit ?)

Ed received a standing ovation at the IUSS 65th Anniversary Reunion for his 65 years of service with SOSUS/IUSS.



20 Sep 2019: 65 Years of Undersea Surveillance

NOPF Dam Neck installed a 30 foot time-line mural recognizing a few highlights (from “Our Book”) of the first 65 years of Undersea Surveillance. Thank you PO2 (ET2) Lisa Jones for your fine work on this project.



1 Oct 2019: NOPF Dam Neck hosted its 40th Anniversary Celebration with a ceremony dedicating of the new watchfloor in the names of CAPTs Jim and Kathy Donovan; both previous Commanding Officers of NOPF DN and the naming of the “new” Ed Smock Conference Room. Also in attendance was CAPT Paul “Scratch” Hryskanich (USN Ret.) the first CO of NOPF DN.



25 Oct 2019: Cold War Museum Vint Hill, VA

The IUSS (SOSUS/SURTASS) and the men and women who served in the community during the Cold War are finally represented appropriately at the Cold War Museum, Vint Hill, VA. This is the display presented at the IUSS 65th anniversary.

Vint Hill Farms Station was the US Army monitoring site where intercepted Japanese & German messages were sent to the Army's Arlington Hall, VA & Naval Security Station in DC for deciphering, as discussed in "Code Girls".



You can locate their website here." <https://www.smithsonianmag.com/travel/cold-war-museum-winery-virginia-180962428/> — feeling proud. – Jim Donovan.

23 Jun 2021 – “History touching History”

Plaque presented to Ed Smock by Jeff Cleary at Jeff's retirement celebration.

The picture is Ed touching the original “Bridge” building in 2013. Jeff made the wood frame using wood from the same building.



8 April 2021 – Jeffrey D. Cleary is selected by Commander Undersea Surveillance (CUS) CAPT Brian C Taddiken to receive the CAPT Joseph P. Kelly Award. Jeff elected to receive the award at his forthcoming retirement celebration on 23 Jun 21.

The wooden base was made from wood from the original “Bridge” building.



Commander Undersea Surveillance (CUS) CAPT Brian C. Taddiken presents the CAPT Joseph P. Kelly Award to Mr. Jeffrey D. Cleary 23 June 2021.

23 Jun 2021 – The Commander, U.S. Pacific Fleet Admiral S.J. Paparo presented MR. JEFFREY D. CLEARY with the Department of the Navy SUPERIOR CIVILIAN SERVICE AWARD. Commander Undersea Surveillance (CUS) CAPT Brian C Taddiken made the presentation.

The Navy Superior Civilian Service Award is the highest honorary award the Chief of Naval Operations or the Commandant of the Marine Corps may bestow on a civilian employee in the Department of the Navy and the highest award granted at the major claimant level. (Wikipedia).





COMMANDER
UNITED STATES PACIFIC FLEET

The Commander, U.S. Pacific Fleet takes pleasure in presenting
the Department of the Navy SUPERIOR CIVILIAN SERVICE AWARD to

MR. JEFFREY D. CLEARY

for service as set forth in the following

CITATION:

For superior civilian service as Director of Intelligence and Senior Intelligence Officer for Commander Undersea Surveillance from January 2016 to June 2021. Mr. Cleary superbly performed his demanding duties in a highly professional manner. Demonstrating unparalleled dedication and professionalism, he expertly led the Integrated Undersea Surveillance System Intelligence directorate with around the clock support that provided the highest quality Acoustic Intelligence support to global Undersea Warfare and intelligence collection operations. Working with numerous Fleet Commands, Navy, national intelligence agencies, and international partners, he spearheaded programs that delivered intelligence analysis from fixed, mobile, and deployable sensor systems, in addition to all-source intelligence, and provided critical and timely actionable intelligence to worldwide Theater Undersea Warfare Commanders, Theater Commanders, and Combatant Commanders. Through an unwavering commitment to innovation, he laid the foundation for an Undersea Warfare fusion capability that provided real-time cross-platform, cross-domain acoustic contact evaluation and informed a comprehensive undersea common operating picture. Mr. Cleary's outstanding professionalism and total dedication to duty reflects great credit upon himself and upheld the highest traditions of the Department of the Navy.

A handwritten signature in black ink, appearing to read "S. J. Papparo", is written over the printed name.

S. J. PAPPARO
Admiral, U.S. Navy
Commander, U.S. Pacific Fleet

30 Sep 2022: “NOPF DN Name Change Ceremony”

Naval Ocean Processing Facility Dam Neck VA name changed to:
Theater Undersea Surveillance Command, Atlantic (TUSC LANT)



**Left to Right: CAPT Katherine Donovan (10th CO), CAPT Paul “Scratch” Hryskanich (1st CO), Ed Smock, CDR Kenneth Myrick (CO), CDR Eric Kirlin (20th CO) and CAPT James Donovan (9th CO).
The event took place in the Ed Smock Conference Room.**

List of previous NOPF DN Commanding Officers:

21 - 2022 CDR Kenneth B. MYRICK	(Mar 22 – Present)
20 - 2020 CDR Eric KIRLIN	(Jul 20 – Mar 22)
19 - 2019 CAPT Charleese HASAN	(Jun 19 – Jul 20)
18 - 2017 CDR Aaron HOLDAWAY	(Nov 17 – Jun 19)
17 - 2015 CDR Robert TREPETA	(May 15 – Nov 17)
16 - 2013 CDR Jeffery JACOBY	(May 13 – May 15)
15 - 2011 CDR Daniel McGUINNESS	(May 11 – May 13)
14 - 2009 CDR Marc T. STEINER	(Jun 09 – May 11)
13 - 2007 CAPT Peter LINTNER	(Feb 07 – Jun 09)
12 - 2005 CDR Charles J. “Jeff” WASHKO	(Apr 05 – Feb 07)
11 - 2003 CDR Debra M. LIVINGOOD	(Jun 03 – Apr 05)
10 - 2001 CAPT Katherine M. DONOVAN	(Aug 01 -Jun 03)
9 - 1999 CAPT James M. DONOVAN	(Aug 99 – Aug 01)
8 - 1997 CAPT Eola L. SCOTT	(Aug 97 – Aug 99)
7 - 1995 CDR Larry D. WILCHER	(Jul 95 – Aug 97)
6 - 1993 CDR Jo Anne L. GILCHRIST	(Jul 93 – Jul 95)
5 - 1991 CDR Leslie J. SKOWRONEK	(Jul 91 – Jul 93)
4 - 1989 CAPT J. Mark VILLARREAL	(Jan 89 – Jul 91)
3 - 1986 CAPT Robert L. TESTWUIDE	(Aug 86 – Jan 89)
2 - 1984 CAPT William E. RATLIFF	(Aug 84 – Aug 86)
1 - 1979 CAPT Paul L. “Scratch” HRYSKANICH	(Sep 79 – Aug 84)

NOPF DN’s Commanding Officer’s Coin:

Upon the conclusion of the ceremony, CDR Kenneth B. Myrick, the last CO of NOPF DN and the first CO of TUSC LANT, gave me what very well might be one of the last NOPF DN coins presented.



The commands name has changed however, that will not diminish the accomplishments of those that served under the NOPF DN title while Protecting Freedom through Undersea Surveillance for the past 43 years. – Ed Smock for all those that served...

Invocation: (Our own Ms. Phyllis Carter)

Let us pray. Heavenly Father, I pray a blessing over each individual that has joined us this morning to give honor to a lasting name and to welcome a new name.

Father God, we use a name to show its meaning, purpose and destiny. Naval Ocean Processing Facility Dam Neck has carried this name for 43 years. Father God we honor the first Commanding Officer, each one who has followed and we honor the current Commanding Officer.

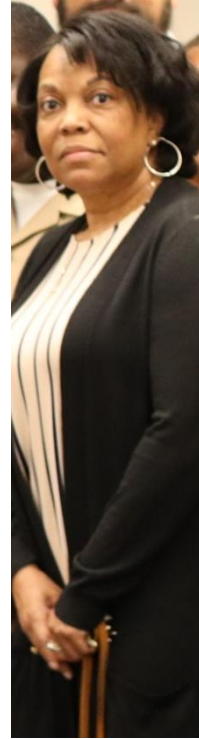
Now Father God we have a new name. A name or identity is a powerful thing. It is a description that allows people to make quick judgments and assumptions about us. While we can understand the harm of assumptions, Father God for the human mind, it is a fast way to categorize a lot of information in a short amount of time.

The word Theater is a place or area where some important action is carried on; as in a theater of war. Ancient Greek, Father says a place for viewing on a world stage.

So Father God, I bless the new name, Theater Undersea Surveillance Command, Atlantic. That it represents identity and expresses the essential nature of its bearer.

And Father God perhaps the most scriptural significance of names is not so much in the label as it is in the reputation of the holder of the label. A name identifies, signifies and specifies.

And Father God as I bless the name, I bless the members, past, present and future that each remains what we know it to be and what it shall be....great. And we say make it so, in Jesus Name. Amen and so be it.



Listing of SOSUS/IUSS Commodores

ATLANTIC

1958	1-May	Oceanographic System, Atlantic was established. CAPT W R LAIRD, USN assigned as Commanding Officer. Oceanographic Units at Norfolk, New York, and San Juan were disestablished on May, 1-, 15-, and 30 respectively: (SECNAVNOTE 5450, 6 May 1958)
1958	24-Jun	Title of officer-in-charge of OSL changed from C.O. to Commander, Oceanographic System, Atlantic: (SECNAVNOTE 5450, 24 Jun 1958)
1959	31-Aug	CDR J F WEIDLING, USN assumed COSL
1959	30-Nov	CAPT S A BOBCZYNSKI, USN assumed COSL
1961	28-Jul	CAPT A R GORDON, USN assumed COSL
1963	18-Jun	CAPT R J ROBISON, USN assumed COSL
1965	19-Apr	CAPT Robert D MCWETHY, USN assumed COSL
1968	5-Apr	CAPT Allen E MAY, USN assumed COSL
1970	13-Oct	CAPT C E WOODS, USN assumed COSL
1973	4-Sep	CAPT G C CANAAN, USN assumed COSL
1975	14-Mar	CAPT D A WILLIAMS, USN assumed COSL
1975	15-Oct	CAPT Jacob C BROWN, USN assumed COSL
1977	28-Oct	CAPT Douglas M SIMON, USN assumed COSL
1980	18-Nov	CAPT Ernest J (Jack) SABOL, Jr, USN assumed COSL
1983	15-Mar	CAPT Peter R CATALANO, USN assumed COSL
1985	26-Aug	CAPT William J (Jerry) FOGLE, USN assumed COSL
1987	28-Aug	CAPT Jonathan D (Dave) MUSTIAN, USN assumed COSL
1989	25-Aug	CAPT Merrill H DORMAN, USN assumed COSL
1991	31-May	CAPT John M PARRISH, USN assumed COSL
1991	1-Oct	<u>COMOCEANSYSLANT (COSL) was changed to COMUNDERSEASURVLANT (CUSL)</u>
1993	30-Jun	CAPT Alfred E PONESSA, USN assumed CUSL
1994	15-Aug	COMUNDERSEASURVPAC (CUSP) was disestablished;
	15-Aug	<u>CUSL and CUSP were merged to form COMUNDERSEASURV (CUS)</u>
1995	1-Sep	CAPT Randall E WAGNER, USN assumed CUS
1997	14-Aug	CAPT Gerald W FABER, USN assumed CUS
1999	Aug	CAPT Neil E RONDORF, USN assumed CUS
2001	24-Aug	CAPT Gregory M VAUGHN, USN assumed CUS
2003	22-Aug	CAPT Stephen G. GABRIELE, USN assumed CUS
2005	13 May	CAPT David J KERN, USN assumed CUS
2007	22-May	CAPT Peter W. FURZE, USN, a meteorologist, assumed CUS
2009	27-Mar	CAPT Paul K HEIM, II USN assumed CUS
2010	15-Oct	CAPT Charles "Scott" RAUCH, USN assumed CUS
2015	22-May	CAPT Kevin S MOONEY, USN assumed CUS
2017	8-Dec	CAPT Scott C. LUERS, USN assumed CUS
2020	10-Jan	CAPT Brian C. TADDIKEN, USN assumed CUS
2021	27 Aug	CAPT Steven E, FAULK, USN assumed CUS

PACIFIC

1964	1-Sep	CAPT David M DIBREL, USN assumed COSP
1965	30-Aug	CAPT John R POTTER, USN assumed COSP
1967	27-Jan	CAPT George Carlton COOK, USN assumed COSP
1968	13-Dec	CAPT John Taylor RIGSBEE, USN assumed COSP
1971	28-Jul	CAPT Richard A HOFFMAN, USN assumed COSP
1974	Jun	CAPT William C GREEN, USN assumed COSP
1974	Aug	CAPT Jerome L O'BRIEN, USN assumed COSP
1976	17-Jul	CAPT Jerry L MITCHELL, USN assumed COSP
1979	21-Sep	CAPT Duane A COX, USN assumed COSP
1981	13-Aug	CAPT Richard M CHANSLOR, USN assumed COSP
1983	13-Sep	CAPT Robert Stuart FITCH, USN assumed COSP
1985	15-Aug	CAPT Ira Hearst COEN, Jr., USN assumed COSP
1987	17-Jul	CAPT Alan Robert MORE, USN assumed COSP
1989	Aug	CAPT Frederick R CRAWFORD, USN assumed COSP
1991	30-Aug	CAPT Raymond D WOOLRICH, USN assumed CUSP
1993	4-Aug	CAPT Marnee L FINCH, USN assumed CUSP
1994	15-Aug	<u>CUSL and CUSP were merged to form COMUNDERSEASURV (CUS)</u>



SOSUS/IUSS MONITORING THE WORLD’S OCEANS

69 years of protecting freedom through Undersea Surveillance.

SOSUS/IUSS Log 1949 – 2023

	This historical log was created and maintained by Mr. Ernest Castillo, III , GS as a classified document until 1995, when “Ernie” retired from Government Service; it was then edited by OTCM (Ret) Jack Holdzkom to eliminate classified material. Subsequent additions have been made by OTCM (Ret) Ed Smock, Jack, and others. It is a working document, with occasional updates made.
DATE	EVENT
1949	
	Navy announces intention to exploit passive sonar in its Anti-Submarine Warfare (ASW) effort
1950	
Jan	Project JEZEBEL undertaken on the recommendation by Committee on Undersea Warfare of the National Research Council
Feb	Project HARTWELL authorized study in long-range detection aspects in ASW
Dec	Bell Telephone Laboratories (BTL) authorized to research detection of low-frequency underwater sound
1951	
	Projects JEZEBEL (Equipment R&D), CAESAR (Procurement, installation, & evaluation), and MICHAEL (Operational use of equipment) initiated for the development of six experimental stations
Dec	ENS Joseph P KELLY, USN assigned as Project CAESAR Program Manager, BUSHIPS Code 849

	Six-element test array installed at Eleuthera
1952	
	Classified name SOSUS established; unclassified name CAESAR established to cover installation/production
Jun	First USN evaluation of LOFAR detection principle, using the experimental laboratory at Eleuthera
	Cable ships USS <i>Neptune</i> (ARC 2) and USACS <i>Albert J Myer</i> assigned to Project CAESAR
	CNO directs BUSHIPS to procure six sets of LOFAR station components for deployment in the North Atlantic basin; number of stations planned later increased to nine
1954	
May	USN system evaluation, using labs at Eleuthera and Bermuda, w/Evaluation Center at COMCARIBSEAFRON, San Juan, PR
	Ten additional CAESAR stations (3 Atlantic, 7 Pacific) authorized
	Sound Search Course 572 "Green Door" established at Fleet Sonar School, Key West, FL
18 Sep	First NAVFAC, Ramey AFB, PR commissioned; LCDR D. E. MCGUIRE, USN was the first CO
23 Oct	NAVFAC Grand Turk, BWI commissioned
	Five RCN WRENs attend Course 572; Leading WREN Kathryn Leola MacDONALD, future Mrs Ed SMOCK
18 Dec	NAVFAC San Salvador, BWI commissioned
1955	
28 Feb	NAVFAC Ramey AFB, PR (Station CHARLIE) became operational
1 Apr	NAVFAC Shelburne, Nova Scotia commissioned as a Joint USN/RCN Station
2 May	NAVFAC San Salvador (Station BAKER) became operational
1 Jun	NAVFAC Bermuda commissioned
30 Jun	NAVFAC Grand Turk (Station ITEM) became operational
2 Aug	NAVFAC Nantucket, MA commissioned
14 Aug	NAVFAC Shelburne (Station FOX) became operational
15 Aug	NAVFAC Cape May, NJ commissioned
1 Nov	USN conducted evaluation of three-station system (BAKER, CHARLIE, and ITEM) and Evaluation Center at San Juan, PR
11 Nov	NAVFAC Bermuda (Station DOG) became operational
2 Dec	NAVFAC Bermuda (Station EASY) became operational
1956	
11 Jan	NAVFAC Cape Hatteras, NC commissioned
1 Feb	Evaluation Center COMEASTSEAFRON New York and Control Center CINCLANTFLT Norfolk, VA became operational
14 Feb	NAVFAC Nantucket (Station HOW) became operational
2 Mar	NAVFAC Cape May (Station GEORGE) became operational
13 Apr	NAVFAC Cape Hatteras (Station ABLE) became operational
9 Aug	NAVFAC Antigua, BWI commissioned
13 Dec	NAVFAC Antigua (Station JIG) became operational
1957	
27 May	NAVFAC Cape Hatteras (Station SUGAR) became operational
Jun	Experiments with shallow-water system (HOW-YOKE and HOW-XRAY) began at NAVFAC

	Nantucket
10 Sep	NAVFAC Eleuthera, BWI commissioned
1 Oct	NAVFAC Barbados, BWI commissioned
31 Oct	NAVFAC San Nicolas Island, CA commissioned; LCDR T C ONDRECHEN, USN was the first CO
6 Dec	NAVFAC Barbados (Station LOVE) became operational
	1958
8 Jan	NAVFAC Point Sur, CA commissioned; LCDR S P DORNBLASER, USN was the first CO
6 Feb	NAVFAC Eleuthera (Station MIKE) became operational
25 Mar	NAVFAC Centerville Beach, CA commissioned; LCDR R S CHANEY, USN was the first CO
1 May	Oceanographic System, Atlantic established; CAPT W R LAIRD, USN assigned as Commanding Officer. Oceanographic Units at Norfolk, New York, and San Juan were disestablished on 1, 15, and 30 May, respectively. (SECNAVNOTE 5450 of 6 May 1958)
13 May	NAVFAC Coos Head, OR commissioned; LCDR F D LAWS, USN was the first CO
14 May	NAVFAC Pacific Beach, WA commissioned; LCDR A J CARRILLO, USN was the first CO
24 Jun	Title of officer-in-charge of OSL changed from C.O. to Commander, Oceanographic System, Atlantic (COSL): SECNAVNOTE 5450 of 24 Jun 1958
	Project CAESAR supports 1958-60 installation of Atlantic and Pacific Missile Impact Location Systems
	1959
1 Jul	NAVFAC Shelburne transferred to RCN for operations and support and became HMCS Shelburne; USN Liaison Officer billet was established.
31 Aug	CDR J F WEIDLING, USN assumed COSL
10 Sep	CNO established requirement for SOSUS Monthly Report (CNO ltr OP312E1, Ser 0030P31 of 10 Sep 1959)
1 Oct	NAVFAC Argentia, Newfoundland commissioned
30 Nov	CAPT S A BOBCZYNSKI, USN assumed COSL
	1960
26 Jul	HMCS Shelburne (Station VICTOR) became operational
15 Aug	NAVFAC Argentia (Station KING) became operational
Dec	NAVFAC Argentia Shallow-Water Complex was installed: ten, 8-element arrays
	1961
28 Jul	CAPT A R GORDON, USN assumed COSL
	Mercury Program 1961-63 – MILS BOA (Missile Impact Localization System - Broad Ocean Area) was used to locate space capsules as they returned to earth. A SUS charge placed in the capsules would be released at splashdown and Time-Difference Fixing (TDF) used to determine the capsule location; the surface fleet would then steam to the area at full speed to retrieve it.
	SOSUS tracked USS <i>George Washington</i> (SSBN 598) from WESTLANT to UK
	1962
	Soviet HEN Class nuclear submarines go to sea: HOTEL SSBN, ECHO SSGN, NOVEMBER SSN
Jan	NAVFAC Cape Hatteras makes first SOSUS detection of a Soviet Diesel submarine: As determined during a 1964/65 review of SOSUS targets detected between 1955 and 1962 and submitted to the Data Processing Unit of the Brooklyn Naval Shipyard for evaluation and documentation. Of some 30 targets available for review, only one, a NAVFAC Cape Hatteras target from January 1962, was considered to have been a valid detection. That target signature, detected at night, was typical of surfaced transits by

	FOXTROT- and ZULU-Class Soviet Diesel submarines. (Bruce Rule)
6-8 Mar	NAVFAC Cape May destroyed by “Ash Wednesday” storm; Station GEORGE secured
1 May	NAVFAC Lewes, DE commissioned; (Station GEORGE) resumed operations
24 May	NAVFAC Eleuthera, (Station MIKE-SUGAR) BTL experimental station installed
20 Jun	NAVFAC Lewes backfitted with DSA equipment
6 Jul	NAVFAC Barbados makes first SOSUS detection of a Soviet Nuclear submarine as it crossed over the Greenland-Iceland-United Kingdom (GIUK) gap. Second-Class Sonar Operator Bill TILLEY is believed to be the on-watch operator responsible for initial recognition/reporting of contact #27103.
Oct	Cuban Missile Crisis: First confirmed detections of Soviet Diesel submarines by SOSUS
26 Oct	NAVFAC Grand Turk detects Soviet FOXTROT-class Diesel submarine; 1st VP/SOSUS positive correlation: ITEM 025/C20
28 Oct	NAVFAC Barbados and P2V make and hold Soviet Diesel sub contact at 13-27N 58-15W until 29 Oct
1 Dec	NAVFAC Adak, Alaska commissioned; LCDR R E GLEASON, USN was the first CO
	1963
10 Apr	USS <i>Thresher</i> (SSN 593) sank off New England with the loss of all 129 hands
19 Apr	NAVFAC San Salvador backfitted with DSA equipment
8 May	NAVFAC Grand Turk backfitted with DSA equipment
4 Jun	NAVFAC Eleuthera backfitted with DSA equipment
18 Jun	CAPT R J ROBISON, USN assumed COSL
Dec	NAVFAC Argentia (Station NAN) became operational with a 2x20 array
	1964
	Director ASW Programs (OP-95) established under VADM Charles B MARTELL
10 Apr	NAVFAC Nantucket backfitted with DSA equipment
28 May	HMCS Shelburne backfitted with DSA equipment
1 Jul	US Navy Sonarman rating changed to Sonar Technician
1 Sep	Commander, Oceanographic System, Pacific was commissioned at Naval Station, Treasure Island, CA; CAPT David M DIBREL, USN was the first commander. Oceanographic Unit San Francisco was disestablished
Dec	NAVFAC Bermuda (Station EASY-1) became operational
	NAVFAC Nantucket shallow-water system experiments (HOW-YOKE and HOW-XRAY) were terminated
	1965
Apr	COSL Evaluation Center (EC) relocated to CINCLANTFLT OpCon Center (NH-95) from original space in CINCLANTFLT NH-4N
19 Apr	CAPT Robert D McWETHY, USN assumed COSL
30 Aug	CAPT John R POTTER, USN assumed COSP
Nov	COSL designated contact MIKE SEVEN, Soviet nuclear submarine, in WESTLANT
	1966
	Landline Data Relay systems installed in OCEANSYSLANT and OCEANSYPAC by Western Electric Co; UQM-4 analyzer/displays installed at COSL and COSP
	COSP designated contacts XRAY II and XRAY III (Soviet Northern to Pacific Fleet Transfers)
1 Mar	NAVFAC Keflavik, Iceland commissioned and (Station AT) became operational; LT Ernest CASTILLO, III, USN was the first CO
May	NAVFAC Lewes, DE backfitted with DSA vernier and super-vernier equipment
Sep	NAVFAC Keflavik (Station AT-1) became operational

Oct	NAVFAC Eleuthera (Station MIKE-SUGAR) became operational
1967	
27 Jan	CAPT George C COOK, USN assumed COSP
Sep	NAVFAC Argentia (Station KING-1) became operational
Oct	NAVFAC Argentia (Station KING-3) became operational
26 Dec	NAVFAC Nantucket backfitted with DSA vernier and super-vernier equipment
	Soviets deploy CHARLIE-, VICTOR-, and YANKEE-class submarines.
1968	
Jan	USS <i>Pueblo</i> (AGER 2) was captured by North Korea and may have been carrying sensitive SOSUS data.
11 Mar	Soviet GOLF II-class SSB (K-129) sank 1600 nm northwest of Oahu; SOSUS supports Air Force AFTAC system in localizing the wreckage; Hughes Glomar Explorer project initiated to recover part of the hull
5 Apr	CAPT Allen E MAY, USN assumed COSL
22 May	USS <i>Scorpion</i> (SSN 589) sank 400 nm SW of the Azores Islands with the loss of all 99 hands, while en route to Norfolk, VA. SOSUS supports Air Force AFTAC system in localizing the wreckage.
Jul	NAVFAC Argentia Shallow-Water Complex deactivated
27 Aug	CFS Shelburne backfitted with DSA vernier and super-vernier equipment
	COSP designated contact XRAY FIVE
23 Nov	NAVFAC Guam, Mariana Islands began limited operations
3 Dec	NAVFAC Guam, Mariana Islands commissioned; LCDR James P. REDGATE, USN was the first CO
13 Dec	CAPT John Taylor RIGSBEE, USN assumed COSP
13 Dec	NAVFAC Midway Island became operational
13 Dec	NAVFACs Midway Island and Guam detected their first Soviet submarine
14 Dec	COMOCEANSYSPAC officially relocated from Naval Station, Treasure Island, CA to Ford Island, HI
	NAVFAC Keflavik makes first detections of Soviet VICTOR- and CHARLIE-class submarines
1969	
13 Jan	NAVFAC Midway Island commissioned; LCDR R L PENDERGRAST, USN was the first CO
29 Mar	NAVFAC Grand Turk backfitted with DSA vernier and super-vernier equipment
Sep	NAVFAC Lewes, DE backfitted with magnetic delay line (MDL) beamformer, replacing the older electro-delay line (EDL)
Sep	NAVFAC San Salvador secured operations in preparation for disestablishment
Dec	First civilian analyst billet established at COSL and filled by Mr. Ernest CASTILLO, III
1970	
31 Jan	NAVFAC San Salvador disestablished
12 Apr	Soviet NOVEMBER-class SSN sank in the eastern Atlantic
Jul	NAVFAC Bermuda (Station EASY-2) became operational
1 Sep	Ocean Systems Technician (OT) rating became effective, incorporating personnel from ST and ET ratings
13 Oct	CAPT C E WOODS, USN assumed COSL
11 Dec	NAVFAC Barbers Point, HI commissioned; LCDR J C RUSSELL, USN was the first CO
1971	
28 Jul	CAPT Richard A HOFFMAN, USN assumed COSP

SOSUS/IUSS 1954 – 2023: A collection of memories – lest we forget
 “Our Book” All 4 Sections Update (6 Jan 23)
 A work in progress

1972	
Apr	The first USN women assigned to SOSUS enter active duty at NAVFAC Eleuthera: LT Susan Canfield and OTs Norah Brown, Iris Wirth, Barbara Yates, Mary Zenes, Yvette Shmitz, Debra Rupp, Dorothy Hardin, Kathy Hardy, Delta Carr, and Darla Sutherland.
Jul	Royal Navy exchange CPO was assigned to NAVFAC Lewes under the PEP Program
1 Oct	NAVFAC Argentia commences Joint Canadian Forces/US Navy operational manning
	PMW 124 established and SOSUS modernization begins
1973	
30Mar	CAPT Joseph P KELLY, USN, “Father of SOSUS” retired after 22 years as Program Manager for Project CAESAR
4 Sep	CAPT G C CANAAN, USN assumed COSL
1974	
1 Jan	NAVFAC Ramey AFB, PR changed to NAVFAC Punta Borinquen, PR
5 Apr	NAVFAC Brawdy, Wales commissioned; CAPT Robert E JACOB, USN was the first CO
May	CAPT William C GREEN, USN assumed COSP
Jun	Interstate Electronics Corp (IEC) FTA equipment installed in COSL Analysis for processing acoustic data
Aug	CAPT Jerome L O'BRIEN, USN assumed COSP
Sep	SOSUS 20th Anniversary Celebrated at Breezy Point Officers Club, NAS Norfolk
1 Oct	NAVFAC Brawdy (Stations 11, 12, and 13) became operational
	NAVFAC Keflavik makes first detection of Soviet DELTA-class SSBN
1975	
	NAVFAC Argentia became host to five tenant commands of former NAVSTA Argentia, making it the largest NAVFAC in the system
14 Mar	CAPT D A WILLIAMS, USN assumed COSL
Mar	NAVFAC Argentia backfitted with HYRADS equipment
Apr	CFS Shelburne (Station VICTOR) secured due to wet-end problems
25-Sep	MCPO Edwin K. SMOCK (STCM/OTCM) COSL MCPOC retired after 22 years service.
15 Oct	CAPT Jacob C BROWN, USN assumed COSL
Oct	NAVFAC Brawdy (Stations 21, 22, 23, and 24) became operational
24 Dec	NAVFACs Nantucket and Punta Borinquen secured operations in preparation for disestablishment
	SOSUS begins modernization program - System Validation Model (SVM)
1976	
30 Apr	NAVFAC Punta Borinquen disestablished
30 Jun	NAVFAC Nantucket disestablished
17 Jul	CAPT Jerry L MITCHELL, USN assumed COSP
1977	
16 Sep	First female CO in SOSUS: LCDR M “Peggy” FREDERICK, USN assumed command of NAVFAC Lewes
28 Oct	CAPT Douglas M SIMON, USN assumed COSL
Oct	Readiness Training Facility established at NAVFAC Centerville Beach; LCDR J J O'HARA, USN O-in-C

1978	
1 Feb	NAVFAC Brawdy (Station 14) became operational
1 Dec	NAVFAC Barbados secured operations in preparation for disestablishment
1979	
22 Jan	COSL Main Evaluation Center (MEC) moved to new wing of NH-95, from spaces occupied since April 1965
31 Mar	NAVFAC Barbados disestablished
9 Feb	COMOCEANSYSLANT assigned to COMSECONDFLT (later disputed by COSL and reversed - CAPT Douglas M SIMON, USN, COSL)
1 Apr	NAVFAC Brawdy (Station 15) became operational
21 Sep	CAPT Duane A COX, USN assumed COSP
27 Sep	LCDR Susan B CANFIELD, USN assumed command of NAVFAC Antigua
29 Sep	SILVER SOSUS, the 25th anniversary of the Oceanographic System, was celebrated at the Omni Hotel, Norfolk by more than 230 attendees including CAPT Joseph P KELLY, USN (Ret), "Father of SOSUS," most NAVFAC COs, and several past-Commodores
	Advanced Acoustic Analyst (A3) Course established at REDTRAFAC Centerville
1980	
15 Jan	NAVFAC Eleuthera secured operations in preparation for disestablishment
31 Jan	NAVFAC Grand Turk secured operations in preparation for disestablishment
29 Feb	NOPF Dam Neck, Virginia Beach, VA was commissioned and (Station 11) became operational; CAPT Paul L HRYSKANICH, USN was the first CO
4 Mar	NAVFAC Cape Hatteras (Station ABLE) was secured due to a wet-end fault
31 Mar	NAVFACs Eleuthera and Grand Turk were disestablished
18 Nov	CAPT Ernest J “Jack” SABOL, Jr, USN assumed COSL
1981	
31 Jan	NAVFAC Pt Sur (Station 11) ceased operations
13 Apr	NAVFAC Argentia (Station NAN) was secured
25 Jun	NAVFAC Lewes secured operations in preparation for disestablishment
13 Aug	CAPT Richard M CHANSLOR, USN assumed COSP
30 Sep	NAVFAC Lewes disestablished
30 Sep	NAVFAC Midway Island disestablished; acoustic data remoted to NAVFAC Barbers Point
1 Oct	NOPF Ford Island, HI commissioned; CAPT J W McCAULL, USN was the first CO
5 Nov	NAVFAC Brawdy (Station 24) ceased operations
18 Nov	NOPF Dam Neck (Station 12) became operational
1982	
1 Feb	NAVFAC Cape Hatteras secured operations in preparation for disestablishment
30 Jun	NAVFAC Cape Hatteras disestablished
19 Oct	NAVFAC Argentia (Station 51) became operational
1983	
15 Mar	CAPT Peter R CATALANO, USN assumed COSL
Sep	NAVFAC Midway acoustic data re-routed from NAVFAC Barbers Point to NOPF Ford Island
10 Sep	NAVFAC Argentia (Station 61) became operational
13 Sep	CAPT Robert S FITCH, USN assumed COSP

2 Nov	Soviet VICTOR III-class SSN sighted wallowing on the surface, east of Georgia, two days after becoming fouled by TASS array of USS <i>McCloy</i> (FF 1038)
6 Nov	NOPF Dam Neck (Station 13) became operational
	Service ratings OTA (Analyst) and OTM (Equipment Maintainer) established
1984	
4 Feb	NAVFAC Antigua secured operations in preparation for disestablishment
2 Mar	NAVFAC San Nicolas Island disestablished; acoustic data remoted to NAVFAC Centerville Beach
20 Mar	USNS <i>Stalwart</i> (T-AGOS 1) arrived at NAB Little Creek to begin T&E of SURTASS subsystem
3 Apr	NOPF Dam Neck (Station 14) became operational
9 Apr	USNS <i>Stalwart</i> commissioned
29 Jul	USNS <i>Contender</i> (T-AGOS 2) commissioned
28 Sep	Thirtieth Anniversary of the Oceanographic System was celebrated at the Cavalier Hotel on the Hill, Virginia Beach, VA. Guest speaker was RADM B T HACKER, USN, former Operations Officer at NAVFAC Argentia and former CO of NAVFAC Barbados
1 Oct	NAVFAC Point Sur disestablished; acoustic data remoted to NAVFAC Centerville Beach
1 Oct	IUSS Operations Support Detachment, Pacific established (SURTASS Support Center)
	USNS <i>Vindicator</i> (T-AGOS 3) commissioned
4 Dec	NAVFAC Brawdy (Station 16) became operational
16 Dec	NAVFAC Bermuda (Station 51) became operational
1985	
12 Jan	USNS <i>Stalwart</i> (T-AGOS 1) began the first operational SURTASS patrol: SOSUS became IUSS.
19 Feb	USNS <i>Triumph</i> (T-AGOS 4) commissioned
1 Mar	Readiness Training Facility (REDTRAFAC) Dam Neck commissioned, replacing REDTRAFAC Centerville
21 Mar	NAVFAC Midway (Station 21) acoustic data secured
2 Apr	USNS <i>Vindicator</i> (T-AGOS 3) arrived at NAB Little Creek
1 May	USNS <i>Assurance</i> (T-AGOS 5) commissioned
13 May	Readiness Training Facility Dam Neck dedicated in memory of CDR William E “Will” JAMES, USN
15 Jun	NOPF Dam Neck (Station 21) became operational
6 Aug	USNS <i>Stalwart</i> (T-AGOS 1) became the first SURTASS unit to operate in the Norwegian Sea
14 Aug	USNS <i>Persistent</i> (T-AGOS 6) commissioned
15 Aug	CAPT Ira Hearst COEN, Jr., USN assumed COSP
16 Aug	NAVFAC Brawdy (Station 19) Fixed Distributed System (FDS) began test and evaluation phase
26 Aug	CAPT William J “Jerry” FOGLE, USN assumed COSL
1 Oct	NAVFAC Barbers Point disestablished; acoustic data remoted to NOPF Ford Island
16 Oct	NAVFAC Brawdy (Station 19) FDS certified by COMSPAWARSYSCOM to be fully operational
1 Dec	USNS <i>Indomitable</i> (T-AGOS 7) commissioned
2 Dec	USNS <i>Persistent</i> (T-AGOS 6) arrived at NAB Little Creek
19 Dec	CNO cancelled requirement for SOSUS Monthly Reports, which originated in Sep 1959.
1986	
6 Feb	LCdr Frederick Alun JONES, RCN, a SOSUS pioneer, passed away.
5 Mar	USNS <i>Prevail</i> (T-AGOS 8) commissioned
23 Apr	Task Force 24 redesignated Task Force 84
30 Jun	NAVFAC Pt Sur (Station 12) ceased operations

16 Jul	USNS <i>Stalwart</i> (T-AGOS 1) became the first SURTASS unit to operate in the Mediterranean Sea
22 Jul	USNS <i>Prevail</i> (T-AGOS 8) arrived at NAB Little Creek
12 Sep	USNS <i>Assertive</i> (T-AGOS 9) commissioned
6 Oct	Soviet YANKEE-class SSBN (K-219) sank, ESE of Bermuda, three days after a missile-tube explosion
1987	
30 Jan	USNS <i>Invincible</i> (T-AGOS 10) commissioned
24 May	USNS <i>Invincible</i> arrived at NAB Little Creek
17 Jul	CAPT Alan R MORE, USN assumed COSP
Jul	NAVFAC Whidbey Island, WA commissioned; CDR Marnee L FINCH was the first CO
28 Aug	CAPT Jonathan D “Dave” MUSTIAN, USN assumed COSL
1 Sep	NAVFAC Pacific Beach disestablished; acoustic data was remoted to NAVFAC Whidbey Island
24 Nov	NAVFAC Argentinia (Station 61) secured due to wet-end faults
30 Nov	NAVFAC Coos Head disestablished; acoustic data remoted to NAVFAC Whidbey Island
14 Dec	NAVFAC Argentinia (Station 61) retrieved for factory refurbishment
1988	
19 Jul	CDR Diane OLIVER, USN assumed command at NAVFAC Keflavik
19 Aug	USNS <i>Adventurous</i> (T-AGOS 13) commissioned
6 Nov	CAPT Joseph P KELLY, USN (Ret) "Father of SOSUS" passed away at Bethesda Naval Hospital
1989	
15 Jan	USNS <i>Worthy</i> (T-AGOS 14) arrived at NAB Little Creek
8 Mar	USNS <i>Titan</i> (T-AGOS 15) commissioned
7 Apr	Soviet MIKE-class SSN (K 278) sank, northwest of Norway, following a fire in aft engineering spaces
7 Apr	USNS <i>Worthy</i> commissioned
10 Jun	IUSS 35th Anniversary was celebrated at Grand Affairs in Virginia Beach, dedicated to the memory of CAPT Joseph P KELLY; guest speaker was VADM D L COOPER, USN ACNO for Undersea Warfare; 400 guests included most NAVFAC COs, several past-Commodores and past-COs
18 Jun	USNS <i>Audacious</i> (T-AGOS 11) commissioned
29 Jun	USNS <i>Capable</i> (T-AGOS 16) arrived at NAB Little Creek
8 Jul	USNS <i>Capable</i> commissioned
25 Aug	CAPT Merrill H DORMAN, USN assumed COSL
Aug	CAPT Frederick R CRAWFORD, USN assumed COSP
20 Oct	USNS <i>Bold</i> (T-AGOS 12) commissioned
8 Nov	USNS <i>Tenacious</i> (T-AGOS 17) commissioned
1990	
1 Feb	USNS <i>Relentless</i> (T-AGOS 18) arrived at NAB Little Creek
8 Mar	USNS <i>Relentless</i> commissioned
20 Feb	USNS <i>Bold</i> arrived at NAB Little Creek
1991	
15 Mar	Official explanation of Oceanographic System mission was changed from original cover (oceanographic research in support of ASW) to actual undersea surveillance for detection of threat submarines.

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31 May	CAPT John M PARRISH, USN assumed COSL in outdoor ceremonies at IOSC, Little Creek
3 Jul	CDR Leslie J SKOWRONEK, USN assumed command at NOPF Dam Neck
30 Aug	CAPT Raymond D WOOLRICH, USN assumed COSP
5 Sep	USNS <i>Victorious</i> (T-AGOS 19), the first SURTASS SWATH-hull vessel, commissioned
1 Oct	COMOCEANSYSLANT (COSL) changed to COMUNDERSEASURVLANT (CUSL); (COSP to CUSP)
	First female Deputy Commander and Chief Staff Officer at CUSP: CAPT Marnee L FINCH, USN
1 Oct	NAVFAC Guam disestablished
1992	
1 Jan	CUSL Main Evaluation Center (MEC) passed authority to designate Uniform contacts to Regional Evaluation Centers (RECs)
7 Jan	USNS <i>Victorious</i> turned over to USN at St Helena Annex, Norfolk, VA
11 Jun	USNS <i>Stalwart</i> (T-AGOS 1) removed from operational service as an IUSS platform
30 Jul	USNS <i>Victorious</i> arrived at new home port, Pearl Harbor, HI
30 Sep	NAVFAC Bermuda disestablished; acoustic data sent to NOPF Dam Neck via satellite for analysis via SWS.
Oct	SOSUS Work Stations (SWS) replaced paper gram displays at NOPF Dam Neck
5 Oct	USNS <i>Worthy</i> (T-AGOS 14) removed from operational service as an IUSS platform
6 Nov	IUSS began ATARF reporting of whales in response to CNO tasking
	NAVFAC Centerville Beach, CA survived a series of earthquakes measuring 6.9 to 7.1 on the Richter scale
	Mr. Henry S AURAND and CWO4 Thomas J UECKER, USN received SOSUS/IUSS CAPT Joseph P KELLY Awards
1993	
	IUSS-CAESAR Alumni Association founded by career SOSUS officer, CDR E K DALRYMPLE, USN (Ret)
12 Feb	USNS <i>Able</i> (T-AGOS 20), the second SURTASS SWATH-hull vessel and first to operate in the Atlantic, was turned over to USN at St Helena Annex, Norfolk
30 Jun	CAPT Alfred E PONESSA, USN assumed CUSL; CAPT John M PARRISH, USN retired
4 Aug	CAPT Marnee L FINCH, USN assumed CUSP
7 Sep	COMUNDERSEASURVLANT Staff was reorganized; Intelligence Directorate (N2) was created, headed by Mr. Ernest CASTILLO, III
30 Sep	NAVFAC Adak, Alaska was disestablished
30 Sep	NAVFAC Centerville Beach, CA disestablished; acoustic data remoted to NAVFAC Whidbey Island, WA
11 Oct	NAVFAC Adak acoustic data remoted to NOPF Ford Island
28 Dec	CNO message 281420Z DEC 93 provided guidance for closure, consolidation, and merger of IUSS commands
	Mr. J Hicks FORD received the SOSUS/IUSS CAPT Joseph P KELLY Award
1994	
Apr	NOPF Dam Neck assumed Atlantic IUSS Main Evaluation Center responsibilities
Jun	Canadian Forces IUSS Centre (CFIC), Halifax, Nova Scotia was established; CDR E TUMMERS, RCN was the first commanding officer
1 Aug	CFS Shelburne, Nova Scotia disestablished
15 Aug	CUSL and CUSP merged to form Commander, Undersea Surveillance (CUS); CUSP disestablished

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Aug	IUSS Operations Support Center, Little Creek, VA established; CDR Stephen C ROSS, USN was the first Officer-in-Charge.
Sep	REDTRAFAC Dam Neck disestablished
17 Sep	IUSS 40th Anniversary celebrated at Grand Affairs in Va. Beach; guest speaker was RADM M D HASKINS, USN, COMFAIRKEF/ICEDEFOR
27 Sep	NAVFAC Argentia disestablished; operations were turned over to Canadian Forces IUSS Centre (CFIC), Halifax, Nova Scotia
1 Oct	NAVOCEANPROFAC Ford Island disestablished
1 Oct	CUS CCWO began watches resident on NOPF Dam Neck watch floor
	NAVFAC Bermuda acoustic data was secured at NOPF Dam Neck
	First woman designated Deputy Commander and Chief Staff Officer at CUS: CAPT Mary P MOSIER, USN
	CUS Staff relocated from CINCLANTFLT OPCON Center (NH-95) to Dam Neck in the building previously occupied by REDTRAFAC
	CUS N2 (Intel) moved to newly renovated spaces in NOPF Dam Neck
	CAPT John M PARRISH, USN (Ret) received the SOSUS/IUSS CAPT Joseph P KELLY Award
1995	
Jun	Russian AKULA-class SSN encountered off the southeastern Atlantic coast.
30 Jun	NAVFAC Brawdy ceased operations in preparation for transition to JMF St Mawgan, UK
21 Jul	CDR Larry D WILCHER, USN assumed command at NOPF Dam Neck
11 Aug	Equipment transferred from NAVFAC Brawdy was re-powered at JMF St Mawgan
18 Aug	Joint Maritime Facility, St Mawgan, UK was commissioned; CAPT Pamela M MULVEHILL, USN was the first commanding officer
29 Aug	CAPT Kirk E EVANS, USN (Ret) and MCPO Edwin K SMOCK, USN (Ret) received SOSUS/IUSS CAPT Joseph P KELLY Awards
1 Sep	CAPT Randall E WAGNER, USN assumed CUS; CAPT Alfred E PONESSA, USN retired
1996	
28 Jun	NAVFAC Keflavik (Stations 21/22/23) ceased operations due to a wet-end fault
30 Sep	NAVFAC Keflavik (Station 11) secured operations in preparation for disestablishment
Dec	NAVFAC Keflavik was disestablished, ending 30 years of service; LCDR James M DONOVAN, USN was the final CO
	LCDR Frederick Alun JONES, RCN received the SOSUS/IUSS CAPT Joseph P KELLY Award (posthumously)
1997	
8 Jan	NAVFAC Adak acoustic data was secured at NOPF Whidbey Island, WA
1 May	IUSS ceased using the digital, common language used for contact reporting more than 30 years, currently called ATARF (Abbreviated Tracking And Report Form) and RAINFORM SOSUS REDs, which were replaced by SitReps and GOLDS/LOCATORs, respectively
1 Jul	NOPF Dam Neck TACWO assumed CUS CCWO responsibilities
15 Jul	CDR C L MOFFORD, RCN relieved CDR Ed TUMMERS, RCN as CO, CFIC, Halifax
14 Aug	CAPT Gerald W FABER, USN assumed CUS
22 Aug	CDR Eola Lewis SCOTT, USN assumed command at NOPF Dam Neck; CDR Larry D WILCHER, USN retired
5 Sep	CAPT Paul E HALLOWELL, USN assumed command at JMF St Mawgan
1 Oct	USN OT Rating disestablished after 27 years, 1 month of SOSUS/IUSS dedicated service; the IUSS Watch in the Sea is resumed by the ST Rating.
	RADM Dempster M JACKSON, USN (Ret) and CDR Larry D WILCHER, USN (Ret) received

	SOSUS/IUSS CAPT Joseph P KELLY Awards
1998	
22 May	CAPT Mary P MOSIER, USN, CUS CSO retired at ceremony on board USNS <i>Loyal</i> (T-AGOS 22), berthed at Norfolk St Helena Annex
19 Jun	VADM E P GIAMBASTIANI, USN relieved VADM R W MIES, USN as COMSUBLANT on board USS <i>Maine</i> (SSBN 741) at Norfolk Naval Station, Pier 12.
26 Jun	CDR Teresa A BARRETT, USN relieved CDR Tonya J CONCANNON, USN as CO, NOPF Whidbey Island
1999	
Jul	Planning Systems, Inc. concluded 27 years of operations analysis/historical database support to SOSUS/IUSS
Aug	CAPT Neil E RONDORF, USN assumed CUS
Aug	CDR James M DONOVAN, USN assumed command at NOPF Dam Neck
Sep	IUSS 45th Anniversary celebrated at Omni Hotel, Norfolk, VA
	Mr. Ernest CASTILLO, III received the SOSUS/IUSS CAPT Joseph P KELLY Award
2000	
12 Aug	Russian OSCAR II-class SSGN <i>Kursk</i> sank during exercise ops in Barents Sea, with 118 men lost.
	Mr. Ragnar SCHAUG-PETTERSEN received the SOSUS/IUSS CAPT Joseph P KELLY Award
2001	
10 Aug	CDR Katherine M DONOVAN, USN assumed command at NOPF Dam Neck, relieving her husband, CDR James M DONOVAN, USN
24 Aug	CAPT Gregory M VAUGHN, USN assumed CUS; CAPT Neil E RONDORF, USN retired
	Mr. Stanley L CARMIN received the SOSUS/IUSS CAPT Joseph P KELLY Award
2002	
20 Mar	SOSUS Work Stations (SWS) removed from operations
	Mr. Henry S FLEMING received the SOSUS/IUSS CAPT Joseph P KELLY Award
Dec	TRW acquired by Northrop Grumman Mission Systems
2003	
18 Apr	USNS <i>Prevail</i> (T-AGOS 8) departed NAB Little Creek for decommissioning.
24 Apr	USNS <i>Prevail</i> decommissioned.
21 May	PMW 181 and PMW 182 combined into PMS-181; CAPT Pat SEIDEL is the new PMS 181 (PEO/LMW)
11 Jun	USNS <i>Loyal</i> (T-AGOS 22) ceased operations in the Norwegian Sea
27 Jun	CDR Debra LIVINGOOD, USN assumed command at NOPF Dam Neck, relieving CDR Katherine DONOVAN, USN
22 Aug	CAPT Steven G GABRIELE, USN assumed CUS, relieving CAPT Gregory M VAUGHN, USN
	USNS <i>Assertive</i> (T-AGOS 9) decommissioned.
	USNS <i>Bold</i> (T-AGOS 12) decommissioned.
	USNS <i>Able</i> (T-AGOS 20) decommissioned.
	USNS <i>Loyal</i> (T-AGOS 22) transferred to PAC Fleet
	USNS <i>Impeccable</i> (T-AGOS 23) transferred to PAC Fleet

	SURTASS activity in the Atlantic has ceased
	Digital Systems Research (DSR) acquired by General Dynamics Advanced Information Systems (GD-AIS)
Sep	US Coast Guard Maritime Intelligence Fusion Center (MFIC) became colocated with NOPF Dam Neck, occupying one-third of the building
18 Nov	Ex-USNS <i>Prevail</i> is designated as <i>Prevail</i> (TSV-1) (Training Support Vessel) by Commander, Carrier Group (COMCARGRU)4
Nov	Advanced Deployable System (ADS) successfully completed dual-array testing.
2004	
11 Feb	Mr. Roger HARRIS, SPAWAR SSC, received the SOSUS/IUSS CAPT Joseph P KELLY Award (for 2003)
26 Feb	NAVSEA's PEO LMW combines all IUSS programs into one Program Office, PMS 485, Maritime Surveillance Systems, under CAPT Pat SEIDEL.
18 Sep	IUSS 50th Anniversary was celebrated at Marriott Waterside Hotel Norfolk, VA. The Guest of Honor was Mrs. Mary Jo Kelly WILHELM, daughter of CAPT Joseph P KELLY. Mr. Edwin K SMOCK received the IUSS 50 th Anniversary Award in recognition of and appreciation for his service to SOSUS/IUSS 1954-2004. (VADM K H DONALD, USN, Commander Submarine Force, US Atlantic Fleet.)
2005	
2 Feb	Mr. Jerry A McDONALD, CUS (PSI) received the SOSUS/IUSS CAPT Joseph P KELLY Award (for 2004)
29 Apr	CDR Charles J “Jeff” WASHKO, USN assumed command of NOPF Dam Neck, relieving CDR Debra M LIVINGOOD, USN
13 May	CAPT David J KERN, USN assumed CUS, relieving CAPT Steven G GABRIELE, USN
6 Jul	VADM Robert F WILLARD, USN, VCNO onboard CUS/NOPF DN for discussions on IUSS Maritime Domain Awareness and Global War on Terrorism, as related to IUSS activities.
2007	
16 Feb	CDR Peter LINTNER, USN assumed command of NOPF Dam Neck, relieving CDR Charles J WASHKO
1 Mar	IUSS/CUS administrative control shifted from COMSUBFOR (Commander Submarine Forces) to CNMOC (Commander Naval Meteorology and Oceanography Command).
2 Apr	USNS <i>Able</i> (T-AGOS 20) reactivation underway; shipyard modification and SURTASS Operations Center (SOC) outfitting scheduled to be completed by 14 Sep.
22 May	CAPT Peter W FURZE, USN assumed CUS, relieving CAPT David J KERN, USN
2008	
	IUSS-CAESAR Alumni Association Director, CDR E K DALRYMPLE, USN (Ret) relieved by CAPT James M DONOVAN, USN (Ret)
16 Jan	The Navy announced that two important steps have been taken under existing law and regulations to allow it to conduct effective, integrated training with sonar off the coast of southern California, after a federal court earlier this month imposed untenable restrictions on such training.
22 Jan	USNS <i>Able</i> completed Passive At Sea Test #1; preparations underway for making <i>Able</i> CLFA capable.
6 Feb	LCDR George J “Chuck” GAGNON, USN (Ret) received the SOSUS/IUSS CAPT Joseph P KELLY Award (for 2007)
17 Aug	MV <i>Cory Chouest</i> deactivated after many years of dedicated service to IUSS

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2009	
11 Feb	Dr. Harry COX (CAPT, USN (Ret)) received the SOSUS/IUSS CAPT Joseph P KELLY Award (for 2008)
9 Mar	USNS <i>Impeccable</i> (T-AGOS 23) was harassed by five Chinese vessels that shadowed and aggressively maneuvered toward it in the South China Sea
27 Mar	CAPT Paul K HEIM, II, USN, CUS CSO relieved CAPT Peter W FURZE, USN as CUS. CAPT FURZE retiring after 30 years of service.
27 Mar	Commander, Undersea Surveillance began reporting directly to Commander, Submarine Force Pacific (COMSUBPAC). In the previous two years CUS had been aligned under Commander, Naval Meteorology and Oceanography Command. CUS currently operates five SURTASS ships - all in the Pacific area. Approximately 600 sailors man the CUS/NOPF/MILDET staffs.
27 May	JMF St Mawgan disestablished. All of its surveillance assets were remoted to NOPF Dam Neck, which became a joint United Kingdom/United States Naval Command. A joint flag-raising ceremony was held with CAPT Peter R LINTNER, CO, and Wing CDR Guy BAZALGETTE, Senior British Officer, presiding.
5 Jun	CDR Marc T STEINER, USN assumed command of NOPF Dam Neck, relieving CAPT Peter LINTNER
12 Sept	SOSUS/IUSS 55 th Anniversary was celebrated at the Waterside Marriott, Norfolk, VA. Approximately 320 past and current members attended.
2010	
15 Oct	CAPT Charles Scott RAUCH, USN relieved CAPT Paul K HEIM, II, USN as CUS.
2011	
13 May	CDR Daniel McGUINNESS, USN assumed command of NOPF Dam Neck, relieving CDR Marc STEINER
11 Aug	CDR Jason A VOGT assumed command of NOPF Whidbey Island, relieving CDR Marc C ECKHARDT
2012	
	VADM Michael J CONNOR relieved VADM John M Richardson as Commander, Submarine Forces/Submarine Force Atlantic/Allied Submarine Command
2013	
18 Apr	Mr. R Bruce RULE received the SOSUS/IUSS CAPT Joseph P KELLY Award (for 2012). CAPT Charles S RAUCH, CUS, accompanied by friends Ragnar and Inge, traveled to Kentucky to present the award.
3 May	NOPF Dam Neck Commanding Officer, CDR Daniel McGUINNESS conducted an awards ceremony to show appreciation to four long-time NOPF DN civilian contractor personnel. He dedicated the Conference Room #142 to Edwin K SMOCK; the generator spaces to Tom N. TYLER; the EMD Equipment Room 214 to Michael D WEIR; and the Communication Center to Robert G. “Jerry” RYAN (posthumously).
17 May	CDR Jeffery JACOB, USN assumed command of NOPF Dam Neck, relieving CDR Daniel McGUINNESS
12 Dec	NOPF Dam Neck received a SECNAV Meritorious Unit Commendation Award for the period 1 Jan 2009 to 31 Dec 2012.
2014	
20 Sep	The Integrated Undersea Surveillance System (IUSS) celebrated its 60th Anniversary Reunion at the Marriott in Norfolk, VA. Guest speakers were VADM Michael CONNOR, Commander, Submarine Forces and RADM Gretchen S HERBERT, USN (Ret).

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	A highlight of the reunion was the presentation of CAPT Joseph P KELLY Awards to OTCM George P WIDENOR, USN (Ret); OTACS Michael D WEIR, USN (Ret); and Mr. George E MILLER, GS (Ret). CAPT Jim DONOVAN accepted the award on behalf of Mr. Miller, who was not in attendance. OTCM Ed SMOCK, USN (Ret) received a standing ovation for his 60 years of service in SOSUS/IUSS.
2015	
1 May	CDR Robert S TREPETA, USN assumed command of NOPF Dam Neck, relieving CDR Jeffery JACOB.
22 May	CAPT Kevin S MOONEY, USN relieved CAPT Charles S RAUCH, USN as CUS.
2016	
Jan	OTCS William E TILLEY, III, USN (Ret) received the SOSUS/IUSS CAPT Joseph P Kelly Award for 2015 (posthumously): CAPT Kevin S MOONEY, CUS.
2017	
27 Mar	LT Timothy L CORNETT, USN (Ret) received the SOSUS/IUSS CAPT Joseph P Kelly Award: CAPT Kevin S MOONEY, CUS; the award was presented on 13 Jun 2017 at CUS HQ.
26 Oct	Acoustic Technician Warrant Officer (728X) established: NAVADMIN 259/17
3 Nov	CDR Aaron M HOLDAWAY assumed command of NOPF Dam Neck, relieving CDR Robert S TREPETA
8 Dec	CAPT Scott C LUERS, USN relieved CAPT Kevin S MOONEY, USN as CUS.
2018	
22 Feb	CAPT James M Donovan, USN (Ret) received the SOSUS/IUSS CAPT Joseph P KELLY Award: CAPT Scott C LUERS, USN, CUS; the award was presented on 6 Apr 2018 at CUS HQ.
2019	
24 Jan	NOPF Dam Neck: Ribbon Cutting Ceremony at which NOPF DN officially transitioned into its expanded Integrated Undersea Surveillance System Facility. Officiating were: CDR Neil BOTTING, Senior British Officer, NOPF DN; CDR Charleese SAMPA, NOPF XO; CDR Aaron M. HOLDAWAY, NOPF CO; CAPT (RN) Nicholas WHEELER, JFC C4I SR Dept. Head; CAPT Scott LUERS, CUS; Commodore Andrew BETTON, OBE, Naval Attaché, British Embassy, Washington, D.C. Guest Speakers were RADM E Andrew BURCHER, USN Vice Director Navy Staff, Deputy Commander Submarine Force, Atlantic and Pacific; and Rear Admiral Paul HALTON, OBE, Commander Operations, Royal Navy.
28 Jun	CDR Charleese HASAN, USN assumed command of NOPF Dam Neck, relieving CDR Aaron HOLDAWAY
21 Sep	The Integrated Undersea Surveillance System (IUSS) celebrated its 65th Anniversary at the Norfolk Waterside Marriott. VADM Charles A “Chas” RICHARD, USN, Commander, Submarine Forces and Commander, Allied Submarine Command was the guest speaker. Also in attendance was RADM James P WATERS, III, USN, COMSUBGRUTWO. Mr. Inge DAHL received the SOSUS/IUSS CAPT Joseph P KELLY Award, presented by CAPT Scott C LUERS, USN, Commander Undersea Surveillance. OTCM Ed SMOCK, USN (Ret) received a standing ovation for his 65 years of service in SOSUS/IUSS.
1 Oct	NOPF Dam Neck held its 40 th Anniversary Celebration with a ceremony dedicating the new watchfloor in the names of CAPTs Jim and Kathy DONOVAN, both former Commanding Officers of NOPF DN, and naming of the “new” Edwin K SMOCK Conference Room. CAPT Charleese HASAN, NOPF CO, officiated. Also in attendance was CAPT Paul L “Scratch” HRYSKANICH,

	USN (Ret), the first CO of NOPF DN.
	Expeditionary SURTASS (SURTASS-E) prototype system made first deployment
2020	
10 Jan	CAPT Brian C TADDIKEN, USN relieved CAPT Scott C LUERS, USN as Commander Undersea Surveillance (CUS).
	CUS HQ building expansion broke ground
24 Jul	CDR Eric KIRLIN, USN assumed command of NOPF Dam Neck, relieving CAPT Charleese HASAN
2021	
8 Apr	CAPT Brian C TADDIKEN, Commander Undersea Surveillance (CUS), presented the SOSUS/IUSS CAPT Joseph P KELLY Award to Mr. Jeffrey D Cleary (CUS N2).
23 Jun	Admiral Samuel J PAPARO, Commander, U.S. Pacific Fleet awarded the Department of the Navy Superior Civilian Service Award to Mr. Jeffrey D CLEARY (CUS N2). CAPT Brian C TADDIKEN (CUS) made the presentation.
27 Aug	CAPT Steven FAULK, USN relieved CAPT Brian C TADDIKEN, USN as CUS
2022	
4 Mar	CDR Kenneth B MYRICK, II, USN assumed command of NOPF Dam Neck, relieving CDR Eric KIRLIN
1 Oct	NOPFs Dam Neck and Whidbey Island were renamed Theater Undersea Surveillance Command Atlantic (TUSC LANT) and Theater Undersea Surveillance Command Pacific (TUSC PAC), respectively.

Contributors:	<u>SOSUS/IUSS (Year – Year) (Total SOSUS/IUSS Years)</u>		
(Alphabetical order)			
Dave Bailey	OTCM USN (Ret)	1971 - 1987	(16 years)
Randal A. Baker	OTMC USN (Ret)	1975 - 1999	(24 years)
Jami Beard	OT/IC/EW		(14 years)
Timothy S. Bevins	OT3 USN (Vet) 1975-1979 Active ('79-'81 Reserve)		(7 years)
Rick Bolin	OTMC USN (Ret)	1967 - 1986	(19 years)
Alan Brandt	OTCM USN (Ret)	1970 – 1994	(24 years)
Phil Brown	OTCM USN (Ret) (20 years) (then CTR)	1964 – 1999	(35 years)
Randy Brown	STGC USN (Ret)	1982 - 2003	(21 years)
W. A. “Buck” Buchanan	OT1 USN (9 yrs) (then CTR)	1969 - 1995	(25 years)
Chuck Cable	OTAC USN (Ret)	1966 - 1986	(20 years)
Ernie Castillo	LCDR USN (13 yrs) (then GS-13)	1958 - 1996	(38 years)
Denny Conrad	OTCS USN (Ret)	1966 - 1987	(21 years)
Tim Cornett	OTAC/LT USN (Ret) (20 yrs) (then CTR)	1979 - 2022	(43 years)
Charlie Crews	CWO4 USN (Ret)	1966 - 1986	(3 years)
Jim Donovan	OT/CAPT USN	1973 - 2001	(28 years)
Edward “Greg” Dyer	OTA1 USN (Ret)	1969-73/1977-93	(21 years)
Bob Eller	OT1 USN 1973 - 1983 (10 Years), (then CTR)	1983 – 2004	(21 Years)
Robert Farver	OTCS USN (Ret) (20 yrs) (then CTR)	1955 - 1985	(30 years)
Chuck Gagnon	LCDR USN (OT) (Ret)	1971-2021	(50 years)
Jenifer A. George	LT USNR	1999 - 2002	(3 years)
Chuck Harding	OTCM USN (Ret)	1959 - 1981	(22 years)
Eric Heim	CWO3 COMSUBPAC N362, IUSS OPS/Plans, SURTASS Officer		
Bob Hickman	LTJG (USNR)	1968 - 1971	(4 years)
Jim Hill	SOG3 (Ret)	1961 - 1965	(4 years)
Jack Holdzkom	OTCM USN (Ret) (22 yrs) (then CTR)	1963 - 1999	(36 years)
Bob (Jake) Jacob	CAPT USN (Ret)	1957 – 1989	(32 years)
Linda Jones	(Fred’s daughter) Civ		
Jerry Juliana	OTAC USN (Ret)	1964 - 1986	(22 years)
Don Leach	CDR USN (Ret)	1956 then 1961-1988	(28 years)
Jerry McDonald	LTJG USNR (3 yrs) (then CTR)	1972 - 2019	(47 years)
Bob McWethy	CAPT USN (Ret)	1965 - 1968	(3 years)
George Miller	LT USNR (3 yrs) + (CIV 29 yrs.)	1961 - 1993	(32 years)
Bud O’Hara	LCDR USN (Ret)	1967 - 1987	(20 years)
John Parrish	CAPT USN (Ret)	1968 - 1993	(25 years)
Baker Peebles	CAPT USN (Ret)	1960 - 1980	(20 years)
Bruce Rule	LT USNR (5 yrs) + (CTR) 1963-1992, 1996-2007		(46 years)
Sandy Sanborn	CWO3 USN (Ret)	1970 - 1992	(22 years)
Randy Scott	LT USN (Ret)	1969 - 1991	(22 years)
Leslie Skowronek	CAPT USN (Ret)	1972 - 1993	(16 years)
Ed Smock	STCM/OTCM USN (Ret) 1954-1975 (22)+(46-CTR)	1954 - 2022	(68 years)
Keith Smock	IUSS CIV CTR (SURTASS/Sub/Fixed)	1984 - 2018	(25 years)
Jim Stalter	LCDR USN (Ret)	1956 - 1974	(18 years)
Bill Tilley IV	Civ		
Howard Tilton	SO2 USN	1954 - 1957	(4 years)
Cyndi Utterback	LCDR USN (Ret) (22 yrs) + (CTR)	1980 - 2022	(41 years)
Nick VanHerpen	OTCM USN (Ret) 1957-1987 (3 yrs DD+5 yrs RTC Orlando)		(30 years)
Jim Weinel	WECO/AT&T/Lucent/Gen Dynamics	1967 - 2000	(33 years)
Mike Weir	OTACS USN (Ret) (23 yrs) + (CTR)	1966 - 2019	(53 years)

George Widenor OTCM USN (Ret) (22 yrs) + (CTR) 1959 - 1984 (25 years)
Jason A. Vogt CAPT USN COMSUBPAC N36
Eric Heim CWO3 COMSUBPAC N362 IUSS Ops/Plans, SURTASS Officer
Ms. Phyllis Carter NOPF DN Security/Admin (TUSC AT LANTIC)
Lewis M. Jackson (Shelburne historian)
Mass Communication Specialist 2nd Class Sarah E. Horne, Commander, Submarine
Force Atlantic Public Affairs.

Special Thanks to the IUSS Alumni Association Web Site for use of many of their articles.
<http://www.IUSScaa.org/homen.htm>

“” We have not been relieved; the "Watch in the Sea" continues...



Memories are "great" however, they are "so much more" if you have someone to share them with... (Thank You, - Ed Smock)

(In case you were wondering)



Ed Smock SONARMAN SA
FSS Key West FL 1954

**“Our Book” is free
“Freedom” is not.**

**Thank a Vet
All gave some.
Some gave all.**



***For my wife “Leola”- who
said, “If you don’t write it, it
will be forgotten”...***



“Our Book”

Section 4

And the Legacy

Continues



Active IUSS Sites



Naval Ocean Processing Facility Dam Neck Virginia Beach, Virginia

February 1980 – Present

Naval Ocean Processing Facility (NOPF) Dam Neck was commissioned on 29 February 1980, under the operational control of COMOCEANSYSLANT. Designed to be the hub of the WESTLANT SOSUS consolidation program, NOPF Dam Neck replaced NAVFACs from Nantucket, MA to Barbados. Today, it is one of the few remaining IUSS facilities and routinely conducts operations throughout the Atlantic Ocean, Mediterranean, North Atlantic, and Norwegian Sea. In 1984, NOPF Dam Neck installed its first SURTASS suite and USNS STALWART became part of Task Group 84.0. Since that time, several T-AGOS vessels have come and gone through the Atlantic SURTASS complement. 25 officers, 225 enlisted and 9 civilian personnel currently comprise the facility as it continues to perform its IUSS mission. Post September 11, 2001 NOPF Dam Neck renewed its efforts to track acoustic contacts, especially merchants, in support of the war on terrorism. In 2003, the USCG Maritime Intelligence Fusion Center and COMLANTFLT's Shipping Coordination Center became tenants of the NOPF. Also in 2003, all SURTASS vessels were transferred to the Pacific ending a 20 year SURTASS presence and capability in the Atlantic.

Effective 27 Mar 09, Commander, Undersea Surveillance reports directly to Commander, Submarine Force Pacific (COMSUBPAC). For the past 2 years CUS was realigned under Commander, Naval Meteorology and Oceanography Command. CUS currently operates 5 SURTASS ships - all are in the Pacific area. Approximately 600 sailors man the CUS/NOPF/MILDET staffs.



Effective 27 May 09, all of JMF's surveillance assets were remoted to NOPF Dam Neck Virginia. NOPF DN at that time became a joint United Kingdom and United States Naval Command. A joint flag raising ceremony was held on 27 May 2009. Accordingly, JMF has been disestablished.

Naval Ocean Processing Facility (NOPF) Whidbey Island, Washington



July 1987 – Present

Naval Ocean Processing Facility (NOPF) Whidbey Island was commissioned in July 1987. Located onboard the Naval Air Station (NAS), NOPF Whidbey sits at the waters edge on the west side of the island and looks out at the picturesque mountains of the Olympic Peninsula and the San Juan Islands. Frequent rainfall, often as much as 300 days per year, promotes the rapid growth and strikingly beautiful vegetation and geological landscapes enjoyed by all who live in the northwest region. NOPF Whidbey Island is manned with U. S. Navy and Canadian Forces personnel and currently has a crew compliment of approximately 300 officers, enlisted and civilians. As the only PAC IUSS site, NOPF Whidbey Island has a unique command structure in that it is under the Operational Control (OPCON) of two Operational Commanders in the Pacific Fleet, CTF 12 for Third Fleet operations and CTF 74 for Seventh Fleet operations. Administrative Control is held by

Commander, Undersea Surveillance in the Atlantic Fleet. Despite this unique structure, NOPF Whidbey Island is a premier operational facility, taking deep pride in its unsurpassed ability to provide tactical ASW data and mobile force support to the entire Pacific Fleet. With its tactical assets including three passive and two active (LFA) SURTASS platforms, NOPF WI monitors over 1 million square miles of open ocean, the largest IUSS area of responsibility in the world.



IUSS Operations Support Center (IOSC) Little Creek, Virginia



August 1984 - Present

The IUSS Operations Support Center, located on Naval Amphibious Base, Little Creek in Norfolk VA, was responsible for all aspects of logistic and technical life support for world-wide IUSS in-service assets, including SURTASS ships and IUSS Fixed Sites. The IOSC provided array support to all Navy combatant ships. Additionally, the IOSC acted as the In-Service Engineering Agent (ISEA) for the IUSS program. As ISEA, the IOSC managed and directed the support of contractors world-wide, acted as the liaison to field activities and laboratories, and provided configuration management, engineering change, technical documentation, preventative maintenance, RM & A, and Planning and Engineering for Repairs and Alterations (PERA) support. Resident Navy commands within IOSC included COMUNDERSEASURV (N42), SPAWAR Systems Center, Charleston, SC (SSCC), Navy Array Technical Support Center (NATSC), and Military Sealift Command (MSC). There was also a variety of Contract Companies working at the IOSC. IOSC remains active however; its role has been reduced in recent year.



Commander, Undersea Surveillance, Virginia Beach, Virginia



August 1994 – Present

Commander, Undersea Surveillance (COMUNDERSEASURV) (CUS) is the staff headquarters of the Integrated Undersea Surveillance System (IUSS). Undersea surveillance is the first vital link in the U. S. Navy’s defense against modern enemy submarines that jeopardize the safe movement of seaborne forces. As of 1 March 2007, CUS administrative control shifted from COMSUBFOR (Commander Submarine Forces) to CNMOC (Commander Naval Meteorology and Oceanography Command). Commander Undersea Surveillance (CUS) is the global headquarters and single Type Commander for IUSS. The mission of IUSS is to detect, track, classify and localize submarine, surface ship and aircraft contacts utilizing fixed, mobile and rapidly

deployable sensors in specific ocean areas of national interests supporting U.S. and Allied maritime operating forces. A total of 1,200 Officers, Sailors and civilian personnel are assigned worldwide. Fixed and towed acoustic arrays make a comprehensive web of sensor systems capable of



monitoring and updating the changing tactical situation in the Naval Theater for the Task Force Commander. CUS establishes directive policies and doctrine and oversees the day-to-day operations of subordinate IUSS commands. CUS began as COMOCEANSYSLANT (COSL) on 1 May 1958, became COMUNDERSEASURVLANT (CUSL) on 1 Oct 1991 and subsequently “CUS” (by combining CUSL and CUSP).



*Sites closed
with
Honor and
Deep
Respect*



Naval Facility Ramey – Punta Borinquen, Puerto Rico

18 September 1954 – 30 April 1976

The birth of the Oceanographic System began in 1953 as construction of Naval Facility Ramey commenced. It was built below the cliff of an Army Air Field built in 1939 at the end of the island of Puerto Rico. The base was named Ramey in 1949 in honor of Brigadier General Howard K. Ramey. Commissioned on 18 September 1954, this first Naval Facility began the task of implementing a new concept in the defense of our nation. Fifty years have passed since NAVFAC Ramey first met that challenge with innovation and achievement, setting the high standards of performance still the hallmark today. With the closing of Ramey AFB on 1 January 1974, NAVFAC personnel, in concert with WEST ANNEX became Naval Facility Punta Borinquen. The visions and accomplishments of this small, isolated Naval Station still live today with all those in the Integrated Undersea Surveillance System. NAVFAC Ramey-Punta Borinquen was awarded the Meritorious Unit Citation and the Navy Unit Citation for outstanding performance in support of undersea warfare. After twenty-two years of dedicated service, NAVFAC Punta Borinquen was decommissioned 30 April 1976.

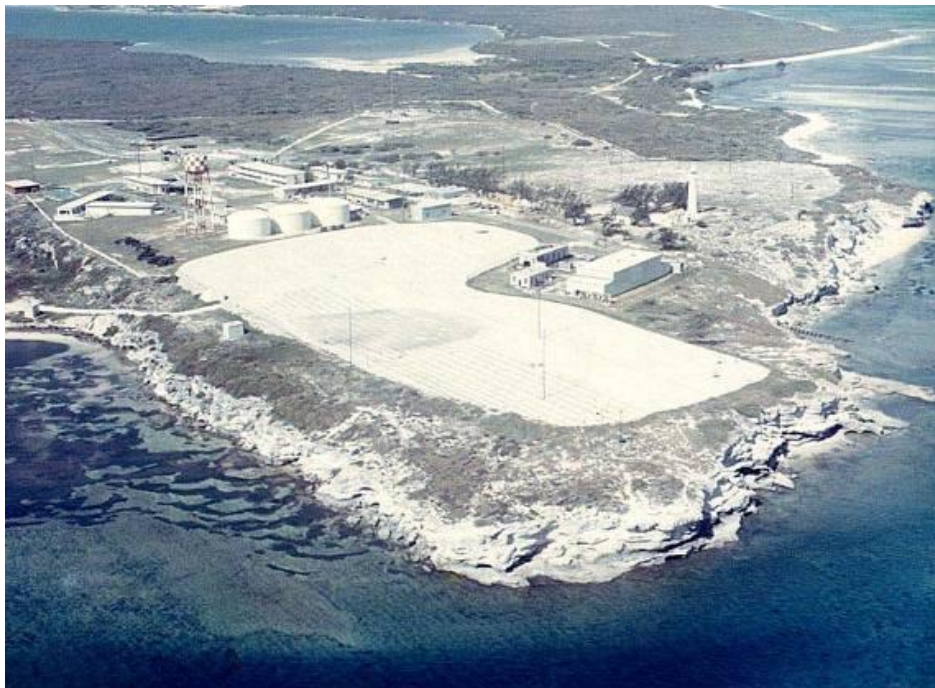




Naval Facility Grand Turk

23 October 1954 – 31 March 1980

Naval Facility Grand Turk was commissioned 23 October 1954. The island was named after a species of indigenous cactus resembling a Turkish fez. Early visitors of note were Ponce De Leon (official discoverer of the Turks and Caicos Islands in 1512), possibly Christopher Columbus, and Lord Nelson, the famous British Admiral who battled the French as a young lieutenant. Worldwide attention was focused on Grand Turk in 1962 when Astronauts LT COL John Glenn and CDR Scott Carpenter were welcomed back to terra firma here on the island after completing their space flights in their FRIENDSHIP Seven and AUROROA spacecraft. Since then Grand Turk has been visited by former President Lyndon Johnson and Queen Elizabeth on their respective tours of the Caribbean. NAVFAC Grand Turk was awarded the Navy Unit Citation for outstanding performance from August 1969 to August 1972. After nearly 26 years of dedicated service, NAVFAC Grand Turk was decommissioned on 31 March 1980.





Naval Facility San Salvador, Bahamas

8 December 1954 – 31 January 1970

Naval Facility San Salvador was commissioned 18 September 1954. Located at the extreme eastern end of the Bahamas island chain, Naval Facility San Salvador was an arid, isolated twelve-month tour of duty. San Salvador boasted a comfortable, subtropical climate, but was otherwise very sparse in amenities. Naval Facility San Salvador operated for sixteen years before its decommissioning on 31 January 1970.





Canadian Forces Station, Shelburne, Nova Scotia, Canada

01 April 1955 – 01 August 1994

CFS Shelburne was originally commissioned as HMCS Shelburne, a fleet establishment of the Royal Canadian Navy (RCN) on 1 April 1955. Located near the town of the same name (named after a British statesman), it was the oldest and smallest Naval Facility in OCEANSYLAND. The first Commanding Officer of Shelburne was also appointed Officer-in-Charge of the joint RCN/USN Oceanographic Research Station, as Shelburne was manned by officers, men and women of both the RCN and USN. Over the years, many changes took place at Shelburne including the replacement of the original Quonset Huts and WWII harbor defense emplacement with modern facilities. With the integration of the RCN into the Canadian Forces (CF) in 1968, the station's name was changed to CFS Shelburne. Throughout the years and changes endured, CFS Shelburne continued to proudly carry out its firm commitment to IUSS until it was decommissioned on 1 August 1994.





**Joint RCN/USN Oceanographic Research Station Shelburne
Nova Scotia Canada 1955**





Naval Facility Bermuda

01 June 1955 – 30 September 1992

Naval Facility Bermuda was commissioned 1 June 1955, making it the oldest continuously operating U. S. command at the time of its decommissioning in 1992. The Naval Facility was located on the west end of Bermuda in South Hampton Parish, adjacent to the island's very scenic south shore. Naval Facility Bermuda experienced numerous composition and equipment upgrades during its long operational tenure. In September 1987, NAVFAC Bermuda weathered Hurricane Emily with no loss of operational capability. Naval Facility Bermuda's fifteen officers, 155 enlisted personnel, 2 foreign national civilians and one resident contractor served with pride and distinction earning three Meritorious Unit Citations and one Navy Unit Citation for outstanding performance in support of undersea warfare. After thirty-seven years of continuous operations, NAVFAC Bermuda was decommissioned on 30 September 1992. At that time, acoustic sensor data were relayed via satellite to NOPF Dam Neck. All such data were turned off on 22 Nov 1994.





Naval Facility Nantucket, Massachusetts

01 August 1955 – 30 June 1978

Naval Facility Nantucket was commissioned 1 August 1955 and was located at Tom Never’s Head, the southernmost tip of the island, approximately twelve miles from the town of Nantucket, Massachusetts. The island, fifteen miles long and four miles wide, is surrounded by eighty-eight miles of sandy beaches. The Gulf Stream and encircling ocean moderate the climate, producing warmer winters and cooler summers, and which combined with quaintness and charm, make the island a tourist mecca with a summer population of 30,000. NAVFAC Nantucket was awarded the Navy Unit Citation and Meritorious Unit Citation for outstanding performance in support of undersea warfare. After twenty-one years of operation, NAVFAC Nantucket was decommissioned 30 June 1976.





Naval Facility Cape May, New Jersey / Lewes, Delaware

15 August 1955 – 30 September 1981

Naval Facility Cape May, New Jersey, was commissioned 15 August 1955. Following the Ash Wednesday northeaster in March 1962, all the Naval Facility equipment was shipped by LST, 12 miles across the Delaware River to Lewes, Delaware. Naval Facility Lewes was commissioned 1 May 1962 following the deactivation of Naval Facility Cape May. A Royal Navy exchange program was assigned under the PEP program in July 1972. In September 1977, LCDR Peggy Frederick became the first woman to assume command of an IUSS Naval Facility. NAVFAC Lewes was awarded the Meritorious Unit Commendation three times and the Navy Unit Commendation once for outstanding performance between August 1969 and September 1980. After twenty-six years of dedicated service, NAVFAC Lewes was decommissioned on 30 September 1981.

NAVFAC Cape May New Jersey (after the storm)



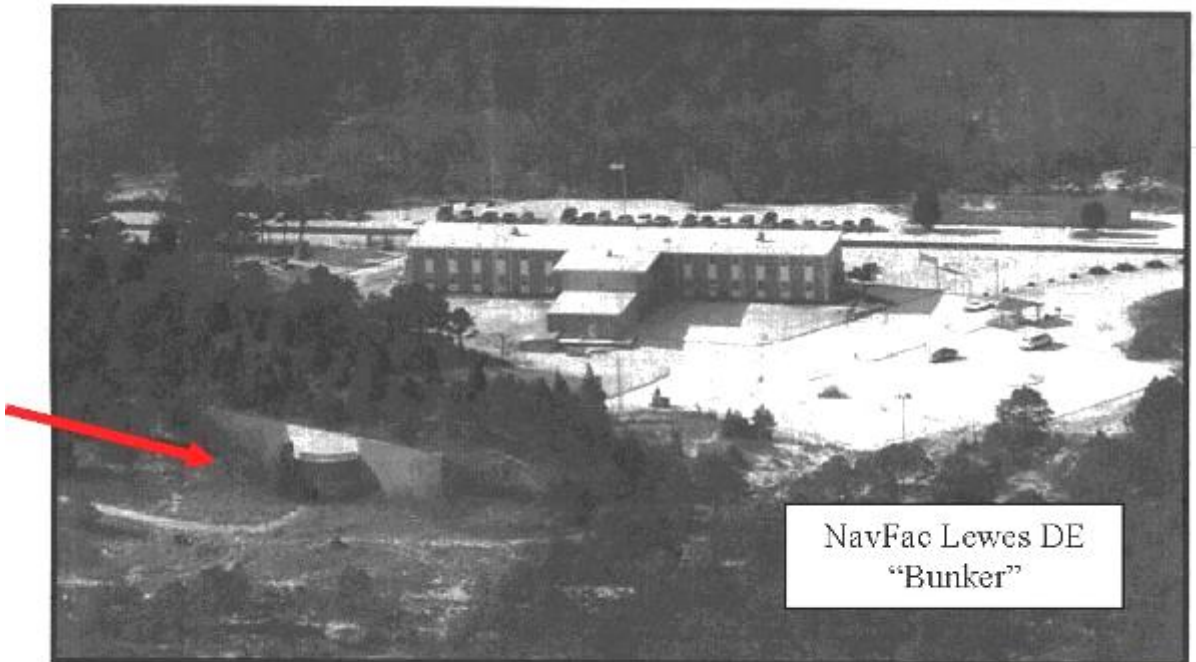


Photo compliments of Lewes Naval Reserve Facility

This wintertime aerial photograph, taken from the ocean side, shows the 18.8-acre site of the Lewes Naval Reserve facility that is likely to be turned over to Delaware late in the summer of 1996. One of the gun emplacements for a 16 inch artillery weapon is visible in the lower left of the photo.



Naval Facility Eleuthera, Bahamas

01 September 1957 – 31 March 1980

Naval Facility Eleuthera, Bahamas was commissioned on 1 September 1957, with a complement of 150 officers and enlisted men. Approximately twenty Pan-American Airway, RCA and Western Electric personnel and 45 Bahamian employees also supported the base. Eleuthera made history June 30, 1970; it was the first facility to employ women in oceanographic research. As for recreation, Eleuthera is surrounded by warm, crystal clear water filled with fresh fish, making water sports a most popular pursuit. Other entertainment included golfing, spelunking, beach combing, nightly movies, and the “Carib Club.” NAVFAC Eleuthera was awarded the Navy Unit Citation and the Meritorious Unit Citation. After 23 years of dedicated service to Undersea Warfare, NAVFAC Eleuthera was decommissioned 31 March 1980.





Naval Facility Barbados

01 October 1957 – 31 March 1979

Naval Facility Barbados was commissioned 1 October 1957. It was a small facility with a compliment of twelve officers and eighty-eight enlisted personnel. Barbados is an island located in the easternmost part of the West Indies, approximately 600 miles southeast of Puerto Rico. The island is twenty-one miles long and fourteen miles wide. English is the formal language, however the local people speak with a “Bajun” accent, which is quite unique and charming. The pleasures of the island are similar to those of most Caribbean islands. Sea, on all sides, is available for all water sports; and in the evening, dancing is the national pastime. Steel bands often play calypso music and “flaming limbo” is an interesting dance often seen. NAVFAC Barbados was awarded the Navy Unit Commendation and the Meritorious Unit Commendation for outstanding performance in support of Undersea Warfare and after twenty-two years of operation was decommissioned on 31 March 1979.





Naval Facility San Nicolas Island, California

31 October 1957 – 02 March 1984

Naval Facility San Nicolas Island was commissioned on 31 October 1957. Located sixty miles south-southwest of Point Mugu, California, the island is the outermost of the Channel Islands off southern California. San Nicolas was occupied solely by the Navy with the Naval Facility located on the eastern shore about mid-island. Although dependents were not authorized on the island, numerous recreational facilities and activities kept assigned personnel busy, including fishing, movies, bowling, pool, softball, football, tennis, basketball, hiking, volleyball, handball, and swimming. Diving for abalone shells, unique to the waters, was a special treat. NAVFAC “San Nic” was awarded three Meritorious Unit Commendations and operated for a proud twenty-six and a half years. After its ocean sensor data were remoted to NAVFAC Centerville Beach, NAVFAC “San Nic” was decommissioned 02 March 1984.





Naval Facility Point Sur, California

08 January 1958 – 01 October 1984

Naval Facility Point Sur, California was commissioned 8 January 1958. During its twenty-six years of operation, it provided continuous support to Undersea Surveillance. Located twenty-five miles south of Monterey, California along scenic Highway 1, the facility was manned by ten officers, ninety-six enlisted and 18 civilians. The command was awarded three Meritorious Unit Commendations, the Efficiency “E” in both 1977 and 1983, and was also rated as the top Naval Facility in 1983 by COSP, achieving the system’s first “clean sweep” of operations, maintenance, and efficiency awards given by the Task Group commander. After its ocean sensor data were remoted to NAVFAC Centerville Beach, NAVFAC Point Sur was decommissioned 1 October 1984.





Naval Facility Cape Hatteras, North Carolina

11 January 1958 – 30 June 1982

Naval Facility Cape Hatteras was commissioned 11 January 1956. It was located at Buxton, North Carolina, adjacent to the Cape Hatteras lighthouse. Hatteras Island is a barrier island, separated from the mainland by Pamlico Sound, and is known for its frequent and severe storms. The Diamond Shoals, southeast of the Cape, have claimed more than 600 ships over the years, resulting in Hatteras being called the “graveyard of the Atlantic.” Although the NAVFAC was considered relatively isolated, its personnel enjoyed movies, bowling, surf and pier fishing, fresh water fishing and hunting. NAVFAC Cape Hatteras was awarded the Meritorious Unit Commendation and the Navy Unit Commendation for outstanding performance between August 1969 and December 1978. After twenty-six years of operation, NAVFAC Cape Hatteras was decommissioned on 30 June 1982.





Naval Facility Centerville Beach, California

25 March 1958 – 30 September 1993

Naval Facility Centerville Beach was commissioned on 25 March 1958. From the original complement of ninety-five personnel and sixteen buildings, it grew to 280 personnel and twenty-four major structures. The facility was located approximately 260 miles north of San Francisco and 100 miles south of the Oregon border. It was situated on thirty-seven acres of rolling pasture land on a 320 foot cliff overlooking the Eel River Valley to the North and bordered by the Pacific Ocean to the West. In addition to its operational responsibilities, NAVFAC Centerville Beach also marked the location of the Readiness Training Facility from 1978 to 1985. NAVFAC Centerville Beach was awarded the Meritorious Unit Citation three times for excellence in supporting Undersea Warfare. Following three earthquakes in 1992, NAVFAC Centerville Beach ocean sensors were re-terminated to NOPF Whidbey Island and the NAVFAC was decommissioned 30 September 1993 after nearly thirty-five years of dedicated service.





Naval Facility Pacific Beach, Washington

14 May 1958 – 01 September 1987

Naval Facility Pacific Beach, Washington was commissioned as a shore activity on 14 May 1958. The Commanding Officer's house was built on the site of the once-famous Pacific Beach Hotel, the Northwest's most romantic "Honeymoon" Hotel in the early 1900s. With outbreak of World War II, the Navy and the Air Force moved in and used the site on and off as a regional headquarters, gunners school, radar station and, finally as a Naval Facility. Naval Facility Pacific Beach had an allowance of 12 officers, 115 enlisted and 15 civilians. NAVFAC Pacific Beach was awarded three Meritorious Unit Citations during the twenty-nine years of operations. After its ocean sensor data were remoted to NAVFAC Whidbey Island, NAVFAC Pacific Beach was decommissioned on 1 September 1987.





Naval Facility Coos Head, Oregon

13 May 1958 – 30 November 1987

Naval Facility Coos Head was commissioned 13 May 1958. The facility was situated on a bluff overlooking the Pacific Ocean at the entrance to Coos Bay, Oregon, the finest natural harbor between San Francisco and Seattle. Naval Facility Coos Head had an allowance of twelve officers, ninety-five enlisted and 15 civilians until 1987. NAVFAC Coos Head was awarded the Meritorious Unit Commendation three times for outstanding performance in support of Undersea Warfare. After its ocean sensor data were remoted to NAVFAC Whidbey Island, NAVFAC Coos Head was decommissioned on 30 November 1987, after twenty-nine years in a fully operational status.





Naval Facility Antigua, West Indies

09 August 1958 – 04 February 1984

Naval Facility Antigua was commissioned on 9 August 1956. The first Commanding Officer was LCDR R. Hinmon. As one of the Leeward Islands of the Lesser Antilles, Antigua is considered by many to have the best climate in the Caribbean. This island, discovered by Columbus in 1493, is comprised of large peaks, rolling hills, and fine sandy beaches accentuated by rough rocky coasts. NAVFAC Antigua was awarded the Humanitarian Service Medal, the Navy Unit Commendation and the Meritorious Unit Commendation for outstanding performance in support of Undersea Warfare. After operating for more than twenty-seven years, NAVFAC Antigua was decommissioned 4 February 1984.





Naval Facility Argentina, Newfoundland

01 October 1959 – 30 September 1994

Naval Facility Argentina was commissioned 1 October 1959 as a tenant command of Naval Station, Argentia, Newfoundland. From an original staff of 45 officers and enlisted personnel, the NAVFAC grew to a population of over 340. Of note, women were first stationed at NAVFAC Argentina in 1973. The first group consisted of two line officers and fifteen enlisted Americans and one Canadian officer and twelve enlisted ratings. From that point on, the facility enjoyed a close working relationship with the Canadian Forces. On 30 June 1975, the NAVFAC assumed duties as host command, becoming the largest NAVFAC in the IUSS with control of 8,987 acres and five tenant commands. NAVFAC Argentina was awarded the Navy Unit Commendation and two Meritorious Unit Commendations. After thirty-five years of operations, NAVFAC Argentina's ocean sensor data were remoted to CFIC Halifax and the NAVFAC was disestablished on 30 September 1994.





Naval Facility Adak, Alaska

01 December 1962 – 30 September 1993

Naval Facility Adak was commissioned on 1 December 1962. Adak, Alaska is a mountainous island of volcanic origin within the Aleutian chain. It is about twenty-five miles wide and thirty-five miles long with a very irregular coastline which varies from broad beaches to sheer cliffs. A treeless island, Adak is carpeted with tundra, a foot-high grass with a spongy base. This environment provides a home to many native birds and fish and combined with introduced game, provide a sportsman's paradise. There is no civilian or native community on the island, but the military, their dependents, the federal employees and contract support personnel once numbered over five-thousand. After thirty years of ASW Excellence recognized by receipt of five Meritorious Unit Commendations, Naval Facility Adak was decommissioned on 30 September 1993.



Commander, Undersea Surveillance, US Pacific Fleet



01 September 1964 – 15 August 1994

On 1 September 1964, Commander, Oceanographic System, Pacific (COSP) was commissioned as a third echelon command reporting operationally to Commander, ASW Force, Pacific (CTF 12) and administratively to Commander in Chief, U. S. Pacific Fleet. COSP served as the principal advisor to CTF 12 for undersea surveillance, through coordination, designation and reporting of Pacific SOSUS data. Acoustic data collected and analyzed at subordinate Naval Facilities were relayed to other operating forces and agencies. In January 1985, with the addition of the SURTASS subsystem, SOSUS became IUSS. In October 1991, the IUSS mission was declassified and COSP became Commander, Undersea Surveillance, US Pacific Fleet (CUSP). During its history, COSP earned the Navy Unit Commendation and five Meritorious Unit Commendations (1967, 1969, 1970, 1971, and 1985). COMUNDERSEASURVPAC was decommissioned 15 August 1994.





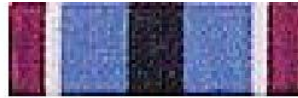
Naval Facility Keflavik, Iceland

01 March 1966 – 13 December 1996

Naval Facility Keflavik, Iceland was commissioned 1 March 1966 with a compliment of only nine officers and sixty-nine enlisted personnel. At its peak of operations, the command grew to 15 officers and 163 enlisted personnel. The Naval Facility was located in the midst of a lava rock field and came to be known by many as the “Dark Side of the Moon;” particularly fitting in the winter months when darkness prevailed. Once off the base however, the island of Iceland was a sightseer’s paradise where numerous glaciers, hot springs, geysers, waterfalls, and natural formations abounded. Over the years, Naval Facility Keflavik earned a global reputation for outstanding professionalism and stellar conduct of its operational mission receiving an unprecedented two Navy Unit Commendations and eight Meritorious Unit Commendations. NAVFAC Keflavik was decommissioned on 13 December 1996, after 30 years of dedicated service.







Naval Facility Guam

03 December 1968 – 30 September 1992

Naval Facility Guam, Marianas Islands, was commissioned 3 December 1968. It was located at the base of a 500-foot cliff at the northern most point of Guam. This area, called Ritidian Point, is one of the most beautiful on the island. Ten officers, 100 enlisted personnel, and one civilian contractor manned the Naval Facility. Naval Facility Guam’s outstanding performance, dedication and commitment throughout the years earned it the title “Best in the West.” NAVFAC Guam was awarded three Meritorious Unit Commendations and the Humanitarian Service Medal. After nearly twenty four years of operations, NAVFAC Guam was decommissioned on 30 September 1992.





Naval Facility Midway Island

13 January 1969 – 30 September 1983

Naval Facility Midway Island was commissioned 13 January 1969. Midway Island, annexed to the United States in 1908, is located at the northwest end of the Hawaiian archipelago, 3000 miles west of San Francisco. Midway Atoll is made up of two main islands surrounded by white, sandy beaches and a calm lagoon. The island is halfway across the Pacific with the international dateline only 140 miles to the west. Midway Island is best known for the famous Battle of Midway in 1942, which was the turning point of World War II in the Pacific. The atoll is volcanic in nature with a land area of about 5 square miles. No native population existed on Midway, and the 2,500 residents consisted of Navy, Air Force, Civil Service personnel and dependents. The relatively small human population shared the island with hundreds of thousands of Laysan and Black-Footed Albatross, more affectionately known as “Gooney birds.” . NAVFAC Midway received three Meritorious Unit Citations for outstanding support of Undersea Warfare. After twenty-four years of operation, NAVFAC Midway ocean sensor data were remoted to NOPF Ford Island and the NAVFAC was decommissioned on 30 September 1983.

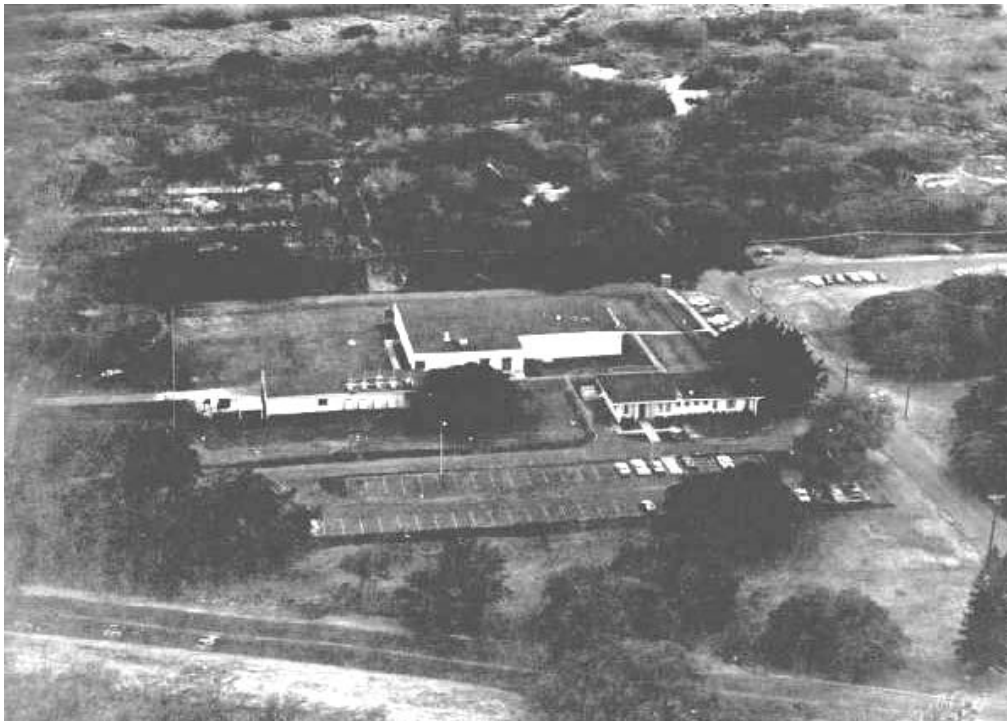




Naval Facility Barbers Point, Hawaii

01 August 1970 – 01 October 1985

Naval Facility Barbers Point was commissioned on 1 August 1970. Eleven officers and 80 enlisted personnel manned the facility. Located at NAS Barbers Point on the beautiful island of Oahu, Hawaii, Naval Facility Barbers Point enjoyed perfect weather and all the amenities that a tropical paradise has to offer—only ten degrees Fahrenheit separated summer and winter temperatures. NAVFAC Barbers Point was twice awarded the Meritorious Unit Commendation for outstanding performance in support of the Undersea Warfare mission. After fifteen years of operation, NAVFAC Barbers Point was decommissioned on 1 October 1985.





Naval Facility Brawdy, Wales

05 April 1974 – 01 October 1995

Naval Facility Brawdy, Wales was commissioned 05 April 1974. A thriving major facility within the IUSS, the positive effects of continued growth were evident in every arena: Operations Technology, Communications, Construction, Security, Manpower, Community Outreach Programs, Administration, Supply and Retention. Welsh roads leading to NAVFAC Brawdy may well have been narrow and winding, but those that led from the station were wide open and ever expanding. Twenty-one years of coordination and cooperation afforded Brawdy a proud place within the legacy of IUSS. NAVFAC Brawdy was twice awarded the Meritorious Unit Commendation. The facility enjoyed a close working relationship with the armed forces of the United Kingdom. The 400 US and UK sailors, civilians and officers of NAVFAC Brawdy served with dedication and pride in this land of stormy beauty, castles and dragons. Following retermination of its ocean sensors to the Joint Maritime Facility, St. Mawgan, NAVFAC Brawdy was deactivated on 1 October 1995. “Cheers!”





NOPF Ford Island, Hawaii

01 October 1981 – 01 October 1994

Naval Ocean Processing Facility Ford Island, Hawaii was established 23 February 1980, with limited data collection commencing September 1981. The command was commissioned 1 October 1981 with eleven officers and 102 enlisted personnel. At its peak of operations, NOPF Ford Island was comprised of 28 officers, 283 enlisted personnel, two remote site detachments (Midway Island/Barber’s Point) and six SURTASS ships, maintaining continuous watch of the Pacific Ocean. The command mission was fulfilled through the professional, coordinated and dedicated efforts of the operations analysts, maintenance technicians, communicators, supply and administrative support personnel stationed there until its decommissioning on 1 October 1994.





Canadian Forces IUSS Centre, Halifax, Nova Scotia

01 October 1994 – 15 April 1999

Canadian Forces IUSS Centre Halifax, Nova Scotia was commissioned 1 October 1994. The Centre was a joint Canadian/United States Navy manned and operated facility that replaced the IUSS capability located at NAVFAC Argentia Newfoundland. It was fully operational by May 1995 and was responsible for providing information to both Canadian Commander, Maritime Forces Atlantic and Commander, Undersea Surveillance. CFIC Halifax (Trinity) responsibilities were transferred to Commander, Maritime Forces Atlantic in April 1999, through which Canada remains fully committed to supporting IUSS with P-3 aircraft and ASW assets in the Canadian arsenal. Canadian Forces “Ocean Op” personnel continue to serve with pride at NOPF Whidbey Island.



Readiness Training Facility

14 February 1985 – 30 September 1994

Temporarily established in 1978 at NAVFAC Centerville Beach, California, the mission of the Readiness Training Facility was to develop and conduct functional and operational team training on advanced systems for officer and enlisted personnel assigned to the Integrated Undersea Surveillance System, and to manage the Navy’s Surveillance Training and Operating Procedures Standardization (SURTOPS) Program. Upon completion of modern schoolhouse facilities and a twelve-million dollar operational laboratory, the Navy officially established the permanent site of the Readiness Training Facility at Dam Neck, Virginia on 14 February 1985. Since establishment, over 2,000 students have passed through the RTF, including members of the Canadian Armed Forces. The RTF offered six formal courses of instruction, the Mobile Training Team (MTT), the Tactical Training Team (TTT) and the pinnacle in training environments, the Operational Training Laboratory (OTL). The RTF continued its vital role in the operational performance and tactical effectiveness of the IUSS until it was decommissioned on 30 September 1994.



*Joint Maritime Facility, Saint Mawgan,
United Kingdom*



August 1995 – 27 May 2009

The Joint Maritime Facility (JMF) was commissioned 18 August 1995, employing ocean sensors previously terminated at NAVFAC Brawdy, Wales, which was being decommissioned. Located onboard the Royal Air Force (RAF) Station St. Mawgan in Cornwall, England, JMF is a jointly staffed IUSS command with personnel assigned from the United States Navy, Royal Navy, and Royal Air Force. JMF is unique in that it is a massive, semi-hardened, partially buried, reinforced concrete structure capable of self-sufficient operations using dedicated supplies. The Joint Maritime Facility provides a direct link between United Kingdom and United States maritime forces and their headquarters in the UK and overseas. The command supports ASW Command and Tactical Forces by detecting, classifying, tracking, and providing timely reporting information concerning submarines, oceanographic, and geologic information. The professionalism and dedication of all personnel onboard has quickly established it as amongst the best and most capable ASW sites in the world.

Effective 27 May 09, all of JMF’s surveillance assets were remoted to NOPF Dam Neck Virginia. NOPF DN at that time became a joint United Kingdom and United States Naval Command. A joint flag raising ceremony was held on 27 May 2009. Accordingly, JMF has been disestablished.”



“Our Book”

