NADC **Reflector**

Volume 31 Number 12 NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA. December 1986

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Welfare and Rec
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HAPPY HOLIDAYS

THE WHITE HOUSE

WASHINGTON

Christmas, 1986

TO THE MEN AND WOMEN
OF THE ARMED FORCES

As 1986 draws to a close and the holiday season fills the Earth with the spirit of peace and joy, I would like you, the men and women of the United States Armed Forces, to know of my profound thanks for all you have done to enable America to enjoy another year of freedom and peace.

Believing in miracles isn't always the fashion in our Modern Age. In a world of technological wizardry in which we too often assume that the future lies totally in our control, it is almost too much for us to accept that the course of human history could be changed so suddenly as it was by the events of that first Christmas Day. The ancient world, like our own, knew the bitter fruit of enmity between nations, and many people looked for the coming of a Messiah who would rule by temporal power. But that miraculous scene that has been the theme of countless composers, painters, and poets -- Mary and Joseph and the Christ-child in the stable at Bethlehem -- tells us by its intimacy of a different power, an inward peace, that is greater than any other.

We cannot properly see the year pass without expressing the hope once more that this message of peace and joy will someday reach all men. As members of the Armed Forces, you stand upon the parapets of that hope, keeping watch not only for the sake of your countrymen but for the people of other lands as well. For this the thanks may seldom seem to match your sacrifice. But on Christmas night the lights of a nation united in gratitude will beam, from every home and every smiling face, for the gifts of peace and freedom your service has bestowed.

Nancy and I send each of you, and your families, our warmest wishes for the Holiday Season, for joy in celebration wherever duty finds you, and for health and prosperity throughout the New Year.

God bless you, and God bless America.

Ronald Reagan

As we close out 1986—a year marked by significant changes here at the Naval Air Development Center—I would like to acknowledge the service, dedication and devotion to duty of all of you who work on Center—civilian, military, and contractor personnel alike.

It is through your efforts that we—and the entire Navy—achieve our mission. I am proud of the job you have done and I believe you should be equally proud of it.

On behalf of the entire NADC management team, I wish you and your families a safe, healthy and joyous Christmas and Hanukkah and a most happy New Year.

Edward J. Sturm
Center Commander

Holiday Message from the Secretary of Defense

As we approach one of the most significant holiday periods of the year, I want to extend my personal best wishes to every member of the Armed Forces and your families for a happy holiday season and a wonderful 1987. To those of you in uniform whose duties keep you from sharing the joys of Christmas and Hanukkah with your loved ones, I extend a special thank you.

Many of you will spend this special season longing for "Christmas past," when you were able to celebrate with family and friends. I hope you will take comfort in remembering one particular "Christmas past" when General George Washington and his ragged-but-brave citizen-soldiers crossed the freezing Delaware River to surprise and defeat the enemy, and turn the tide in the fight for independence. Their selfless sacrifice, like yours, has earned America the peace and freedom we enjoy every day of the year. There is great comfort in that.

Your commitment has allowed all Americans to enjoy a peaceful "Christmas present" and to look forward to the "Christmas future" with faith, hope, and the knowledge that America does indeed remain the land of the free and the home of the brave.

Caspar W. Weinberger

It's beginning to look a lot like Christmas

Photo by JO2 Todd Lufkin

The Officer's Wives Bake Sale is an indication that Christmas is close by. The delectable treats sold out in record time this year.

Photo by JO2 Todd Lufkin

The yearly Toys for Tots Campaign gives Center employees a chance to spread good cheer. Center Commander CAPT Edward Sturm (right), along with Major Daniel Swindell and Captain Al Keiss, Fire Dept. are some of the first to give a gift.

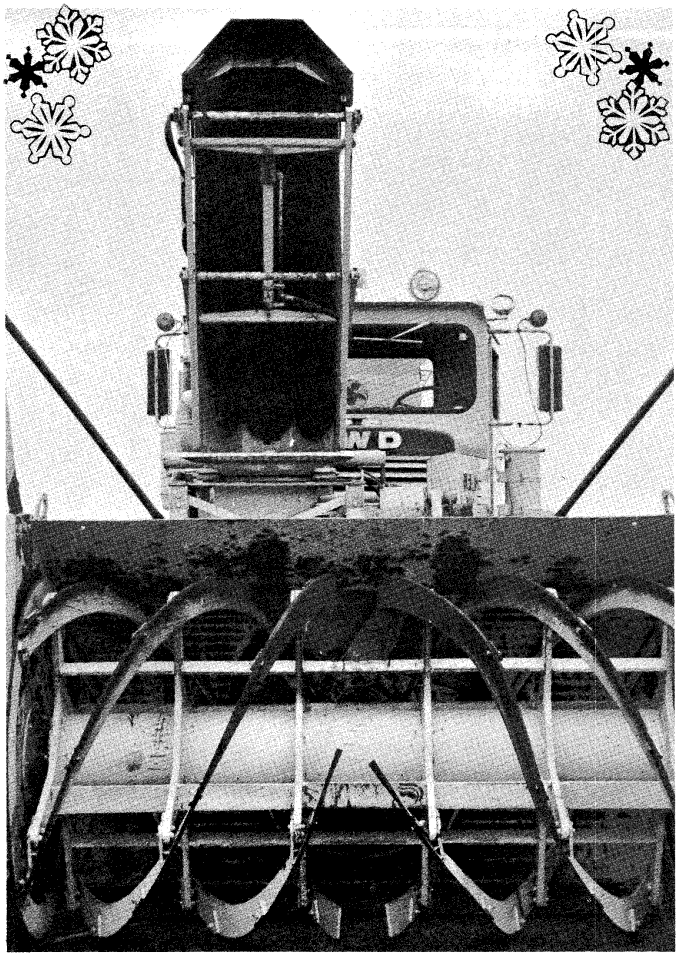


Photo by JO2 Todd Lufkin

Let it snow . . . ***because Public Works is ready! A fleet of snow plows is standing by at NADC just waiting for that first storm to arrive.***

Federal salaries up 3%

A 3% pay raise for military personnel and federal civilian employees goes into effect January 1, 1987. A 1.3% cost-of-living allowance for military and civilian retirees also takes effect.

The following charts show the new military and civilian pay scales:

PAY GRADE	Under 2	2	3	4	6	8	10	12	14	16	18	20	22	26
COMMISSIONED OFFICERS														
O-10	5378.10	5567.70	5567.70	5567.70	5567.70	5781.00	5900.10	5900.10	5900.10	5900.10	5900.10	5900.10	5900.10	5900.10
O-9	4766.70	4891.50	4995.60	4995.60	4995.60	5122.50	5122.50	5335.80	5335.80	5781.00	5900.10	5900.10	5900.10	5900.10
O-8	4317.30	4446.60	4552.20	4552.20	4552.20	4891.50	4891.50	5122.50	5122.50	5335.80	5567.70	5781.00	5900.10	5900.10
O-7	3587.40	3831.30	3831.30	3831.30	4002.90	4002.90	4235.10	4235.10	4446.60	4891.50	5227.80	5227.80	5227.80	5227.80
O-6	2658.90	2921.40	3112.50	3112.50	3112.50	3112.50	3112.50	3112.50	3218.10	3727.20	3917.70	4002.90	4235.10	4593.30
O-5	2126.40	2497.20	2669.70	2669.70	2669.70	2669.70	2750.70	2898.30	3092.70	3224.00	3514.80	3621.30	3747.60	3747.60
O-4	1792.50	2182.80	2328.30	2328.30	2371.50	2476.20	2645.10	2793.90	2921.40	3049.50	3133.80	3133.80	3133.80	3133.80
O-3	1665.90	1862.40	1990.80	2202.90	2308.20	2391.30	2520.60	2645.10	2710.20	2710.20	2710.20	2710.20	2710.20	2710.20
O-2	1452.60	1586.40	1905.60	1905.60	1969.80	2011.20	2011.20	2011.20	2011.20	2011.20	2011.20	2011.20	2011.20	2011.20
O-1	1260.90	1312.80	1586.40	1586.40	1586.40	1586.40	1586.40	1586.40	1586.40	1586.40	1586.40	1586.40	1586.40	1586.40
COMMISSIONED OFFICERS WITH MORE THAN 4 YEARS ACTIVE DUTY AS ENLISTED OR WARRANT OFFICER														
O-3E	0.00	0.00	0.00	2202.90	2308.20	2391.30	2520.60	2645.10	2750.70	2750.70	2750.70	2750.70	2750.70	2750.70
O-2E	0.00	0.00	0.00	1969.80	2011.20	2074.80	2182.80	2266.20	2328.30	2328.30	2328.30	2328.30	2328.30	2328.30
O-1E	0.00	0.00	0.00	1586.40	1694.70	1757.10	1820.70	1884.00	1969.80	1969.80	1969.80	1969.80	1969.80	1969.80
ENLISTED MEMBERS														
E-9	0.00	0.00	0.00	0.00	0.00	0.00	1974.00	2018.70	2064.30	2111.70	2158.80	2200.80	2316.60	2541.90
E-8	0.00	0.00	0.00	0.00	0.00	1655.70	1702.80	1747.50	1793.10	1840.20	1882.80	1929.00	2042.40	2270.10
E-7	1155.90	1247.70	1294.20	1339.20	1385.10	1429.20	1474.80	1520.70	1589.40	1634.70	1680.30	1702.20	1816.50	2042.40
E-6	994.50	1083.90	1129.20	1177.20	1221.00	1265.40	1311.90	1379.40	1422.60	1468.50	1491.00	1491.00	1491.00	1491.00
E-5	872.70	950.10	996.00	1039.50	1107.60	1152.60	1198.50	1242.60	1265.40	1265.40	1265.40	1265.40	1265.40	1265.40
E-4	814.20	859.50	909.90	980.70	1019.40	1019.40	1019.40	1019.40	1019.40	1019.40	1019.40	1019.40	1019.40	1019.40
E-3	766.80	808.80	841.50	874.80	874.80	874.80	874.80	874.80	874.80	874.80	874.80	874.80	874.80	874.80
E-2	738.00	738.00	738.00	738.00	738.00	738.00	738.00	738.00	738.00	738.00	738.00	738.00	738.00	738.00
E-1	658.20	658.20	658.20	658.20	658.20	658.20	658.20	658.20	658.20	658.20	658.20	658.20	658.20	658.20
E-1	608.40	608.40	608.40	608.40	608.40	608.40	608.40	608.40	608.40	608.40	608.40	608.40	608.40	608.40

E-1 with less than 4 months — 590.70

NOTE — Monthly pay limited to $5900.10 by Level V of the Executive Schedule

FEDERAL PAY SCALES FOR WHITE COLLAR EMPLOYEES

IN DOLLARS

GS	1	2	3	4	5	6	7	8	9	10
1	9,619	9,940	10,260	10,579	10,899	11,087	11,403	11,721	11,735	12,036
2	10,816	11,073	11,430	11,735	11,866	12,215	12,564	12,913	13,262	13,611
3	11,802	12,195	12,588	12,981	13,374	13,767	14,160	14,553	14,946	15,339
4	13,248	13,690	14,132	14,574	15,016	15,458	15,900	16,342	16,784	17,226
5	14,822	15,316	15,810	16,304	16,798	17,292	17,786	18,280	18,744	19,268
6	16,521	17,072	17,623	18,174	18,725	19,276	19,827	20,378	20,929	21,480
7	18,358	18,970	19,582	20,194	20,806	21,418	22,030	22,642	23,254	23,866
8	20,333	21,011	21,689	22,367	23,045	23,723	24,401	25,079	25,757	26,435
9	22,458	23,207	23,956	24,705	25,454	26,203	26,952	27,701	28,450	29,199
10	24,732	25,556	26,380	27,204	28,028	28,852	29,676	30,500	31,324	32,148
11	27,172	28,078	28,984	29,890	30,796	31,702	32,608	33,514	34,420	35,326
12	32,567	33,653	34,739	35,825	36,911	37,997	39,083	40,169	41,255	42,341
13	38,727	40,018	41,309	42,600	43,891	45,182	46,473	47,764	49,055	50,346
14	45,763	47,288	48,813	50,338	51,863	53,388	54,913	56,438	57,963	59,488
15	53,830	55,624	57,418	59,212	61,006	62,800	64,594	66,388	68,182	69,976
16	63,135	65,240	67,345	69,450	71,555*	73,660*	75,765*	77,870*	79,975*	
17	73,958*	76,423*	78,888*	81,353*	83,818*					
18	86,682*									

* The rate of basic pay payable to employees at these rates is limited to the rate payable for level V of the Executive Schedule, which would be $70,800.
SOURCE: Office of Personnel Management

Integrity Alert

by Ron Kabin

There has been confusion over the years concerning participation by officers and employees of the Department Of Defense (DOD) at conferences, symposia, seminars, and similar gatherings sponsored by associations and other non-governmental entities.

Any participation by Center personnel in this type of activity that may be questionable should always be cleared through the Center's General Counsel (Code 095). The following is provided as basic guidance only:

If the participation can be considered part of your official duties, then no payment from the sponsor or other source is allowed (18 U.S.C. 209).

If the subject is not within your official responsibilities, if it is presented on your own time (e.g. annual leave), and if you comply with the "outside employment" rules of the Navy Standards Of Conduct Instruction, SECNAVINST 5370.2H, you may be paid for your participation.

If in doubt about a particular situation contact the Center's General Counsel (Code 095) X3000, or the Internal Review Office (Code OOR) X3033.

Promotions

Vinod Agarivala, Loretta Dunn, Michael Hartman, Edward Henry, Alan Kaniss, Catherine Kitchenman, David Panetta, James Weikert.

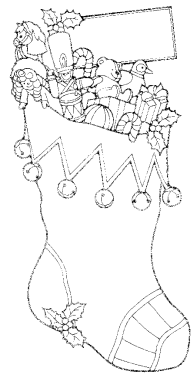
Security Reminders

Badges

NAVAIRDEVCENINST 5510.13B, Chapter 15, requires that badges be worn on the upper part of the body in full view, to facilitate identification. All employees are reminded that wearing the Center Badge is mandatory while on the Center.

Library Material

Sign classified material out for your personal use only. Do not sign classified material out for a co-worker. The signature on the library card is the responsible custodian, remember—the burden is on the holder; not the recipient.



A special thanks to all those whose assistance make our tours, events, and visits successful. From the engineers, scientists, and technicians who share their expertise to those who work behind the scene to make things run smoothly! Civilian and military—we wish to extend to you all our wishes for a happy Holiday Season and a great New Year.

The Public Affairs Office Staff

Kim K. Margaret L.
Mary Ann B. Todd K.

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Acting Technical Director ..... **Thomas Castaldi**
Public Affairs Officer and Editor ..... **James S. Kingston**
Associate Editor ..... **Mary Ann Brett**
Assistant Editor ..... **JO2 Todd Lufkin**

Engineering Design Branch

Aircraft mods advance Center research

by Mary Ann Brett

As more and more shop space is modified for office space it may come as a surprise that a great deal of aircraft design engineering, fabrication, and installation work is still being done within the Center.

The Aircraft and Crew Systems Technology Department's (ACSTD) Design Engineering Branch (DEB), headed by Nick Sipa for the last three years, has been busy designing high value projects in support of national defense. His branch provides the design engineering, drawings, and installation management for all R&D projects installed and tested aboard NADC aircraft. "I'm fortunate to have a great group of people here," said Sipa of his nearly 40 employees. "They have various backgrounds and expertise and have fused together very well."

Since much of this installation and modification work is done in the hangars on the airfield side of the Center, the projects have had low visibility. However, two recent major aircraft modifications have been especially significant, greatly expanding the technological base of the Center.

Airborne Laser Research Modification

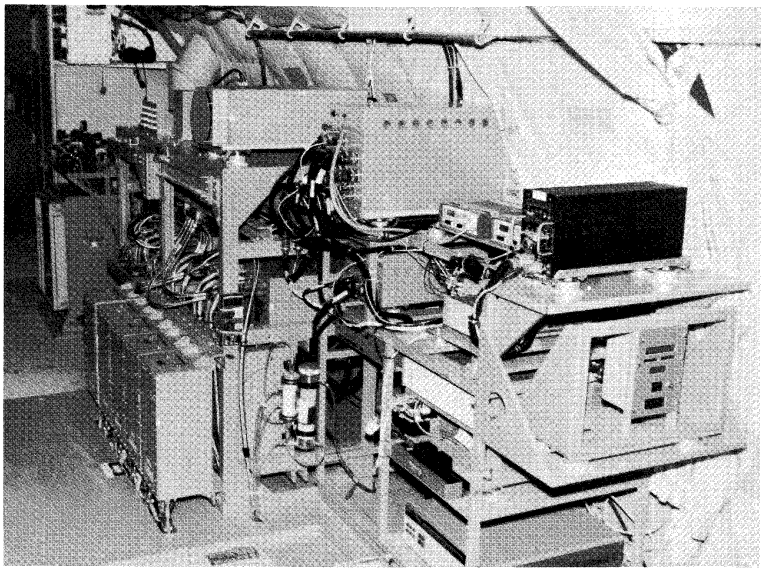
A pressing Navy problem has been communication with submerged submarines without exposing their location. This has now been effectively addressed by installing a 1500-pound, high-power laser communications system in an NADC P–3C aircraft.

Lead engineer on this effort was Dan Lorch, who has a Master's degree in Biomedical Engineering. He and electrical engineer Jerry Duley, both of ACSTD, provided preliminary designs and guided a team of engineers and designers to complete the 40 drawings required for the installation. The aircraft had to be extensively modified for a ten-square-foot, two-inch-thick window used to transmit the laser beam. All of the fabrication, electrical and mechanical installation work was done by NADC personnel in the Aircraft Installation Shop (A/C IS) of the Engineering Support Group.

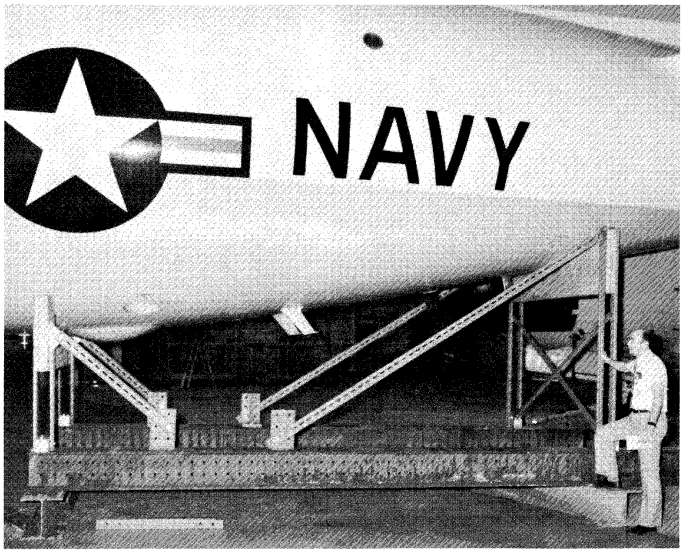
"The very difficult job of fabricating and installing the window" said Lorch, "was accomplished by Andy Schwartz and Dave Stasen." Schwartz and Stasen spent more than one thousand hours on this effort alone. Schwartz, a chief metal mechanic, explained that since the aircraft actually needed restructuring, special attention went to proper sealing and pressurization.

The same aircraft is also being utilized by the Defense Mapping Agency to obtain data on the depth of coastal waters around the world. Until now the method of determining ocean depths for coastal charts was to use a hydrographic ship to obtain sonar soundings. This method is very slow and requires a ship with all its support personnel (REFLECTOR—Nov. 86—"Laser sounder replaces shipboard methods"). Now that the DEB and A/C IS has installed this Hydrographic Laser Sounder system into the aircraft, a laser beam can be used to determine the ocean depths by measuring time delay as the beam reflects off both the water surface and the white sand bottom at a fraction of both the time and the cost.

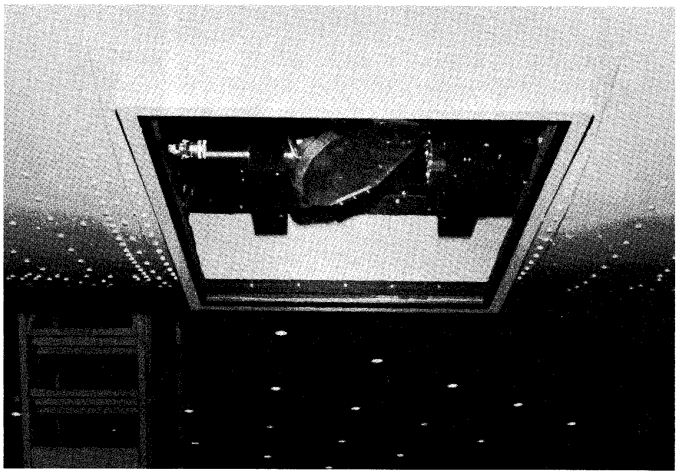
(continued on page 5)



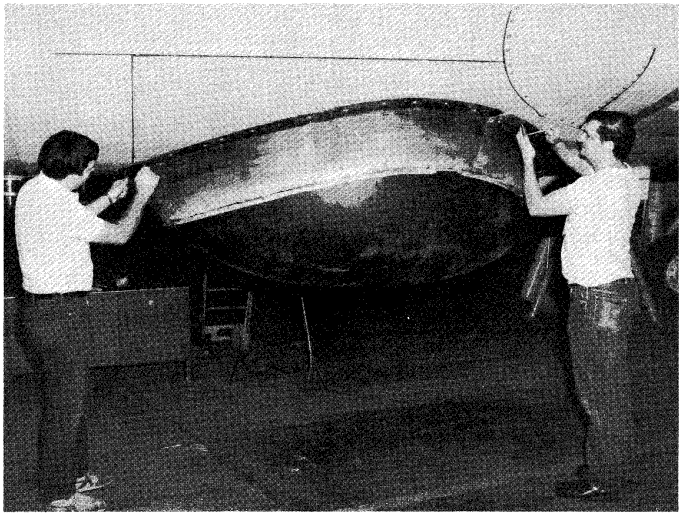
Aircraft-to-Submarine 1500—ground laser—communication system installed into the NADC P–3 aircraft by the Design Engineering Branch.



Dan Lorch takes a good look at the P–3 tail, supported prior to installation of the synthetic aperture radar.



Laser window provides NADC with new research capability.



NADC Mechanics Bill Williams and Jim Lezoche attach SAR Radome to P–3 aircraft.

Sailor and Blue Jacket of the Quarter named

by JO2 Todd Lufkin

Sailor of the Quarter

AW1 Richard Hoooper, P–3 Update IV Petty Officer, has been named as the Naval Air Development Center's Sailor of the Quarter (SOQ) for the third quarter of 1986. The 37-year-old sailor has been in the Navy for 13 years and has been at the Center for almost a year.

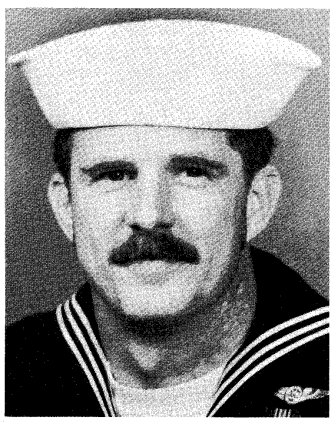
On being named SOQ, Hooper stated: "I was honored at being nominated Sailor of the Quarter. It made me feel even better knowing that the Chief Petty Officers on the Board felt that I was deserving of being SOQ."

This native of Coos Bay, Ore., has previously been stationed with VP–40, Moffett Field, Cal.; the Tactical Support Center, Moffett Field, Cal.; Naval Facility, Coos Head, Ore. During a four year break in service he became a journeyman carpenter and earned an Associates Degree in Business at Southwestern Oregon Community College. Economics, coupled with good memories of his prior naval service convinced him to reenlist. Prior to coming to NADC, he completed a 42-month tour with VP–48 at Moffett Field.

Hooper is also the Leading Petty Officer of VP Support Office. "I support the procurement process of future avionics systems in ASW aircraft and provide technical advice to research engineers," he said.

This SOQ takes in stride the publicity that comes with the recognition. "I don't think there is such a thing as a 'perfect' petty officer," he said. "Just because a person receives 4.0 evals doesn't mean that he is perfect. Instead he is a person who goes that extra step in meeting or exceeding expectations."

Hooper would like to see an improvement in cohesiveness among his fellow First Class Petty Officers at NADC. "You have First Class Petty Officers who have been E–6 for a long time and you have those who have just recently been advanced to E–6," he said. "I'd like to see a strengthening of the First Class Association to provide a forum for senior E–6's to share their experiences and provide leadership advice to new E–6's," stated Hooper. "There is a big difference in the responsibilities and leadership requirements between a Second and a First Class Petty Officer. However, most don't realize this until they make it. I would like the newly advanced E–6 to have the opportunity to become better prepared to assume the role of a First Class Petty Officer.



AW1 Richard Hooper

His advice to his fellow sailors is not to accept anything at face value. "If there is a situation that needs to be corrected, the Navy has ways to remedy it. Don't just complain—ACT," Hooper stated with determination.

Hooper's plans for the future include advancing as far as he can, both academically and professionally. "When I finally finish my service career, I want to start my own cabinet shop. But that's several years in the future and right now I intend to continue enjoying the day-to-day challenges of the naval service."

Hooper, his wife Jeanne, and their four children live in Chalfont and are all impressed with the beauty of Bucks County.

Blue Jacket of the Quarter

AZ3 Brenda Denonville has been named the Naval Air Development Center's Blue Jacket of the Quarter (BJQ) for the third quarter of 1986.

Denonville has been in the Navy for more than three years and at the Center since February. "I like the Warminster area," she said, "We're close to the city but at the same time, far away." Prior to her assignment to NADC, she was stationed at NAS Bermuda.

A native of Auburn, Maine, Denonville recently began working as Maintenance Control Clerk. Describing her job, she said, "I work behind Maintenance Control where I keep busy doing issuing inspections and verifying Vids boards, along with many other tasks to keep Maintenance Control running smoothly. It's a good group of people to work with."

The 22-year-old sailor is pleased with her selection as BJQ. "Of course it was an honor to be chosen," she said. "I honestly felt that I deserved the honor. I try to set a good example in my work habits and my appearance. In everything I do, I always try to put forth my best efforts." She feels that the BJQ award is an excellent morale-booster and that it gives E–4 and below something to strive for. "It's good to be recognized as outstanding," Denonville said. "People need to get an occasional pat on the back."

As part of her daily regimen, Denonville does a 30-minute workout consisting of running two miles and at least 50 sit-ups and 30 push-ups. "Basically I do it because it makes me feel good," she said. "I'm a firm believer that if a person feels good, they're going to look good."

The advice she would give to her fellow females is don't be afraid of the Navy because it is male-dominated. "Go in and be who you are. People will respect you if you're yourself," Denonville said with determination. "I tried to get some of my girlfriends back home to join, but they're afraid and that's a shame."

Denonville's plans for the future are uncertain at this time. Currently, she is working toward an Associate's Degree in Elementary Education at Bucks County Community College. After that she is giving serious thought to going into the Enlisted Commissioning Program and becoming an officer. "Right now I'm undecided about what I'm going to do," she said, "but I could picture myself as an officer or even as an instructor of some sort."

AZ3 Brenda Denonville

Commander Salutes

Janet Koch, Diane Heal, Lynda Newman (Code 09). **Christopher Veith** (Code 80). **Michael Natasi** (Code 40): For timely and helpful support to the Small Business Administration's Breakout Program.

Michael Kreszewski, David Panetta (Code 10); **CDR Jerome Landers** (Code 30): For assistance during recent visits by Mr. Magill of General Electric.

Tor Jansen, Kenneth Bullard, Mary Conyers, Richard Espright, Anthony Degennaro, Robert Hefty, James McNamara, Vinh Nuyen, William Mawhinney, John Tyburski, Thomas Wardle, Mieczyslaw Zurko (Code 60): For exceptional technical support provided to AIR-5303 on the V–22 Aircraft Program.

Richard Chern, John Markow, Charles Destra, Cynthia Yanoff, and Edward Calvello (Code 03): For coordinating the meeting and tour for the Northeast Region Training Advisory Group.

Barbara Ward (Code 03): For efforts helpful in molding the Navy Centralized Cooperative Education Program into a workable program.

Norbert Armstrong (Code 50): For many hours of exacting preparations for the F/A–18(R) Advanced Test Bid program's flight tests.

David Bailey (Code 30): For outstanding performance in preparing the SOW for the Navy Airship Program.

Richard Erickson (Code 60): For excellent performance during the recent FAILSAFE conference.

LCDR Timothy Singer (Code 60): For an informative presentation during the COMPAT WINGSPAC Safety Conference.

Paul Reimel (Code 40): For outstanding performance resulting in the first demonstration of VHSIC devices.

John Savage (Code 50): For diligence which proved essential in bringing together the VLAD sonobuoy working group.

Harry Reichardt (Code 50): For time and effort during the AV–8B Night Attack Dynamic Flight Simulation.

Jonathan Kaufman, Katherine Dijneka, Suzanne Reeps, Gary Whitman (Code 60): For support during the recent cold water immersion studies on protective equipment.

Richard Chern, John Markow (Code 03): For assistance to the 79th U.S. Army Reserve Command.

CDR John Tobia, Steve Ganop, Michael Greco, Paul Meisinger (Code 40): For participation during the Battle Group Navigation Improvement Project assuring the project was successful.

Alan Victor, Anthony Mickus and Ann Lipinski (Code 30): For noteworthy participation in the Navy's 1986 Global War Game.

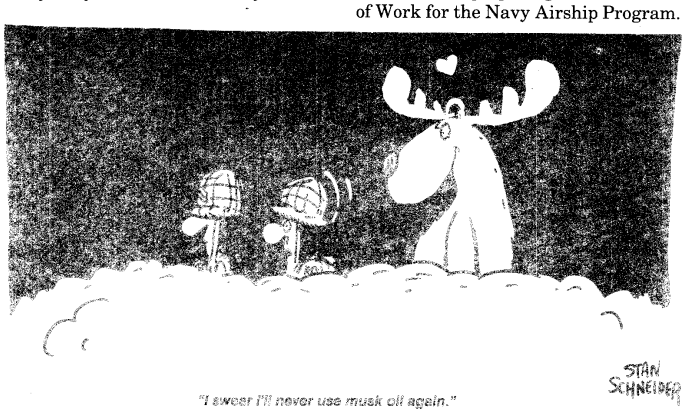
Sydney Oliver and Gwynn McConnell: For assisting with the survey of Gruman Aircraft Systems.

Richard Gasser (Code 50): For dedicated support of the Military Critical Technology List for the Deputy Under Secretary of Defense.

CDR John Tobia (Code 40): For outstanding performance on the Battlegroup Navigation Accuracy Project.

Thomas Castaldi (Code 01A) and **Major Blaine Feltmate**: For significant contribution to the success of the Canadian Industrial/Defense Exposition.

Frances Winterer (Code 10); **Carl Reitz** (Code 20); **Maria Hura, James Weikert, Susan Coar, Richard Desipio, Robert Johnstone** (Code 30); **Richard Adams, Harry Frost, Carmen Mazza, Eleanor Vodala, Joseph Franz, Edward Deska, Michael Strizak, Gregory Holmes** (Code 60); **Randall Huckaba, John Smith** (Code 50); **Richard Lane, Robert Santmann** (Code 70): For valuable contributions to the Naval Air Systems Command in preparing the Statement of Work for the Navy Airship Program.



"I swear I'll never use musk oil again."

Hill named first TACAIR Systems Deputy

by Mary Ann Brett

Texas-born Commander Roger Dale Hill arrived at the Center in November to assume the role of TACAIR Systems Department Deputy. One of Hill's primary goals in this new position is to promote NADC's TACAIR capabilities.

Commander Roger Hill

"NADC does a lot of TACAIR work"; said Hill, "we handle the technical and engineering development of several major TACAIR systems. But, despite this, the Center gets very low visibility and credit in this area." With his considerable experience and numerous contacts in the TACAIR and fleet communities, Hill feels he can help improve the Center's reputation for TACAIR expertise.

Hill considers the Center's reorganization which established a TACAIR department a step in the right direction since approximately 40% of NADC's work is TACAIR related. He said, "Now that we have proper recognition on-Center, we can go for higher visibility off-Center. We've got good, hard-working, motivated people. With this new organization, we will rival anti-submarine warfare as one of the Center's major mission areas."

More aggressive marketing techniques and increased credibility are two of the techniques Hill intends to employ to accomplish TACAIR's goals. "We definitely need more interaction with fleet operators," he said. "They give us the input and statements of requirements that lead to new technology and generate work for the Center.

Another goal of Hill's is to get an FA–18 aircraft for the Center. "There's plenty of work here for an FA–18" he said. "Just like the P–3s, it would be a technology demonstrator and a risk reduction airplane for developmental purposes." Hill explained risk reduction includes directly reducing the costs associated with development. "If we can do the proper groundwork for a weapon system so it is technologically sound, it will cost a lot less in the long run."

Hill graduated from the U.S. Naval Academy in 1970. He became a naval aviator in 1972 and was assigned to VA–105 flying A–7s at Cecil Field, FL. In 1975 he became an instructor pilot at VA-174, the A–7 training squadron. During 1976 he attended Navy Test Pilot School at Patuxent River, MD. He then served as a test pilot and operations officer at the Armament Development Test Center, Eglin Air Force Base, FL. From July 1980 to August 1983 he again served as a Fleet pilot with VA–46 as Operations, Maintenance, Administrative and Safety Officer. He has made cruises on the USS TICONDEROGA, the USS AMERICA (twice), and the USS J.F. KENNEDY.

In October 1984, Hill received his Master's degree in Aeronautical Engineering from the Navy Post Graduate School, Monterey, California. His most recent assignment as Operations Officer and Tactical Readiness Officer for Commander, Light Attack Wing, U.S. Pacific Fleet, is what Hill considers the best preparation for his assignment here.

"I had a lot of job opportunities to consider," Hill said, "but NADC sold itself. Here I saw unlimited potential for good work that will benefit the fleet and I wanted to be part of it."

Hill and his wife Diana are making their new home at NADC's Quarters "B" for the next few years. She is already involved in Officers' Wives Club activities.

Aircraft modifications advance Center research

(continued from page 3)

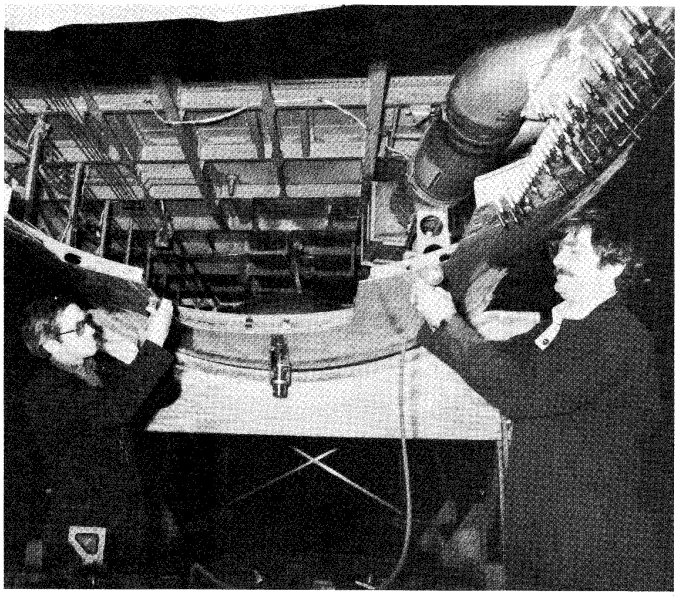
Multipurpose Synthetic Aperture Radar Modification

The latest technology in radar systems is called Synthetic Aperture Radar. When coupled with computer analysis, it provides picture-quality imaging of the earth and water surface. NADC and other agencies have needed an aircraft equipped with this radar to do additional exploratory research. This capability is potentially of great value in the analysis of ocean currents for understanding the formation of beaches and for determining surface wind patterns and ocean temperature differences for weather prediction.

To install this system, a very large opening had to be provided in the belly of a P–3A aircraft to hold the complex radar antenna system. The antenna also had to be enclosed with a large radome. Since more than 50 square feet of the aircraft skin was removed, the entire tail section of the P–3 had to be supported while NADC mechanics installed the internal framing.

One of these mechanics was Dennis Bellevou, an aircraft sheet metal model maker whose been at the Center for 11 years. "What we did was unique," said Bellevou. "Bill Williams, Jim Lezoech and I surgically removed critical structural support ribs from the aircraft. That made it imperative for the antenna box to have the same structural properties." In the process, they stripped the plane of nearly 2000 pounds of outdated sensor equipment creating space for more than 2000 pounds of avionics equipment. This equipment is housed in universal racks (another EDB innovation) so it can easily be removed and replaced with other equipment as necessary.

"The massive mechanical and electrical modifications done to this aircraft make it the most extensive design/installation done at the Center in the past 25 years," said Lorch. "This aircraft is a test bed for NADC and other agencies to explore a variety of radar equipment and computer analysis. His enthusiasm was evident when he said this modified aircraft would prove to be an important asset as the Center seeks to expand its field of research and development.



Dennis Bellevue and Bill Williams prepare aircraft prior to installing SAR antenna box and Radome.

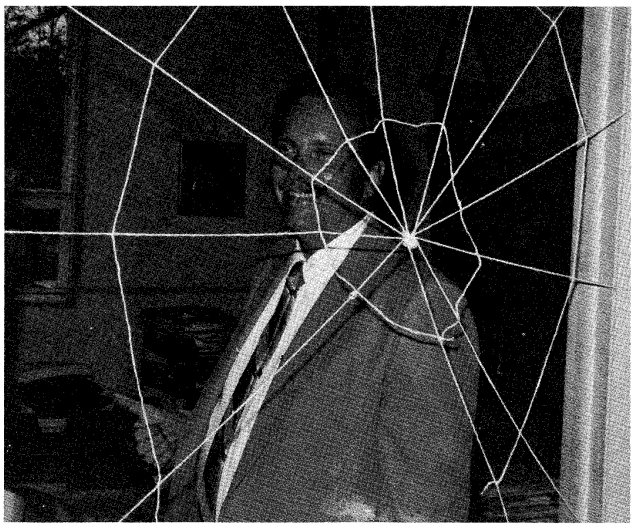


Photo by JO2 Todd Lufkin

Al Hellman's friends from Code 60 didn't forget him during his extended travel and leave in New Zealand and Fiji. The cob web made it clear nobody had done his work.

Welfare and Recreation is for everyone

by JO2 Todd Lufkin

Without ever realizing it, you may have used the services of this NADC organization. In fact, you may never have paid any dues, but you're still considered a member. What is this group? It's the NADC Welfare and Recreation Association (W&R).

"Everyone at the Naval Air Development Center is a member," explained Len Roach, Welfare and Recreation Chairman, "civilians and military alike. The mission of Welfare and Recreation is to support government employees and their families."

W&R is open to suggestions and ideas from everyone at NADC. "Maybe we can handle it, maybe we can't . . . but we'll listen," says Roach. "We have to be open to everyone, but that doesn't mean that everyone will take advantage of us. If one group comes to us with a proposal for a microwave oven for their office we'll listen. But the overall question has to be, will it benefit the few or the many? Remember too, W&R can only do so much and we try to do all we can with the limited amount of resources we have."

The most well known W&R asset is its little store next to the credit union. "We have a limited amount of NADC shirts, sweatshirts, film and videotape that is marked up only 10 percent. We stock several thousand dollars worth of convenience items that a Center employee can buy without ever leaving the Center," said Roach, "and we guarantee the customer is always right." However, the W&R store is best known for its photo developing service. "We deal with four to five thousand dollars a month for photo services," he said. "We offer convenience and the prints or slides are back in just a couple of days."

A new item being offered is business cards. "We only make a dollar on each order, so we are very competitive with the outside," stated Roach.

The W&R store is not without its problems. One is a lack of space; and the other is the fact that the personnel who work there are volunteers, as are all members of Welfare and Recreation. "Everyone connected with W&R is an NADC employee and has job responsibilities. We can only give so much of our time to W&R. People need to realize that we don't just do W&R work all day long," stated Roach. "There is so much we could do, but the question is 'can we handle it with the people and the time we have?'" he said.

Photo by JO2 Todd Lufkin

Carl Plantarick serves another satisfied customer in the W&R store.

However, Welfare and Recreation isn't just limited to its store. "We have two primary activities that we take great pride in," said Roach. "The first is the annual Employee Picnic at Dorney Park; the second is the Orphan's Christmas Party. The picnic runs W&R about eight thousand dollars and all the orphans from Christ's Home and Bethanna House are given a $20 gift they pick from a Christmas catalog and which is then presented to them by Santa Claus."

W&R also offers interest-free loans for hardship cases and in unusual circumstances makes outright grants of food or money. It provides medical assistance in the form of loaned beds, canes and walkers to NADC employees and their families; sends flowers to the deceased. Support is available to any club on NADC needing financial assistance above and beyond what they get from normal dues. Sports clubs may get money for equipment or the computer club for software. Technically these items belong to W&R and are available to anyone on Center. But then these clubs may be asked to provide assistance during the Christmas party or ice cream sale.

Cruises and tours are coordinated by Margaret Vigelis and Colleen Richardson; and W&R acts as the middle man for other social activities.

"Last year we started offering group rates for ski tickets and sold over $25 thousand. We can get good deals from the companies because we represent a lot of people. This is another area where W&R doesn't make a cent. It's just a service we offer and will probably do it again this year," Roach explained. W&R also sells discount movie tickets (buying at least 500 a month) and tickets to the Eagles and Flyers games as well as the Philadelphia zoo. "CPD volunteered to handle the tickets for us because they were open all day long and could accommodate anyone's time," he stated, "but the ski tickets can only be purchased at the W&R store because of the paperwork."

W&R also sponsors the periodic blood drives and gives out the discount cafeteria tickets to those people who donate blood. "This was my idea and it's a way to pat people on the back. The end result is that the entire community benefits from the deal," said the W&R Chairman.

Welfare and Recreation is governed by a Board of Directors. In addition to Chairman Roach, there is a Vice Chairman (Michael Cannon); Secretary (Joan Kopper) and a Treasurer (Louis Rakszawski), all of whom are elected by the Board, not by Center employees. They are joined by Ervin Rothermel (union rep), HMC David Becker (military rep), Neil Abramson (CPD rep), Carl Plantarich (Assistance), Margaret Vigelis (Recreation) and Janet Wild (at-large). "We meet every other Thursday for one hour at the W&R store and discuss business," said Roach. "Anyone is free to attend the meetings, with or without their ideas and suggestions. We're only as good as the input we receive."

Welfare and Rec receives its money from the W&R store and from its annual membership drive and art sale. "Last quarter we conducted nearly $100 thousand worth of business," he stated. Roach stressed the fact that W&R was audited like other businesses and that it was important that their books balance.

"W&R's goal is to continue what we're currently doing to the best of our ability. However, government is changing so rapidly every day and people are getting out of volunteerism. This just makes the job harder," Roach sadly stated.

It's MAGIC!

Photo by JO2 Todd Lufkin

Alan Kaniss (right) describes the Computer Department hardware and function to members of the Mid-Atlantic Government Information Council (MAGIC) during their visit and tour.

Technical Highlights

P–3C SYSTEM TEST PROGRAM S4.5 RECEIVES FLEET CERTIFICATION

P–3C System Test Program S4.5 was issued Fleet Certification approval after successfully completing Phase II of NTE testing at NAVAIRTESTCEN. This software is a combination of corrections supporting SASP and non-SASP aircraft which will allow the in-flight technician to more efficiently and accurately run status checks on SASP, the ARM/ORDD system, LOC, DATALINK and OMEGA. Fleet release of the S4.5 program is expected in late January 1987.

NIGHT VISION GOGGLE (NVG) EJECTION SAFETY

The TAV–8B contingency assets were used to conduct NVG ejection tests. Two dual ejection tests occurred at the NAVWPNCEN SNORT at speeds of 0 and 500 knots. Three different NVG configurations were used on the test dummies as follows:

0, AFT — Releasable CATSEYES
0, FWD — Fixed CATSEYES
500, AFT — Releasable CATSEYES
500, FWD — Advanced Helmet Integrated Display System

All testing has been completed and analysis is underway.

ENHANCED FIGHTER MANEUVERABILITY, PHASE I

A project entitled "Enhanced Fighter Maneuverability (EFM), Phase I" was conducted on the Dynamic Flight Simulator between 3 Nov and 10 Nov 86. The project utilized 3 test pilots from NASA-Dryden, Rockwell International, and Messerschmitt-Bolkow-Blohm who "flew" a modified F–14A aircraft simulation with thrust vectored post-stall maneuvering capabilities. The study represented a significant new utilization of the DFS to model advanced aircraft designs and predict pilot/control system performance in previously unexplored flight regimes. The results of the study will be used to identify future NADC simulation efforts in support of the Navy/DARPA EFM program.

NACES FLOTATION PLATFORM

DT–IIA Tests successfully performed. Cold water protection tests were performed at RAF Institute of Aviation Medicine, Farnborough, England, on 4 to 8 April 1986. Rough water testing was performed 12 November 1986, at Robert Gordon's Institute of Technology, Aberdeen Scotland. The raft successfully met all the NACES requirements pertaining to these tests.

Sports

Airomatics take volleyball title in Fall Championship

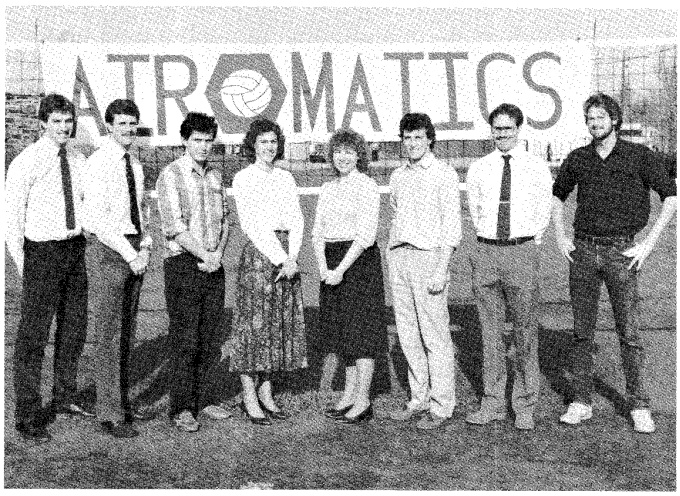


Photo by JO2 Todd Lufkin

Team members: (L to r)—Mike Janinek (1014), Jim Campana (5052), Bob Mulins (5052), Mary Lentz (SEMCOR), Dorie Reilly (409B), John Whalm (5052), Jack Reilly (6062), Tom McGovern (6011), (not shown—Bill Birmingham (5052), Eillen Beans (5052) and Dennis Turner (5052)) all contributed to taking the Fall Volleyball Championship. Congratulations!

Bowling news

by Tom Reiter

Winners of our annual Turkey Shoot were Carl Kizelowicz and Stephanie Hall. Carl's 245 and Stephanie's 225 earned them gift certificates for Genuardi's. First half champions will be decided on Knockdown Night—1 January.

Ski news

by Joyce Smith

The NADC Ski Club would like to wish warm Seasons Greetings and a happy, prosperous New Year to everyone.

The first of the scheduled ski trips will be coming up on January 16, 1987. The trip is a three day venture going to Jay Peak in Vermont. Time to start getting prepared!

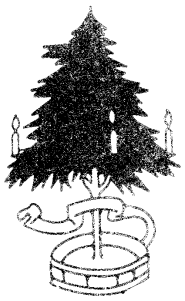
December's meeting included carol singing and homebaked Christmas cookies to get us in the holiday spirit. The last competitive game was played for the Great Giveaway Contest. The winner of the Grand Prize will be announced in the January edition of the *Ski Bee*.

The Ski Club meeting for January will be held on the fourth Monday, due to the ski trip to Jay Peak. So, come out for the meeting on the 26th and hear all about the trip from those who went.

Don't Let

FIRE

Ignite Your Holidays



- Purchase only UL listed outdoor/indoor lights.
- Check and discard frayed strings of lights.
- Don't overload electrical circuits.
- Use flame-resistant decorations.
- Select a fresh live tree or non-flammable labeled artificial tree.

VIEWPOINT

This month's question is:

"Besides your two front teeth, what do you want for Christmas?"

Photos by JO2 Todd Lufkin

"A 20% pay increase to pay for the joys of giving!"

Cathy Burian, Code 8132

"Materially, not much. I just want to be with my family and friends, see a beautiful snow covering and hope that my turkey comes out nice and juicy. To me, that would be 'just ducky.'"

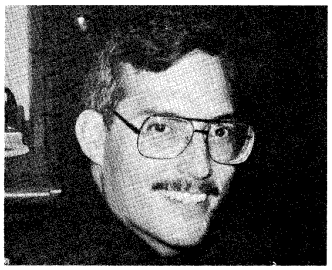
Joyce Shields, Code 10P

"Some shiny new car keys in my stocking would be nice."

Rosemary Dominic, Code 0211

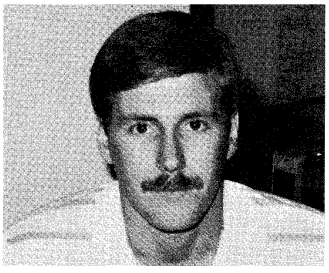
"Good health, lots of wealth and a great bottle of bourbon to sip on when I don't get the second one."

CDR Wayne Savage, Code 1S



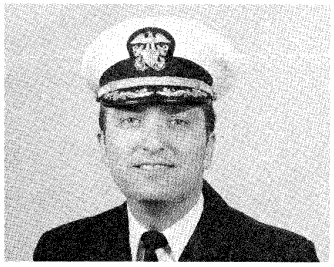
"I have already received the greatest gift of all—my new baby granddaughter, Julia!"

Dotty Dugan, Code 043



"My family home, snow for my skiis, and a Vanna White doll."

Jeff Tolle, Code 045



"For people to know the *true* meaning of Christmas."

AT1 Earl Getch, Code 098

Small Business demo held

The U.S. Small Business Administration (SBA) Procurement Center Representative for the Breakout program, Vincent Rice in cooperation with NADC, held a small business demonstration in Hangar No. 1 on November 20th. All employees were invited to see the latest in computer software and hardware from the Future Net Division of Data I/O Corporation.

Dennis Evans and Richard Pierpont representatives of Future Net, were demonstrating their Unisite 40 (a universal programmer), the DASH schematic capture workstation, the SILICON Development System for the gate array and standard cell design and other engineering workstation related products all day.

Several of their programmers are already in use at the Center. Future Net has more than 6000 workstations installed.

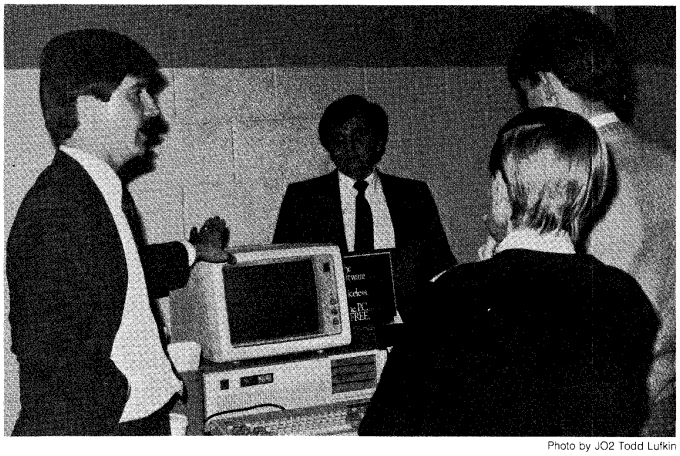


Photo by JO2 Todd Lufkin

(Left) Dennis Evans of Future Net Division Data I/O Corp. and Vincent Rice (center back) of the Small Business Administration during the recent demo.

If the SOC Fits

by Robert James

SECNAVINST 5370.2H, entitled "Standards of Conduct and Government Ethics," is the primary Navy instruction in the area of Standards of Conduct (SOC). This instruction is available in General Files (Extension 2763), and should be consulted for guidance on any SOC questions. The Office of Counsel (Code 095) is likewise available to provide advice and guidance on these matters, and I urge any of you with SOC questions to call me on Extension 3000.

One of the enclosures to the SOC instruction, entitled the "Bedrock Standards of Conduct," provides a concise summary of the entire instruction. Those bedrock standards of conduct are:

1. Avoid any action, whether or not specifically prohibited, which might result in or reasonably be expected to create the appearance of:

—Using public office for private gain,

—Giving preferential treatment to any person or entity,

—Impeding Government efficiency or economy,

—Losing complete independence or impartiality,

—Making a Government decision outside official channels, or

—Adversely affecting the confidence of the public in the integrity of the Government.

2. Do not engage in any activity, acquire or retain any financial interest which results in a conflict between your private interest and the public interest of the United States related to your duties.

3. Do not engage in any activity that might result in or reasonably be expected to create the appearance of a conflict of interest.

4. Do not accept gratuities from defense contractors.

5. Do not use your official position to influence any person to provide any private benefit.

6. Do not use your inside information to further a private gain.

7. Do not use your rank, title, or position for commercial purposes.

8. Avoid outside employment or activity that is incompatible with your duties or that may bring discredit to the Navy.

9. Never take or use Government property or services for other than officially approved purposes.

10. With limited exceptions described in the instruction, do not give gifts to your superiors or accept them from your subordinates.

11. Conduct no official business with persons whose participation in the transaction would be in violation of law.

12. Seek ways to promote efficiency and economy in Government operation and public confidence in its integrity.

NADC surpasses $100 M In Small Business contracts for FY86

FY 1986 was a good year for small business at the Center. Through the cooperation and commitment of both technical and procurement personnel we exceeded our overall Small Business goal, awarding 36% of the dollar value of direct purchases ($101,276K) to small business firms.

The performance of the Center was also particularly noteworthy in the areas of women-owned business ($2041K in awards), direct awards to disadvantaged business firms ($5000K) and R&D awards to small business firms (44% of total R&D awards).

The following FY 87 Center goals have been established:

Small Business	35% of total purchasing
Set Aside	$48M
8A	$6.5M
Direct Disadvantaged	$5M
Women Owned	$2.1M
R&D	38% of R&D dollars

This year Congress has placed particular emphasis on contracts with disadvantaged business firms, including awards made via Section 8(a) of the Small Business Act. Under 8(a) procedures we can award contracts directly to qualified disadvantaged businesses without synopsis, competition, or sole source justification. This year DOD is developing initiatives which will also give the Center credit for awards to Historically Black Colleges and Universities.

Information or assistance on any of these programs is available from the Small Business Office (ext. 7132 or 2456).

On This Date : (December)

December 1 *Civil Air Patrol established, 1941.*

December 2 *The Monroe Doctrine enunciated by President James Monroe, 1823; ". . .In the wars of the European powers in matters relating to themselves we have never taken any part. . .we should consider any attempt on their part to expand their system to any part of our hemisphere as dangerous to our peace and safety. . ."*

December 5 *Prohibition repealed, 1933.*

December 6 *First military observatory—U.S. Naval Observatory in Washington, D.C.—established, 1830.*

December 7 *Japanese attack Pearl Harbor, and President Franklin D. Roosevelt orders mobilization, 1941.*

December 8 *U.S. declares war on Japan, 1941.*

December 14 *South Pole discovered, 1911.*

December 15 *First 10 amendments to the U.S. Constitution (known as the Bill of Rights) ratified, 1791.*

December 16 *Boston Tea Party. Patriots dump nearly 350 chests of tea into Boston Harbor, 1773, an act considered by some as the most important event leading to the American Revolution.*

December 17 *Orville and Wilbur Wright achieve first successful powered flight at Kitty Hawk, N.C., 1903.*

December 18 *Thirteenth Amendment, which abolished slavery, proclaimed, 1865.*

December 20 *Louisiana Purchase Day. U.S. buys more than one million square miles of land from the French for about $20 a square mile, 1803.*

December 21 *Medal of Honor established, 1861. Pilgrims land at Plymouth Rock, 1620. Apollo 8 mission launched from Cape Kennedy, Fla., 1968. Astronauts Frank Borman, James Lovell and William Anders become first men to orbit the moon.*

December 23 *Federal Reserve System—nation's central bank—established, 1913.*

December 25 *Christmas. George Washington crosses the Delaware River, 1776, leading to a victory at Trenton, N.J., a turning point in the American Revolution.*

December 27 *John C. Calhoun resigns the office of Vice President in disagreement with President Andrew Jackson, 1832. He was the first person to ever resign from that office.*

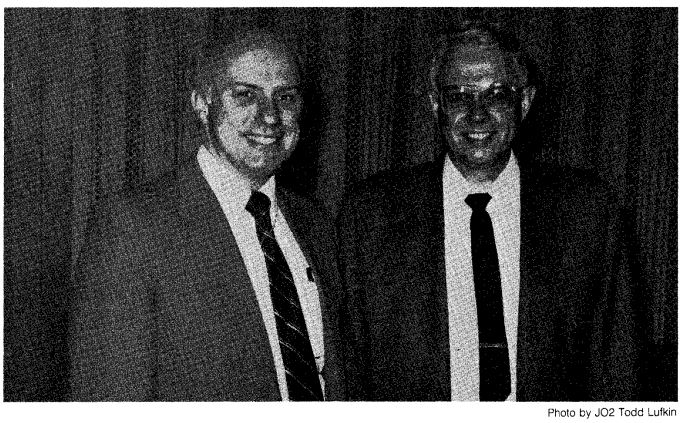


Photo by JO2 Todd Lufkin

Thomas Castaldi (left), Acting Technical Director and Dr. William Howard, Technical Director, Naval Space Command explored the possibility of mutual exchange of information and assistance during Dr. Howard's visit to NADC on 2 December.

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