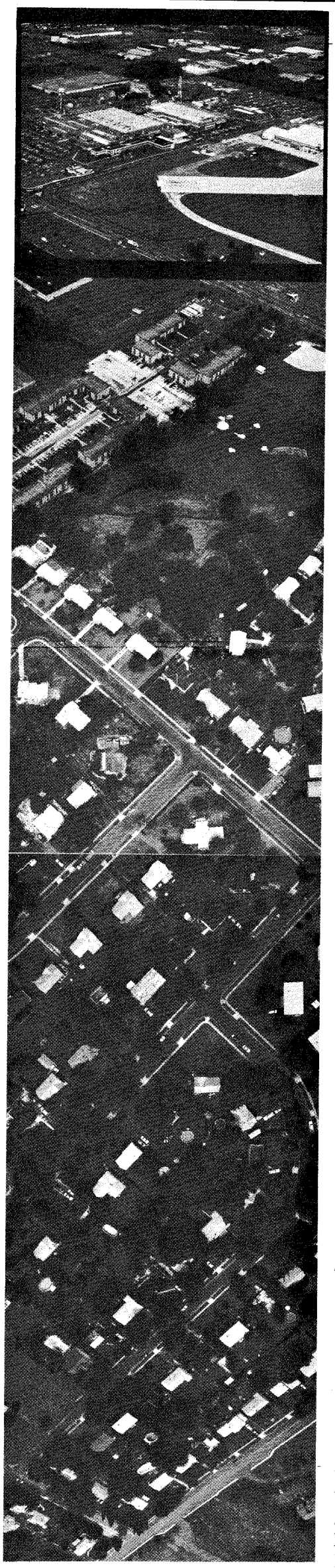
NADC **Reflector**

Volume 30, Number 1 NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA. January 1985

In this issue:
- **Reservists Aid NADC**
- **CFC Results**
- **DeSipio "Best Paper"**
- **Barnaby Reminisces**



F/A-18 Reconnaissance Pallet
KA-99 Camera
1000 ft. altitude

Keane receives Superior Service Award

In a small ceremony in Captain Edward Sturm, Center Commander's office, Admiral S. A. White, Chief of Naval Material presented John J. Keane the Navy Superior Civilian Service Award in recognition of his outstanding technical contributions while serving as senior technical specialist in the Sensors and Avionics Technology Directorate.

Keane's citation noted that during the period January 1981 to January 1984, he served with distinction as a technical expert on airborne ASW Systems. At the request of senior OPNAV officials, he was a key participant in four major studies that addressed and solved critical issues related to the development of advanced system designs. His contributions have significantly influenced the direction to be taken in airborne ASW R&D during the next decade.

Photo by Ken Smith

ADM S. A. White, Chief of Naval Material, presents Navy Superior Civilian Service Award to John Keane.

Keane began at the Center in 1963 as a physicist in the Sonar Division of the Anti-submarine Warfare Laboratory until 1968 when he began work in the Passive Search Sensors Branch in the Underwater Acoustics Development Division of the Aero Electronics Technology Department. From September 1979 until January 1981 Keane was Air ASW Assistant to the Program Manager of PMA-264 in NAVAIR.

As Senior Technical Specialist in the Acoustic Development Division, Keane provided superior technical support and has kept this Center the lead laboratory in Airborne Acoustic Sensor Development. Keane's awards and published papers as well as his participation in outside organizations are too numerous to mention but are certainly as significant as these words spoken by Admiral White, "Mr. Keane's exceptional dedication and technical abilities are in keeping with the highest traditions of the Department of the Navy."

Secretary of Defense commends Griffin

Photo by Cathy Burian

Center Commander CAPT Edward J. Sturm commends Joseph Griffin on his outstanding contributions. (additional photo on page 2)

In a letter personally signed by Secretary of Defense, Caspar W. Weinberger, Joseph T. Griffin was commended for his special achievement, "Automation of Calibration Techniques for General Purpose Test Equipment" which resulted in first year savings of $419,000. Subsequent endorsement letters followed from ADM James Watkins, Chief of Naval Operations, and ADM S. A. White, Chief of Naval Material. NADC's Commander, CAPT Edward Sturm had the pleasure of presenting an award to Griffin, giving added emphasis to his outstanding contribution.

A Productivity Enhancement Capital Investment (PECI) Award received several years ago allowed Griffin to purchase new state-of-the-art calibration systems such as Fluke, Tektronix, Hewlett Packard, and Pratt & Whitney. Griffin organized, coordinated and directed the acquisition and integration of this precision instrumentation into a completely autonomous, "stand-alone," microprocessor-based, automated calibration system to be utilized in conjunction with a concept known as MEASURE (Metrology Automated System for Uniform Recall and Reporting).

The concept behind MEASURE is to reduce the technician labor factor from 16 to 7. Lack of trained personnel plus ceiling restraints prevented the accomplishment of MEASURE. Griffin with his PECI award implemented the automated calibration system in compliance with the MEASURE program and was able to carry out more work with less manpower and at a cost savings of $419,000. Ideally, the new system should pay back its original investment in 4 years. Griffin and staff paid back the grant plus almost 10% more in only one year.

Griffin said the entire calibration group deserves credit for this recognition, "the original idea to get the PECI grant was started by Ken Clegg; planning and day-to-day operations were carried out by Stanley Kondrad; more than 1200 software programs for automated sytems were written by John Hughes; and each of the seven technicians have spent considerable time learning how to operate the new equipment."

Griffin went on to say, "we have extended service to the Naval Air Station and the Marine Corps at Willow Grove to assist them in calibrating their equipment. The result has been quick turn-around time and a substantial cost savings."

The Center commends Griffin and those who helped him for their outstanding efforts.

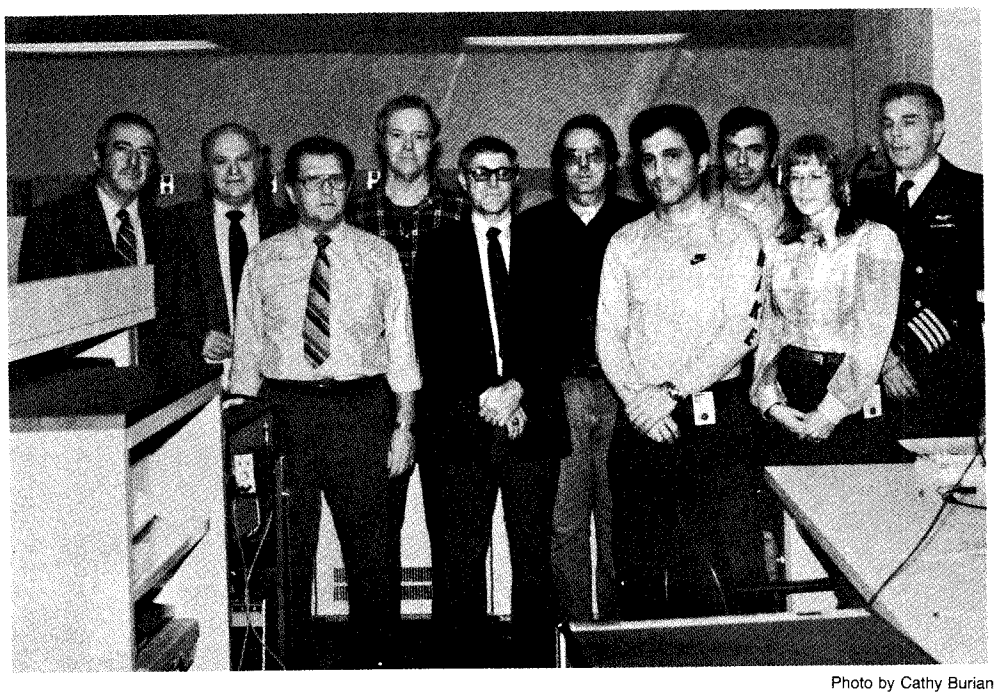


Photo by Cathy Burian

THE CALIBRATION TEAM ***who assisted Griffin with the implementation of "Automation of Calibration Techniques for General Purpose Test Equipment" is pictured from left to right: Frank Smith, Joseph Griffin, Stanley Kondrad, Robert Patterson, Ken Clegg, John Hughes, Otto Cotugno, Charles Rapp, Phyllis Grant (accompanied by Center Commander CAPT Edward Sturm). (story on page 1)***

NADC Reserve Unit 0193 provides ADP Security

The Department of the Navy requires that all Navy activities prepare and implement an Automatic Data Processing (ADP) Security Program to develop security measures for the protection of ADP systems and data.

The ADP Security Program at NADC is being implemented by Robert Finkleman in his capacity as the ADP Security Officer. He is being assisted in this effort by members of the Naval Reserve Unit NADC 0193. Perhaps, little known, is the role played by two Naval Reserve Units that perform their weekend drills here. NADC 0193 (CAPT T. Schneider, Commanding Officer) and NADC 0293 (CAPT H. Cannon, Commanding Officer) are part of the Air Systems Program, sponsored by NAVAIR. The program is staffed by technically qualified officers and enlisted men who perform project work for the Center, and who, in the event of mobilization, will be immediately assigned to augment the Center's normal work force.

NADC 0193 maintains liaison with appropriate departments on Center to work on projects that can be performed on weekends and during the annual two weeks of active duty. Thanks to the voluntary work efforts of Finkleman and Al Kaniss, also of the Computer Department, a mutually beneficial agreement was reached between NADC 0193 and the Center.

Through this agreement, the reserve unit will assist with the implementation of the Navy ADP Security Program, while at the same time receive valuable mobilization training. The first phase of the program is Asset Identification and Monitoring which has been accomplished with back-to-back active duty periods and weekend work during FY84. Phase II, is Threat and Vulnerability Assessment of each asset, and is planned for completion in 1986.

The above was provided by NR-NADC 0193 Reserve Unit. For additional information contact John Shannon on extension 2441.

Photo by Cathy Burian

Future scientists see NADC

Jim Dunn of the Sensors and Avionics Technology Directorate gives a low light level, night vision briefing to high school students in the Bucks County School District. These students are interested in pursuing a career in science. This was one of the first briefs in a series of three sets of seminars which will be given at the Center throughout the year. The REFLECTOR will give more details on this program and the people involved in the near future.

Photo by Ken Smith

Admiral White visits Center

Admiral S. A. White, Chief of Naval Material, gets an indepth brief on the ejection seat from David DeSimone, Associate Director of the Crew Systems Technology Directorate. ADM White toured several Center facilities during his visit here on the 20th of December 1984.

Editor's Note: Not just another pretty face

Not just another pretty face but another pretty face with some good sense and an old familiar name. Put them all together, they spell R-E-F-L-E-C-T-O-R. The origin of that name may be hidden in the musty archives of Public Affairs, but it's still near and dear to our hearts and we keep trying to make it a household word among NADC employees. Even if we can't succeed in doing that . . . at least we may succeed in making it easier to look at. That's why we had the "nameplate" or "flag" redesigned and it proudly makes its formal debut in this first issue of 1985. So, what do you think?

As you can see, the word "REFLECTOR" has been set in bright, new, contemporary type style and a graphic 'reflection' added to emphasize the significance of the name. In addition, one of the fruits of the Center's labors — the F/A-18 Reconnaissance pallet — has provided a dramatic aerial photograph of the Center and surrounding area. This has been incorporated as part of the graphics of our new front page and will continue to occupy this position in most, if not all, issues.

We want to know what you think of the changes. Do you like them? Don't you like them? A note through interoffice mail or a call to X2290 will do.

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NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA.

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Editor ..... **Regina Beans Gasuk**
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RADM Cassidy takes the driver's seat

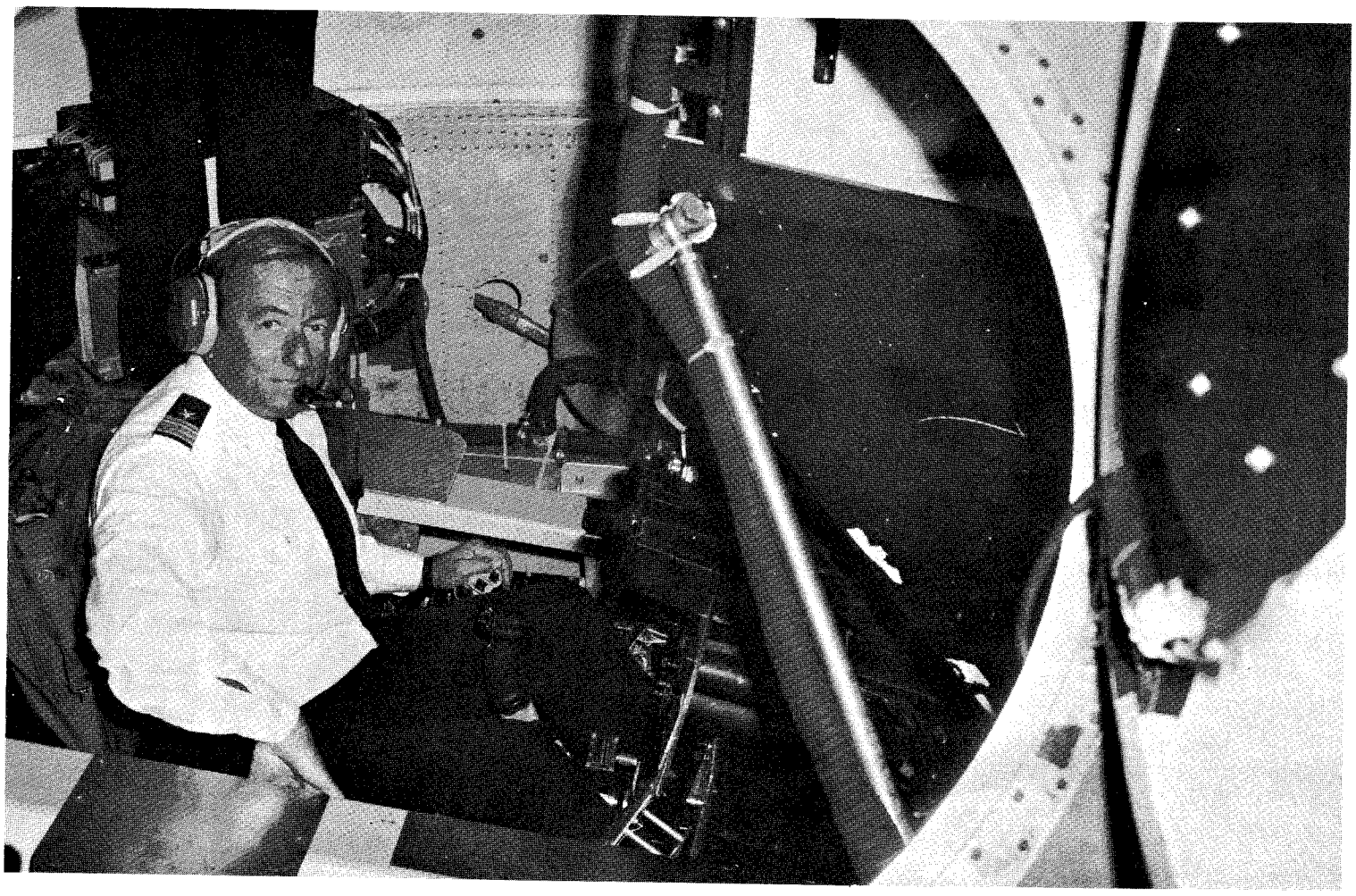

Photo by Ken Smith

RADM T. J. Cassidy, Jr., get a grip on the joy stick.

Rear Admiral Thomas J. Cassidy, Jr., Commander of the Fighter Airborne Early Warning Wing, U.S. Pacific Fleet, visited the Center during mid-November.

The purpose of his visit was to get acquainted with the Dynamic Flight Simulator (DFS) and to familiarize himself with the ongoing efforts in the Life Support Equipment area of the Aircraft and Crew Systems Technology Directorate (ACSTD).

The Admiral became interested in the DFS as a result of feedback he received from pilots stationed at the Naval Air Station, Miramar who had participated in the Center's recent F-14 Flat Spin Recovery Program.

Jack Eyth of ACSTD briefed the Admiral on the DFS and noted that he appeared impressed with the simulator's potential for evaluating protective systems, controls and displays. The Admiral expressed an interest in knowing if it could also be used to define optimum F-14 Spin/Departure recovery procedures for fleet pilots. (MAB)

Technical Highlights

S-3A FLEET ISSUE 4.0.4 SOFTWARE COMPLETES TECHEVAL

TECHEVAL of S-3A Fleet Issue (FI) 4.0.4 System Test Program (STP) was successfully completed on 29 Nov 1984 with no major deficiencies identified. The FI 4.0.4 STP was recommended for release to the fleet, with appropriate changes to supporting technical publications. Fleet availability of this software is significant in that it provides the operator with automatic recovery of the STP from weapon system power loss and recovery from twenty potential fault codes. The FI 4.0.4 software also provides the operator with an option to process FLIR Passive BITE errors as degradable faults and incorporates FLIR FCP integration provisions.

P-3UPDATE IV COMPETITION INITIATED

NAVAIRDEVCEN held a pre-solicitation conference on 19-20 November opening the first phase of a two-phase development program for the P-3 aircraft UPDATE IV Avionics Modernization. The program involves development of an updated and standardized avionics system for up to 314 aircraft, and will include a new distributed data processing subsystem, a new multi-station display and control subsystem and integration of new radar, acoustic processor and communications subsystems with existing avionics. Up to three Phase I contracts will be awarded, involving design, fabrication and test of a subset of the full system. One of the contractors will sub-sequently be selected for Phase II fullscale engineering development of the UPDATE IV avionics system, with a production option included. An RFP is expected to be released in January 1985.

MICROPROCESSOR FACILITY FOR AUTOMATED SOFTWARE PRODUCTION

The Software and Computer Directorate successfully rehosted the Microprocessor Facility for Automated Software Production (MicroFASP) to the Navy's new standard desk top computer (SDTC). This provides a basic software engineering environment for the development, test and maintenance of tactical decision aids for the SDTC. The environment will support software development in the FORTRAN and 'C' programming languages and configuration management and control of software releases and documentation.

SONOBUOY THINNED RANDOM ARRAY PROCESSOR (STRAP)

Quarry testing of the SSQ-53B sonobuoy was completed and results reported to NAVAIR and NOSC. Specifications and test plans for the PAEL (Prototype Array Element Location) sonobuoy were completed and delivered to NADC for sonobuoy procurement. Test objectives and instrumentation requirements for the PAEL at sea test, planned for February, were reviewed with NOSC.

EXPENDABLE RELIABLE ACOUSTIC PATH SONOBUOY (ERAPS)

ERAPS is an active echo ranging sonobuoy which exploits the reliable acoustic path (RAP) phenomenon. RAP conditions in deep open oceans will provide long range direct path coverage which is virtually unaffected by the near surface thermocline structure. The ERAPS system will enhance the Navy's ability to conduct large area active search and tracking missions for all of its future airborne ASW platforms. Presently, the ERAPS program is in the Engineering Development Model (EDM) phase and subsystem/major component testing is underway. Acoustic array measurements were made for the first time which empirically verified array directivity, beam patterns, phase and amplitude tracking. A new technique (pulse gate) was used to eliminate facility generated boundary reflections which for the first time will permit a fully integrated array to be evaluated thereby validating the hardware design.

NAVSTAR GLOBAL POSITIONING SYSTEM

Verification of the interfaces between the GPS User Equipment (GPS/UE) and the A-6E aircraft avionics, navigation, and fire control systems was successfully completed. This achievement was critical to the start of dynamic flight tests.

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 and contractors are reminded the wearing of the Center Badge is mandatory while on the Center.

COMMUNICATIONS SECURITY (COMSEC) SURVEILLANCE MONITORING

All military and civilian personnel are reminded that discussion of classified information over nonsecure circuits is prohibited, that official government communications systems and facilities, including DOD telephones and telephone systems are subject to COMSEC monitoring at all times, and that use of such systems, facilities, or telephones constitutes consent to COMSEC monitoring.

PADLOCK SECURITY

When the door, gate or other equipment, which a padlock is intended to secure, is open or operable, the padlock is to be locked into the staple, fence fabric or other nearby securing point. This is to preclude the switching of the padlock to facilitate surreptitious entry.

COMMUNICATIONS SECURITY (COMSEC) SURVIELLANCE

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COMBINATION CHANGES

Combinations to security containers shall be changed under the following circumstances:

- when container is placed in service.
- when an individual knowing the combination no longer requires access.
- when the combination has been compromised or the security container has been discovered unlocked or unattended.
- at least annually, unless more frequent change is dictated by the type of material stored therein.
- when the container is taken out of service.

Command Corner

CAPT Edward J. Sturm, Center Commander

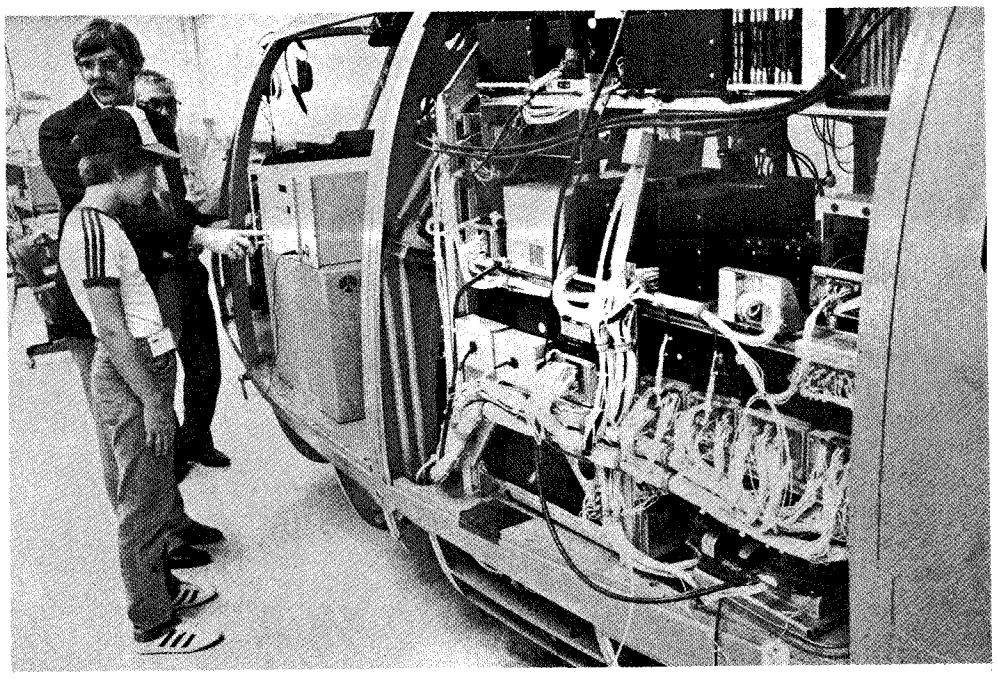
Robert S. Buffum, Technical Director

This year, the Combined Federal Campaign broke all established records for collection with a total of $101,000.00 including $86,000.00 from Center employees. In addition, CFC 85 saw the introduction of the first fully automated system for accounting and reporting on CFC contributions.

The 1985 Combined Federal Campaign is a good example of how Center personnel pull together in a dedicated effort to help those less fortunate than themselves.

To all those key people whose interest and talent made the difference between mediocrity and excellence and to all those Center personnel who contributed so generously, please accept our thanks for a job well done!

DeSipio takes award at Air Force/Navy Symposium



Paul DeSipio (Richard DeSipio's son) is shown the avionics system of the Coast Guard HH-65A Helicopter which he will interrogate to demonstrate the NADC "Ask and Tell" concept to determine the status of the system. This is one of the feasibility demonstrations conducted by NADC to emphasize the utility of emerging technology.

A paper written by Richard DeSipio of the Command and Control Division of the Communication Navigation Technology Directorate took top honors for best paper in the Electronic/ Computer Science category at the Air Force/Navy Scientific and Engineering symposium held at the Norfolk Naval Air Station in November.

The symposium offered DeSipio the opportunity to present concepts and ideas on Avionics System Readiness and Support — a subject of concern to the Navy, the tri-services, and the commercial avionics community.

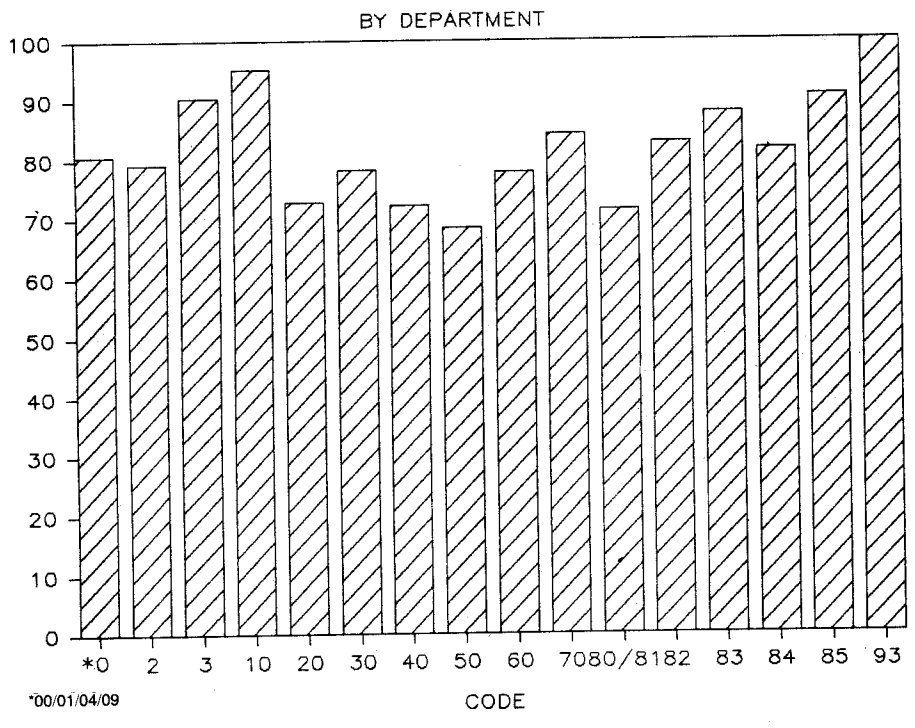
His paper "At the Push of a Button" attempts to focus on the impact of modern and projected technology not only on military systems but also on the social impact of present and emerging technologies.

In his paper, DeSipio asks us to consider how dependent we are on the push of a button for the many things in our daily lives and, more specifically in our military systems. He further comments that these systems are great when they are working, but who is going to fix them when they fail? DeSipio addresses this problem and makes specific recommendations.

The paper describes feasibility demonstrations which NADC has pioneered and performed. It then proceeds to present a ways and means of attacking the problem. DeSipio said that it is interesting to observe that subsequent papers presented at the 6th Digital Avionics Systems conference of the AIAA/IEEE also address the subject of avionics maintenance and support readiness reflecting a common concern and various, not unrelated, means of providing solutions.

"I am personally convinced that the type of systems which I discuss in the paper and which NADC has pioneered are on the horizon and that the Navy will benefit by having a high degree of confidence that the systems which are fielded will, in fact, operate "at the push of a button," concluded DeSipio.

Combined Federal Campaign collects record breaking amount



This year's Combined Federal Campaign had some impressive results. Below are statistics gathered by the CFC Headquarter's staff which show this year's breakdown of contributions:

Designated Contributions

United Way Agencies	$16,790.26
International Service Agencies	11,584.30
National Health Agencies	21,751.80
National Service Agencies	5,994.18
Other Agencies	10.00
Write-In Agencies	5,341.66
Total	$61,472.20

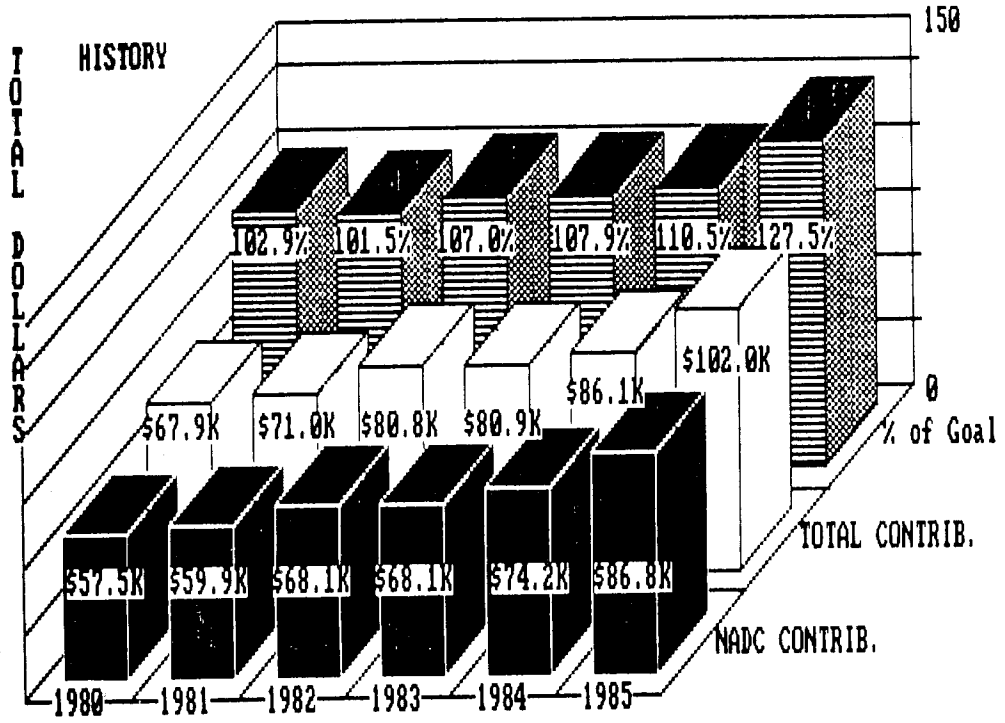
Undesignated contributions amount to $25,393.25 which will be divided up using the following formula: United Way Agencies will receive 74.1% of undesignated funds, National Health Agencies receive 16.4%, and International Service Agencies complete the total with 9.5% of undesignated monies.

If you've been wondering just how well the Center fared in meeting their CFC goal, here are the results:

NADC Participation

Total NADC Contribution	$86,865.45
Percent of $80,000 Goal	108.58%
Number of NADC participants	2137
Percent overall NADC participation	77.60%
Average NADC contribution	$40.65

Below is a Combined Federal Campaign History which was generated by the new automated system for accounting and reporting.

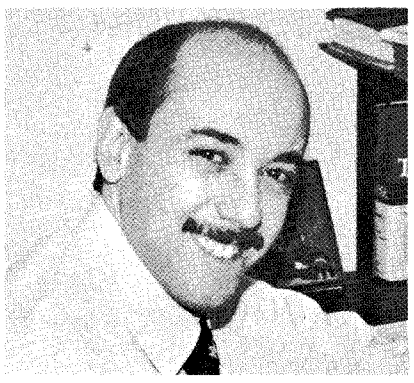


Note: Figures include Post Office, Social Security and USDA contributions.

VIEWPOINT

The REFLECTOR Staff asked the question,
"What is/are your New Year's resolution(s)?
Photos by Regina Gasuk

This month's question submitted by Carol Keller.



"I intend again this year to lose 300 lbs. as I intended last year. And, now that everybody in CNTD has taken so kindly to teaching me the difference between North and South, I'm going to try to find out the difference between East and West."
John Wrigley, Code 40A

". . . To *keep* the resolution this year and to get into better physical condition by proper dieting, exercise and trying not to cheat."
John Kupetz, Code 044

". . . To discover the ultimate cure-all formula or 100% hair reproduction in accordance with MIL-STD-25000 (UP ROOT)."
George Lazzari, Code 7031

". . . The truth of the matter is I can't make resolutions in January and break them in February. Therefore, I have no resolutions except to live one day at a time."
George Gianios, Code 90

". . . To lose 30 pounds so my clothes will fit. Also, to write my wife a love letter every day."
Joe Clay, Code 83A

". . . Since I'll soon be leaving the area, I resolve to actively keep in contact with all the wonderful people who have touched my life at the Center and to introduce Maryland to the joys of lunchtime volleyball and TGIFOT parties."
Betty Anne Mauger, Code 1001

". . . To give up smoking, drinking, and gambling. Next year I'll resolve to tell the truth."
Frank Dolan, Code 024

". . . To not feel guilty when all the work can't get done. Given the limitations, I'm trying to accept that I won't be able to please all the people all the time."
Al Kaniss, Code 851

NSAP on the East Coast

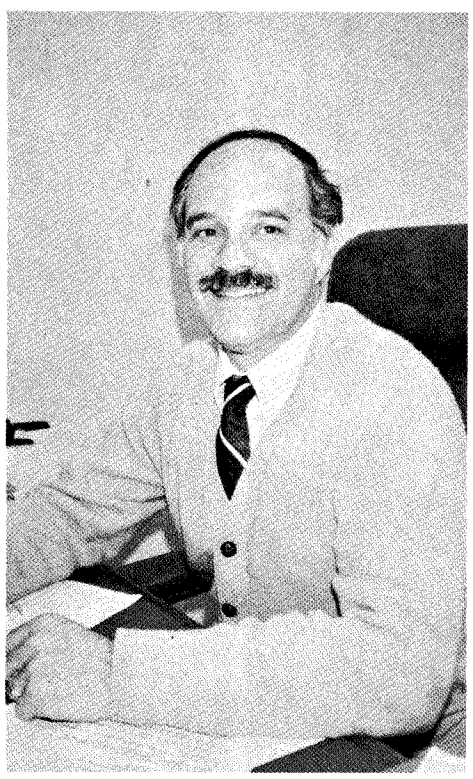


Photo by Jim Kingston

Al Spector

The Navy Science Assistance Program (NSAP) sponsored by the Chief of Naval Material (CNM) has five NADC engineers in the field. Al Spector is one of these engineers and he is stationed at COMNAVAIRLANT, Norfolk.

Spector participates in fleet exercises aboard AIRLANT carriers, ships, submarines and aircraft. Everyday duties consist of liaison with the staff to stay abreast of developing problems, preparing situation reports and point papers, commenting on issues, and arranging special technical meetings and briefs for the staff.

Spector has established a personal liaison with Navy field activities because solutions to some operational problems are not readily available and require input from one or more R&D Centers. Also, the Science Advisor is the point of contact for conducting liaison between field activities and the operational units under AIRLANT.

Spector comments that the quality of life in the Norfolk area is quite good, especially if one is inclined toward the nautical pleasures. The area offers fine cultural events being near historic Williamsburg, Jamestown, and other communities with rich colonial history.

Martin Luther King Jr's Birthday January 15th

The NADC RECIPE REVIEW

BAKED ZITI

This month's recipe is provided by Marjorie Tausek (Code 0342, x3970) who will recieve a **$50 Bond** from the Food Service Board. This recipe will also be served in the NADC Cafeteria. Submit your recipes to Mr. Robert Green, Cafeteria Manager. One winner will be selected each month.

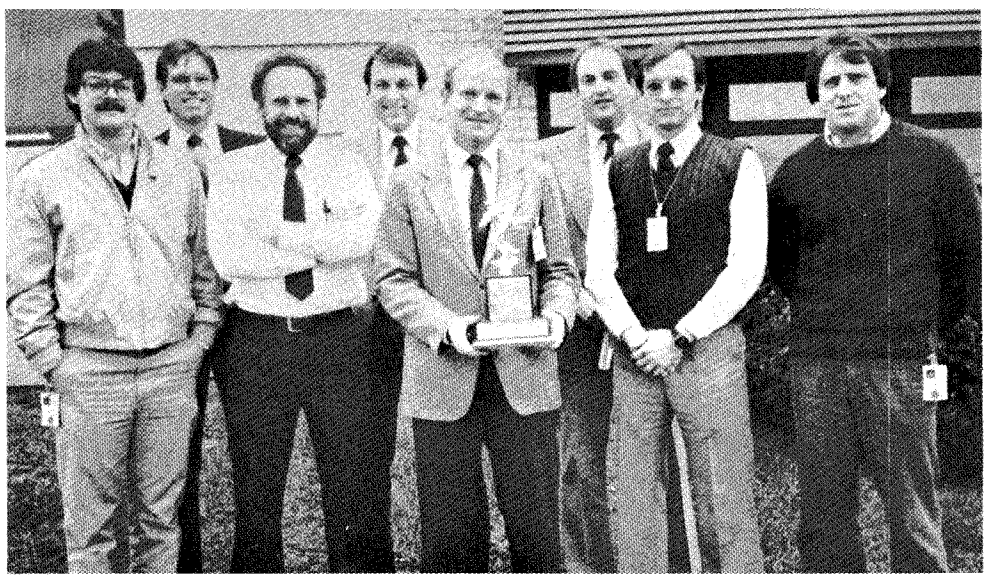
1½ lb. ziti
1½ lb. ricotta
½ lb. Mozzarella
2 eggs
1½ T Parmesan
1 T parsley flakes
S & P
½ C milk
2 12 oz. cans Ital. Paste
24 oz. water
½ lb. provolone, sliced

Mix Ital. Paste & water & simmer. Par boil ziti. While ziti is cooking, mix together ricotta, eggs, mozzarella, parmesan, parsley & S & P. Add enough milk to make smooth & creamy. When ziti is cooked, drain well & mix with all but 1 cup spaghetti sauce. Then add cheese mix to ziti & sauce & toss to mix well. Line pan with remaining sauce & top with sliced provolone. Bake at 3500 until cheese melts & becomes brown.

LOOK FOR THIS RECIPE TO BE SERVED IN THE NADC CAFETERIA

Cut here for file card

Blues sweep championships 5-2



The Blue Team — (left to right): Terry Houghton, Ron Kapusta, John Bechtel, Moise Devillier, Carl Reitz, Fred Kuster (Coach), John Santini, and Bob Larr; team member Glenn Lorenz not pictured.

By Fred Kuster

The Blue (8th Inning) team pulled off a rare double sweep by adding the NADC Friday Football League championship to their NADC Softball League championship. The Blues defeated the Granfalloon 12-6, thus duplicating the Falloons' two-sport sweep last year. The Falloon ended the regular season with a 6-1 record — their only loss coming in a 12-7 upset by the Touch Clowns. The Blues ended the season 5-2, losing to the Falloon and Gangreen.

The semi-final round matched the first place Falloon against the fourth place Touch Clowns. The Falloon led most of the way 2-0, benefit of a Tom Weiss sack of quarterback Phil Sapovits. The teams exchanged scores late in the game, but the Falloon won going away 15-6, thus avenging their only defeat of the year.

In the other semi-final, the Blues faced the NADS, also 5-2 during the regular season. The Blues won 19-0 led by the passing of Bob Larr, the pass catching of John Santini and the tough defense of Carl Reitz, setting up the rematch of last year's championship.

The Falloon fielded the league's best offense, led by quarterback Weiss and receiver Matt Brown, and averaging over 21 points a game. Their defense allowed only 43 points over seven regular games. The league had six shutouts this year, and the Falloon had three of them. The Blues most impressive statistics is their age; with an average age of 35, they are far and away the league's graybeards.

In the championship game, the Blue team scored midway thru the first half when Quarterback Bob Larr found center Fred Kuster beyond the defensive coverage for a twenty-five yard touchdown. The Falloon scored midway in the second half to tie the game. Quarterback Weiss scrambled to find Matt Brown with a 40 yard score. Late in the game, the Falloon drove to the Blue goal line. But Blues' rusher Ron Kapusta sacked Weiss to move the ball back off the goal line, and a fourth down pass was caught by Brown just out of the end zone.

With two minutes left, the Blue team began the game winning drive from their own ten yard line. Receptions by Terry Houghton and Mo Devillier moved them near midfield. Quarterback Bob Larr scrambled and found Glenn Lorenz for a key 30 yard reception. A screen play and a quick slant-in to Houghton found the Blue team on the goal line with seven seconds to play. QB Larr threw to Kuster in a crowded end zone. The ball was deflected, but Kuster held on for the winning score as time ran out.

Defensively, the Blue team was led by Houghton with three interceptions, John Bechtel with one, and Kapusta's constant rushing pressure.

Much to the credit of all the players in the league, every game this year was again played without referees. Disputes were worked out by the team captains. There were no major controversies and no serious injuries. So no matter what their record, each team can be proud of its participation. The final standings for the regular season were as follows:

WINS	LOSSES	TEAM	POINTS FOR	POINTS AGAINST
6	1	GRANFALLOON	148	43
5	2	BLUE	92	75
5	2	NADS	75	82
4	3	TOUCH CLOWNS	120	87
4	3	GANGREEN	59	88
3	4	DRAGONS	86	83
1	6	DRUIDS	70	105
0	7	RENEGADES	37	123

Retirees restore historic Brewster aircraft

—Conclusion—

By Nick D'Apuzzo

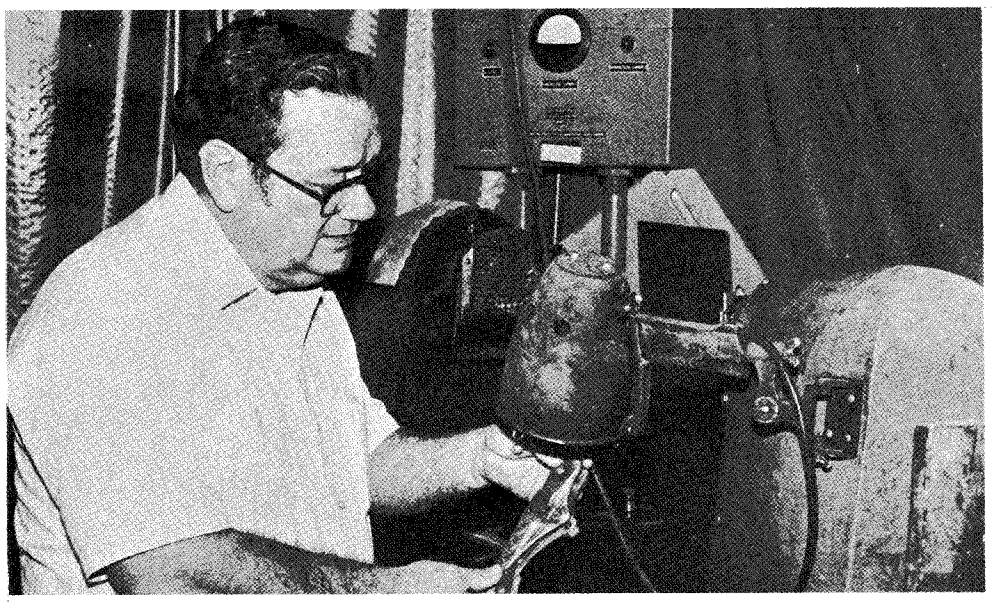
An inventory of the major items disclosed many missing sub-assemblies and key items necessary to effect a satisfactory final product. It also became evident that without drawings, the project would be unduly slowed down. By a stroke of good luck it was learned that a fairly complete set of drawings for this airplane was still on file at the Naval Storage Facility at Mechanicsburg, PA. Arrangements made by the Center's Public Affairs Office resulted in the drawings being transferred to the project. They have already proven their worth in the restoration work being done on the badly battered fuselage, the rudder and the completed vertical fin.

The other major items displaying good progress are the wing center section, the two outer panels, the two horizontal stabilizer sections, the bomb bay doors, and numerous smaller items such as the dive brakes, flaps and tail wheel strut assembly.

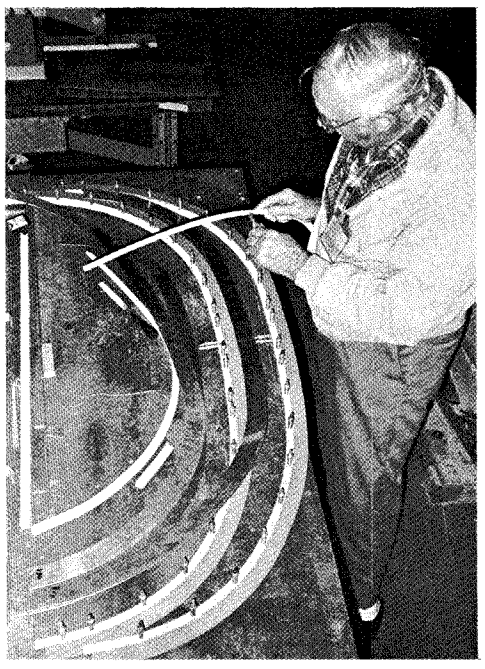
Earlier in the program when the plan was to restore one airframe to suitable-for-flight condition, Carson Helicopter Co., of Blooming Glen, PA offered the free services of their non-destructive testing laboratory to magnaflux any and all critical steel fittings. This they have already done in the case of the horizontal stabilizer main attaching fittings which were found to be in excellent shape despite thirty years of residency in the Tennessee swamp.

Mention should be made here that not all the people working on the project are NADC retirees. Harry Schlossberg who has been on the project since the beginning worked for the Brewster Company and retired from RCA. John Depue who teams up with Bill Shepard in restoring some of the more difficult items is retired from Fisher and Porter. Ray Carlin and Bill Kemp are retired from private industry. John Fitzpatrick is in real estate and John Varallo is with AIR SHIELDS. Fred Engelhardt, too young to retire, is with the Council Rock School District. His current job on this project is the restoration of the windshield and the "greenhouse." The rest of the group, all NADC retirees are Bob Anciaux, Bill Shepard, Lewis Marino, Joe Burke, Bernie Furman and Nick D'Apuzzo.

Skilled and semi-skilled help is sorely needed to accelerate the progress of this project. If you or any of your friends would like to join the group contact Nick D'Apuzzo at 646-4792 or any one of the others that you may know.



Bob McVaugh, Metallurgist in charge of Carson Non-Destructive Testing Division of Carson Helicopter Co. of Blooming Glen, PA inspects a stabilized attachment fitting. Carson provided this service free of charge.



Bill Kemp assembling replacement frames for the damaged fuselage area.

Bill Shepard and John Depue fit a new piece of skin to the verticle fin.

CAPT Barnaby reminisces

CAPT Ralph S. Barnaby

By CAPT Ralph S. Barnaby

As I recall it, I first saw this poem in Franklin P. Adams' column in the New York Herald Tribune shortly after I returned home from my tour of duty in Europe which lasted from around June of 1918 to March 1919. I never found out who wrote it — but it impressed me so much that I memorized it, and later set it to the tune of Kipling's song "To The Ladies," and used to sing it, accompanied on my guitar! Unfortunately at my age, with loss of singing voice and with arthritic fingers, that is no longer possible, which I regret.

"Pelham Bay"

My Country called, and I answered, thrilling in ever nerve,

So I gave up my job and I shipped as a "Gob" in Uncle Sam's Naval Reserve.

They gave me the togs of a sailor and they sent me to Pelham Bay,

where they taught me to chew as the sailor men do, and to talk in a nautical way.

for the walls of our barracks were "bulkheads," and when we said "deck" we meant "floor,"

and when for example we went out of camp, we said "we were going ashore!"

We learned to scrub hammocks and barracks, and to carry a rifle on guard

To tell time by bells, and with pebbles and shells to make anchors and things in our yard.

And through the war's murk and darkness, we valiently stood at our post,

and never a gun of the venturesome Hun was heard near the Westchester Coast,

and never a U-boat reached Pelham and never a Bosche ventured nigh,

No shot ever fell upon fair New Rochelle, Mt. Vernon, or Yonkers or Rye!

And now I'm back at me office, and my soul's crying out to be free,

For a tar never more can be happy ashore — who has harked the call of the sea!

Just a reminder

15 MPH—We can live with it

Most of the Center's 2500 employees drive to work everyday. With such a large number of cars and pedestrians in the parking lots, safety is most important. It is so easy to become overconfident and increase speed and neglect stop signs in parking lot areas driven every day. However, it is this same overconfidence that can lead to an accident.

The speed limit on the Naval Air Development Center, everywhere on Center — is 15 MPH. There are stop signs painted on the black top at the end of every row of cars in all parking lots and posted red "stop" signs at every gate. Entrances to the Center at gates 2, 8, 30, and 33 are manned 24 hours a day, however, other gates are only manned at certain heavy traffic flow times. When these gates are unmanned extreme caution should be exercised when cars feed into the main flow of traffic.

Parking lot #2 adjacent to building 125 has two gates for incoming and outgoing vehicles. Gate #16 (closest to the barracks) should be utilized by vehicles heading northbound on Jacksonville Road and Gate #14 (closest to building 125) should be used for southbound traffic.

It is certainly worth the additional effort that is required to slow down and pay attention to signs, guards and traffic patterns, especially during winter inclement weather conditions.

THE WHITE HOUSE

WASHINGTON

October 17, 1984

Dear Friends:

America stands on the threshold of new challenges and opportunities in space. By accepting the challenges, we will move forward with the same courage and indomitable spirit that made us a great nation and that carried our Apollo astronauts to the Moon.

In order to maintain our position of leadership in the world of high technology, we need to rekindle the spirit of scientific adventure and help nurture it in our nation's schools.

It is for that reason that, early this year, I asked the best minds in our scientific, educational, corporate and government communities to develop a program that would use the excitement of the United States Space Program to encourage our young people to excel in their study of mathematics, science and high technology.

It is with great pleasure, therefore, that I announce the launching of a new private sector initiative called the Young Astronaut Council. This Council will oversee the development of the Young Astronaut Program to ignite in the spirit and minds of elementary and junior high school students and their teachers an enthusiasm for scientific inquiry.

The Young Astronaut Program will develop and deliver programs and materials for use in schools and community organizations interested in forming Young Astronaut Chapters. I've seen the plans for this new project and I know you will want to become a part of this exciting new initiative.

This partnership among educators, parents, the business community and many professional groups demonstrates our country's commitment to improve the science and mathematics ability of our youth.

I commend the Young Astronaut Program and believe it will help our country achieve even greater heights.

Sincerely,

Ronald Reagan

The White House announced the Young Astronaut Council sent invitations to form Young Astronaut Chapters to over 75,000 schools throughout the country in November 1984.

The national program, is using the excitement of the United States Space Program to elevate the interest and skills of elementary and junior high school students in science, mathematics and technology.

The Young Astronaut Council is coordinating the development of supplemental space-related curricula that will be available to all Chapters.

In addition to classroom materials, the program also offers Chapters a national newsletter, special contests and merit programs, logos, insignias, buttons, access to a national computer bank, programs on space, and sponsored trips to launches, camps and other space-related activities.

Further information is available from the Young Astronaut Council, 1015 15th Street, N.W., Suite 905, Washington, DC 20005, (202) 682-1984 (ATTN: Richard Funkhouser, or Hamish Park); the White House Office of Private Sector Initiatives, Washington, DC 20500, (202) 456-6204 (ATTN: Edith Westerman); or from the Public Affairs Office, extension 1842. MAB

Warminster Rotary charity run held at NADC

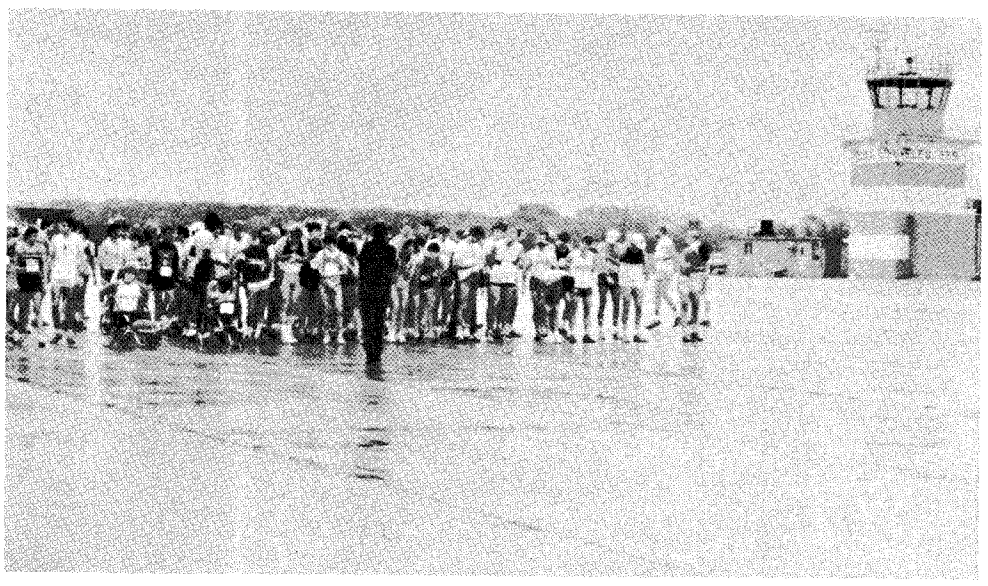


Photo by Regina Gasuk

Contestants assemble at NADC to participate in the Annual 10 kilometer run this year on 11 November.

Photo by Regina Gasuk

Center Commander CAPT Edward Sturm and Dorie Reilly (NADC employee who volunteered to help) review results of the race.

Promotions

—November—

Kenton L. Bachman, Barbara I. Baum, Margaret A. Bernhardt, Rita J. Brownlee, Judy D. Burns, Richard P. Butkus, Charles D. Chester, Kenneth A. Clegg, Rosemary Convery, Patrick J. Finnegan, Christine M. Gallagher, John G. Gibbons, Thomas E. Gould, Alfred W. Gramp, Janice Hammond, Olga T. Haug, Frank J. Hirsch, Frank E. Hollenbach, Joseph P. Jacobson, Thomas G. Keegan, Kevin M. Kennedy, Noreen M. Lapira, Mei Yean Lee, Dorothy M. Littley, Robert Loewenstern, Victoria A. Mathews, Kathleen M. McCloskey, John J. McFadden, Kenneth J. Melvin, Theodore W. Morrison, Trong Van Nguyen, John J. Perazza, Stephen R. Pfeiffer, John R. Piergallini, Jr., Robert A. Piras, Lister Ransom, Edgar A. Reed, III, David W. Schuck, John A., Sgro, Vincent G. Sieracki, Norma M. Strohmeier, Kimberly Wayland, Lorraine C. Weaver, Randall E. Weidemoyer and Glenn R. Willis.

—December—

Daniel J. Aaron, Carlo A. Allodoli, Neil Axler, Robert M. Balonis, Claire W. Bayer, Margaret R. Bodkin, James F. Butt, William W. Capps, Peter F. Carroll, Mingming H. Chen, Margaret M. Clark, Eileen M. Craig, Douglas S. Crompton, Alexis M. Deleon, Chris P. Digiovanni, Janet M. Drulis, Sandra L. Dubois, Charles J. Dugan, Jr., Ada C. Fisher, Daniel F. Flynn, Phyllis J. Grant, Robert S. Griet, Bruce H. Heath, Jr., David M. Herbine, Arnulfo Hinojosa, Jr., Donald F. Johnson, Lawrence G. Johnston, Rita C. Jones, Donna L. Keil, Irene L. Knehnetsky, Mark A. Lilly, Michael H. Lipczynski, Carla S. Mackey, George S. McElhinney, Ellen L. McGrody, William L. McKenna, Michael C. Messe, Stanely A. Mikanowicz, Philip R. Nelson, Peggy L. Newbrough, Donna M. Nicolo, Charles A. Rapp, Jr., Ervin E. Rothermel, Raphaela E. Routzahn, Doris Schieber, Susan L. Schopfel, Frank Sherard, Carol B. Smiley, John K. Smith, Tyrone R. Snowden, Timothy A. Springer, John W. Swaren, III, James A. Tobin, David E. Torr and Helen A. Watkins.

Black History Month

February

Photo by Jim Kingston

TOYS FOR TOTS — ***Center Commander CAPT Sturm (left) deposits a gift into the Toys for Tots barrel. This worthwhile effort was coordinated by Major Daniel Swindell, NADC Marine Liaison Officer.***

Here comes Santa Claus . . .

Photo by Jim Kingston

. . . On 11 December the Warminster Rotary hosted a Christmas party for the handicapped children from McDonald Elementary School. Santa Claus (alias Otto Engdahl, electrician at NADC) delighted the children with his jovial manner and spirited HO-HO-HO.

Photo by Jim Kingston

Warminster Rotary President, Dino Mancinelli (formerly Director of ACSTD) keeps a watchful eye to make sure each child gets a gift personally delivered by Santa. Jeannie Gasuk (kneeling) and Mary Ann Brett (standing), members of the Center's Public Affairs Staff are helping with Santa's deliveries.

Commander Salutes

Henry Beyer, Code 70; **Janet Koch,** Code 094: For significant contribution during the Federal High Tech '85 Conference on Small Business Innovation Research.

David Bailey, Code 60: For providing a fascinating Lighter than Air Program brief to members of the Naval Reserves.

LT Leland Goodman, Code 60: For cooperation and assistance during the 1984 Naval Aviation Selection Workshop.

John Burns, Richard Fenn, Code 60: For dedication to the success of the YAQM-127A target source selection effort.

CDR Gordon Safley, Code 70, **CDR Michael Milchanowski, Franz Bohn, Thomas Weaver, Jack Lamperez,** Code 10; **David Whiteman, Robert Minder,** Code 20; **Anthony Madera, Gordon Marshall,** Code 30; **John Mikulich,** Code 50: for the outstanding assistance provided during Herr Otte, the German Federal Ministry of Defense, visit.

Edwin McGlynn, Code 60: For outstanding contribution to the Air Standardization Coordinating Committee Working Party 50.

Robert Scott, Code 30: For outstanding support provided during the recent READEX 2-84.

Robert Johnstone, Jr., Code 60: For the fine report on the comparison of technology status of deployed systems of the US and USSR.

Where were you on this date in January?

January 1 *New Year's Day. The Panama Canal, built by the U.S. Army Corps of Engineers, opens, 1915.*

January 3 *George Washington leads troops to victory at Princeton, N.J., 1777.*

January 5 *Stephen Decatur born, 1779. An American naval officer, Decatur said at a dinner in Norfolk, Va., in 1815, "Our country! In her intercourse with foreign nations may she always be in the right; but our country, right or wrong."*

January 7 *First federal election under U.S. constitution, 1789.*

January 8 *Battle of New Orleans, 1815. General Andrew Jackson leads U.S. troops to victory against British troops attacking the city. Neither side knew the War of 1812 had ended two weeks earlier with the signing of the Treaty of Ghent.*

January 10 *Ratification Day. Act of Congress ends American Revolution and establishes the United States as a sovereign power, 1784.*

January 15 *Civil rights leader and 1964 Nobel Peace Prize winner Martin Luther King, Jr., born, 1929.*

January 17 *Benjamin Franklin born, 1706.*

January 18 *Versailles Peace Conference, which set terms for the peace following World War I, opens, 1919.*

January 19 *Robert E. Lee born, 1807.*

January 20 *U.S. Navy Lt. Charles Wilkes discovers the Antarctic continent, 1840.*

January 21 *First nuclear-powered submarine (USS Nautilus) launched, 1954.*

January 22 *First Navy torpedo boat (USS Cushing) launched, 1890.*

January 24 *Gold discovered in California at Sutter's Mill, 1848.*

January 25 *Shays' Rebellion, 1787. More than 1,000 discontented Revolutionary War veterans, led by Daniel Shays, unsuccessfully attempt to capture the Federal Arsenal at Springfield, Mass.*

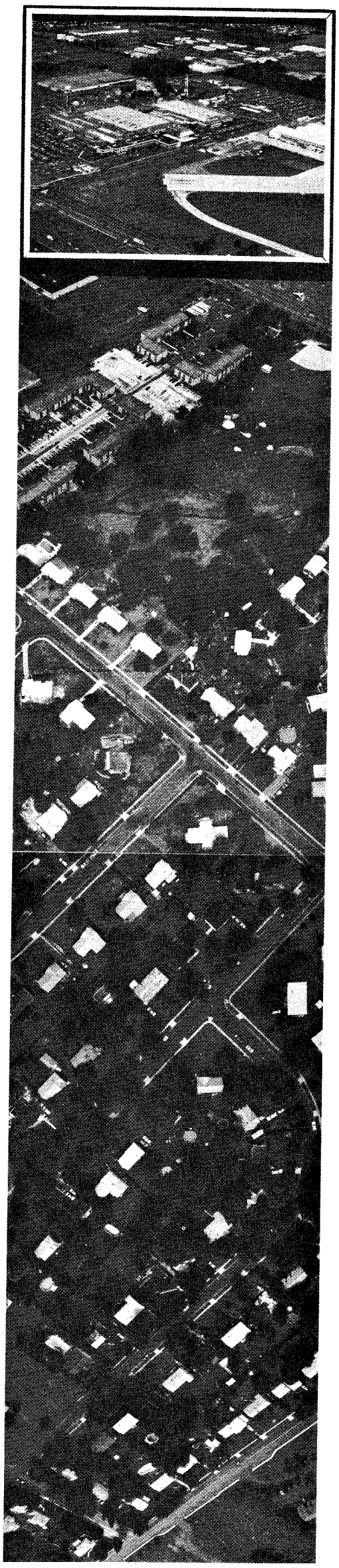
January 27 *Vietnam War cease-fire signed at Paris ending longest war in U.S. history, 1973.*

January 31 *Explorer I, the first successful U.S. satellite, launched, 1958.*

NADC Reflector

Volume 30 Number 2 NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA. February 1985

In this issue:
- Network$
- Black History Quiz
- MEP
- State of The Center
- Cafeteria Personnel



F/A-18 Reconnaissance Pallet
KA-99 Camera
1000 ft. altitude

Wrigley — Superior Civilian

In a quiet ceremony in his office, Captain Edward Sturm, Center Commander, presented John B. Wrigley with the Meritorious Civilian Service Award for his outstanding contribution to the Naval Air Development Center as Deputy Director of Command Projects and his contribution to the defense of the U.S. from October 1977 to December 1984.

As Deputy Director of Command Projects, Wrigley was responsible for the technical operations and management direction of the civilian/military personnel complement of 100, plus an operating budget in excess of $135 million. In this capacity, he provided the policy, directed its implementation, and tracked and assessed the progress for the seven major programs of the directorate: VS, LAMPS, JTIDS, CV-ASWM, TACAIR, and TACAMO.

Captain Richard Fidlar, director of Command Projects commented, "John is most adept at providing clear direction and expected goals, yet allowing the freedom for innovative and creative action. His exceptional ability to develop and maintain the close working relationship with program sponsors, respond to their individual program requirements and merge these efforts with the Center's overall corporate direction has been a major influence in establishing the Center's strong professional image at both NAVAIR and NAVMAT levels."

Wrigley recently assumed the position of Deputy Director of the Communication and Navigation Technology Directorate (CNTD). Besides a physical relocation, Wrigley has a whole new field to explore in CNTD. His efforts as Deputy will be to support the director and assist division heads. He feels the division heads have made his effort a lot easier by introducing him to all their programs and being open about any problem areas. "I have found here a highly qualified technical team supporting very interesting work which I was unaware of before," said Wrigley. "This makes my job a lot easier because the work is so interesting and challenging."

Speaking of his goals for CNTD, Wrigley said, "what I'd like to do is attempt to make every effort that is going on in the directorate more streamlined, and as efficient as possible so we can maximize our resources." He concluded saying, "as in all my past efforts, I have recognized that people are the most important commodity that we have and it is necessary to provide them with challenging goals, to reward those of high performance, and to maintain an attitude of teamwork throughout our directorate and throughout the Center as a whole by achieving the objectives of improving Navy weapons systems."

Photo by Peg Callahan

Center Commander CAPT Edward J. Sturm presents Meritorious Civilian Service Award to John B. Wrigley.

Black managers offer advice

Last year in January, Kathleen Gause was selected the Center's Deputy Equal Employment Opportunity Officer, replacing Gilbert Ridley who retired.

Since then, she and Civilian Personnel Director, Ron Young have made a concerted effort to restructure the Center's minority recruiting efforts.

"Planning is the key" says Gause. "It takes some extra effort." She went on to say, "but, matching our volunteer college recruiters with the schools from which they've graduated and coordinating other similar circumstances really pays off because the recruiter has a much better rapport with the student."

Recruiting statistics lend truth to this, also. The aim for performance year 1985 (which includes 1 July 1984 through 30 June 1985) is to increase the number of minority scientists and engineers (S & E) to 8 percent of the total S & E workforce. At mid-point in the performance year, the Center has already achieved 8.2 percent. Gause feels this accomplishment reflects directly on the dedication of management to support the Affirmative Action Plan and EEO policies.

Two of the Center's prominent managers, Richard Mitchell and Robert Jones are highlighted this month as they offer advice and the benefit of their experience to new recruits.

Richard Mitchell

In November 1984, Richard Mitchell replaced George Eck as the Deputy Director of the Systems Directorate.

"I am proud and glad to be a part of

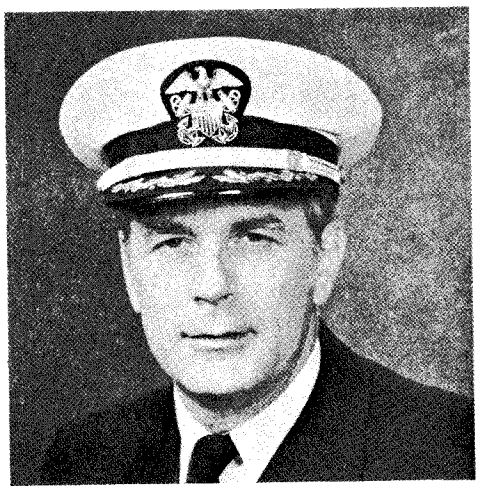
continued on page 3

Photo by Jim Kingston

Richard O. Mitchell

February Black History Month

Command Corner



CAPT Edward J. Sturm
Center Commander

Robert S. Buffum
Technical Director

Each February, the Center commemorates Black History Month. This year's theme is "The Afro-American Family: Historical Strengths for the New Century."

This observance affords us an opportunity to think about the Black Americans' past problems and accomplishments. They have made and continue to make important contributions to our nation's defense and its development as a great nation.

The Center has made significant progress in and will continue to support the ideals of Equal Employment Opportunity.

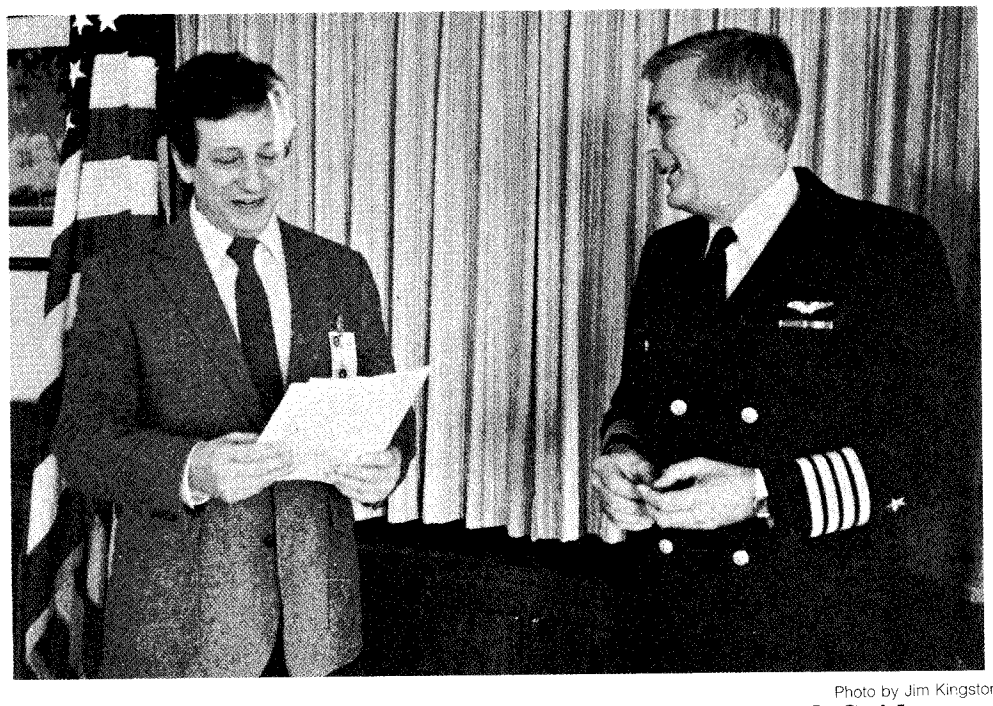


Photo by Jim Kingston

CAPT Edward Sturm presents first Network bonus to Joseph Guidos.

"Network$" Works

Following the lead of private industry hiring practices, the Naval Air Development Center (NADC) here has begun offering cash bonuses to its 2300 civilian employees in an effort to spur hiring of some 300 additional scientists and engineers.

According to Ron Young, Director of Personnel for the Navy R&D center, in addition to being a highly cost-effective hiring practice, employee referrals tend to have a number of pluses over walk-in or recruited applicants.

"For one thing," Young said, "knowing someone who works here gives an applicant a slight edge in that he or she comes recommended by someone whose judgement we already trust. The applicant also has a pretty good idea of what it's like to work here — friends generally 'tell it like it is'. And, of course, a Center employee wouldn't jeapordize his or her credibility by referring someone who wasn't highly qualified and a good worker."

The NADC program, called "Network$," is applicable only to certain scientific and engineering disciplines and not to general hiring at the Center. Presently covered under the progam are: eight engineering specialties, physicists, chemists, metallurgists, mathematicians, computer scientists, and operation research analysts.

Although a first for NADC, a similar bonus-paying hiring plan was undertaken by the Naval Sea Systems Command when it was seeking engineering personnel. The practice of paying employees bonuses for referrals is quite common in a number of private sector areas such as insurance, banking, and the high-tech industries.

"With total recruiting costs and expenses running more than $2,000 per hire," Young concluded, "paying an employee a $500 bonus for a qualified scientist or engineer is a real bargain!"

Technical Highlights

P-3B/C POCKET SIZE AIRCRAFT PERFORMANCE ADVISORY COMPUTER (P-S APAC)

In support of the Navy Energy Program, NAVAIRDEVCEN has completed the RDT&E of the P-3B/C Pocket-size Aircraft Performance Advisory Computer (P-S APAC). The primary purpose of the P-S APAC is to advise P-3B/C aircrew members of controllable preflight and inflight aircraft parameters, which would result in the most efficient utilization of available fuel. It is estimated that a two percent reduction in fuel usage, which correlates to $3.2 million per year at the current JP-5 price of $1.00 per gallon, can be realized by the P-3B/C community through the frequent use of the P-S APAC.

P-3C UPDATE III OBTAINS APPROVAL FOR LIMITED PRODUCTION

Approval for Limited Production (ALP) for the P-3C UPDATE III was granted by CNO on 31 December 1984. The ALP provides for expenditure of funds for 18 P-3C UPDATE III aircraft with those portions of the Adaptive Controlled Phased Array Antenna required for signal flow. Authority was also granted to provide two trainer systems.

RING LASER GYRO FOR SUBMARINE APPLICATIONS

As part of the Ship and Submarine Navigation Tehcnology Block 6.2 Program, design and development of three Model GG 1389 Ring Laser Gyros were completed. Preliminary long term drift test results obtained at NADC's Inertial Facility indicate that more than an order of magnitude improvement in performance over current ring laser gyros has been achieved and that this technology appears feasible for SSN navigation applications. This program is currently scheduled for transition to the advanced development phase in the late 1980's.

Security Reminders

Reproduction of classified material

All requests for reproduction of classified material will be approved by the Security Department Code 0441. A Reprographic Request, NPPBSO NADC-5604/1 will accompany each request. The request will then be taken to Navy Publication and Printing Service Branch Office, Code 90, for reproduction. Use of all other duplicating equipment for reproducing classified material is prohibited.

Protection of Personal Property

Employees who have personal property in their work area are responsible for safeguarding it. Radios, plants, and other items having a dollar or sentimental value should be locked up.

Letter to the Editor

Dear REFLECTOR:

Can you please explain why the base will go outside the personnel it already has working here as permanent personnel to fill jobs rather than fill them in-house. An example is electronics mechanics for aircraft. There are people on base who continually apply for that job, yet are rejected solely because they lack actual experience on the aircraft. Why don't they make it an upward mobility job and give people at the lower end of the pay scale a real shot at moving upwards instead of giving this climb to the top lip-service.

Still Sitting at the Bottom

Dear Still Sitting at the Bottom:

The main reason for the existence of the engineering shops is to support aircraft installation and modification work.

Most of the aircraft work and the growing workload in the shops combine to make it very important that most of the vacancies be filled with experienced journeymen. This is not to say that positions are never filled below the journeyman level. As recently as last August, an electronics mechanic position was, in fact, advertised without the requirement for aircraft experience.

Technical Services recognizes the long-term need to fill some positions at the "trainee" level and is working on a formal training plan that will be used to develop employees selected below the journeyman level.

These positions, if approved will provide a real opportunity for employees like you to compete for positions with journeyman potential.

(Editor's note: This information was provided by the Civilian Personnel Department.)

NADC Reflector

Volume 30
Number 2
Feb. 1985

NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA.

The *REFLECTOR* is published monthly by the Public Affairs Office to inform Center Personnel about topics of interest, and to promote the morale and general welfare of all concerned.

Views and opinions expressed in this publication are not necessarily those of the Department of Defense.

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All correspondence should be addressed to Editor, *REFLECTOR*, Code 091, Naval Air Development Center, Warminster, PA 18974 (441-3067).

Commander, NADC ..... **CAPT Edward J. Sturm**
Technical Director ..... **Robert S. Buffum**
Public Affairs Officer ..... **James S. Kingston**
Editor ..... **Regina Beans Gasuk**
Assistant Editor ..... **Mary Ann Brett**

Black managers offer advice

Continued from page 1

this organization" said Mitchell. "The Systems Directorate has begun to assert itself and take its rightful place in advanced systems as the reorganization of 1977 intended it."

A 1961 graduate of Tuskegee University with a Masters degree in Electrical Engineering from the University of Pennsylvania in 1970, Mitchell joined the Command Projects Directorate in 1975. For two years, he functioned as the VP Program Engineer and provided support to all aspects of the VP community including the development and integration of systems and subsystems to enhance the ASW effectiveness of the P-3C weapon sytem.

From 1977 through 1982, Mitchell was a division superintendent in the Software and Computer Directorate where he supported combat system software development and fleet software engineering and analysis for application software, including the P-3C, UPDATE III, LAMPS MKIII, S-3B. ASP, and F-14D.

He then advanced to the Head of the Center Design Team where he provided the focal point for the Center for conceptual designs.

Mitchell enhances his professional capabilities by his affiliation with the Institute of Electrical and Electronic Engineers, the American Institute of Aeronautics and Astronautics (Digital Avionics Technical Committee), the Naval Civilian Administrators Associaton, the NAVAIRSYSCOM Software Management Advisory Committee, and the Advisory Group for Aerospace Research and Development.

Armed with this experience, Mitchell feels his most important contributions to the Systems Directorate will be "to instill new enthusiasm for systems work and to begin to increase the focus on new and advanced systems while maintaining the past level of good work."

Mitchell reminisced that back in his early days, he had no special counseling. He said, "I learned the hard way — finding out what worked and adjusting my life style to accommodate that."

He added, "Once you are in a particular position, you can begin to influence that society as well and get them to believe in some of the things that are a part of your background."

When time permits, Mitchell tries to give informal advice to black youths on Center, sometimes taking them to lunch at the price of listening to the voice of his experience. "I try not to impose my thoughts as a recipe for success but just to describe what I went through. Today is a lot different than when I first started here."

In terms of the Affirmative Action Plan, Mitchell feels the Center has made a true effort in hiring minorities. "However, job assignments are very important" says Mitchell. "They can really open up opportunities. You've got to be given a lot of responsibility or you aren't likely to progress.

"Overall," nodded Mitchell, "the Center has done an excellent job."

Robert Jones

Robert Jones is currently assigned as the Acting Deputy Director of the Software and Computer Directorate. He was detailed to this position in August 1984 to replace David Schimsky who is Acting Director. Jones will return to his regular assignment as the Division Manager of the Combat Systems Software Directorate in February.

Jones described this opportunity as Deputy Director as "... an excellent assignment in terms of broadening one's view of the Directorate."

"Obviously," he said, "at the division level, you tend to focus on the problems and issues at that level. Although you are aware of the interface between the various divisions, it's not the same as being responsible to solve the problems or address issues that encompass all the divisions."

Jones thinks the experience exceptionally valuable. In fact, he would recommend to the Director that each of the Division Managers would benefit from a rotating assignment to the Deputy's office.

Jones received his undergraduate degree from the University of Illinois and his Masters degree in Electrical Engineering from Drexel University in 1964. He worked in private industry for five years before joining the Center.

"I always tell the story," said Jones, "that it was my intention to spend only a few years at the Center — only long enough to gain some experience in the computer field. The experience ended up being so enjoyable that I decided to stay. Those two years have now stretched into twenty."

Jones' years at NADC have been spent primarily in the computer field. He worked in what was then the Airborne Computer Lab, now simply known as the Computer Lab and then on to the Systems Directorate in 1975.

Jones, much like Mitchell, also achieved success without the benefit of special programs.

"The system has changed over the past twenty years" Jones said. "We've seen the advent of civil rights, Equal Employment Opportunity, legislation, awareness, and Affirmative Action Plans. These have all forced society and the working community, of which the Navy is certainly a part, to make a conscious effort not to discriminate based on race, religion, or sex.

"The Center and its Commanders have certainly done a better-than-fair job in placing the EEO program and policies up front."

Affectionately, as well as accurately, known as the "founding father" of the Minorities in Engineering Program on Center, Jones contributes a large portion of his time to recruiting. He offers all of his recruits the same advise and counsel, i.e. BE PROFESSIONAL.

Jones' definition of "professional" is "not necessarily a college graduate, but rather a person who brings certain attributes to his/her work. It includes first, Competence: know your field; second, Professional integrity: offer your opinion if you feel something is technically or ethically wrong, and last, but not least: give the Navy/the Center a full eight hours work for eight hours pay."

Photo by Jim Kingston

Robert L. Jones

Jones confidently said, "if you do those things you'll be successful in my division or anywhere on Center." He added, "To my way of thinking that makes you a professional. And, by that definition a secretary or a janitor as well as a college graduate can be 'professional'." (MAB)

Black History Quiz

Test your knowledge of black history. Answers appear on page 12. Quiz prepared by Lois Savage.

Medicine

1. Q) Who performed the first successful open heart surgery?
2. Q) Who discovered blood plasma, set up the first blood bank in England and was director of the American Red Cross blood donor project?
3. Q) Why did Ernest E. Just receive the first Spingarn Medal, the NAACP award for meritorious achievements of Afro-Americans, in 1915?

Geography

1. Q) Who placed the American Flag on the top of the North Pole?
2. Q) Jean Baptiste Point DuSable founded a trading post that established what American City?
3. Q) Where is the grave of composer James A. Bland who wrote "Carry Me Back to Old Virginny," "Oh Dem Golden Slippers," and "In the Evening By The Moonlight"?

History

1. Q) Pedro Alonyo Nino was captain of whose ship?
2. Q) What year did Henry O. Flipper become the first black graduate of West Point?
3. Q) What did Lieutenant Commander Samuel L. Gravely become the first black to do on January 31, 1962?

Inventors

1. Q) Who invented the traffic light in 1923 and the gas mask in 1916?
2. Q) Who made the first American Clock?
3. Q) Who invented the golf tee?

Public Office

1. Q) The first black man elected to a full term in the U.S. Senate represented. What state during what time period?
2. Q) What United Nations Ambassador was the first black congressman from Atlanta, Georgia since reconstruction?
3. Q) Who became the first black supreme court justice?

Miscellaneous

1. Q) Whose epitaph reads: "He could have added fortune to fame, but caring for neither he found happiness and honor in being helpful to the world"?
2. Q) Who won the Nobel Peace Prize in 1950?
3. Q) What year did Renard Edwards become the first black musician to play for the Philadelphia Orchestra?

CHILD ABUSE

By Evelyn D. Harris
American Forces Information Service

It is an unfortunate fact of life that there are people out there who abduct and molest children.

Tragically, 50,000 children were affected last year. Although it is difficult for many parents, talking to their kids about the problem is one of the best ways to reduce the chance of their becoming victims. Here are some guidelines that have been recommended by many authorities to help protect children from abduction and molestation.

• First of all, don't scare your children. Let them know that most friendly adults really do like them. However, just because most houses don't burn down doesn't mean you don't need a smoke alarm and regular fire drills.

• Tell your children to avoid going alone to isolated places—shortcuts through the woods, down an alley, etc.

• Teach young children that no one should touch their "bathing suit parts" except for legitimate hygiene purposes. You might want to talk about "good touch" and "bad touch." Even very young children can sense "bad touch"—it makes them feel uncomfortable. Encourage them to tell you about any "bad touch" experience.

• Don't dress your children in clothing with their names on it. Young children can be taken in by a stranger who calls them by their first name.

• Some potential abductors will tell the child, "Your mother is in the hospital—she asked me to get you." Have a special code word that only you and the child know, and tell the child not to go with anyone unless they use the code. In fact, it is a good idea to have an emergency plan of action and "drill" your child so he or she will know what to do.

• Some molesters will ask for some kind of assistance, something as seemingly innocent as asking for directions. Tell your child to tell them to ask an adult for help.

• Most molesters are relatives or are known to the child. Be suspicious of adults who seem unduly interested in your child and who want to spend a lot of time with him or her. If a young child wants to avoid a particular relative or babysitter, try to find out why.

• Children who look unkempt and uncared for, and young children who smoke or hang out in video arcades are particularly vulnerable.

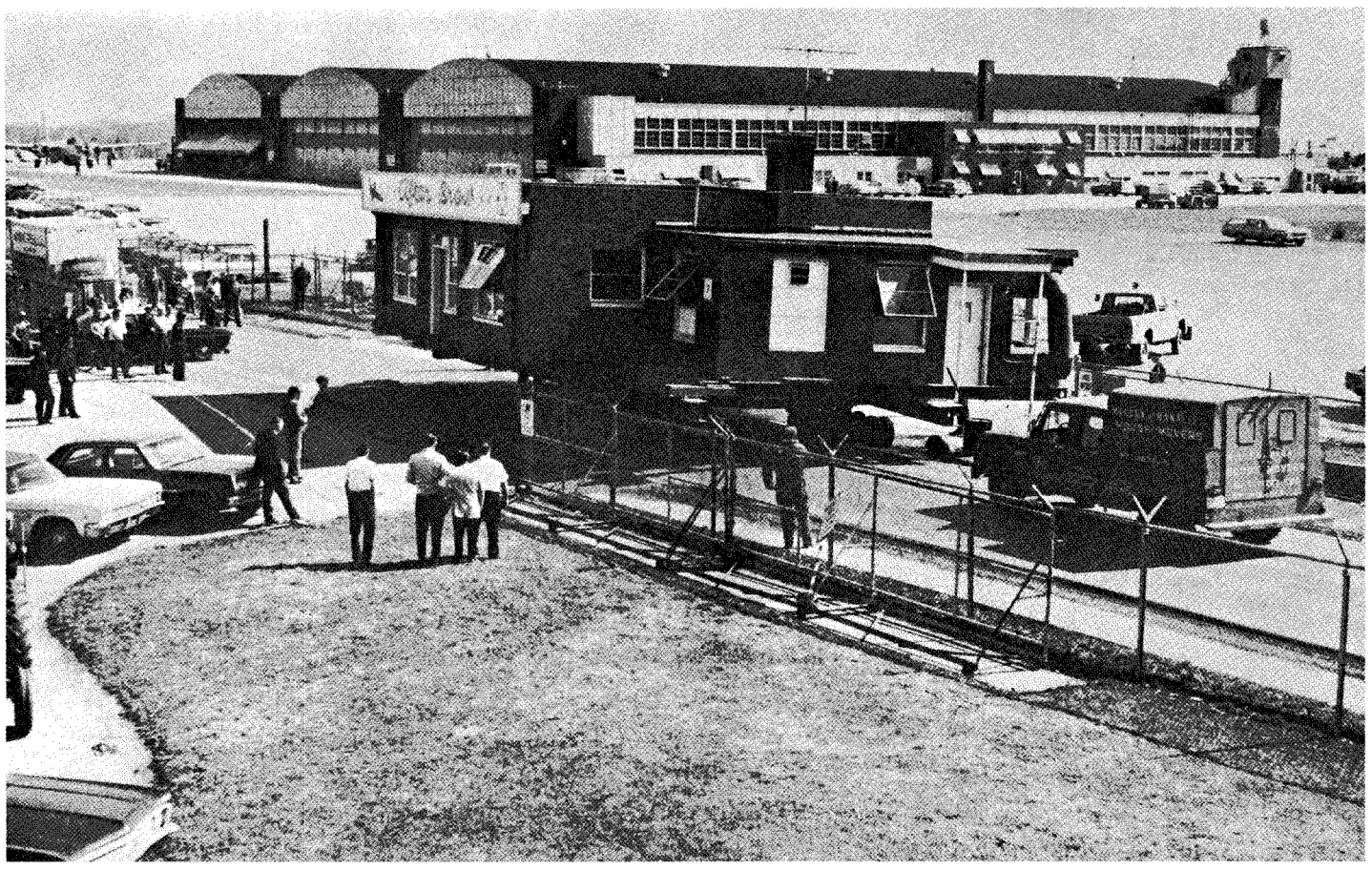
• Although vans are involved in some horrible child molestation crimes, the innocent-looking blue sedan is one of the most common vehicles involved.

• Adolescents can be lured by the promise of a high-paying job, with interviews often held in a secluded place. Tell your teen-agers you want to know who is interviewing them and where.

• Perhaps the most tricky ploy for luring children is the individual dressed as a policeman or other authority figure. Some even have false badges and identification papers.

• Teach your children to run or scream "No!" or even "Fire!" if they are approached or touched by a molester. Most say they will flee if the intended victim runs or screams.

• Finally, assure your child that if "something" does happen—a bad touch or a strange remark by an adult—the child should tell you or, in your absence, another trusted adult about it and not keep it to himself or herself.



Where did our Club go? In 1967 NADC's Consolidated Mess (Open), moved from its original location in Parking Lot No. 1 to its present location on the airfield side of Jacksonville Road. Built in 1948 as a Marine Officers' Quarters, it was remodeled in 1965 and called the AFTER BROW. The name was later changed to the CROW AND CHEVRON and is once again seeking a new name. See contest below.

Promotions

—January—

Richard E. Adams, Mary D. Banford, Emil S. Bazow, Eileen M. Beans, Dennis H. Bing, John J. Bowes, Jr., Alan E. Cantor, Linda J. Carey, Jeanette G. Coster, John A. Coyle, Judith A. DeFranco, Anthony N. DeGennaro, David W. Dummeldinger, Guy D. Fenerty, James A. Fingerle, William E. Frazier, Shauket A. Gadiwalla, Jeffrey D. Glatz, William A. Greer, Susan E. Handler, Terence L. Houghton, Jr., Leonid Hrebien, Deana K. Hudson, Gerald A. Iannelli, Michael M. Kijesky, John R. Kolb, Jr., Frederick A. Kuster, Jr., Paula L. Lafollette, Michael A. Lanier, Thomas F. Leahy, Jr., Mark S. Libeskind, Mark J. Lipacis, George F. Logue, Mary Joan Maloney, Anthony C. Manilla, Edward J. Mansfield, John J. McGee, Jr., Abraham Meth, Kenneth A. Michel, John Mochulski, Andrew R. Ochadlick, Jr., Paul E. Ondeck, Robert G. Peck, Colleen P. Perkins, Timothy A. Pletcher, Charles A. Rapp, Jr., Glenn R. Rhodeside, Selina M. Ridpath, Sharon R. Robinson, Richard H. Rowland, Sr., Umberto A. Salvati, Stephen M. Sanelli, Scott R. Shaner, David E. Stasen, Cheri S. Stead, Gregory D. Sweriduk, David J. Swinski, Edward A. Swiski, Jr., Wei Willy Tseng, Peter W. Verburgt, Michael J. Wagner, David E. Waldman, Thomas M. Weiss and Charles J. Winslow.

WANTED

A NEW NAME FOR THE CONSOLIDATED MESS

Dinner for two aboard the Spirit of Philadelphia at Penn's Landing and $50.00 in cash will be awarded to the person who submits the winning name.

Suggestions should be in keeping with the Center's professional status and must be received by Code 0423 not later than 4 March. The Consolidated Mess (Open) Advisory Board will judge the entries and the winner will be published in the March issue of the Reflector.

*in case of ties/duplications a drawing will be held to decide the winner

(Cut along the dotted line and mail to Code 80A.)

FILL IN YOUR SUBMISSION BELOW

_____

_____

_____

_____

Name: _____

Code: _____ Ext.: _____

MEP offers students unique opportunity

Following the lead of private industry, the Naval Air Development Center has been and is currently recruiting minority (and female) student scientific and engineering prospects and is experiencing reasonable success. Several area companies that initiated similar programs also had positive results.

An Equal Employment Opportunity Affirmative Action initiative by Bob Jones of the Software and Computer directorate, prompted the Center to establish the Minorities in Engineering Program (MEP) designed to select minority candidates from local high schools for an "Introduction to Engineering." Students are given the opportunity to gain hands-on experience by completing an engineering project. Summer employment is also offered to a number of promising students who have been accepted and are enrolled in college scientific/engineering programs.

Jones first became aware of MEP from his son who participated in a similar program at RCA, Moorestown, NJ. The MEP at NADC was adopted from and patterned after that of RCA.

Students are selected on the basis of academic excellence, interest in pursuing a technical career, ability to communicate and work well with others, and high school counselor recommendations.

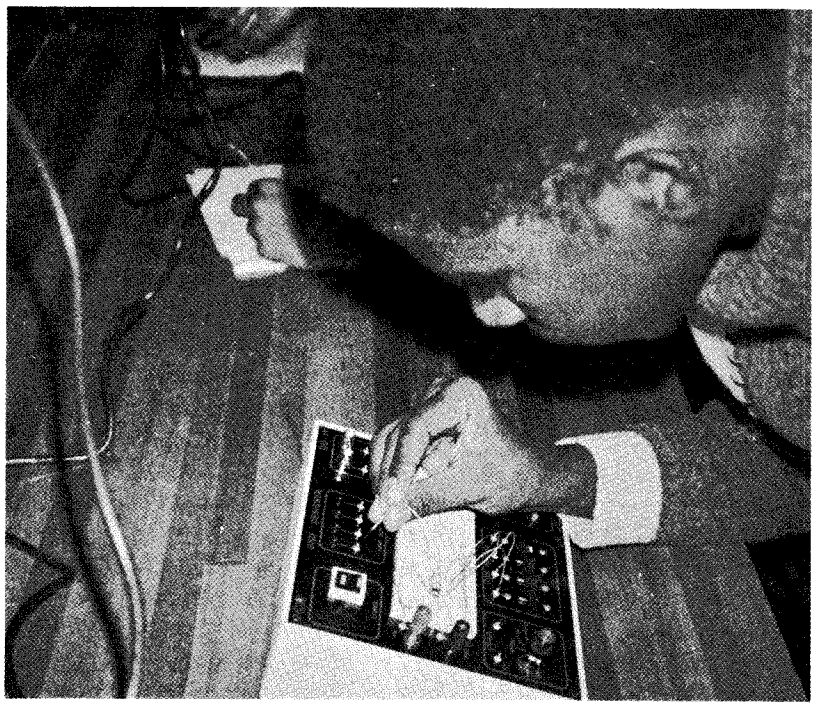
The MEP begins with an evening meeting to introduce parents to the program followed by a meeting with guidance counselors which includes a tour of the major programs of the Center. Students attend two career workshop sessions, an engineering disciplines discussion session, four introduction to digital electronics sessions, four student project sessions, and a wrap-up dinner for students and parents with awards and certificates being presented.

Bensalem, Bristol township and Centennial school districts agreed to participate during 1984-85. The program has met with such success that the Center is hoping to extend to other school districts.

A school district's only obligation is to provide students and transporation; NADC provides classroom laboratory facilities, instructors, and all learning materials. Classes consist of 15 to 20 students, primarily 11th graders. Twelve 2½ hour sessions are scheduled. Students are currently being introduced to digital electronics. During this session, they will design and construct simple digital circuits, be exposed to a rudimentary understanding of computer hardware, and become familiar with the binary number system.

The Minorities in Engineering Program is not only introducing minority students to engineering programs and hopefully a career at the Center, but also increasing NADC's community involvement through interaction with school district's guidance counselors, students and parents.

For additional information regarding the MEP contact the Deputy EEO Officer on extension 3061.



Student carefully connects simplified circuits on Digi Designer.

Rich Mejzak (far right), Code 502, ensures that students have correct combination of inputs.

Demonstrator Mike DeShield (center), Code 501, and his students discuss the capabilities of the Digi Designer.

Photo by Jim Kingston

Steve Youngblood (second from left), Code 504, discusses logic table with students.

Where were you on this date in February?

February 1 *Freedom Day. President Lincoln signs Thirteenth Amendment (abolishing slavery), 1865. February is Black History Month.*

February 2 *Goundhog Day. Legend has it that if the groundhog sees his shadow, winter will continue for six more weeks.*

February 3 *Birthday of Elizabeth Blackwell, first woman physician in the United States, 1821. Four military chaplains give up their life jackets and sacrifice their lives in the torpedoing of the S.S. Dorchester off Greenland, 1943. The chaplains were: Army first lieutenants George Fox, Alexander Goode, Clark Poling, and John Washington.*

February 4 *USO founded, 1941.*

February 7 *Birthday of composer Eubie Blake, who wrote more than 1,000 songs, including "I'm Just Wild About Harry," 1883. Defense Department names a chief for the Advanced Research Projects Agency, an organization established to develop outer space weapons, rockets, and other space vehicles, 1958.*

February 8 *Boy Scouts of America chartered by Congress, 1916.*

February 9 *United States National Weather Service established as a unit of the U.S. Army, 1871.*

February 11 *Birthday of Frederick Douglass, noted black publisher and abolitionist, 1817.*

February 12 *Abraham Lincoln's birthday, 1809. General of the Army Omar N. Bradley's birthday, 1893. First submarine-fired guided missile, the Loon, launched from USS Cusk, 1947.*

February 13 *Marine Corps Women's Reserve organized, 1943.*

February 15 *Susan B. Anthony's birthday, 1820. Anthony was arrested and fined in 1872 for voting, then a criminal act for a woman.*

February 16 *Coast Guard Reserve established, 1941.*

February 17 *Marian Anderson, famous black contralto, born, 1907.*

February 20 *Lt. Col. John Glenn, USMC, becomes first American to orbit Earth, 1962. Mercury-Atlas spacecraft 6 completes three orbits.*

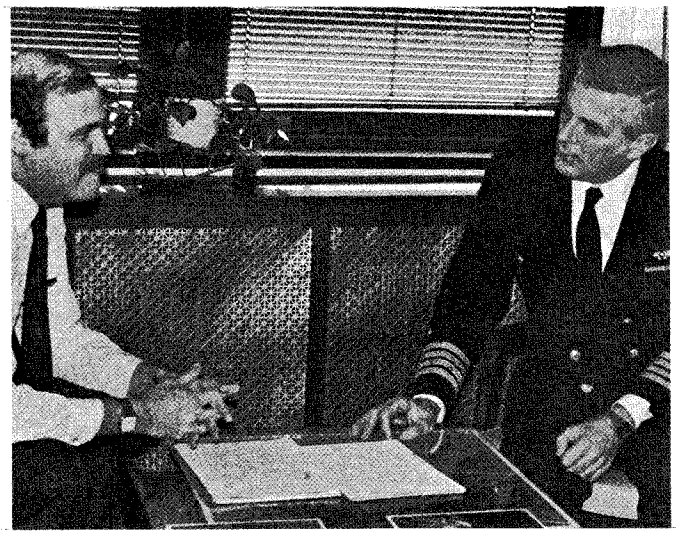
February 21 *Washington Monument dedicated, Washington, D.C., 1885.*

February 22 *George Washington's birthday, 1732.*

February 26 *Frontiersman William F. (Buffalo Bill) Cody's birthday, 1846.*

February 27 *Richard M. Nixon becomes the first U.S. president to visit any country not formally recognized by the United States when he visits the People's Republic of China, 1972.*

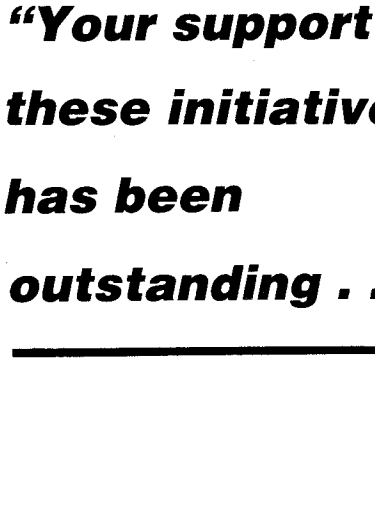
February 28 *First U.S. airplane-to-ground radiotelephone communication, San Diego, 1917.*



Neil Abramson (CPD) with CAPT Edward Sturm

State of

CAPT Edward J. Sturm
Center Commander



CAPT Edward Sturm at the podium

"Your support for these initiatives has been outstanding . . ."

As we start a new year, I am pleased to take this opportunity to share with you, my thoughts about the Center over the last year and projections for our future. You are the people who have to put it all together and make it work. Some changes have taken place at NADC since I assumed command and I hope you recognize that they were instituted as positive moves towards improving both the quality of life at the Center and the quality of the working output. Your support for our new initiatives has been outstanding and I hope to see this type of response continue in the future.

Over the past several years, NADC has continued to grow in new obligational authority. This means that we are taking on more work for our sponsors and will have to continuously increase our output to meet our commitments. In FY-83 we received a total of $318.3 million and in FY-84 a total of $347.8 million. This overall increase of 9.3% compares very favorably with an inflation index running at less than 4%. Our direct labor workeryears increased from 1,403 in FY-83 to 1,497 in FY-84, while our total workeryears went from 2,311 to 2,439 in that same time period. Our FY-85 projections are for a new obligational authority of $380.0 million and an increase of 278 people in our overall workforce. These additional personnel will alleviate some of our problems, but finding, hiring and housing them will create others.

While our total cash flow has been increasing, we have been undertaking an effort to keep more of the important work in-house in order to maintain our "smart buyer" role for the SYSCOMS. Our contract ratio has been as high as 61% outhouse in the recent past. We have discussed this problem with CNM and DNL and have made our intentions to reduce our contracting out efforts very clear to them. Our long term goal is to keep this figure down to the 50% level and in effect keep more of the key engineering work in-house.

These factors should combine to mean that we will be in a continuous hiring mode for the next few years. We are facing some formidable challenges in attempting to attain this growth. Many of our current staff find the employment packages external to the government service too attractive to turn down and leave our employ. These losses, coupled with the normal losses to retirement, mean that we must work very hard to hire the numbers of competent personnel required to meet our future needs. This is especially true in the high tech areas in which industry is paying premium salaries. I am counting on each of you to help us in this effort. We must demonstrate to potential new employees the intrinsic benefits that working at our Center can offer them. The Center is attempting to further incentivize this effort on your part by offering a finder's fee or bonus program to employees who actively participate in our recruiting efforts.

One of the major changes I have instituted is the stressing of the need for T&Ps, or technologists and professionals, vice our previous emphasis on the hiring of only S&Es, scientists and engineers. We must realize that our professional support personnel are as critical a factor in accomplishing our mission as our engineering staff. In FY-85, we will be attempting to increase our overall T&P staff by 135 of which approximately 119 will be S&Es.

In an attempt to recognize the importance and the quality of the work produced on this Center, we have instituted a major effort to have our high grade limits raised. In FY-83, our high grade (GM-13 thru GM-15) count was 442. In FY-84, we remained relatively constant at that number primarily because relief to increase our numbers to 469 came at the end of the fiscal year. In FY-85 the controls in the GM-13 through 15 area have been removed. We are going to manage that relief prudently by allowing our GM-13 through 15 ranks to grow commensurate with the overall personnel growth we have programmed.

During FY-84 our EEO program has continued to improve. Minority Scientists and Engineers increased from 6.6% to 7.7% of the workforce. The percent of female scientists and engineers also increased, from 6.2 to 7.4. The Upward Mobility Program continued to serve as a vehicle to increase technical positions. Of the fourteen upward mobility positions filled, thirteen were females with three of those engineering technicians. The Center also initiated the Federal Junior Fellowship Program. Through this program four high school seniors were employed at the Center during the summer and school breaks in quasi-administrative and technical positions. The Worker Trainee, Stay-in-School and Summer Aid Programs continue to serve as feeder programs to employ minorities and other disadvantaged people in clerical and similar type positions. The worker trainee program is currently training 19 employees; the stay-in-school program has 16 participants; and last summer our summer aid program gave needed employment to 25 disadvantaged youth.

Our Center, in association with the Bucks Employee Assistance Consortium (BEACON), is recognized as providing one of the top employee assistance programs in the Navy. This past year we strengthened that position by the implementation of the Shipshape program. This wellness program focuses attention on the many extracurricular activities already available, and stresses to provide the impetus for additional activities and facilities which you have indicated may be needed. I recognize that the healthy balance between nutritional, physical and mental aspects not only

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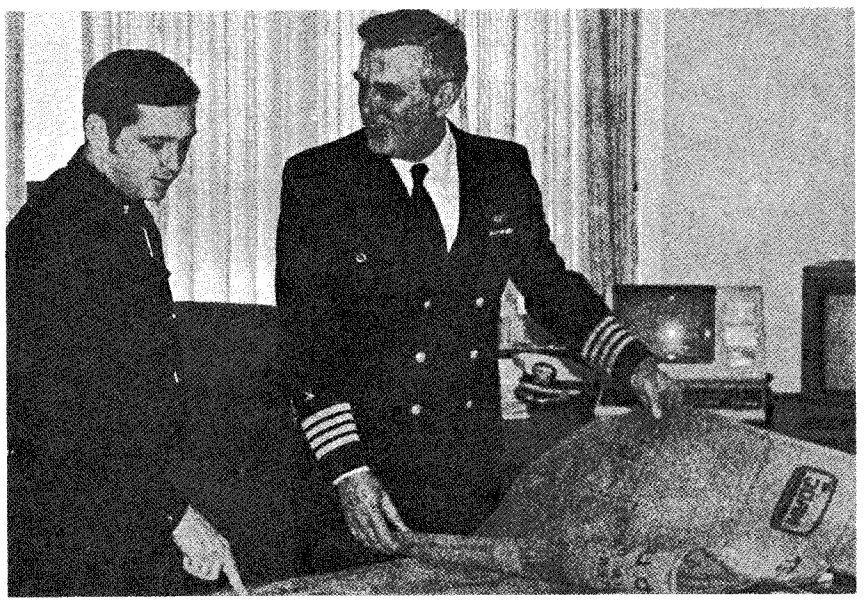
Hal Tremblay (left) and Robert Finkelman (right), Computer Department with CAPT Edward Sturm



LCDR Burt Streicher (Public Works Officer) and CAPT Edward Sturm

the Center

Robert S. Buffum
Technical Director

This is the first of a series of regular updates of what is going on technically at NADC. While this report covers the last and current fiscal year, future reports will concentrate on timely happenings in the world of Center technology.

First, I thank all of you for your support during the past year. It seems each year has its own peculiar problems to overcome and our working together is the only way to stay on top of a rapidly changing environment.

We have been striving over the past few years to strengthen our technical capabilities and increase our in-house-to-contract ratio. Our projections show a 30% increase in our RDT&E funds for FY-85 compared to an overall Center budget increase of 14%, and a work-year increase of close to 17% compared to a 4% Center increase. While moving in the right direction, we still have a way to go in reaching our monetary goal of a 50% in-house-to-contract ratio.

Our ten largest programs for this year are: VP; TACAIR; CV-ASWM; NAVSTAR GPS; S-3A; LAMPS; AIRCRAFT TECHNOLOGY BLOCK; VH-3D HELD AVIONICS MODERNIZATION; AIRCRAFT MATERIALS TECHNOLOGY BLOCK; and TARGET SYSTEMS DEVELOPMENT. These programs account for almost half the total Center funding for FY-85. Three of our nine exploratory development block programs are in the top sixteen Center programs. Block programming accounts for approximately 70% of our tech base dollars and remains the heart of our tech base.

To emphasize our concern for the future direction of the Center, Captain Sturm and I have endorsed six strategic goals which were formulated by our Center Management Group. Three of these goals are of a technical nature and are worth repeating here.

SYSTEMS AQUISITION AND SUPPORT
GOAL: Expand NADC's role as a full spectrum research and development Center in the acquistion and support of air systems, aircraft systems and subsystems, and establish a significant presence in aerospace systems and battle group systems.

This will require that we fully develop our capability as the air systems lead technical support activity for NAVMAT-assigned leadership areas and NAVAIR product, functional area and systems engineering assignments. We must apply our systems expertise to new air and aerospace systems and battle group systems. We must apply new and emerging technologies to the acquistion of affordable air systems and aerospace systems of high military worth and utility. And we must reestablish our preeminence in air ASW systems and technology developments to provide for fleet introduction of weapon system capabilities in advance of the threat.

ADVANCED TECHNOLOGY
GOAL: NADC will increase its role in the forefront of advanced technologies required to satisfy key Navy needs and future operational requirements.

By applying advanced technology capabilities we will strengthen our lead activity roles. We must increase the scope of advanced technology applications to new sponsors. We must expand our advanced technology capabilities into aerospace applications. We must increase the emphasis on new and advanced technologies which have significant impact on air and aerospace systems; for example, lightweight platforms, stealth, artificial intelligence, VHSIC, super computers, and data fusion. And we must enrich and expand the Center's technology base by more vigorous interaction with universities and industry.

COMMAND AND CONTROL SYSTEMS
GOAL: Provide leadership for integration of Navy air command and control capabilities in multi-warfare, multi-platform environments.

This necessitates a Center-wide approach to multi-warfare, multi-platform air command and control, a strengthening of our command and control system engineering capability, the obtaining of formal recognition, sponsorship and support from SYSCOMS and OPNAV, and a capitalization on Center programs which pertain to fleet command and control. The establishment of the Command and Control Division in Code 40 indicates our top management backing of this goal.

Our technology base portion of total Center funds of 16% in FY-84 and projected 18% in FY-85 is far short of the NAVMAT long range goal of 40% in manpower and funding for our tech base.

Our main thrust for the future then, is the strengthening of our tech base. The changes to the ratios of tech base, systems work and other non-RDT&E work have been pursued for the past two years and this emphasis will continue. We must be judicious in our selection of new hires insuring a cadre of technologists who will fill our technology shortfalls. We must do all in our power to retain our present experts not only to carry on our present technology strengths but to act as mentors for the new hires. At the same time, we must retain more of the workload in-house.

We must add to our capabilities through the improvement of current or the building of new laboratory facilities. A step in this direction was taken in the development of our new Magnetic Laboratory to build our capabilities in the area of magnetic storage devices and techniques.

Our skill base level must include capabilities in the high-driving technologies such as artificial

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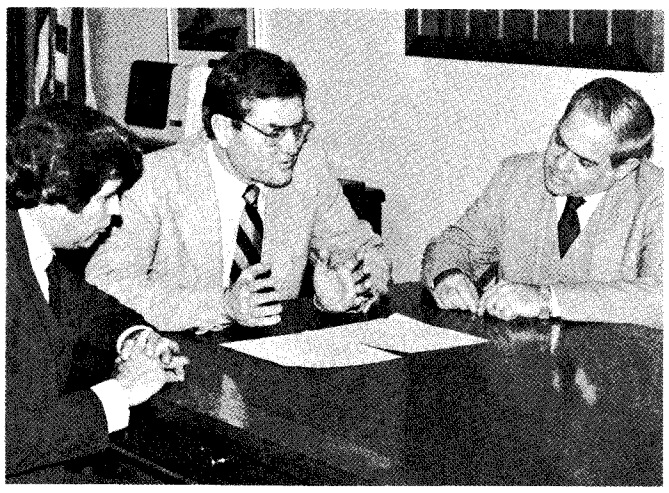
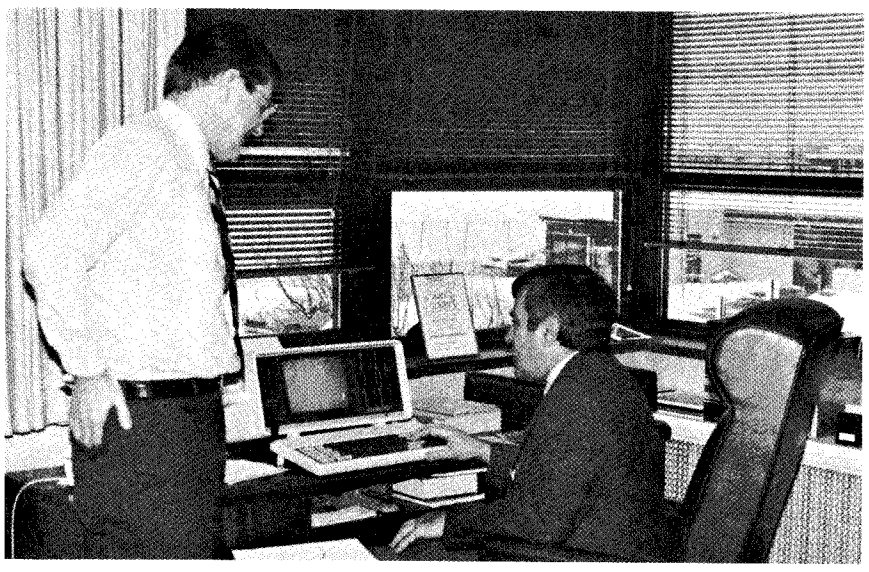


Louis Naglak (left) and Stu Simon (right), PAR, with Robert Buffum

William Lyons (left), CNTD, with Robert Buffum

Robert Becker (right), ACSTD, and Robert Buffum



Jerry Guarini, Associate Technical Director with Robert Buffum

"Our main thrust for the future then, is the strengthening of our technology base."

Photos by Regina Gasuk

State of the Center (continued)

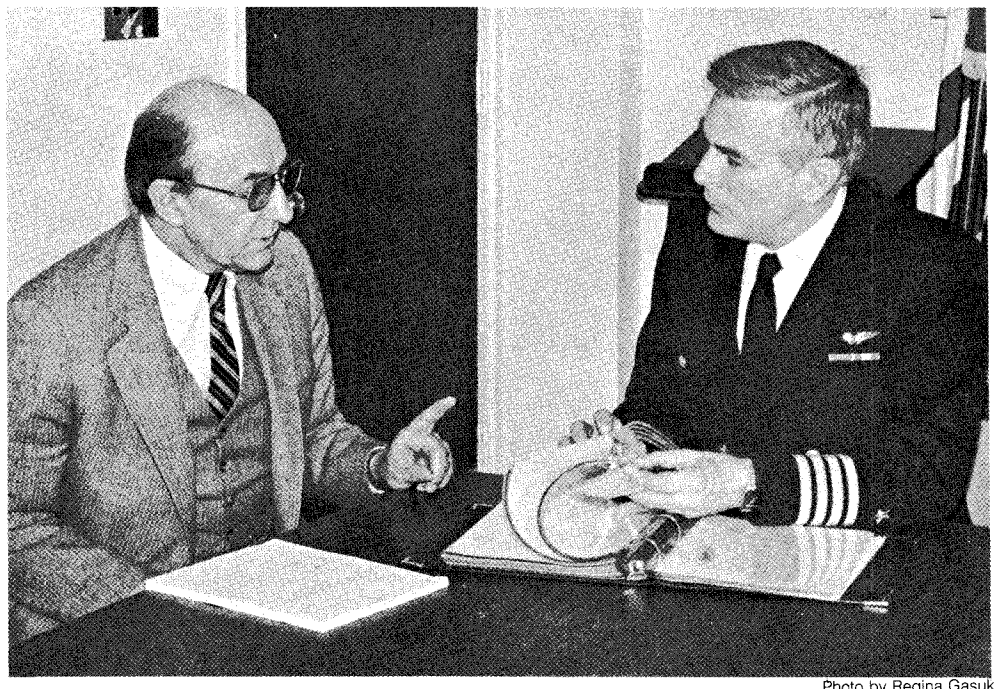


Photo by Regina Gasuk

Thomas Shopple, Comptroller, with CAPT Edward Sturm

CAPT Edward Sturm

(continued from page 6)

promotes your personal well-being, but also results in improved productivity — a must if we are to achieve all our goals. I urge you all to take advantage of the continuing lectures, discussions and other activities promoted by our Shipshape program. I will continue my support and do all in my power to provide, as soon as possible, adequate facilities to enhance the program.

As you all know, we are required to conduct CA (commercial activity) studies to determine whether certain efforts can be done more effectively in-house or by contract. To date, all studies scheduled through FY-84 (PW support services, storage and warehousing, mail distribution services, motor vehicle operations and maintenance, fueling services, data processing services) have been completed and retained in-house with a three year savings to the taxpaper of $2,500,000. Successful competition against outside bidders reflects most favorably the high level of competency,

"Past successes must not allow us to rest on our laurels."

efficiency and experience of our work force. The efforts of all those who participated in these studies is sincerely appreciated. Only one CA study (test and calibration laboratory) is scheduled for completion in FY-85. With the continued cooperation of the employees involved, we intend to develop an organization that will ensure the retention of the function in-house and provide further savings to the taxpayer. Past successes must not allow us to rest on our laurels. With the increased emphasis on productivity, we will continue to be tested to find better and less costly ways of using our human resources, equipment, and facilities.

In the area of human resources, the Defense Regional Inter-service Support (DRIS) program requires that we look at various support functions at a regional level and, where economically feasible, consolidate functions. While I do not feel that this program presents a major threat to our Center, it underscores the fact that we must always strive to improve our efficiency. There is also a productivity enhancement program which gives us the opportunity to receive funding for fast payback, labor saving equipment. We have been successful in using this program to attain funds to build the Automated Test and Calibration Facility which has proven to be a very useful tool to both NADC and other government agencies. I encourage all of you to maintain your efforts in these areas and I will keep you informed of our progress.

In order to ensure that employees have the necessary knowledge to accomplish the Center's mission, and to grow in their careers, we continue to have a very comprehensive training and development program. Last year nearly 70% of our civilian personnel attended at least one training course. In FY-85, we have budgeted to expend more than $2,300,000 in tuition, travel, per diem and salary for training. This training ranges from full time, long-term graduate level university training for scientists and engineers to basic typing training for entry level worker-trainees. Recent initiatives include the addition of Artificial Intelligence courses to the Penn State on-Center graduate program curriculum, and the implementation of a "subsidy-plus" program to our cooperative education program. The subsidy-plus is designed to enhance the retention of graduating subsidized student trainees by reimbursing them for the remaining 50% of the cost of their tuition, books and fees after they accept permanent employment with the Center.

Another major initiative that we have undertaken is in the upgrade and modernization of our facilities. This will encompass both our laboratories and our office areas. We have made some significant progress in the past year and are continuing with an aggressive approach towards further improvement in the near future. To date we have taken steps to aesthetically improve the appearance of the Center. Over the last year there have been major landscaping efforts completed along the base perimeter; our Center sign has been modernized; the visitor's parking lot and entrance have been improved; and various improvements have been completed on the airfield side of the activity.

In FY-85 our improvement plan has four main thrusts. First, we will make any improvements which are required to support safe operations and the Directorates in their identified technical program objectives. Secondly, the priority will be to ensure that all essential maintenance and repair is effectively completed. Our third thrust will be in the improvement and upgrade of our environmental (HVAC) control systems. The balance of our efforts and improvement funds will be directed towards upgrading the working spaces on the Center. We have already leased space in the Moreland Plaza Office complex and have moved some activities to that location in order to facilitate upgrades to working spaces in buildings 1 and 3. Some of the other FY-85 efforts will include: the relocation of the DCP admin offices; renovation of the Center Design Team offices; construction of a magnetics test facility; renovation of the electronic warfare integration facility; an additional lab area in building 125; renovation of the 501 and 504 offices; construction of a powder processing lab; refurbishment of building 70; expansion of the CREST lab; repair of roofs, windows and walls throughout the plant; installation of a new electronic security system and; improvement of the Center central computer system spaces. In addition, new training rooms and better access to parking lot #2 should be completed. In FY-86 a new laboratory building will be constructed, using MILCON funds, to house the TACAMO/GPS projects. There are many other improvement programs currently scheduled through FY-1991. The details on most of these are available in the Center business plan.

During the past year we have had visits from people whose review may have profound impacts on this Center. In June, 1984 the NRAC (Naval Research Advisory Council) committee, composed of major industry CEOs, reviewed the Center's work and personnel and in December 1984 we were visited by ADM S. White, the Chief of Naval Operations. The NRAC group conducted a very thorough review of our facility and were briefed on most of our major projects as well as our strategic goals and methods of operation with private industry. The entire top management staff of the Center took part in the briefings. We will not know the final output of the committee for some time yet, but, the feelings here are that the presentations were very well received. ADM White, who was also afforded an overview of the Center and some abbreviated project reviews, expressed great pleasure with the operation and personnel of our Center and offered a "well done" at the conclusion of his visit.

As I stated before, the command has taken some new management initiatives that should improve our methods of operation and efficiency. We have instituted a strategic planning effort to allow us both to better understand our current product

"It is vital to the survival of the Center that we are better able to plan and have more control over our destiny."

line and to more clearly chart our path in the future. The final output of this effort will make for better plannning and get all levels of the organization involved in the definition of our future work. It is vital to the survival of the Center that we are better able to plan, and therefore, have more control over our own destiny. Over the next few months, you will see new definitions and categorizations of the types of work performed on this Center. I am sure that they will allow each of you to better understand the importance of the role you play in the functioning of NADC, and exactly where your work fits in the future of our activity. It is our intent that this plan take into account both top-down as well as bottom-up inputs. As the plan takes shape, detailed information will be released to all levels of the Center.

(continued on page 9)

Photo by Regina Gasuk

CAPT Fred Wright, Chief Staff Officer and CAPT Edward Sturm

State of the Center (continued)

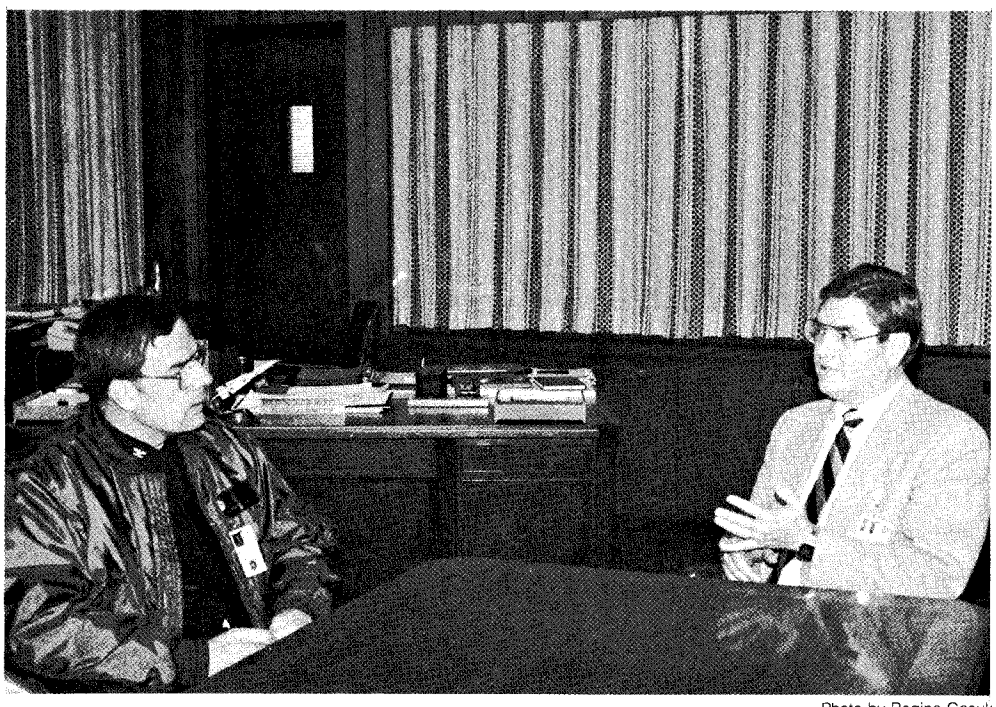


Photo by Regina Gasuk

CAPT Robert Bondi, SATD, and Robert Buffum

Robert S. Buffum

continued from page 7

intelligence. An association with Penn State University has resulted in on-Center courses being taught which will start us on our way to that skill development.

To work the front end of the tech base problem, we need more and better interfacing with our ONR/ONT counterparts. Toward this end, I have instructed our block program managers to improve or initiate personal contact not only with those who may sponsor the research and exploratory efforts but also with those who will eventually use the block's products. This will result in smoother transitions both into and out of the block.

We must be wise in the use of our IR/IED (Independent Research and Independent Exploratory Development) funds. These are the only discretionary monies at the Center's disposal for research and development and must be focussed to achieve long range goals. I will be providing much more specific guidance in the future as to how these funds are to be used.

We must influence the use of industry's IRAD (Independent Research and Development) monies striving for more closely coupled tasks to the needs of the air Navy thereby leveraging a large industrial skill base.

We must improve our interaction with the university community. This can be accomplished by increasing their involvement in our on-going work as well as the use of the Summer Faculty Program, ONR and ONT fellowships and whatever other means are available.

Laboratory and at-sea experiments related toward optimizing the LOW COST SONOBUOY have been completed. This year the test and evaluation of Baseline Sonobuoy Designs will be completed.

The NAVSTAR GLOBAL POSITIONING SYSTEM (GPS) has developed the Navy design requirements for production GPS sets and will complete TECHEVAL/OPEVAL on the A-6E, CV and SSN.

The STRAPDOWN INERTIAL NAVIGATION SYSTEMS DEVELOPMENT PROGRAM has completed the design and initial Test and Evaluation of the ADVANCED TECHNOLOGY RING LASER GYRO for submarine applications.

The CONFORMAL RADAR PROGRAM has demonstrated multiple, simultaneous sidelobe nulls with the PASSIVE WING ARRAY.

PROGRAM PLANS for fighter and AEW INFRARED SEARCH & TRACK have been developed.

Our MEMORY TECHNOLOGY DEVELOPMENT PROGRAM has completed functional requirements definition of an INTELLIGENT MEMORY for avionic processing systems.

The COMPOSITE FUSELAGE DEVELOPMENT PROGRAM has validated static and fatigue strength, demonstrated damage tolerance, repairability and post-buckling capability for a center fuselage section.

"Without our dedicated workforce this Center could not maintain the leadership roles it currently enjoys."

Our IR/IED PROGRAM has had a 60% transition rate to outside sponsorship over the past two years.

I am proud of our technical capabilities at NADC and of the people who make it so. Without our dedicated work force this Center could not maintain the leadership roles it currently enjoys. I have dwelt quite a bit on the need to build our technology base, and purposely so, for this is our main strategical thrust for the near future. I welcome anyone's advice on how we can strengthen this Center.

The Navy, the nation, and all employees should be proud of our contribution to the defense postures of the country. I repeat my thanks to all of you for your loyal support.

Finally, in the area of tech base improvement, we need improved planning. We are committed to the inception of Strategic Planning which will play a major role here but will require the help and cooperation of all those involved.

We can be proud of our accomplishments here at the NADC. I share with you some of our successes of the past year and a few anticipated accomplishments this year.

The TECHEVAL of the ELECTRICALLY SUSPENDED GYRO NAVIGATION SYSTEM aboard the USS SALT LAKE CITY has been completed, and approval for limited production has been obtained. OPEVAL will be completed this year.

The LAMPS program has completed the audit of the AIR OPERATIONAL PROGRAM and the AIR MAINTENANCE TEST PROGRAM.

The CV-ASWM PROGRAM has completed and delivered the MODEL 4.1 BASELINE MISSION SOFTWARE PROGRAM. This fiscal year will see the delivery of the first AN/UYQ-21 STANDARD SHIPBOARD DISPLAY SYSTEM to NADC for SOFTWARE DEVELOPMENT.

The JTIDS PROGRAM has published and distributed the JTIDS INITIALIZATION AND DATA GENERATION GUIDE for use on E-2C and F/A-18.

The P-3C UPDATE IV PROJECT has been assigned to the NAVAIRDEVCEN under the VP PROGRAM. This year the BEARTRAP OPERATIONAL PROGRAM, AT4.6, will be delivered to the fleet.

Under the VS PROGRAM, FLEET ISSUE 4.0.3 has been delivered to the fleet and FLEET ISSUE 4.0.5 was delivered for TECHEVAL. This year FLEET ISSUE 4.0.4 will be delivered to the fleet.

Under the AERIAL TARGETS PROGRAM, the Test and Evaluation of Extended Range VANDAL has been completed and the system has been certified as operational.

The Center has been established as the TACTICAL DEVELOPMENT AND EVALUATION PROGRAM CENTRAL DEVELOPMENT AGENCY for all desk-top computer TACTICAL DECISION AIDS.

The MASS PROGRAM has incorporated Radar, Acoustic and ESM models in their simulation and now have a real-time simulation evaluation tool.

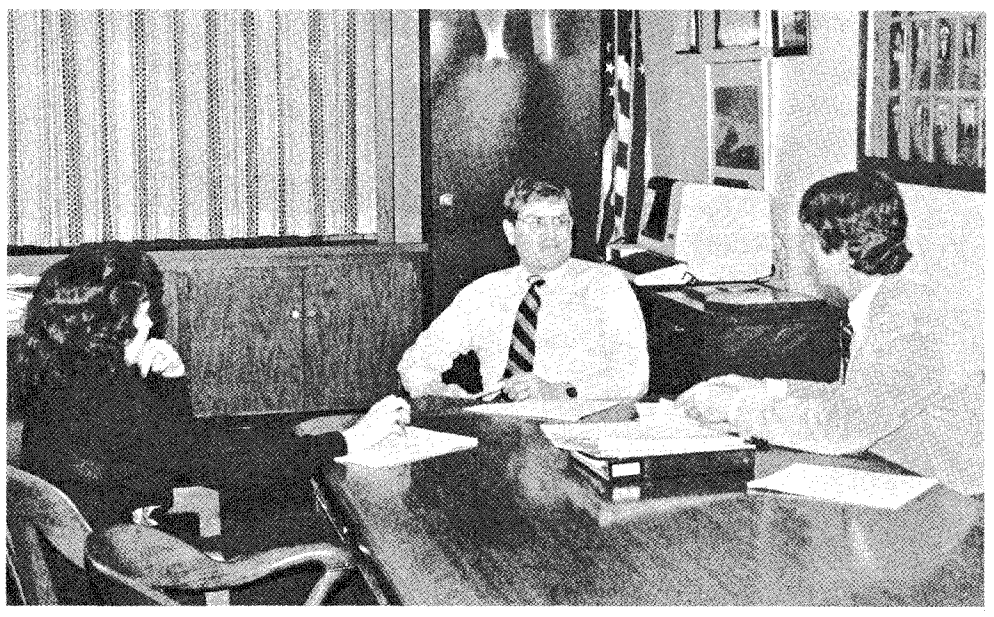


Photo by Regina Gasuk

Maureen Marron and Ronald Young, CPD, and Robert Buffum (center)

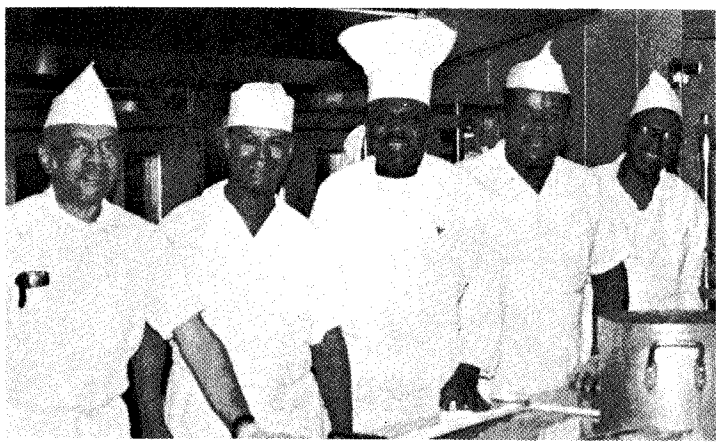
CAPT Edward Sturm

continued from page 8

I am sure that you are all aware of the major effort I have instituted in attempting to update and modernize our equipment inventory data base. With an activity as large as ours, that has in its control more than $100,000,000 of on-board equipment, it is imperative that we strive to maintain good control of this part of our operation. We are instituting new procedures for equipment acquisition and receipt as well as more efficient means of ensuring timely delivery and service to you, the end users. In the next few weeks you will be receiving pamphlets and updated instructions outlining and explaining these procedures. The intent of the operation is to provide you with the best equipment for your work at the most efficient cost to the Navy. In this same vein, I have instituted a move to bring the electronic office, or office automation (OA), to NADC. We have already set in place the foundation for an in-house computer store from which you will be able to draw sets of standardizied OA equipments. This type of operation will ease you of the burden of specifying, ordering and even maintaining the equipments you need for your every day operations. At the same time it will ensure that the Center always has state-of-the-art equipment that is standard from directorate to directorate and department to department. I realize that with the institution of a new system the initial efforts in this area will seem to be time consuming and bothersome. However, I ask for your support in this phase so that we can move towards a more efficient and smoother day-to-day Center operation.

This is how I see the state of the Center from the people, funding, facilities and special business initiatives standpoint. Coupled with Mr. Buffum's report on our direct work, this rundown should make you a little wiser about your Center and where it is headed.

Cafeteria Personnel — Service with a smile



Russell Savage, William Baker, Robert Skinner (Head Chef), William Alston, and Earnest Carr.

Jeannie Greer (left) and Ann McWilliams

Margaret McGoldrick

"Anchorage" personnel cheerfully at work on a typical morning.

Left to right: Assistant Manager Mike Labus, Marjorie Cummings, Bookkeeper, and Jose Ferrer, Manager.

Larry Clark (Assistant Chef) and Mike Labus.

Photos by Regina Gasuk

Left to right: Kathy Schaeffer (Assistant Kitchen Supervisor), William Baker, Rosemary Wolfe, Shirley Burton (Kitchen Supervisor), Betty Adaire, and Dorothy Hoffman.

"Anchorage" wins contest *— Food Services Board Chairman Aris Pasles (far left) and Mike Labus, Assistant Cafeteria Manager (far right) present a $100 savings bond each to Doris Bessler (left) and Carol Pemrick (right) for the winning title of "Anchorage" for the NADC Cafeteria.*

Two SATD Students: "Outstanding"

Donald J. Spry & Edward Forgarty of the Sensors & Avionics Technology directorate competed in the National Security Mgt. Course and received Outstanding notations on the diplomas they received from the National Defense University.

"This is a real achievement," said Ed Tankins, course director, "since less than one percent of the graduates receive this distinction."

Tankins feels this is a credit to the Center since the program consists of several thousand high level government officials. "It is a rare occurrence to have two outstanding graduates from the same organization."

The objective of the course is to promote an understanding of the strategic, economic and industrial effects of National Security and management of resources under varying domestic and international conditions. The course is based on the ten month resident course at the National Defense University. It requires 4800 pages of reading to be done in 22 text books, 5 comprehensive exams and 3 written case studies.

The American Council on Education recommends that 6 graduate credits be awarded to students designated as outstanding. Stan Winsko (6022) and Helen Ling (2041) are past graduates. The course is offered each year as an in-service course here at NADC.

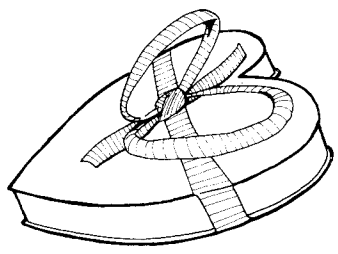
VIEWPOINT

This month's question submitted by Jim Kingston.

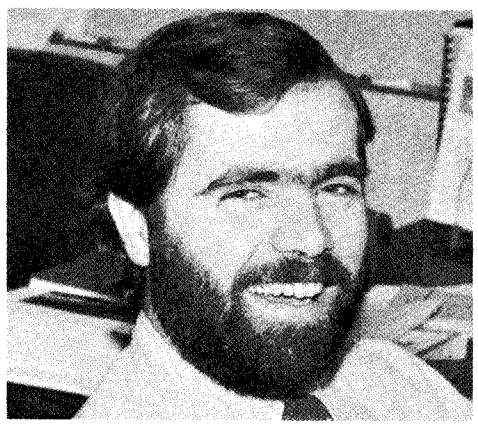
Excluding husbands, wives, boyfriends, and girlfriends, who would your fantasy valentine be? Why?

Photos by Regina Gasuk

Ann Gana, Code 01S
"Oh, I think Paul Newman would be the one. He has such charisma. On second thought, maybe Julio Iglesias — he's so suave, sophisticated, and sexy. How about both?"

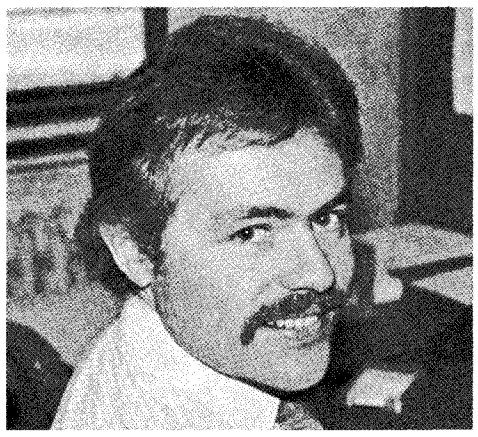


John Bowes, Code 1P
"Bo Derek because she's the only way I can verify that my wife is an '11'."



Joan Pokoy, Code 60S
"Clint Eastwood. Do you have to ask why?"

Jerry Guarini, Code 01A
"Stephanie Powers. My 'Hart' belongs to Powers. I always wanted to be her apple (Jonathan)."



John Markow, Code 03
"It would be Mae West in her prime. She was witty, sexy, experienced, and oh-so-eager!"

Cathy Burian, Code 81
"Tom Selleck because he's funny, good-looking and he lives in Hawaii."

LT Scott Wood, Code 04A
*"C. Stallion." Born in 1953. She's been known to handle 34 fully loaded combat troops at one time. My wife gets mad because I take her out at lunchtime, stay out after dinner with her and go away with her overnight to far away places."

Editor's note: C. Stallion is a helicopter.

Duds can be deadly

by Mike Masington

As you have probably noticed, there is a lot of remodeling and demolition going on throughout the Center. Usually, we hire construction contractors to do this kind of work, but recently some of our folks have apparently decided to develop a capability for doing this on their own by keeping live or partially expended ordnance in their workspaces and homes.

The effects of these actions, of course, could be spectacular. Just picture the punk rock decor you could create in your own office if that live CAD you've been keeping as a paperweight rolls off your desk, detonates, and burns a six foot hole in your new carpet! Or think about the strong anti-smoking statement you could make by using that shell casing with the powder residue in it for an ashtray. Why that searing, three foot tall column of yellow flame would discourage even the most diehard (no pun intended) smoker from polluting your space. And imagine how thrilled your wife would be when that 20MM souvenir you brought home from "The Big One" suddenly decided it's waited long enough to see action, goes off, and installs a window where that useless bedroom closet used to be.

Now, of course, there are plenty of good reasons to keep old ordnance items lying around. They can recall our past heriocs in our country's service when, while stationed at Ft. Dix, we kept the streets of Bayonne free from invading Nazi hordes. Or they may remind us of projects we worked on in the days when everything, including pencil sharpening, wasn't contracted out. And, of course, as far as projecting a macho image, it ranks right up there with eating beer cans and alligator wrestling. Unfortunately, none of these reasons outweigh the possible dangers of improperly storing these potentially deadly goodies.

Now we're not saying that truly inert or properly defused, disarmed and cleaned pieces of iron or brass are hazardous to your health, but all too often these little mementos were never inspected and certified as safe by qualified ordnance personnel. Even munitions that we generally consider to be comparatively harmless, such as small arms ammunition, can become surprisingly unstable over time as their propellant begins to deteriorate. So why take a chance? AOC Ron Jerasa, Code 8223, extension 2073, has volunteered the services of his workcenter to take in these ordnance orphans, so carefully look through your homes and workspaces. (This applies to display boards and cases also.) If you find old CADs, shells, bullets, military pyrotechnics, (no fireworks) igniters, thermonuclear bombs, or any other type of ordnance, turn it over to Chief Jerasa, *no questions asked.* The Chief will be happy to tell you how or if the stuff should be moved, and then will see to it that it is properly taken care of.

The NADC RECIPE REVIEW

ENTREE PRIMAVERA

This month's recipe is provided by Lucrezia Colantonio (x3478) who will recieve a **$50 Bond** from the Food Service Board. This recipe will also be served in the NADC Cafeteria. Submit your recipes to Mr. Jose Ferrer, Cafeteria Manager. One winner will be selected each month.

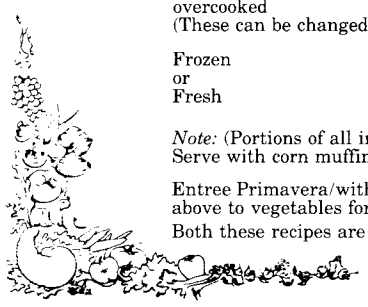
(*All Vegetarian.*) Boiled rice — served on side (*scoop*)/or boiled noodles. Saute 1 onion, 1 garlic clove in oil, *than add marinara sauce.* *Add several tablespoons of instant chicken broth. (*optional) *Quickly, cooking slightly* — All vegetables — *firm side* — Vegetables should taste crunchy — not overcooked

(These can be changed)			Examples
Frozen	Peppers		Cauliflower
or	Stringbeans	or	Broccoli
Fresh	Zucchini		Peppers
	Peas		Peas

Note: (Portions of all ingredients depends on amount of servings.)
Serve with corn muffin or other kind.

Entree Primavera/with *tuna, chicken,* or salmon. Same as above — but add any of above to vegetables for a more filling dish!

Both these recipes are *economical* and *nutritious.*



LOOK FOR THIS RECIPE TO BE SERVED IN THE NADC CAFETERIA

Cut here for file card

Commander Salutes

Leon Domzalski, Michael Schultz, Peter Yost, Anthony Tran, Ellen Hayes (Code 60): For the excellent briefing on aircraft crashworthiness presented to the Experimental Aircraft Association.

Thomas Sanders (Code 10): For outstanding contribution as Vice Chairman of the IEEE 1984 Position Locations and Navigation Symposium.

Norman Melling (Code 40), **Joseph Stepenosky** (Code 70): For dedication in support of Aviation Explorer Post 690.

Joseph Minecci (Code 60): For significant contribution to the fatigue testing on the Antenna Mast Group.

AE1 Richard Scott: For outstanding efforts in support of the A-7 aircraft at NAS Cecil Field, Florida.

Thomas Gabrielson (Code 30): For valuable support provided to the Environmental Acoustic Research Group at the Naval Postgraduate School.

Michael Quinn, Glenn Watson (Code 80): For excellent professionalism displayed while handling a medical emergency.

CDR Gordon Safley (Code 70), **LT Warren Harner, Richard Gleich** (Code 30): For valuable contribution to the Naval Ocean Research and Development Activity during the Project CHAIR LIFT operation.

Paul Terpeluk (Code 10), **Charles Miller, Samuel Sizgorich, John Burns,** (Code 60), **Vincent Morelli, Svend Berntsen** (Code 80): For significant support during the recent avionics modification in a VP special projects aircraft.

LCDR Timothy Singer (Code 60): For valuable contribution to the Reserve ASW Training Center's safety standdown.

Orphans see Santa

Photo by Peg Callahan

Just before Christmas the NADC Welfare and Recreation Association hosted over 100 children from Bethanna and Christ Homes in the Center's cafeteria. Santa (Otto Engdahl), clown (Linda Lopez), and other Center employees provided the entertainment. Santa arrived on a fire truck and delivered gifts after the children enjoyed a hamburger, french fries and soda luncheon.

Color me beautiful

Photo by Ken Smith

Pictured are the 3-way-tie winners of the Welfare and Recreation Association Christmas poster coloring contest. Left to right: Lanie Mears (Code 301), Barbara Kempf (Code 606E), and Norma Mitthauer (Code 044.)

Black History Quiz Answers (from quiz on page 3)

Medicine

1. A) Dr. Daniel Hale Williams (1985-1931).
   Williams, an original member of the American College of Surgeons, performed the surgery in 1893 at Provident Hospital in Chicago.
2. A) Dr. Charles Richards Drew 1904-1950
   Drew, the first black to receive a doctor of medical science degree from Columbia University's College of Physicians and Surgeons, discovered that blood plasma could replace whole blood in transfusians during his research in the late 1930's. He was responsible for collecting blood, converting it to plasma and shipping it to England to save those injured during the Battle of Britain bombing.
3. A) Because of his research in the field of Biology.
   Just, (1883-1941), who graduated Magna Cum Laude from Dartmouth was the only student to receive special honors in more than one subject. He later earned PhD's in zoology and physiology and did extensive experiments in cancer research.

Geography

1. A) Matthew Alexander Henson — (1867-195). Henson's rapport with the Eskimos was of invaluable help on his expeditions with Admiral Robert E Peary. Henson, also called Peary's "dark companion," Peary and four Eskimos were the only ones to reach the North Pole on April 7, 1908.
2. A) Chicago — DuSable, a prosperous fur trader from New Orleans, originally Haiti, established a trading post on the north bank of the Chicago River. A plaque on the Michigan Ave Bridge marks this site today.
3. A) Lower Merion Township, Montgomery County
   Bland, (1854-1911) was an accomplished comedian and a composer of over six hundred songs.

History

1. A) Christopher Columbus. After the Santa Maria was wrecked and deserters returned in the Pinta, Nino piloted the Nina back to Spain with Columbus aboard.
2. A) 1877 — Flipper born a slave in Georgia, was also the first black officer assigned to the Tenth Cavalry, a black regiment who fought the Cheyenne and Apache Indians in the Southwest.
3. A) Assume command of a U.S. Warship (U.S.S. Falgout)
   Gravely (1922 -), the first black to graduate from Midshipman School served in World War II, Korea, and Vietnam. He was promoted to Rear Admiral in 1971 as Director of Communications at CNO.

Inventors

1. A) Garrett Morgan (1875-1963) Morgan, his brother and two volunteers, using his gas inhalator, saved 20 men from the Cleveland Waterworks who were trapped in a collapsed tunnel below Lake Erie. He sold his rights for his automatic stop sign to General Electric for $40,000.
2. A) Benjamin Banneker (1731-1806) Banneker made this wooden clock in 1753 carving each gear by hand. He was an astronomer, farmer, mathematician and surveyor, who helped lay out the Washington D.C. boundaries and produced one of the most reliable almanacs of his day.
3. A) George F. Grant, Grant patented the golf tee on Dec. 12, 1899.

Public Office

1. A) Mississippi 1875-1881, Blanche Kelso Bruce, 1841-1898 served as a Republican Senator from Mississppi. Hiram Rhoades Revels filled the unexpired term of Jefferson Davis from 1870-1871.
2. A) Andrew Young (1932;) Young, appointed Ambassador by Jimmy Carter in 1977, was elected to Congress by a majority white district in Nov 1972.
3. A) Thurgood Marshall (1908-) Marshall, known for his meticulous research, prodigious memory, and brilliant mind, was appointed to the Supreme Court in 1967.

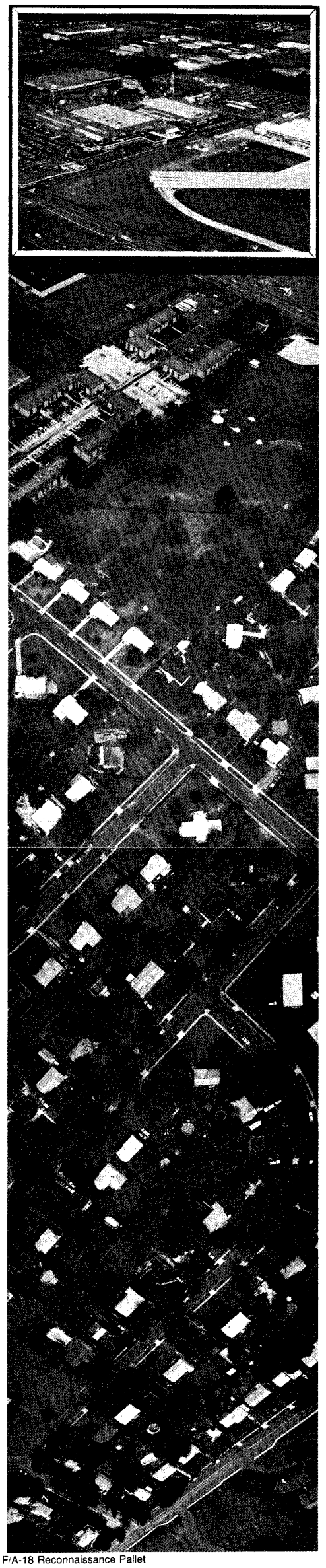
Miscellaneous

1. A) Dr. George Washington Carver (1864-1943). Carver, well known for his experiments with peanuts and sweet potatoes, declined six figure jobs with both Thomas Edison and Henry Ford.
2. A) Ralph Bunche 1904-1971, was largely responsible for the Jan 7, 1949 cease fire and peace settlement between Egypt and Israel in his capacity as United Nations mediator.
3. A) 1970 — Edwards joined the Philadelphia Orchester in 1970 as a violinist.

NADC Reflector Warminster

Volume 30 Number 3 NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA. March 1985

In this issue:
- Washington Liaison Office
- Science Seminar
- Female Technicians
- Sailor of the Quarter
- Fraud, Waste and Abuse



F/A-18 Reconnaissance Pallet
KA-99 Camera
1000 ft. altitude

A fourth stripe for Bondi

In a quiet ceremony in Captain Edward Sturm's office on 1 February, Commander Bob Bondi was frocked to Captain, an unexpected pleasure for the 21-year Navy careerist and Deputy of the Sensors and Avionics Technology Directorate.

Attaining this rank will have a very definite effect on Bondi's future plans. First, the promotion means that when he receives the full promotion, he is obligated to stay in the Navy a minimum of three years. This results from a new manpower law known as DOPMA which assures the Navy that their senior experienced people remain. Second, Bondi will not stay at NADC much longer. The detailer has not told the new selectees when and where they are going, however he has indicated that they will be moving from their current assignments.

When asked how he felt being made Captain, Bondi replied, "I was exhilarated. In my community you don't expect too many promotions toward the top; competition is very stiff."

Bondi attributes much of his success to those people he has worked for and with throughout the years. "Something I believe in very strongly," stressed Bondi, "is that no one succeeds in this world without the help of other people. In my case I have had help at some significant levels. I've had help from people like CAPT Dudley, CAPT Tuttle and CAPT Sturm, who put me in positions of responsibility both here and in Trenton. They gave me the opportunity to show what I was really good at."

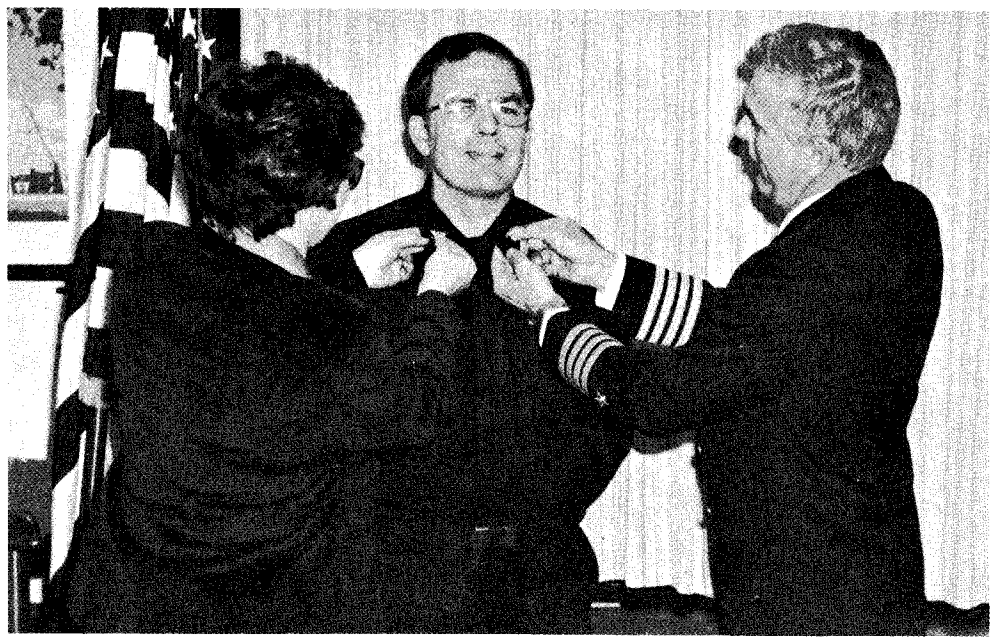


Photo by John Jones

CAPT Sturm, Center Commander (right) and Mrs. Bondi (left) pin new insignias on the frocked CAPT Bondi.

"The other part of success lies in the fact that you always have the help of the other people you are working with," continued Bondi. "The people I work with now and in my former lives here and over in Trenton as well, have just been the best. John Wrigley from the VP program and Dave Schimsky when he was in Proteus, helped me out a lot. Many of the people who worked on the projects allowed me to bask in their reflected glory. They do the work too; I provide a little guidance and help out as much as I can, and we succeed together working as a team."

Bondi concluded, "I don't believe in the dictatorial method of military/civilian relationships. I believe in the team building method of getting the work done. And I am a part of the team just like everyone else. That has been the key to my success, to build teams among the people I am associated with."

LAMPS renamed Vertical Flight

"What's in a name?" you ask. The people in the Vertical Flight Program Office are convinced that a name is significant, for they know of one representing a program that has grown from a two-million-dollar project in 1967 to a multi-faceted 22-million dollar program in 1985 requiring the Center's support to expand from two directorates to every directorate on the Center.

On February 11, 1985, the LAMPS Program Office was officially renamed the "Vertical Flight Program Office." The change was marked by hanging a new shingle outside the program office. The new name recognizes the expansion of the existing LAMPS program into new areas related to vertical flight.

LAMPS MK-III remains the largest effort in the Vertical Flight Program Office. NADC has been designated as the Software Support Activity for the SH-60B helicopter, the airborne part of the LAMPS MK-III weapon system. Since 1981, the Center has been providing software support for the Acoustic Processor Program, one of the

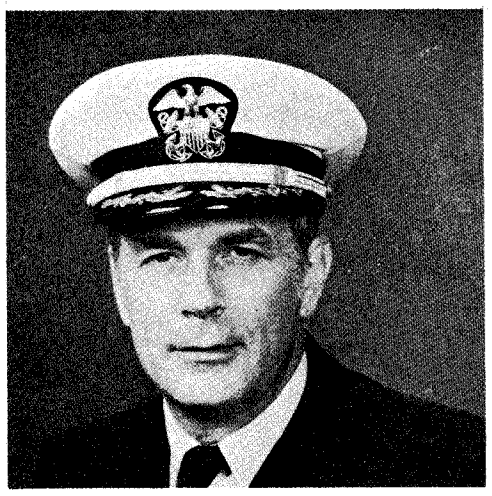
(continued on page 2)

Photo by Chuck Fichera

Left to right: CDR Lem Butler, Program Director, Joyce Moore, Program Analyst, Richard James, former program engineer and Ralph Hungerford, new program engineer change to the new office sign.

March is Women's History Month

Command Corner



CAPT Edward J. Sturm
Center Commander

Mr. Robert S. Buffum
Technical Director

As you are probably aware, VIP's, professional societies, other adult groups, students, and scout troops alike have always been interested in touring the Center's facilities. Naturally, some sites are more visually interesting than others and, therefore, perhaps more popular.

We realize that many hours of preparations go into each one of these visits and that personal time and inconvenience are often overlooked.

We would like to take this opportunity to extend a general thank you to all those employees who have worked on these visits and who have contributed to the fine professional reputation the Center enjoys. Well done!

ROBERT S. BUFFUM
Technical Director

CAPT EDWARD J. STURM
Center Commander

NADC's Liaison Office Reopens for business

Betty Anne Mauger and Herb Schoenfeld "man" the NADC/NAVAIR Liaison Office.

If you have been wondering about the status of NADC's Washington liaison office, here's the answer:

The new office has just opened in NAVAIR (AIR-03), Room 413, Fourth floor, Jefferson Plaza One. It is newly staffed by Herb Schoenfeld formerly branch head of the Air Navigation Systems Development Branch in the Communications and Navigation Technology Directorate and Betty Anne Mauger who previously worked in Command Projects. Both Schoenfeld and Mauger are anxious to provide support to all NADC personnel.

NADC's liaison office capabilities include:

(1) On-site representation in the Washington community, providing timely awareness of events, requirements, and opportunities having a direct bearing on Center operations.

(2) Providing publicity for NADC capabilities and achievements in support of increased business opportunities.

(3) Serving as focal point for the Washington community in matters relating to NADC areas of interest.

Schoenfeld's background is strong in inertial guidance and navigation for various platforms. He has been a block manager on Ship and Submarine Navigation Technology as well as Aircraft Navigation Technology.

Schoenfeld hopes to lay the groundwork for successors by establishing a visible, responsive, liaison office that sponsors will seek out. He believes there is a strong need to establish good lines of communication through personal contacts.

Mauger, an administrative assistant, can provide pick-up and delivery of materials and telefax services.

For further information, liaison office personnel can be contacted on autovon 222-2219, 1196.

LAMPS — Vertical Flight

(continued from page 1)

five SH-60B computer programs. In October 1986, the Center will assume responsibility for a second program, the Air Operational Program. By 1988, the Center will have responsibility for all the SH-60B computer programs.

To accomplish this, the Center is building a modern laboratory, the Avionics Integration Laboratory, (AIL), containing SH-60B avionics, simulation/stimulation hardware, and controlling computers. This lab will be used to test the software and correct software problems. The AIL has been under development since 1980 and is currently in the avionics integration phase.

The Lamps MK-III project and the Software and Computer Directorate have initiated the Deployable Proficiency Trainer (DPT) development. Over the next three years, the Center will develop a program for the SH-60B which will be used to maintain the operational proficiency of the flight crew by providing simulated tactical problems. In addition, a wide variety of other technical areas are included in the overall LAMPS MK-III efforts.

The LAMPS MK-III sponsor has recently started to develop plans for future improvements to the system, and this Center is actively participating. These improvements will eventually encompass virtually every technical discipline at the Center. This presents an opportunity for new and challenging work.

The functions of the Vertical Flight Program Office have expanded to include support of the SH-2F (LAMPS MK-I Helo) improvement program, CV-Helo acquisition. Global Positioning System (GPS) integration in helicopters, and other helicopter-related projects.

The LAMPS MK-I SH-2F is a smaller, older ASW helicopter which has been enhanced in recent years in an evolutionary way. The Center has prepared a variety of engineering studies and program plans for the LAMPS MK-I sponsor, specifically in the areas of acoustic processing data links and navigation systems.

The Vertical Flight Program Office has been supporting NAVAIR in developing specifications and planning the acquisition of the CV Inner-Zone ASW Helicopter, which will replace the aging SH-3H. Investigations have been conducted and alternative avionics systems examined for the new helicopter. NADC recently participated in evaluating the CV Helo proposals and a contract award for NAVAIR is anticipated.

The Vertical Flight Program Office, working with the Communication Navigation Technology Directorate, has been providing expertise for the integration of the NAVSTAR GPS in all Navy helicopters. The Center generates cost and schedule estimates for the integration of the GPS into various models of Navy and Marine Corps helicopters, and establishes the installation requirements for these efforts.

With the expansion of responsibilities, "LAMPS" does not adequately describe the efforts of the program, hence, the new name, "Vertical Flight Program Office." The new Vertical Flight Progam Office is indicative of the Naval Air Development Center's broad-spectrum support of Naval Aviation and its commitment to the future of vertical flight.

Editor's Note: This article was provided by the personnel of the Vertical Flight Program Office.

Babies on Parade

Want to parade your baby's photo in our Easter Parade? Send a photo of your child to: REFLECTOR, *Code 091, (must be the child of a current Center employee and 18 months or younger). We must receive the photos by 3 April. Selections will be made at the discretion of the editorial staff and photos can be returned upon request. Watch for this special section in the April issue!*

NADC Reflector
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March 1985

NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA.

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Bucks County Science Seminar

"... Naval Air Development Center is its backbone"

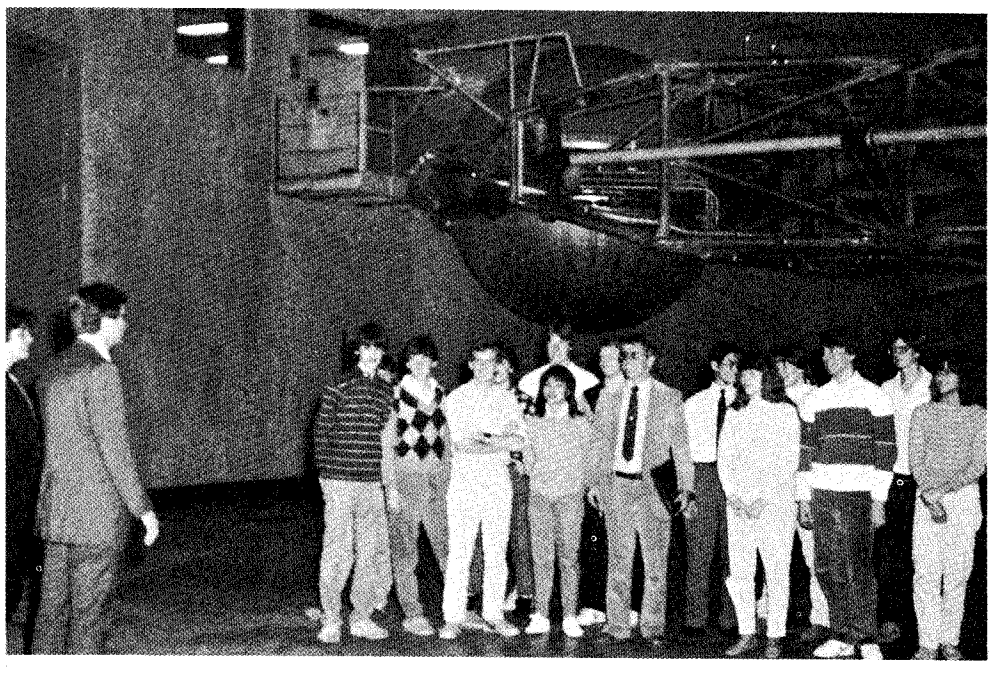


Photo by Ken Smith

Nancy Topping and Jack Eyth (left) give students and Mr. Diers (center) an up close and personal view of the Dynamic Flight Simulator (Centrifuge) structure.

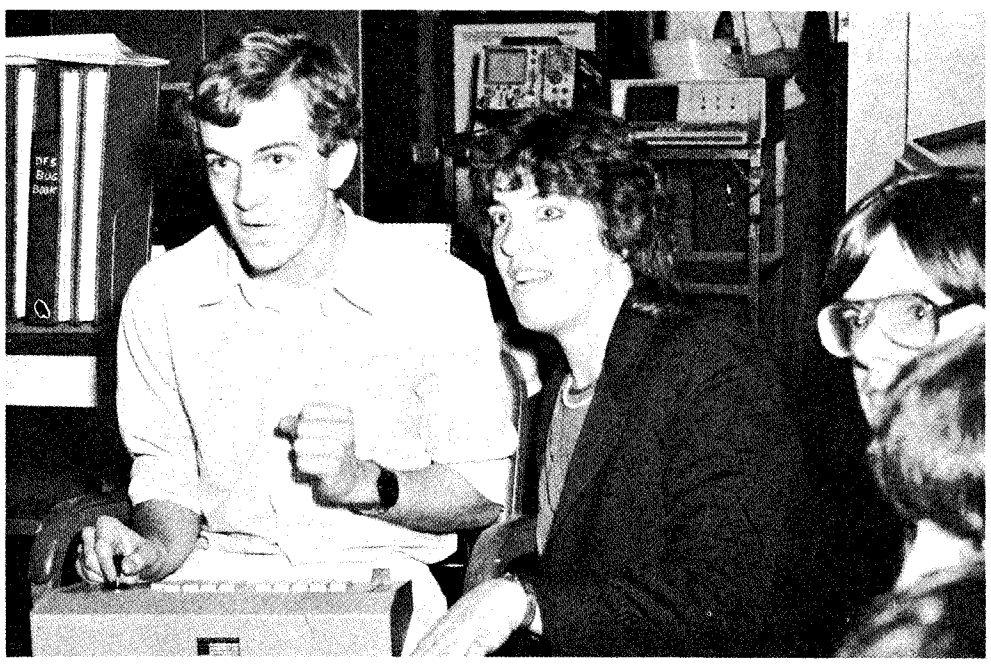


Photo by Ken Smith

Student and demonstrator (Nancy Topping) show real enthusiasm as the student uses a "fly box" to actually simulate the flight of an F-14 aircraft on a video display.

The Bucks County Science Seminar is yet another worthwhile program to which Center personnel volunteer their time and efforts. This Science Seminar is run under the cognizance of the Intermediate Unit (IU) in Doylestown which handles special education throughout Bucks County.

Russ Diers, charged with the IU's "gifted" young people in special education since 1972, has been coordinating the science seminar since then. NADC's Jim Moran was involved with the program at its inception in 1970. Together, Diers and Moran took a modest program and transformed it into a success. The program has grown from one seminar (four sessions) a year to three seminars a year at full capacity.

Diers said, "Although other corporations are also involved with the seminars, we could not survive without the participation of NADC. They (NADC demonstrators) have all volunteered their time and their cooperation has been unbelievable."

The program is open to sophomore and junior high school students who must be screened by way of a scholastic achievement test. Diers visits each high school in Bucks County and selects approximately 100 youngsters who not only have aptitude in but are interested in science. "Interest is the key." said Diers. He added, "Then, I screen them again by administering the Westinghouse Science Talent Search. That's the instrument Westinghouse management used for selecting their scholarship recipients. It's a two hour exam that tests the students in all areas of science and it's my personal opinion that this test makes SAT's look like a pop quiz." The 15 or 20 who do best make it into the program.

"We expose the students to as many areas of science as we can" explained Diers. The Rohm and Haas Corp. (plastics engineering), McDonald School's Planetarium, Council Rock School District (nuclear engineering), the National Audubon Conservancy District at Honey Hollow (archeology and environmental education), and the Montgomery County Community College Marine Biology Lab are all included in the seminars."

At least 15 NADC engineers and scientists in five different technology areas are involved: Ted Trilling and Dave Schuck (Code 301) in the Infrared Imaging area; Jim Dunn and Ferd Reetz (Code 301) handle Night Vision; Mike Rankin, Nelson Hall, Jerry Ferguson, Ed Siebert, Steve Bazow, and Lloyd Bobb (Code 301) for Laser technology; Bob Finkelman and Al Kaniss (Code 85) show the Computer Lab; and, Jack Eyth (Code 602) and Dennis Keifer (Code 81) explain flight simulation.

From experience Diers and his demonstrators have learned that you can't put the students into another classroom environment. The student loses interest and then so does the demonstrator. Diers said, "Once the youngsters were exposed to the laboratory environment, the difference was unbelievable. Don't just tell them; show them what you do and let them touch it — that's the key to success."

Steve Bazow is a good example of this success. Now an electronics engineer in the Remote Sensing Branch of the Sensors and Avionics Technology Directorate, Bazow was one of the William Tennent High School science seminar students during 1976/77.

Bazow described the seminars as exceptionally interesting. "In those days," he said, "high schools didn't provide much lab work or it was very basic. When I came to NADC, the experience was great. I got a feel for the real world." Bazow specializes in lasers and has built his own holograph. However, he admitted, "before I participated in the science seminar, I had never even heard of a laser." At that time he became so interested that he volunteered his time to work in the laser lab and he was permitted to work on a science project that measured seedling growth under different laser lights. Bazow impressed the laser lab personnel with his talent and initiative. He was hired part time at first and then permanently after his graduation from Muhlenberg College in 1981. Bazow is returning his good fortune by volunteering as a demonstrator for the program.

Diers remembered another student. "One girl thought she was interested in the nuclear lab. After a short while," he said, "she discovered she hated it. It just wasn't what she expected. Consequently she changed her mind and possibly saved years of misdirected energy. I consider that a valuable experience."

NADC is still the students' favorite as it was back in the 70's when NADC did some nuclear research. The nuclear lab was just about the most popular area then." Diers and school officials alike consider the science seminar "... a fantastically successful program."

Diers explained that although the program must work within time constraints, it has recently expanded to include archeology and marine biology. Diers concluded, "The program has a good reputation throughout the county and the Naval Air Development Center is its backbone." (MAB)

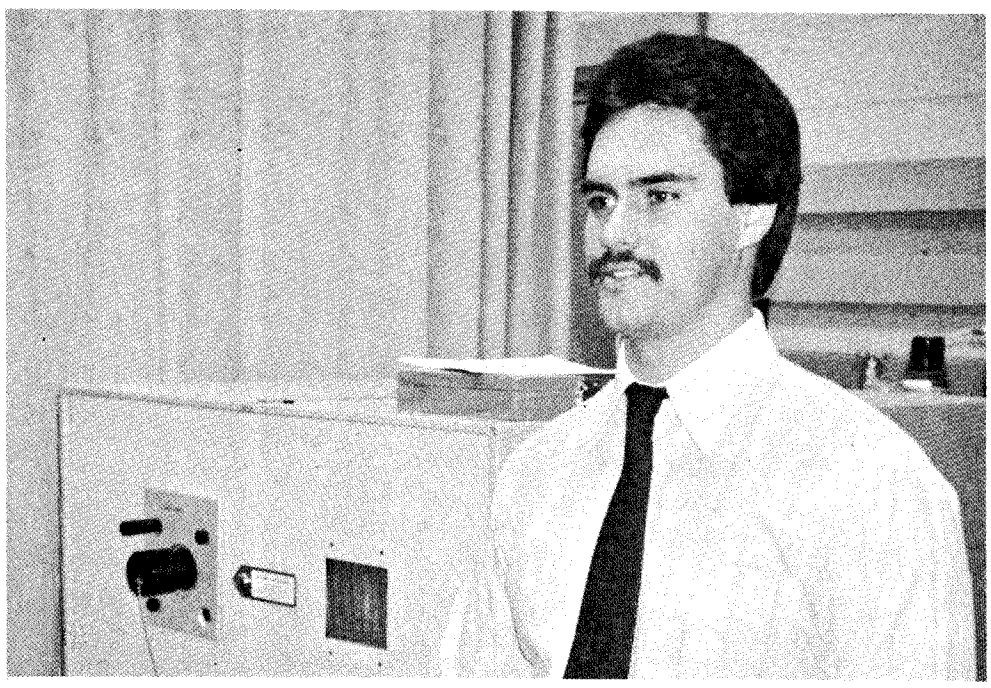


Photo by Jim Kingston

Steve Bazow describes a high energy CO_2 gas laser used in his demonstrations.

You've come a long way . . .

Photo by Chuck Fichera

Dr. Gloria Chisum of the Aircraft and Crew Systems Technology Directorate is the first woman in the Center's history to act as Technical Director. The momentous occasion took place on 14 Feb. 1985

Female Technician

Webster defines a technician as "one who is trained or skilled in the technicalities of a subject." Although technicians are not required to have a college degree some, in fact, do and many others are working toward their degrees. In a sense, the technician bridges the gap between the clerical community and the professional. Positions requiring practical, rather than broad, academic or professional, knowledge of the particular subject-matter field, are performed by the technician.

Here at NADC you will find technicians in many areas of Center work. Because March is "Women's History Month", we are focusing on five of our female technicians in both the R&D and support fields.

Accounting Technician

Clara Laiss is an Accounting Technician within the Comptroller Department. She has been employed with the Federal government for almost 24 years and has been in her present position for five years. Laiss feels her position is extremely important to the operation of the Accounting Office. She handles more than $600 million in cash accounts every year. Also she is responsible for 700 outstanding Defense Contract Administration Services Region contracts that are used by the Center for any services in excess of $25,000.

Laiss is responsible for the verification and obligation of all cash funds. She reconciles and controls all transactions that involve the processing of cash, including reviewing and controlling all the cash records and preparing journal vouchers for posting to the general ledger.

The accountant uses her records to balance all general ledger accounts and to reconcile the cash account submitted to the Navy Accounting and Finance Center in Washington. Laiss's reports are part of the documentation used to prepare the Navy Industrial Fund (NIF) Financial Statements, which are the Center's overall monthly financial reports. Laiss needs knowledge of all NIF general ledger accounts in order to make cash determinations on approximately 50 different accounts.

One of Laiss's big hopes is to get into the budget field as an analyst. She said, "I feel I would be an asset to the budget division because of my extensive knowledge of the job order system and contracts. I enjoy my job, it is different and interesting," said Laiss, "each month I start working and by the end of the month I balance to the penny, then I start all over again."

Electronic Technician

Pat Foley is an electronic technician in the Communication and Navigation Technology Directorate. She has been with the federal government for 18 years and in her present position five years. Basically, she is required to provide technical services to project engineers. These services include printed circuit board layout and fabrication, microminiature hybrid circuit layout, and thin film deposition by vacuum and sputtering as well as wire bonding. It takes Foley anywhere from a week to a month to build a circuit depending on how many components it has. The engineer needs the technician to perform this time-consuming task. Foley is dedicated to the precision necessary to do the artwork, building and testing of the circuits.

Foley's job requires knowledge of electronics principles and techniques, vacuum principles, and microchip handling. She is just five courses from completion of her Associate degree in Electronic Technology at Bucks County Community College. Foley is not stopping there though. She is hoping to go to Trenton State College to complete her Bachelor's in Engineering Technology. "The job is not repetitious," comments Foley, "I enjoy the hands-on engineering. There is always something different; different labs, equipment, circuits and tests that keep the job interesting."

Library Technician

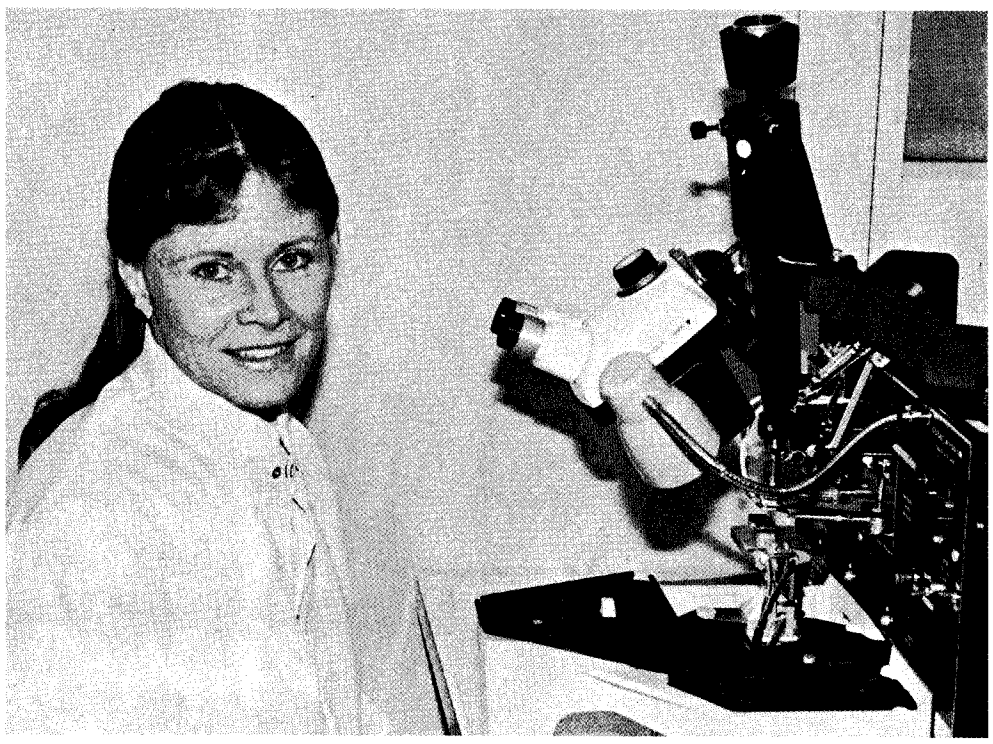
Kay Adelotte is a library technician in the Technical Information Branch of the Technical Services Department. She has been with the federal government for 14 years and in the library for 13 years. Aydelotte is the Acquisitions Librarian. She does all the buying whether for books, periodicals, reports or anything that has to be brought in from the outside. "We do automated distribution of reports," said Aydelotte, "but anything that isn't automatically brought in has to go through me. She is also responsible for inter-library loan borrowing. "The library must have an acquisitions library technician; it is a very important job," explains Aydelotte, "the librarian is very dependent on me to handle the day-to-day operations of acquiring technical information, so she is able to concentrate her efforts on deciding what kind of technical material would be beneficial to the Center."

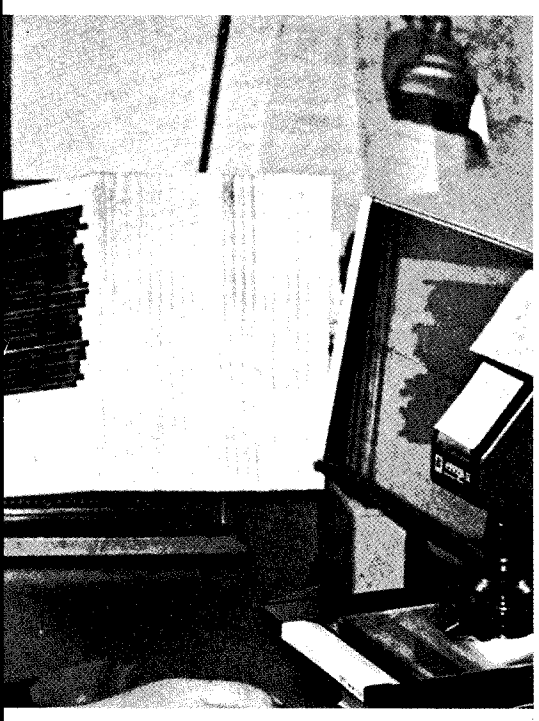
Aydelotte plans on staying with the library; she enjoys her work. She thinks it would be very difficult to

"My philosophy is to never say, 'I don't know' . . . 'but always get the answer.'"

Top left: Clara Laiss works with weekly cash receipts/disbursements reports.
Top right: Betty Harvey prepares a radome mold.
Center: Hazel Andrews searches through a microfiche directory in Supply.

s Bridge The Gap





Bottom left: Kay Aydelotte uses computer for inter-library loan acquisition.
Bottom right: Betty Harvey prepares a radome mold.

Photos by Regina Gasuk

move out of the library field now. Besides acquisiton Aydelotte is responsible for the library budget. She tracks all expenditures for purchased books, periodicals, and other publications, whether on the shelves or loaned out, enabling the library to gauge just how much cash flow they need to keep up with state-of-the-art purchases.

The library technician says it is important to present a good appearance and speak well. Her philosophy is to never say 'I don't know'. She takes notes, checks reference books, searches through files, but always gets the answer.

Material Engineering Technician

Betty Harvey is a Material Engineering Technician in the Microwave division of the Sensors and Avionics Technology directorate. She has been with the federal government for 11 years and has been in her present job for four of them. Her duties consist of constructing and repairing experimental radomes. A radome is a dome covering for an antenna. She takes an engineer's design for a radome which includes information such as thickness, and other measurements, then picks the material she will use and has a wooden pattern made. From that pattern she constructs "male" and "female" molds from which comes the finished radome. Most of the radomes are very sophisticated because they are so small and have to be vacuum bagged to control resin and to protect the electrical parts of the antenna.

Usually, anyone on Center who has a job requiring plastics comes to Harvey for assistance. Sometimes she does special projects involving potting (filling in a disc with epoxy) and making floats (styrofoam molds covered with fiberglass). She just finished a project involving a parachute survival kit. On many occasions the engineer comes to Harvey and does not know quite what he wants. She will work with them trying to come up with what is necessary to satisfy the requirements, even if she is not sure what the end product will be.

The Microwave division makes their own foam and Harvey performs this task also. "That is the most dangerous part of the job," said Harvey, "because of the toxins that are there." She must wear protective equipment and must be very knowledgeable concerning the safety requirements of her position.

She is currently studying Mechanical Engineering at Bucks County Community College. Her determination is not diminished by the length of time it will take her to complete her degree. She enjoys each and every course and learns a lot that is applicable in her present position like drafting which has enabled her to read blueprints with ease. "In the meantime I grab any course I can on radomes," said Harvey, "they are far and few between. Being a technician is what got me interested in going further and studying to become a Mechanical Engineer," concluded Harvey.

Supply Technician

Hazel Andrews is a Supervisor Supply Technician in the Supply Department. She supervises 11 people in two work sections each with its own section head. She has been with the federal government for more than 26 years and in her present job about five years. "Our basic job is supply functions for the Center," said Andrews. "We have to process all purchase requests (PR's) submitted on Center according to NAVSUP rules and regulations." This requires considerable knowledge of parts, components, computers, and tools. Supply technicians also need a good working knowledge of the many kinds of shipping procedures, also plant account and minor property. Some knowledge of computer programming is required for the technicians and Andrews does quite a lot of programming in connection with office automation. "Every PR that comes into the office must be researched thoroughly including checking budgetary funds," said Andrews. This process is very complicated and time-consuming.

Andrews is within 20 credit hours of an Associate degree in Business Management at Montgomery County Community College. She has been trying to get more of a computer background and speculated that if she were to have a career change, it would be in programming. "I am very satisfied with what I am doing," comments Andrews, "it took a long time to get here. I don't mind working; I enjoy it and always have."

Andrews believes she is working in a service area and it is her job to support engineers and scientists who are here to do research and development. "Somebody has to do the paper pushing," she said. "When it comes to knowing all the ins and outs of PR's, buying and shipping, they need people like us to back them up, and that only enhances their job," concluded Andrews. Besides supervising 11 employees, Andrews is co-chairperson of the Women's Advisory committee and an EEO counselor.

"Being a technician is what got me interested in going further and studying to become a mechanical engineer."

Need Tax Help?

(Extracted from Armed Forces Press Service)

Each year there are some predictable trouble spots with federal income tax forms, according to the Internal Revenue Service. These are areas where large numbers of taxpayers make incorrect entries and thereby slow the processing of tax forms.

These trouble spots fall into two broad catagories: problems that recur each year, such as taxpayers selecting the incorrect figure from the tax tables; and problems that stem from changes in the tax laws and forms from one year to the next, such as the addition of a new line to a form or the shift of an existing line to a new position on the form.

Not surprisingly, the largest percentage of errors are made on Form 1040, the so-called *long form*. To assist filers of this form, IRS has compiled the following list of problem areas to double-check:

1. *Medical Deductions.* This item is not entered on Form 1040, but on a related schedule. Because Schedule A was redesigned last year, this item will probably lead the list of last year's most common errors. Due to rule changes on medical deductions, IRS expects problems again this year. Be sure to check the limitation on medical expenses.
2. *Figure from Tax Table.* Because of the number of pages and figures involved, this item is always high on the list of most common errors for all tax forms. Double check the figure from the tax table for your filing status and enter on line 38. Check the box for *Tax Table.*
3. *Unemployment Compensation.* Due to changes in the tax law last year, this item moved into the list of most common errors. Double-check your figures on the worksheet in the tax instruction booklet (page 10), and make appropriate entries on lines 20a and 20b.
4. *Child Care Credit.* Read instructions carefully and double-check your computations on Form 2441, *Credit for Child and Disabled Dependent Care Expenses.* Enter the figure on line 41 and attach Form 2441 to your return.
5. *Balance Due/Refund.* This important item usually makes the list of most common errors. If your total tax (line 56) is larger than your total payments made (line 64), enter the difference on line 68, Amount You Owe. Follow the instructions for remitting payment. If the reverse is true, enter the difference on line 65, *Overpaid.* Enter on line 66, *Refunded to You,* the portion of the line 65 overpayment that you want refunded to you.
6. *Earned Income Credit (EIC) Not Claimed.* If you are a working parent and have at least one child living with you, and if your adjusted gross income (line 32) is less than $10,000, you probably qualify. See page 16 of the instructions.
7. *EIC Error or Not Qualified.* Make sure you are qualified. Certain limitations must be met and you must have a dependent child living with you and you must have worked during the year. Follow the instructions carefully and enter on line 59.
8. *Dividends.* You must complete and attach Schedule B if you have $400 or more in dividend income. Enter your total dividends on line 9a; your exclusion (up to $100 for individual filers, up to $200 for married filing jointly) on line 9b; and enter the difference (subtract line 9b from 9a) on line 9c.
9. *Income Computation.* This is an outgrowth of item 8, since the taxpayers who miscompute their dividend income will have an error on line 23, total income. Double-check these figures.
10. *Income Averaging.* Schedule G, *Income Averaging,* is one of the most complicated and intimidating forms for individual filers, due to the number of tax years covered on the form. You should have copies of your returns for the preceding three years in order to accurately complete this form. Read and follow instructions carefully and double-check all figures.

Birdman of NADC

Photo by Jim Kingston

Of the many strange requests that are made of the Center, this one was for the birds — literally!

Word of the fairly abundant wild life aboard NADC reached the ears of the Pennsylvania Game Commission. The Commission, it turns out, was in need of live wild pheasant breeding stock for its Eastern Game Farm. Here they breed, raise and release pheasants to repopulate some wild areas of the state.

Superintendent of the Game Farm, Jerry Piotrowski contacted NADC, asked for and received permission to trap some of our wild pheasants.

Piotrowski set out a total of nine traps in the wooded area bordering Shenandoah Woods. The result was a successful catch of six birds; four female, two male.

Special Tax Break for Working Couples

Married couples who work are eligible for a special tax deduction worth as much as $3,000 on 1984 federal tax returns. This deduction may be claimed on either Form 1040A or Form 1040, the IRS said.

The deduction is subtracted from gross income and is limited to the smaller of either 10 percent of the qualified earned income of the lesser-earning spouse, or 10 percent of up to $30,000, for a maximum deduction of $3,000. To take the deduction, both spouses must have earned income, such as wages, salaries, and tips. However, income earned by one spouse working for the other does not qualify; nor does such income as interest, dividends, pensions, annuities, IRA distributions, unemployment compensation, deferred compensation or nontaxable income.

Viewpoint

This month's question was submitted by Pat Wenclawiak. "How does spring fever affect you?"

Photos by Regina Gasuk

"In spring I go out to lunch to watch girls instead of to eat."

Bill Aisles, Code 302

"Being the intelligent, considerate, and WARM person that I always am, spring doesn't affect me, I affect spring."

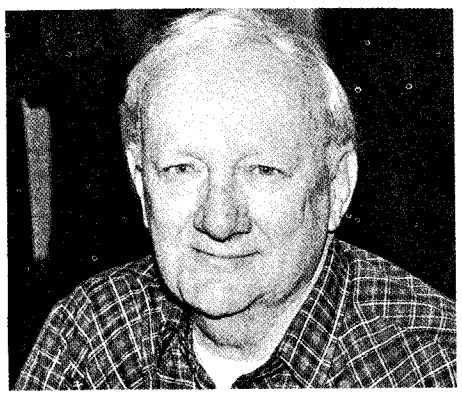
Don Furmanski, Code 20P

"As old as I am, I still have the fever but my spring is broken."

Art Duhaime, Code 813

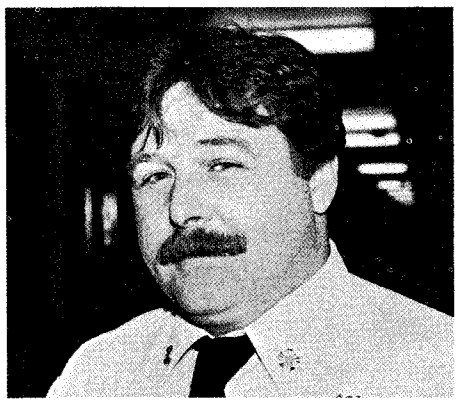
"Spring makes me feel like my two year old son, experiencing something new and beautiful everyday."

Don Meadows, Code 814



"Spring makes me long for long weekends."

Eileen Healy, Code 609



NADC's FWM Hotline is effective

Combatting fraud, waste, and abuse is a continuing priority for the Navy as well as the entire Department of Defense (DoD). According to the DoD, significant progress has been made, saving taxpayers billions of dollars.

In the past three years:

• 59,000 internal audits were completed with potential savings of $6.1 billion;

• 123,000 corrective actions were completed on 41,000 DoD internal audit reports, resulting in monetary benefits of $2.8 billion;

• 2,400 corrective actions were taken on 1,000 General Accounting Office (GAO) reports, resulting in monetary benefits of $3.6 billion; and

• An additional 4,000 DoD and GAO reports are being tracked, with potential savings of $3.1 billion.

Since the Defense Hotline for fraud, waste, and abuse reporting was established in June 1981, more than 23,000 calls or letters have been received. About one-third of them have led to inquiries and further reviews. Presently, Hotline reports are being received by the Defense Investigative Service at a rate of about 880 per month.

The kinds of wrongdoing being reported include overpricing, misuse of authority, wasting government money, and misuse of military aircraft and commercial airline tickets.

Some specific examples are:

• A caller reported that a navigational light purchased by the Air Force increased in price from $35 to $283. A subsequent investigation resulted in the standard unit price of the light being reduced to $52 and the contractor refunding to the government more than $30,000.

• A naval officer performing duties as a contracting officer directed the prime contractor to award two $22,000 contracts to a subcontractor. The subcontractor then further subcontracted the work to another firm of which the naval officer was the sole director. The officer pleaded guilty to two counts of conflict of interest and one count of unlawful acts affecting a financial interest. He was sentenced to two years imprisonment with 18 months suspended, and he was also fined $6,000. The Navy is seeking civil recoupment of the $44,000 initially awarded.

• Another caller alleged that an Air Force officer was conducting business while on duty. An investigation disclosed that the officer was a representative of two retail firms and spent duty time selling these firms' products to subordinates and other personnel. The officer received an Article 15, was fined $817 a month for two months and allowed to pursue retirement in lieu of a general courts-martial.

• A caller complained that a DoD civilian employee was making unauthorized expenditures in connection with a relocation of a facility within New York state. A preliminary inquiry resulted in the formation of a joint government task force consisting of teams from four federal organizations. A senior civilian pleaded guilty to more than 170 counts. The government has attached the defendant's home, which is valued at more than $500,000.

Additionally, In October 1981, Secretary of Defense Caspar W. Weinberger established the Defense Criminal Investigative Service (DCIS) to focus on "white collar" crime. The DCIS is a specialized unit under the DoD Inspector General with about 250 agents in 10 main field offices and 18 subordinate locations.

DCIS has an impressive record: 186 indictments, 143 convictions, and $18 million in fines, recoveries and recoupments. Included in these figures are judgments against these defense contractors:

• *Sperry Corporation* — Convicted of mischarging labor hours on two Air Force contracts involving the Peacekeeper missile. A total of $30,000 in fines, $650,000 in double damages, and $167,000 in interest penalties were assessed.

• *Davey Compressor Company* — Convicted of fabricating documents to inflate the cost of materials. Davey's vice president was sentenced to two years in jail, and the company was fined $250,000 plus $2.7 million in civil penalties.

• *National Semiconductor* — Convicted of false certification of microchips. Criminal fines of $247,000, $105,000 for the cost of prosecution, and $1.4 million in civil penalties were levied.

• *Municipal and Industrial Pipe Services, Ltd.* — Convicted of submitting fraudulent statements concerning construction work at 14 DoD facilities. Three corporate officers, all members of the same family, received sentences ranging from six months to eight years.

Closer to home and just as important, NADC's Fraud, Waste, and Abuse/Mismanagement (FWM) Program is effective.

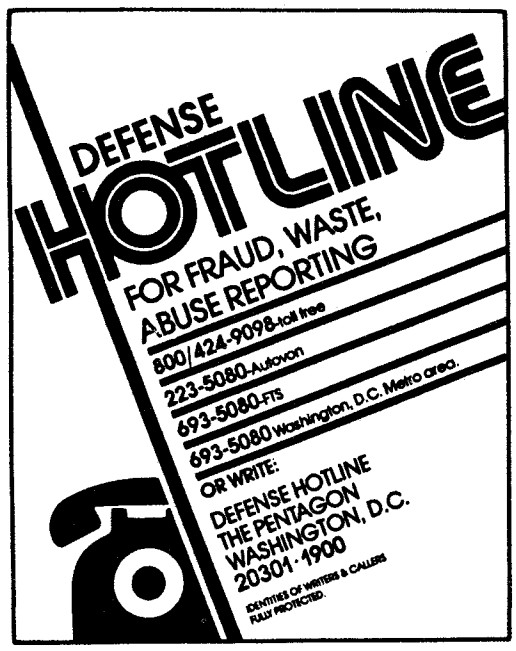
Robert Fisher, Security Officer, is the FWM Officer and concentrates his efforts on the theft/criminal-like cases. Ron Kabin, Internal Review Manager, is Assistant FWM Officer and investigates most of the other allegations. Robert James, General Counsel, is consulted when legal repercussions are possible.

The Center's FWM Hotline was installed in May 1983 but the program was formalized and has been active since the summer of 1982. Kabin says he has received at least 25 reports of improprieties over the last two or three years. Many of those reports were on actual fraud, waste, or mismanagement cases. Reports have included allegations of falsifying time cards/records and improper procurement practices, not necessarily by procurement personnel but by anyone involved in requisitioning equipment or services. Fraudulent travel claims in every form, unauthorized training commitments, and conflict of interest were all charged. Travel claims were such an issue that all claims now undergo careful scrutiny especially those claims for long term travel. Additionally, misuse of computer facilities by contractors and shoddy contractor workmanship were alleged. Each of the above cases was investigated to some degree and at least six resulted in financial restitution to the government. Amounts up to $8,000 per incident have been collected from both NADC personnel and contractors.

Kabin stressed that even though an accusation is valid and an investigation is conducted, the person who made the report may not see the results. This does not mean that action wasn't taken. "I, myself, may not be informed at the outcome" said Kabin. "The Captain (Center Commander) might forward the case to the Naval Investigative Service, or to Civilian Personnel, or even handle it himself."

The best advice Kabin can give is to avoid those situations or actions that may give the appearance of wrongdoing and to follow the guidance provided in NAVAIRDEVCENINST 5430.2 and 5370.1.

If there is a potential fraud, waste, or mismanagement situation you have observed, the NADC Hotline Number is extension 3015. Reports will be personally reviewed by the Center Commander. (MAB)



Editors Note: (Information for this article was extracted, in part, from the American Forces Press Service.)

Sailor of the Quarter

Center Commander, CAPT Sturm, congratulates AO2 Timothy Roupe.

Roupe, stationed at NADC since May 1982, was selected as Sailor of the Quarter by the Center's Chief Petty Officers after long and careful consideration from among a group of extraordinarily well qualified nominees. Selection is the Center's formal recognition of appreciation for consistent support and superb performance.

CAPT Sturm recognized Roupe's selection with this citation:

. . . Since being assigned to the Aircraft Maintenance Department, your personal example and outstanding performance are in keeping with the highest standards of dedication and professionalism. Your excellent knowledge of the P-3 Orion Aircraft Ordnance Systems and related ordnance coupled with your professional expertise and strong leadership have earned respect and admiration from all with whom you serve. During the past Quarter you were involved in several major projects in support of the Center's mission. Your performance in each assignment was flawless. You were a continuing source of new ideas, submitting well thought out and thoroughly evaluated plans to improve the efficiency of the task at hand. The impact of your outstanding efforts will enhance worldwide fleet ASW capabilities for years to come . . . I extend my congratulations for a job well done."

As additional perks attached to this award, Roupe was assigned a parking spot not only at his work site but also at the Exchange and he was excused from the Watch Bill for the First Quarter 1985. (MAB)

The NADC RECIPE REVIEW

ASPARAGUS AND LEEK CHOWDER

This month's recipe is provided by Joan Boyes (Code 2011) who will recieve a **$50 Bond**. This recipe will also be served in the NADC Cafeteria. Submit your recipes to Mr. Jose Ferrer, Cafeteria Manager. One winner will be selected each month.

3 cups (8 ounces) sliced mushrooms
3 large leeks, sliced
1 10-ounce package frozen cut asparagus, thawed
6 tablespoons butter or margarine
3 tablespoons all-purpose flour
1/2 teaspoon salt
dash pepper
2 cups chicken broth
2 cups light cream
1 12-ounce can white whole kernel corn
1 tablespoon chopped pimiento
dash crushed saffron

In large saucepan, cook mushrooms, leeks, and asparagus in butter or margarine till tender but not browned, about 10 minutes. Stir in flour, salt, and pepper. Add chicken broth and light cream to vegetable mixture; cook and stir till mixture is thickened and bubble. Stir in the white whole kernel corn, chopped pimiento, and crushed saffron. Heat through but do not broil. Season with additional salt and pepper, if desired. Makes 6 to 8 servings.

This receipe is expensive but it is delicious. I'm sure you could cut the amounts and exchange some onions with a leek. It is a very thick soup so it could be cut in many ways.

LOOK FOR THIS RECIPE TO BE SERVED IN THE NADC CAFETERIA

Cut here for file card

Center employees donate blood

Code 01A: Jean Dowds, Jerry Guarini; Code 02: Joseph Caristo, Joann Cocchimiglio, Linda Lips, William McDonald, Beth Mumford, Margaret Rudolph, David Taylor; **Code 03:** Kathleen McPeak, Robert Pomrink, Lois Savage; **Code 04:** Ada Fisher; **Code 10:** Judith Anderson, Joseph Colombo, Grace McCaffrey, Peggy Newbrough, Jeanine M. Peterson; **Code 20:** Robert Andriszak, John Bowes, Deborah Bridges, Richard Brookes, Renae Davis, Carol Erb, Donald Furmanski, Roland Hall, Stephanie Hall, Terence Houghton, Robert Imbrogno, Wilbur Knerr, Carla Mackey, Thomas Michalski, Michael Miller, Dean Mondelblatt, William Nuss, Robert Oakley, Kimberly Pogles, Debbie Sztubinski, Carl W. VanWyk, David Williams; **Code 30:** Roland Bender, Stephen Campana, Wayne Everett, Robert Gallis, Roger Hontz, Glenn Jadney, Joseph Kaszupski, Harry Koper, H. Elaine Mears, Edward Paulsworth, Leonard Roach, John Samaras, Edward Schmidt, David Schuck, John Sniscak, John Toner, John Williamson; **Code 40:** Lynne Albert, Edward Beals, William Bradley, Charels Halko, Gordon Heal, Karen Heller, Michelle Martin, Thomas J. Matthews, John McFadden, Thomas McHugh, Philip Sanborn, Leon Smith, Kim Wayland, Marcus Wolf; **Code 50:** Edward Beach, Ruth Bendzlowicz, Carol Blakey, Michael Deshield, Raymond Glemser, Michael Heinz, C. Scott Holloway, Jeffery Irvin, Clyde Jackson, Michael Jusczak, Donna Keil, Helen Keller-Surman, Barbara Leistiko, George McElhinney, Edward Monaghan, Robert Piras, James Rachiele, Umberto Salvati, Larry Smith, Federick Stowell, John Supp, Basit Syed, James Tidwell, Lorraine Weaver, John Whalon, Robert Zwissler; **Code 60:** Nora Beck, William Becker, Raynolds Brooks, James Butt, Ranae Contarino, Richard Dalrymple, Dan Darrigo, Ronald Emery, John Felix, Albert Ferkel, Timothy Fitzpatrick, James Grubb, Maria Hura, James Henderson, Marshall Hynes, John Johns, Jonathan Kaufman, Fred Kuster, Richard Lee, Mark Lilly, David Luiz, Charles Miller, Mary O'Dowd, John Ohlson, Frank Rageis, James Rodgers, Mark Salamon, Irving Shaffer, Marshall Thomas, Nancy Topping, David Waldman, David Walter, Craig Wood, James Wright; **Code 70:** James Bethka, Mary Moran, William Myers, Gordon Safley, John Tate; **Code 81:** Melvyn Berg, Jefferey Biscardi, Michael Blankenship, Joseph Dwornik, Arnold Gibson, Richard Guinan, Phyllis Grant, Lawrence Miller, James Myers, Michael Rogalski, Ervin Rothermel, Martin Ruzansky, Malio Ventresca, William Wiggs; **Code 82:** Stephen Cox, Jonathan Hester, Jaime Jaromay, Martin Krueger, Gerald Mebice, Joseph Mooney, William Reese, Norman Watson; **Code 83:** Roy Deese, John Floyd, William Hickey, Linda Lopez, Robert McFetridge, William McKenna, Joseph Quigley, Clifford Tierney, Robert Urban; **Code 84:** Clare Ashley, James Bryant, Loretta Dunn, Zachary Mancini, Seleni Ridpath, T. William Singleton, Milton Weaver; **Code 85:** Karen Churnetski, Margaret Douglas, Robert Smith, Alan Reines; **Code 91:** Ross Hendricks; **Code 93:** Vincent Pace; Others: Diana A'Harrah, Theresa Chambers, Edward Devinney, Anthony DiSebastiano, William Kohler, Dorothy Mahaffey, Robert McCaskey, Jan Safley, Richard Willers.

New books for library

Following is a partial list of books recently added to the Technical Information Branch. Visit or call your library at extension 2918 to inquire about these books.

Management
"The Art of Corporate Success."
HD9572.9.S34
"Decision Making — Congresses : Cognitive processes In Choice and Decision Behavior."
BF441.C53
"Defining The Business : The Starting Point of Strategic Planning."
HD30.28.A24
"High Technology Marketing Management," Rexroad, Robert A.
HF5415.13.R44
"Human Information Processing : Engineering Psychology and Human Performance, : Wickens, C.D.
TA166.W48
"Managing The Systems Development Process."
HF5548.2.B463
"Perspectives on Employee Staffing and Selection . . ."
HF5549.5.S38 P46
"Strategic Management : an Integrative Perspective," Hax, Arnoldo C.
HD30.28.H388

Material Science
"Environment-Sensitive Fracture — A Symposium".
TA409.E58
"A handbook Of Protective Coatings For Military And Aerospace Equipment."
TP935.H33

Computer Science
"Computer Graphics Glossary," Hubbard, Stuart W.
T385.H78
"The Design Of Operating Systems For Small Computer Systems," Kaisler, Stephen H.
QA76.9.S88 K34
"IBM Personal Computer — Programming," Norton, P.
QA76.8.I2594N67
"Minicomputers — Programming," Krutch, J.
QA76.6.K784
"Understanding and Using dBase II," Bowie, MD
QA76.9.D3 K79
"UNIX (Computer Operating System)," Sobell, Mark G.
QA76.6.S61673
"Useful BASIC Programs For the IBM PC," Berkeley, CA
QA76.8.I2594 T76
"VAX/VMS (Computer Operating System)," Kenah, Lawrence J.
QA76.6.K454

Information and Signal Processing
"Array Signal Processing," Prentice-Hall, 1985
TK5102.5.A73
"Digital Communications," Proakis, John G.
TK5103.7.P76
"Electronic Communications," Reston Publishing Co., 1984
TK5101.R56
"Electronic Communications Systems," Reston Publishing Co.
TK5101.S66
"Fast Algorithms For Digital Signal Processing."
TK5102.5.B535
"VLSI and Modern Signal Processing."
TK5102.5.V18

AUDITORIUM REOPENS ***Center Commander CAPT Sturm cuts the ribbon for the opening of the newly refurbished Auditorium. LCDR Burt Streicher, Public Works Officer, Phyllis Magness and Barry Probst, designer are present for the event.*** Photo by Chuck Fichera

Promotions

Bilal A. Alam, Rose Mary Alexander, Ronald P. Averell, William G. Barker, Paul J. Beer, Sharon F. Best, Michael D. Blankenship, Frank J. Boka, Thomas Bowers, John B. Boodey, Kenneth G. Bullard, Michael P. Cannon, Angela Castello, Steven G. Catricks, Helen A. Catto, Sing Cheung Chow, Kenneth A. Clegg, Roland C. Cochran, Lisa J. Cowles, Colleen T. Craggs, Michael Daum, Timothy C. David, Michael J. DeShield, Marc C. DiLemmo, Leon P. Domzalski, Marybeth Dormuth, Leroy G. Eckbold, Diego P. Escobar, James L. Ferris, Jr., Robert C. Ginn, Sandra M. Grazioso, Michael R. Grossman, Martha J. Harazim, Elizabeth M. Harvey, Dennis J. Herbert, Arthur W. Horbach, Robert E. Imbrogno, Clyde Jackson, Thomas F. Jennings, John J. Keane, Dawn Keiser, Charles A. Kita, David B. Kobus, William G. Knebel, Timothy L. Kraynak, Michael L. Kuszewski, Joseph E. Laska, Jr., Nicholas W. Loggia, Joseph McFadden, Paul P. McGee, Jr., Carol Jean McIlwain, Margaret A. McLaughlin, James E. McNamara III, Suzanne M. McNellis, Anthony A. Martinelli, James T. Michell, Dean S. Mondelblatt, Robert P. Mullins, Thomas J. Murphy, Dominic J. Nguyen, Ky T. Nguyen, Thomas D. Nguyen, Edith M. Nichparenko, William O. Nuss, Gerald J. O'Hara, Nicholas A. Onorato, Steven Panko, Anthony P. Passamante, Laurie A. Pelletier, Michael R. Poli, John J. Reilly, James J. Robinson, Karl J. Schraut, Martin D. Sholomskas, Irene Simmons, Samuel Sizgorich, Edward T. Smith, Lloyd B. Smith, Mary M. Steenhoff, Michael L. Stellabotte, Robert C. Suloff, Patrick M. Sweeney, Squire D. Thomas, Susan J. Tiley, Anthony T. N. Tran, Michael J. Troyanosky, Robert S. Turzanski, Jr., Claire M. Walsh, David W. Walter, John J. Whalon, John Winiarczyk, Craig A. Wood, Timothy P. Woolverton, Steven Youngblood, and Dominic E. Zaccaria.

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 and contractors are reminded the wearing of the Center Badge is mandatory while on the Center.

CUSTODIAN RESPONIBILITIES
Persons who have signed for custody of items of government property, or are charged with custody of property in storage, are responsible for the maintenance, safekeeping and accountability of the property. NAVAIRDEVCENINST 5510.13B, Chapter 16 outlines the action to be taken if they become aware that property is missing, lost or stolen.

Classified Material should be reviewed annually to determine if it should be downgraded, declassified, destroyed or returned. The purpose of the review is to reduce the volume of material on hand and reassign security containers made available by reduced volume of material.

New Navy League Chief

ARLINGTON, Va. — Rear Adm. William Gene Sizemore, USN (Ret.), has been appointed Executive Director of the Navy League, according to the League's national president, Albert H. Freidrich.

Sizemore will direct the day-to-day administration of the non-profit educational association.

After beginning his career in 1944 as an apprentice seaman, Sizemore was designated a Naval Aviator and Aviation Midshipman in 1948. He amassed 218 combat missions in Korea and Vietnam. His last active duty assignment was as Deputy Director of the Defense Nuclear Agency. He retired in 1982.

In this issue:

NADC Job Fair

Record numbers turn out

The Naval Air Development Center held its first Job Fair on Saturday, March 30th to attract scientists and engineers of every discipline to the Center.

A thorough advertising campaign produced nearly 700 interested professionals who walked through the Credit Union doors to submit their resumes. Nearly 500 of them met the Center's basic needs and qualifications.

Civilian Personnel Department (CPD) representatives screened the applicants and then personnel from each of the directorates were available for interview sessions.

NADC has authority to hire close to 300 men and women in the science and engineering fields. CPD estimates that 50 job offers will be made within the next month. (MAB)

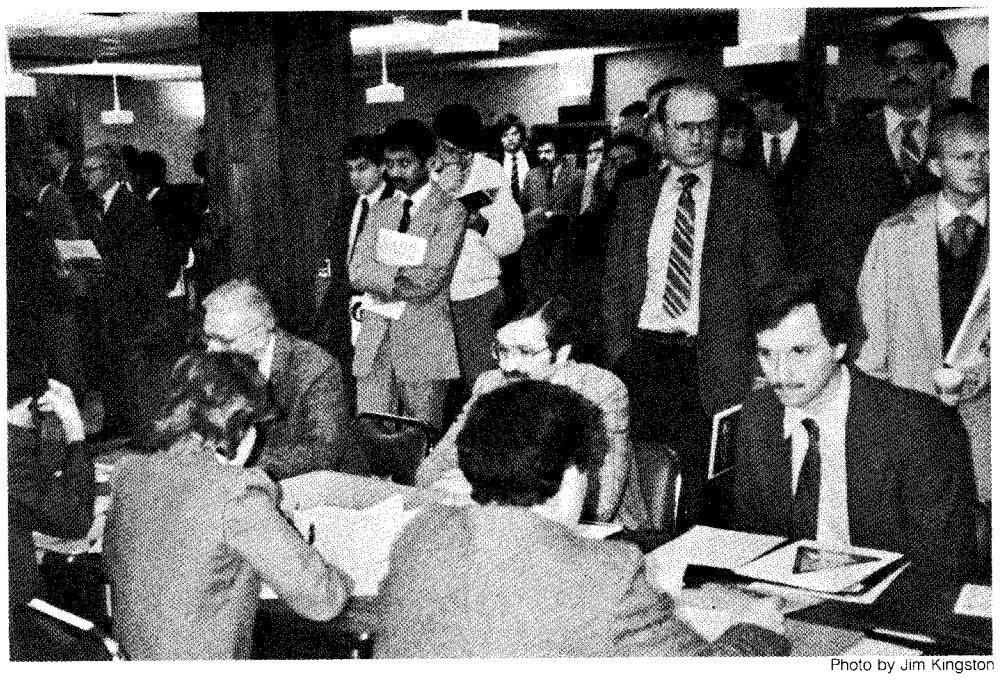
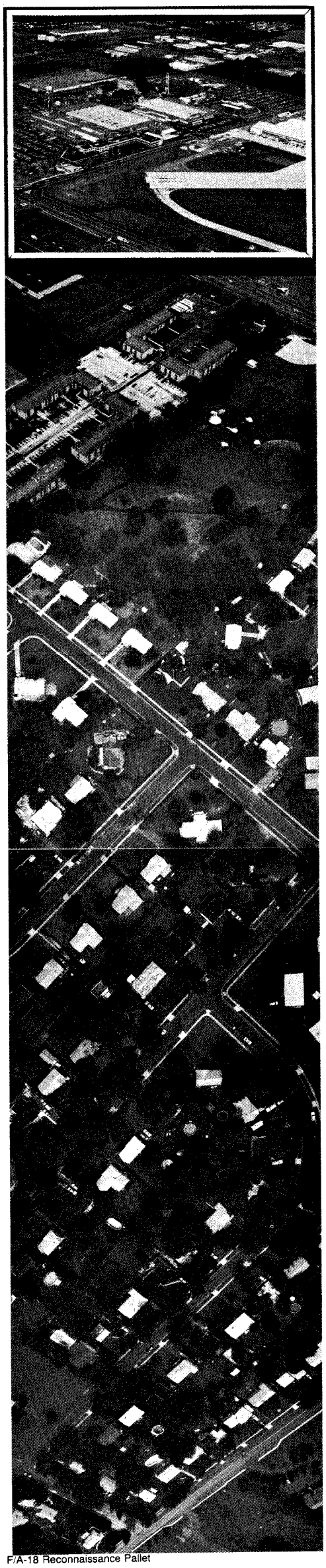


Photo by Jim Kingston

Hundreds of applicants flooded NADC's Credit Union Lobby in answer to Job Fair advertisements.



F/A-18 Reconnaissance Pallet
KA-99 Camera
1000 ft. altitude

NADC Reflector

Volume 30 Number 4 NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA. April 1985

Spodaryk receives Center Commendation

Joseph Spodaryk, program manager of the Naval Air Development Center's (NADC) Information System, was presented the Meritorious Civilian Service Award. He was honored for his outstanding contribution in the development of the Center's Management Information System and technical contributions to other Navy and DOD activities.

Spodaryk became head of the Information Systems Division in 1973 and was responsible for the design and implementation of large automated systems to support the Center's financial, procurement, and project management functions. He became Center Information Systems Program Manager in 1983.

This office functions as the NADC focal point for the technical performance, schedule and funding related to the Center Information System. It is responsible for the establishment of initial and long range objectives, defining overall technical approach, schedules, cost and performance.

An engineer by trade, Spodaryk takes the engineering approach to data processing. He has successfully implemented an executive reporting module which allows top management desktop electronic access to a wide range of key management information. Tom Shopple, NADC's Comptroller, feels Spodaryk has become a nationally recognized expert on information systems hardware, software and their applications associated with the management process. "He has made significant contributions to the current STAFS (Standard Automated Financial System) development, said Shopple, "and has served as a consultant to a multitude of activities in the field of ADP (Automated Data Processing) and Information Systems." Spodaryk was designated by the Center to be the one responsible for the implementation of STAFS at NADC. "His work on the Center Information System has provided the Center with the most extensive capability in the Navy Laboratory," said Shopple.

Spodaryk said, "we are trying to get the system up to make it more user oriented for people and to apply the latest state-of-the-art technology so that people can get access to do their business in a better fashion. Let's face it, I am collecting data," he said, if people can use it to mean something, it becomes information, other than that it is just a data tool."

Spodaryk is trying to mold the Center Information System so that the Center can really use automation to enhance productivity. "We are looking at things that give some idea of the business posture of the Center," he said, "such as how well we are doing in the technology areas of the Center; where are our resources being used; and what are our primary sources of

Continued on Page 3

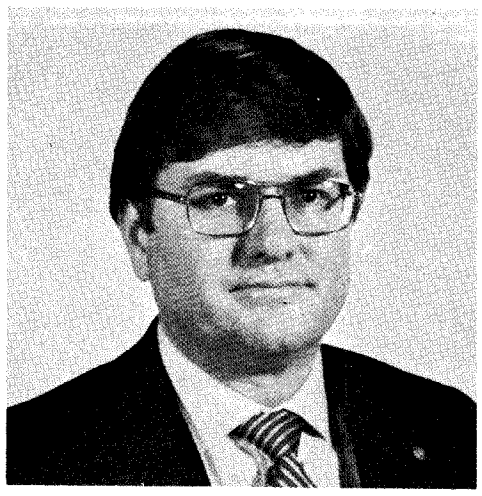
Photo by Cathy Burian

Center Commander, CAPT Edward Sturm presents the Meritorious Civilian Service Award to Joseph Spodaryk.

Command Corner

CAPT Edward J. Sturm
Center Commander

Each month the nine Navy labs are evaluated by the Chief of Naval Material. This Center has been number one in the area of lowest overtime (2.1%) which is measured by the percentage of overtime as compared to total labor hours. NAVMAT's performance indicators show us to be second in the area of productivity (63.5%) and our percentage of competitive procurement (62.5) ranks us third in that category among the Navy laboratories.



Mr. Robert S. Buffum
Technical Director

We are doing extremely well and can be proud of our record to this point in the fiscal year. We must continue to maintain this high level of performance and wherever possible strive to improve.

CAPT. EDWARD J. STURM
Center Commander

ROBERT S. BUFFUM
Technical Director

CPR Training Offered

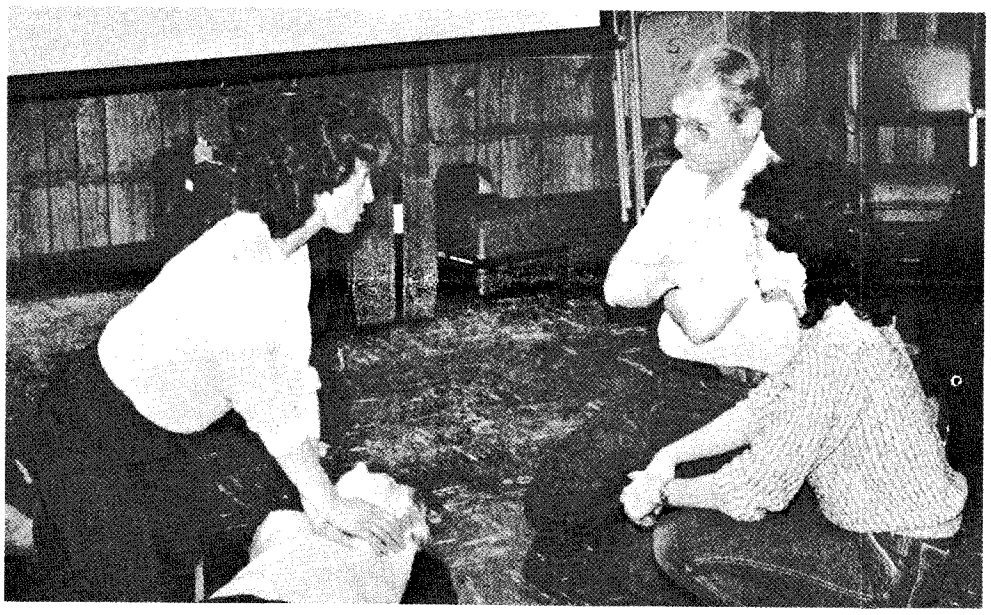


Photo by Tyrone Snowden

Jean Gasuk performs CPR techniques on mannequin that is a special teaching device used by Red Cross. Dennis Bing (Safety Office) and Shari Glaskin (Red Cross instructor) monitor the practice session.

You don't have to worry, this is not a real emergency, but part of the Center's program to teach Cardiopulmonary resuscitation (CPR) to NADC personnel.

CPR courses are expected to begin in the early summer for all interested Center employees. Twelve NADC volunteers are in the process of being trained as instructors to give the courses that will be offered twelve times a year.

This program is an excellent way for employees to take advantage of an opportunity that could someday save a life — your own or someone else's.

Classroom instruction consists of reading, lecture and hands-on practice. After completion attendees will be certified by the American Red Cross for one year. The Center will be offering refresher courses whereby employee's certification can be reinstated yearly.

Letter to the Editor

Dear Editor:

Most of us know about the Individual Retirement Arrangement (IRA) which is available for retirement planning, and as a tax hedge that is authorized by the IRS. Another authorized plan is the Keough account for self-employed persons. A third authorized plan is known as "401(k)" and is administered by employers for use by their employees.

I want to make use of a 401(k) program, but I don't know of any that are available to government employees.

Does the government have any 401(k) plan available for my participation? If not, what can we do to initiate one?

E. J. Emery

Dear E. J. Emery:

At this time there are no provisions for government employees to legally have a 401(k) program.

The Office of Personnel Management suggests, you may want to contact your Congressman, as legislation would have to be passed for a 401(k) program.

Center Video News makes its debut

Photo by Ross Barcklow

Good Show! Says program producer, Ray Satterfield to Center Video News anchorpersons, Mary Ann Brett and Jim Kingston.

By Jim Kingston

They may not be a serious threat to Larry Kane and Deborah Knapp or Jim Gardner and Chris Wagner, but NADC's Center Video News anchor-persons, Jim Kingston and Mary Ann Brett are certainly in there trying.

Center Video News (CVN), which made its official debut on the Center's closed-circuit TV system March 8th, will be a regular feature of NADC's Public Affairs Office. It is intended to highlight newsworthy events on Center as well as items of interest from NAVY NEWS THIS WEEK. Initially, the program will be produced monthly and run from 15 to 30 minutes. It will be aired three times a day at convenient viewing hours — usually 0800, 1130, and 1300 — and will be on three days — usually Monday, Wednesday and Friday for one week. Announcement of days and hours will be in the Log and Plan of the Day.

Later, as everyone gains more experience, it is planned that CVN will appear twice each month, and perhaps, ultimately become a weekly program.

News portions produced about NADC activities are being sent to the Navy's Broadcast Service for inclusion in NAVY NEWS THIS WEEK which has Navy-wide, world-wide distribution.

Suggestions and recommendations for video news stories — technical, scientific, or human interest are welcome. Write a *brief* description of the event, include a point of contact and sent to Center Video News, Code 091.

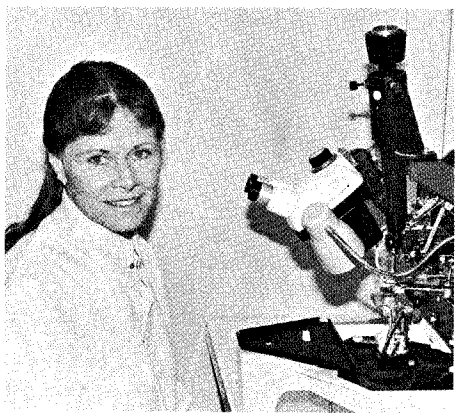
OOPS!

PRINTERS ERROR

In the March REFLECTOR, on page 5, the top right photo was incorrectly identified.

It is Pat Foley working at an ultrasonic bonder which attaches gold wires to integrated circuits.

Sorry, Pat!



NADC Reflector
Volume 30
Number 4
April 1985
NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA.

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Views and opinions expressed in this publication are not necessarily those of the Department of Defense.

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The *REFLECTOR* is a subscriber to the American Forces Press Services.

All correspondence should be addressed to Editor, *REFLECTOR*, Code 091, Naval Air Development Center, Warminster, PA 18974 (441-3067).

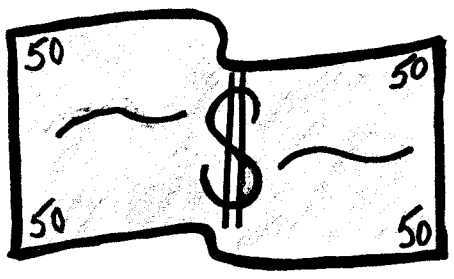
Commander, NADC ..... **CAPT Edward J. Sturm**
Technical Director ..... **Robert S. Buffum**
Public Affairs Officer ..... **James S. Kingston**
Editor ..... **Regina Beans Gasuk**
Assistant Editor ..... **Mary Ann Brett**

"Crews Rest" Wins Contest

The votes were tallied and the decision was made. A new name for the Consolidated Mess was chosen from the many entries submitted to the advisory board last month.

The winnner was AC2 Ken Dayton (code 7043). He thought "Crews Rest" was an appropriate name and obviously the judges thought so, too.

Dayton was the recipient of a check for $50.00 and dinner for two aboard the SPIRIT OF PHILA at Penn's Landing.



Technical Highlights

ICEPICK

The ICEPICK program is an exploratory development effort sponsored by Defense Advanced Research Projects Agency. A contract from DARPA has been awarded to Defense Systems Inc. to design and fabricate hardware. NAVAIRDEVCEN is responsible for the flight test program in preparation for Arctic tests.

ICEPICK is an ice penetrating sonobuoy system intended for operations in the Arctic. The system has two separate units both P-3C deployable. Unit one is an ice penetrating and perforating vehicle which deploys sonobuoy hydrophones below the ice in order to collect and transmit acoustic data to unit two. Unit two is deployed after it has been determined that unit one is successfully functioning. It receives data from the sonobuoy, processes and stores acoustic data, and retransmits on command. Both units are designed to be 12.75 inches in diameter by 100 inches long and deployable from the bomb bay of the P-3C.

Based on an unsuccessful November captive carriage test of both units from NAVAIRDEVCEN P-3C No. 158204, the safety release mechanism was redesigned by NAVAIRDEVCEN and approved for retest. On 14 December 1984, the Center completed static release tests of both ICEPICK units. On 17 December 1984, a successful captive carriage test was performed by the Center on P-3C No. 158204 during a training flight from Pax River, MD. Finally, a drop test was conducted at Warren Grove, NJ. Two units were launched from the bomb bay of No. 158204 from 2500 feet altitude. Both units deployed successfully from the bomb bay, went through a multi-stage parachute retardation phase, and descended along a nominal trajectory.

BATHYMETRIC NAVIGATION TECHNIQUES

NAVAIRDEVCEN personnel planned, directed and successfully conducted an at-sea demonstration of bathymetric navigation techniques aboard the USS BARB (SSN-596) from 18 to 25 Jan 85. The demonstration was conducted in support of an NSAP proposal for new navigational capabillities for SSN and surface fleet application. Preliminary results of this demonstration showed that bathymetric navigation fix techniques can be successfully utilized by SSN's.

P-3 UPDATE IV

An RFP was issued to industry by the NAVAIRDEVCEN on 9 February for the first phase of a two-phase competitive P-3 UPDATE IV avionics improvement program. Up to three contracts will be awarded during the first contract phase for concept development and demonstration. A follow-on competitive full-scale engineerring development contract will be awarded to one of the first contract phase winners. This update to the P-3 will include a new distributed data processing subsystem, a new multi-station display and control subsystem and integration of new radar, acoustic processor and communications subsystems with existing avionics. This is both a retrofit and forward fit program.

Mumford Awarded Navy Commendation Medal

Recently, CDR Thomas Mumford, the Center's Test & Operational Resources Manager, was awarded the Navy Commendation Medal. Although presented at NADC by CAPT Sturm, the award citation, signed by Admiral James D. Watkins, Chief of Naval Operations, was granted for his meritorious service as the Executive Officer and Production Officer of the Naval Air Rework Facility (NARF) from November 1983 to September 1984.

The award citation reads in part, ". . . CDR Mumford's superior decisive leadership and management ability were responsible for substantially improving the quality and overall effectiveness of the NARF, Alameda. Displaying untiring devotion to the Navy and the command's mission, CDR Mumford initiated and implemented numerous initiatives which resulted in accelerated completion rates of aircraft and engines with significant improvement to expenditures against funded norms; meaningful reduction in turnaround time and expenditures in the production of missiles and components; and a 5% improvement in direct to indirect ratio in a six month period. The exceptional leadership, professional knowledge, and innovative management style which CDR Mumford displayed in carrying out his duties were recognized and widely respected throughout the aviation and logistics communities. CDR Mumford's extraordinary professional performance, noteworthy achievements, and selfless dedication to duty reflected credit upon himself and were in keeping with the highest traditions of the United States Naval Service." (MAB)

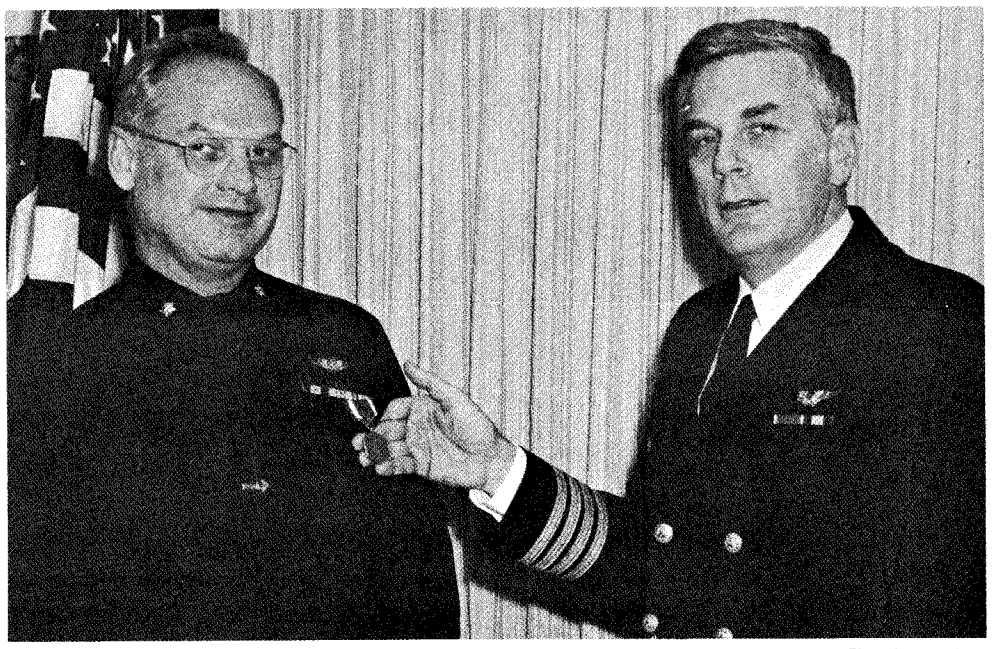


Photo by Ken Smith

CAPT Edward Sturm, Center Commander (right) presents the Navy Commendation Medal to CDR Thomas Mumford.

Savage is new VS program manager

Photo by Regina Gasuk

CDR Wayne Savage

CDR Wayne F. Savage is the newly assigned VS Program Manager. He joined the Center in late February and will be here at least until the second half of 1987.

A 1967 graduate from the Naval Academy, Savage received his Masters degree in Aeronautical Engineering from the Naval Postgraduate School in Monterey, CA in 1975. He was stationed aboard the USS JOHN F. KENNEDY until 1978 and then proceeded to the Office of Naval Research (ONR), Washington, DC until June 1981 as the Missiles Project Officer.

His previous assignment through January 1985 was as Project Manager at the Joint Cruise Missile Project Office (JCMPO), Washington, DC. The JCMPO is responsible for the development and acquisition of Tomahawk Cruise Missiles for both the Fleet and Air Force systems. While there, Savage held a three-faceted assignment — he was responsible for concept definition, full scale engineering development, and competitive procurement of the missiles.

Savage said, "I asked to be assigned to NADC. My first tour as an Aeronautical Engineering Duty Officer was at ONR where I saw basic and advanced developmental research. NADC is where you really get to apply the research. You've got airplanes that can test some of the equipment and people that are actually performing research directly applicable to the Navy's needs.

"I wanted Command Projects in particular," Savage (an S-2 pilot) said, "because I've been out of the VS project for a long time. I can offer NADC a blend — having spent seven years in Washington, DC, I know their problems. Also, I don't think the Fleet's problems have changed much in the past twenty years. I have enough background in VS that I can direct the way their research should go," he concluded.

Savage considers himself too new to make any changes in his organization, but he's already impressed with his people. He is very happy to once again have the opportunity to be both a naval aviator as well as a manager. He looks forward to flying as often as he can manage.

Savage was accompanied to this area by his wife, Jane. His children, Stacy — age 14, and Christopher — age 10, will join them later. (MAB)

Spodaryk Commended by Center

Continued from page 1

funding?"

He received his B.S. in Electrical Engineering from Villanova University in 1961. He also holds master degrees in Electrical Engineering (1965) and Engineering Management (1971) from Drexel University.

One of his personal goals is to complete his PhD. In addition he is considering a part-time teaching position something he might want to do when he retires.

POP UPS ★ ★ ★ ★ ★ ★ ★ ★

By Charlie Destra

It was not yet determined at press time, but it appears as though the league will play a 16-game schedule with two divisions of seven teams . . . Kemper field will again be used this year along with Sailors, Inertial and Tyler . . . The new commissioner of the league is Jim Kearney (Misfits) who'll take the reins from Craig Volker (Rebels) . . . When it was discovered that two home plates and a pitching rubber were missing from the equipment locker this year, Kearney took action to prevent similar wrongdoings in the future He got the league to build new equipment lockers for both Tyler and Inertial fields . . . Best quote of the young season comes from Craig Volker: "With the starting pitching we (Rebels) have, we decided to go with a big bullpen this year" .. Inertial and Tyler fields are being resurfaced this year . . . The league is looking into the possibility of having a benefit softball game against a "celebrity" team. A couple of local radio stations and the Flyers have been contacted. Nothing concrete as yet . . . Stricter rules are being enforced this year concerning the tossing of equipment. If it's deemed by the umpire that a thrown glove, bat, etc. could cause injury to another player, that player will be ejected from the game and incur a one-game suspension . . . Speaking of ejections, if a player is ejected a second time, he'll get a three-game suspension. Three ejections means he's suspended for the balance of the season . . . It takes longer to run from second base to third that it does to run from first to second because there's a short stop in between . . . The league all-star game is tentatively scheduled for 20 June.

Greenies-third time champs

Photo by Regina Gasuk

Greenies Golf Team kneeling left to right: George Gebert, Bill Achuff (Captain), and Chuck More. Standing left to right: Dick James, Cliff Tierney, Fred DeLarso, Ed Hughes, Tom Gledhill, John Beckum (not shown John Shannon).

The 1985 Championship was won by the Greenies.

Greenies Captain, Bill Achuff was truly happy and appreciative of his players. They took an early lead in their division, held it thoughout the regular season, won their division playoff and finally the Championship.

It's the third Championship for the Greenies, winning their first in 1966 when the league was first formed and its president was Nick Murphy after whom the perpetual trophy is named; winning again in 1968 and 1984. Only two teams have won three times — the Greenies and Double Eagles. Which team will break the barrier?!

Greenies Golf Team (left to right):

Greenies team: Bill Achuff, John Beckum, Fred DeLarso, George Gebert, Tom Gledhill, Edward Hughes, Dick James, Chuck More, John Shannon, and Cliff Tierney, the only one to play in all three championships.

In memory to past Greenies.

Thanks! Greenies

Men's Softball League sees new season changes

By Charlie Destra

Last year's men's softball champs, the late-blooming 8th Inning, are returning intact this year and are looking to win the crown again. However, three of the league's elite teams — the Guzzlers, Misfits and Granfalloon — have undergone key personnel changes.

The Guzzlers have picked up pitcher Ron Lang, one of the league's steadiest and fastest hurlers. Lang, who last season represented the Misfits, bolsters an already formidable team. The Guzzlers' defense and hitting are among the best, and the missing piece in the puzzle has generally been considered its pitching. The Guzzlers, still wary of past disappointments, are nonetheless quietly confident of having a big year.

The Misfits may have lost Lang, but they still have imposing Greg Heydet perched on the mound. They've also added two fine players, Matt Brown (formerly of the Granfalloon) and Joel Wexler (ex-Renegade), both of whom can pitch. The Misfits have been working hard during the exhibition season and seem committed to maintaining their winning tradition.

The big losers in the off-season shuffle may be the Granfalloon. The perennial favorites have lost three of their first six batters in the lineup. Ed Swiski, one of the league's premier power hitters and pitchers (8-0 last year), has left the team. Matt Brown (lead-off hitter and 3-1 on the mound) and Tom Kreppel are also gone. "I look at it this way," Manager Tom Weiss said, somewhat philosophically, "we've had our share of championships over the years." Don't be surprised, however, to see the Granfalloon, who still have a decent nucleus, threaten in this year's race.

Two new teams have joined the league this year, expanding the number to 14. The Rebels have divided their overloaded squad into two teams: one of the teams is retaining the original "Rebel" name and the other was still searching for a team name at press time.

The other new addition is the Pacer, made up of employees of Pacer Systems, Inc. "We field a pretty competitive team," said Manager Tom Risbon, whose squad played together last season in another league. Indeed, for a new team, they have the advantage of being organized and familiar with one another.

And there are seven other teams out there, all hoping to drink the champagne in 1985. Here's to a good season for all the teams.

Play ball!

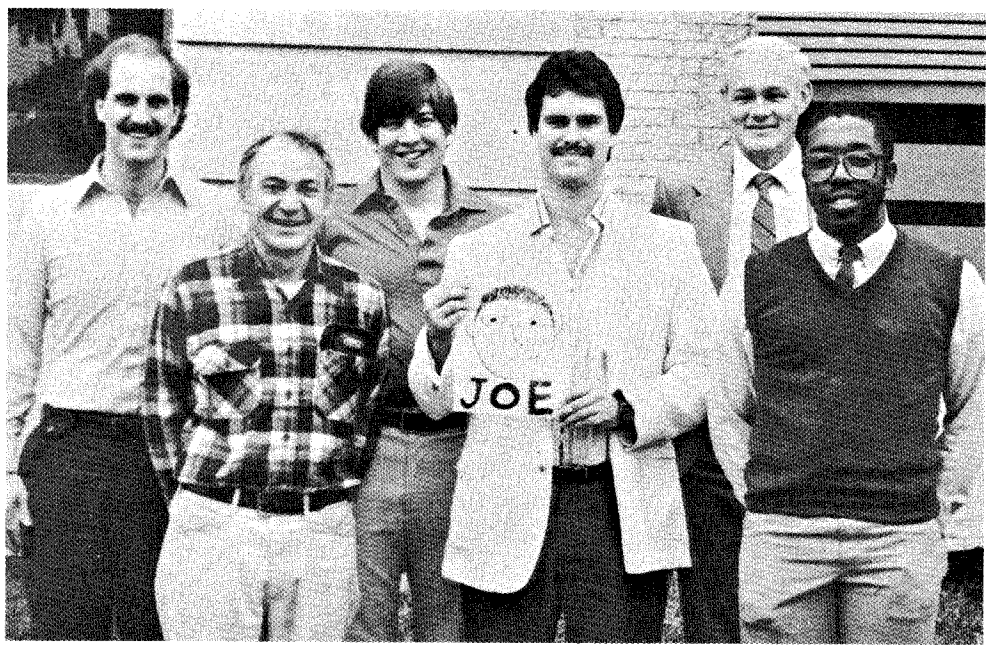
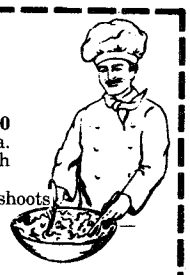


Photo be Regina Gasuk

The Renegades, ***1984 Open League Volleyball Champions, say "Beware!" to all 1985 challengers. (Left to right): Greg Elicker, Al Beans, Wayne Everett, Steve Bazow, Robert Melby, Mike Lanier, and 'pictured', but not present, Joe Bebey.***

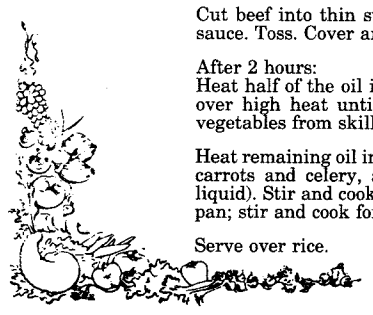
The NADC RECIPE REVIEW



Margaret's Stir-fry Beef Dish (4-6 Servings)

This month's recipe is provided by Margaret Russo, (Code 6062, x-2660) who will recieve a **$50 Bond** from the Food Service Board. This recipe will also be served in the NADC Cafeteria. Submit your recipes to Mr. Jose Ferrer, Cafeteria Manager. One winner will be selected each month.

1½ lb. beef round, fat trimmed
¼ cup soy sauce
¼ cup oil
3 carrots, thinly sliced
3 stalks celery, thinly sliced
1-8 oz. can sliced water chestnuts
1-8 oz. can sliced bamboo shoots
1 Tbsp. cornstarch
1 cup water



Cut beef into thin strips. Place beef in a bowl (not plastic) and add soy sauce. Toss. Cover and set aside in refrigerator for 2 hours.

After 2 hours:
Heat half of the oil in a large skillet (or wok). Stir-fry carrots and celery over high heat until they are tender crisp, about 10 minutes. Remove vegetables from skillet and set aside.

Heat remaining oil in pan. Stir-fry beef until browned. Lower heat and add carrots and celery, and water chestnuts and bamboo shoots (including liquid). Stir and cook about 5 minutes. Mix cornstarch with water. Add to pan; stir and cook for 10-15 minutes.

Serve over rice.

LOOK FOR THIS RECIPE TO BE SERVED IN THE NADC CAFETERIA

Cut here for file card

NADC pilot visits library

Photo be Regina Gasuk

LT Thomas Bily, NADC pilot, shows survival vest to children of the Toddler Learning Center at the Warminster Free Library. Evelyn Barnes, instructor (standing), and Debbie Streicher, President of the NADC Officers' Wives Club (kneeling), look on.

Could these 3-year old's be future Navy aviators? With a pilots help they might. LT Thomas J. Bily, a pilot here at the Naval Air Development Center (NADC) took time from his busy schedule to talk to twenty pre-school children in the Toddler Learning Center of the Warminster Free Library. LT Bily arrived in his flight uniform together with some of his other flight gear on Wednesday morning, March 20th at the request of Deborah Streicher, President of the NADC Navy Officer's Wives club. Streicher's son Jeffrey attends the Toddler Learning Center.

LT Bily showed the children his fire resistent flight suit, his helmet and microphone, aircraft pictures, survival vest and other survival equipment. The children each had an opportunity to try on his life vest and helmet.

There are approximately 20 children in classes under the guidance of instructor Evelyn Barnes of the Warminster Free Library.

Photo by Regina Gasuk

COMO Daniel J. Wolkensdorfer (OP-951) ***was well briefed during his visit to the Center on 27 March 1985. Left to right: CAPT Robert Bondi, military coordinator, Robert Fosko, technical coordinator, COMO Daniel Wolkensdorfer, and CAPT Edward Sturm, Center Commander, break from their busy schedule.***

NADC receives donor award

Photo by Regina Gasuk

CAPT Edward Sturm (right), Mrs. Diane A'Harrah (far left) and Mrs. Alice Norford (left) accept Blood Donor Award from Jerry Talbot, Red Cross Volunteer Blood Donor Coordinator.

The Naval Air Development Center was the award recipient in the Winter 1984-85 American Red Cross's Penn-Jersey region representatives George Dworsky (Director of Blood Services) and Jerry Talbot (Volunteer Blood Chairman for Lower Bucks County Chapter) came to the Center on March 21st to make award presentations. A trophy and certificate of support were given to Captain Edward Sturm, Center Commander, in appreciation of the 169 pints of blood donated by Center personnel during a two day blood drive.

Members of the Center's Civilian Personnel Department and the Navy Officer's Wives club were also commended for their assistance in coordinating the drive and providing volunteer support during both days.

NADC continually supports the American Red Cross by conducting blood drives three times a year for which Center personnel donate approximately 450 pints of blood yearly.

Good nutrition fights cancer

A mounting array of scientific evidence is showing that eating "the right stuff" may help prevent a large percentage of certain cancers, according to the cancer experts at AMC Cancer Research Center of Denver.

After years of studying the relationships between food and cancer, most cancer researchers agree on the following guidelines to help lower the incidence of cancer in Americans.

Eat more foods with high fiber content such as whole-grain breads and cereals, bran, kidney or navy beans, nuts and vegetables and fruits with skin.

Although its precise role is not known, some scientists believe fiber protects against colon-rectal cancer by shortening the amount of time cancer-causing substances remain in the body. Or its protective power may be due to the typically low fat content of high fiber diets.

Decrease fat to less than 30 percent of total calorie intake by drinking skim instead of whole milk, using margarine instead of butter, eating more fish and poultry and less red meat.

Studies have shown both saturated (animal) and unsaturated (vegetable) fats may increase the risk of developing cancer of the breast, colon and prostate.

Increase consumption of Vitamin A by eating more raw fruits and vegetables such as carrots and spinach. Apricots, mangoes, sweet potatoes and squash are also good sources of Vitamin A. Scientific studies have concluded that adding more foods rich in Vitamin A to the diet appears to protect against cancer of the lung, esophagus, throat and bladder.

Have at least one serving per day of cruciferous vegetables like cabbage, broccoli, cauliflower or brussels sprouts. Evidence shows these foods may reduce the risk of stomach and colon cancers.

Add more foods high in Vitamin C such as cantaloupe, oranges, grapefruit, strawberries and broccoli. Scientists believe Vitamin C may decrease the risk of stomach and esophagus cancers.

Avoid an excess of heat-charred food by sauteing, stewing, baking or poaching meat rather than broiling, grilling or frying. Although the effect on people is not known, meat cooked at high temperatures contains substances that may be carcinogenic.

Maintain ideal weight by consuming fewer excess calories. Studies have shown that people who are 40 percent overweight have a higher rate of uterine, colon and breast cancer. People who weigh within 10 percent of the average for their height have the lowest cancer rates, according to some studies.

Drink alcohol in moderation because heavy drinking increases the risk for liver cancer. If heavy drinkers also smoke, they increase their risk for developing cancers of the mouth, throat, larynx and esophagus.

Reduce intake of salted, cured and smoked foods, which may increase the risk of stomach and esophagus cancers.

Other information on cancer prevention is available by calling 1-800-525-3777, AMC's toll-free national telephone cancer information line. (In Alaska and Hawaii, call collect: 1-303-233-6501.)

AMC's cancer information service is staffed by professional counselors who can also provide up-to-date information and guidance on cancer symptoms, detection, diagnosis, treatment and rehabilitation.

AMC Cancer Research Center is an international leader in the fight against cancer. AMC carries out research in the clinic, the laboratory and in the community in prevention, early detection, accurate diagnosis and the design of the most effective therapy programs to fight cancer.

AMC serves as world headquarters for the International Association for Breast Cancer Research and for the journal *Leukemia Reviews International.*

1985 Armed Forces Day Message from the Secretary of Defense

I am proud to extend a well-deserved tribute to the brave men and women who serve in the United States Armed Forces. This is a day when Americans join together to recognize the members of the Army, Navy, Air Force, Marine Corps, and Coast Guard for their contributions to our security.

We live in an uncertain world, and we know that without your readiness and vigilance our freedom and independence would surely be lost.

You endure many hardships—working long hours, sometimes serving in remote and difficult places, moving frequently and being separated from your families. But you accept these sacrifices willingly and with pride, knowing that your job is a most important one—preserving the peace. Furthermore, you should know that you have earned the honor, respect, and full support of your fellow Americans.

I salute you all and challenge you to maintain your alertness, your sense of service to the country, and your high standards of conduct and performance.

Promotions

Rosemary C. Abramson, John F. Andujar, Antoinette C. Arble, Tracy Batdorf, Robert P. Bollard, James R. Bonanno, Bernadette M. Bump, Catherine A. Burian, Thomas A. Canniere, Jasper Caro, Lisa M. Christiansen, Richard H. Clapp, Constance Cosgrove, Busey S. Cottier, Dannie Darrigo, Harry F. Davis Jr., Roy H. Deese, Jorge Dominguez, Sheila Y. Dorsey, Michael L. Draham, Debra L. Erney, Charles R. Falchetti, Rhea A. Feldman, Sylvia M. Fiumara, Pundat Foo, Kenneth W. Foulke, Janet M. Froggatt, David L. Gauntt, William J. Green, Robert Patrick Hay, Marshall S. Hynes, John E. Indelicato, Elaine T. Irwin, Robert B. Johnstone Jr., Daniel J. Kane III, Mitchell J. Kelly, Veronica E. Kinder, Catherine M. Kitchenman, Charles F. Koch, David L. Kramer, David F. Lam, Anthony T. Lee, Ru Lee, Nancy E. Macmeekin, Joan C. Marano, Thomas R. Marchione, George McClellan, Steven McComas, Thomas W. McHugh, Robert J. Merchant, Ying L. Nip, Nancy L. Nissley, William J. O'Donnell, Ross A. Osborn, Norman P. Ostroff, Dean T. Perrong, Carl P. Plantarich, John J. Pye, Sewall B. Rent Jr., Philip A. Richardson, Jeremy C. Robinson, Geoffrey L. Robson, Regina E. Rodak, Daniel J. Rose, Kathryn A. Rosiejka, William L. Schork, Donald Joseph Shaw, Peter T. Shaw, Stephen J. Spadafora, David E. Stassen, Pablo Suarez Jr., Richard L. Thomas, Stephen J. Troyanoski, James S. Verdi, George N. Virgulti, Edwin L. Walter Jr., Thomas J. Whittle, William Wiesemann III, Charles J. Williams, Dolores Wilson, Connie Zar.

Commander Salutes

AD1 D. Hewlett: For returning CAPT Sturm's NA-7E aircraft to flight status during a trip to NAS Norfolk with virtually no local technical support.

Robert Gallagher (Code 20): For outstanding performance during the VFMX effort at NAVAIRSYSCOM.

Donald Spry (Code 30): For completing the National Defense University National Security Management Course as an "Outstanding Graduate."

LCDR Timothy Singer (Code 60): For the informative briefing on Human Factors and Aircraft Mishaps to the Training Air Wing Six.

Robert Bollard (Code 30): For an outstanding briefing on airborne sonobuoys to the Naval Postgraduate School.

Otto Kessler (Code 30): For an outstanding presentation on ASW radar technology to the NR-NADC 0193 Naval Reserve Unit.

Alan Ankeny and **Mieczyslaw Zurko** (Code 60): For outstanding performance in support of Air Vehicle Functional Subsystems, Equipment and Components.

David Rhoads and **Joseph Orosz** (Code 20): For outstanding support to NAVAIRSYSCOM of the JVX program.

CAPT Robert Bondi (Code 30), **William Lyons** (Code 40), **CDR Fred Ameel, Franz Bohn** (Code 10), **Dr. Lloyd Bobb, Ellen McGrody, Harry Koper** (Code 30), **Jules Drelick** (Code 40), **David DeSimone, Dr. John Deluccia** (Code 60), **ADAN C. Hoffman, AD1 R. Medina** (Code 82), **Thomas Ames, Edward Linke** (Code 83), **AFCM E. Cain** (Code 098), **Regina Gasuk** (Code 091): for outstanding performance which ensured a highly successful visit for Admiral Steven A. White, USN, Chief of Naval Material on 20 December 1984.

Gerald Seidel and **Garry Gross** (Code 60): For significant contribution to the Oblique Wing Research Aircraft Phase B Source Selection process.

LCDR L. Mills, David Herbine (Code 60), **Regina Gasuk** and **Patricia Wenclawiak** (Code 091): For excellent assistance provided to the Naval Reserve Unit NADC 0293.

Bettie Simpson (Code 03): For valuable support to the Office of Personnel Management during their recent Negotiating Labor Agreements training session.

William Graff, David Hammond, Joseph Zaroff (Code 30): For valuable contribution in the development of the Passive Extended Range Sonobuoy System.

NAVAIRDEVCEN Key West Detachment Personnel: For support during a recent demonstration test of the Air Launched Deep Ocean Transponder System for the Strategic Systems Project Office.

Sesame Street teaches adults

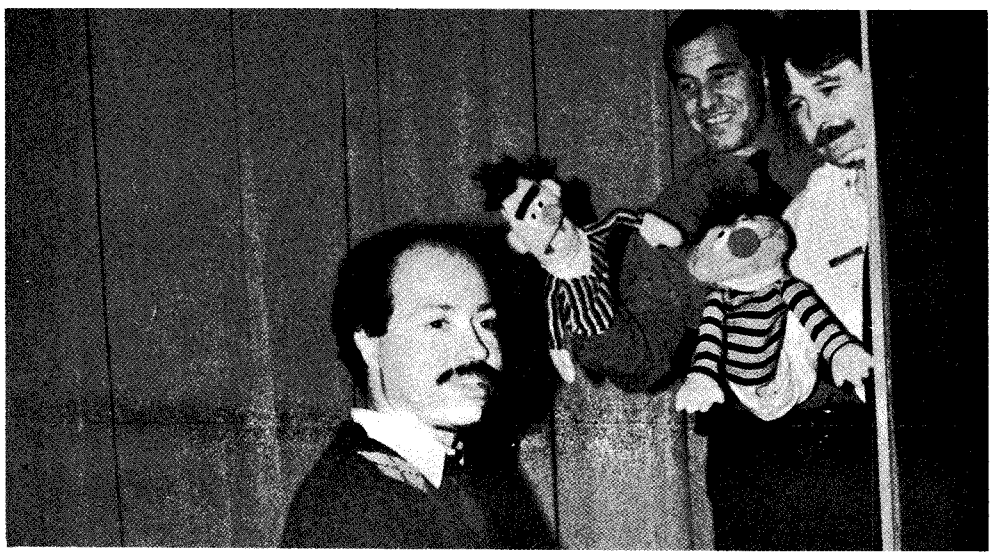


Photo by Peggy Callahan

CTW's Art Guidry (left) explains teaching techniques with the assistance of Sesame Street characters, BERT and ERNIE. Captain Carlos Sanchez (right) and Fire Chief Don Meadows (far right) 'lend a hand.'

On 29 March, the Center hosted the Sesame Street Fire Prevention Safety Workshop. The workshop was conducted by the Children's Television Workshops, New York, producers of the children's educational TV show "Sesame Street."

CTW discussed and demonstrated fire prevention safety techniques in a manner that preschool children can easily understand.

At the invitation of NADC, eleven neighboring fire companies and twenty local Navy activities and Day Care Centers sent nearly sixty representatives for the training.

Optimally, these representatives will take the life saving techniques back into their own communities and they'll tell two friends . . . and they'll tell two friends, and so on, and so on. (MAB)

Og gets healthful hints for handling heat hardships

Once upon a time (6:05 PM (EST), Thursday, 30 April, 4,000,009 B.C. to be exact), Og and his family were sitting down to dinner. "Meat, meat, always meat, triceratops chops, stegosaurus steaks, brontosaurus butt," complained the consistently carnivorous caveman. "Why don't we ever have vegetables?" "What are vegetables, dear?" responded his mate, Lilting Lava. "They're green and yellow plants you eat," answered Og. "Yech," countered Lilting, "what do you think we are, some kind of savages? Besides, Adam and Eve tried that stuff once, and look what happened to them."

Undeterred by this epicurean putdown, Og decided to invent the first vegetable garden. The next morning was unseasonably hot as our hero chose a likely plot of land, and began turning the earth with a revolutionary tool known as a shovel. After several hours of backbreaking labor, and the discovery of another new invention called blisters, Og began collecting fertilizer (which considering the size of the average dinosaur was not a difficult commodity to come by). He spread his "fragrant" findings over the plot, and again turned it over. As he was selecting suitable seeds for his prototype plantings, the hard work, the heat, etc., suddenly got to him. His head began to swim, his skin got clammy, and finally he collapsed.

Lilting Lava found the out-of-it Og, and summoned emergency medical help. The family physician, Dr. Rock Zock, M.D. (Malady Diviner) was called in from playing 18 holes at the geyser pits (Author's note: A very interesting early form of golf which, due to the superheated toxic gases and molten lava, tended to be very hard on both equipment and players.) The doctor examined his now conscious patient and asked standard questions such as: what were you doing before you collapsed, what are your symptoms, did you anger the sky-god Bobo, do you have Blue Club and Blue Rock, etc.

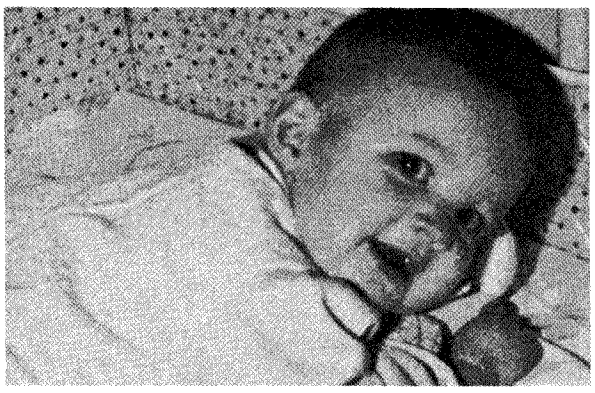
After analyzing the data and saying a few incantations, the doctor arrived at his professional diagnosis. "Og, you're an idiot. Anytime you're going to do strenuous physical labor in hot weather, you have to build up to it, gradually. Trying to do it all in one day is asking for trouble. When you work in the heat, make sure you take frequent breaks, drink plenty of non-alcoholic liquids to replenish body fluids, and if you should start feeling any symptoms of heat stress stop immediately. As far as your back is concerned, learn to lift a shovel just as you would lift any load. Let your legs do most of the work to prevent undue strain on your back. Also, if your hands aren't toughened up, wear gloves to prevent blisters." "Gloves?" asked Og. "Those are animal skins used to cover the hands," responded the prehistoric practitioner. "Finally, if you're going to handle freshly fertilized earth, make sure your tetanus shots are current."

"Well Doc," countered the convalescing caveman, "I've certainly learned a lot from this, and it's given me an idea for a new invention that will eliminate my problem." "Let me guess, responded Doc Rock," "you're going to invent the roto-tiller." "No," replied Og, "I'm going to invent the supermarket. Let some other poor fool do all the work."

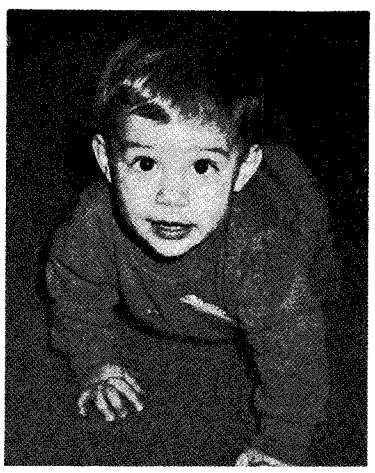
Babies on Parade

Thank you for participating in our parade. The only winners are the parents of these lovely children.

Danielle Carbo — 5 mos.

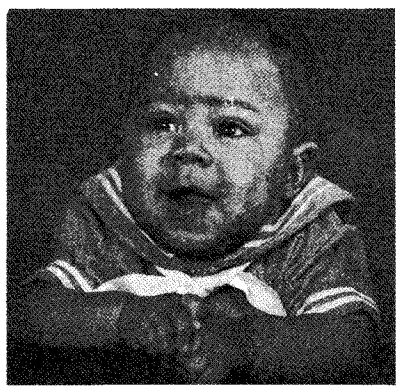


Megan Mayers — 5 mos.



Jeffrey Stancliff — 12 mos.

Heidi Cornell — 14 mos.

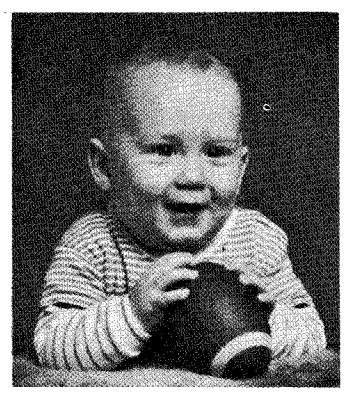


Christopher Valdivieso — 4 mos.

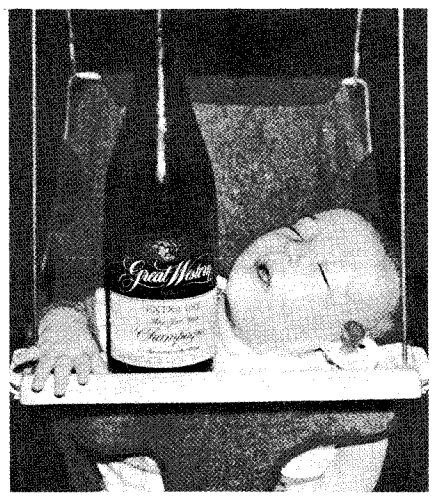
Ted Reeves — 16 mos.

Katie Woods — 6 mos.

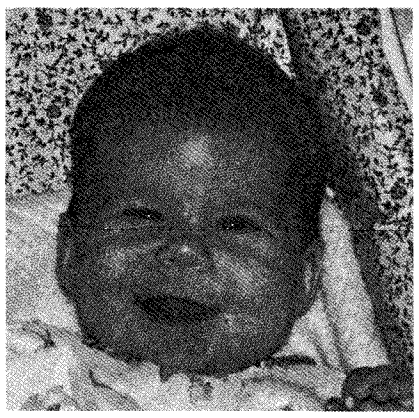
Eric Gould — 8 mos.



Brad Montrey — 14 mos.

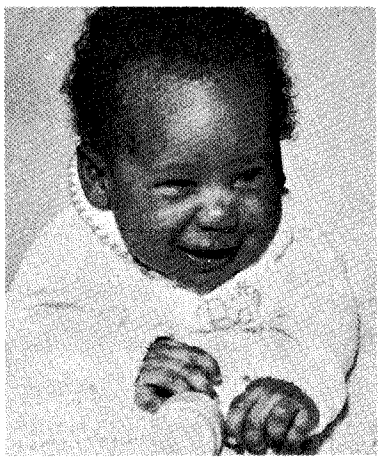


Justin Williamson — 6 mos.



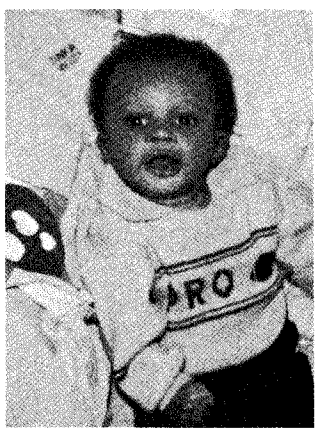
Kelly Ann Kirk — 4 mos.

Sarah Seveney — 10 mos.



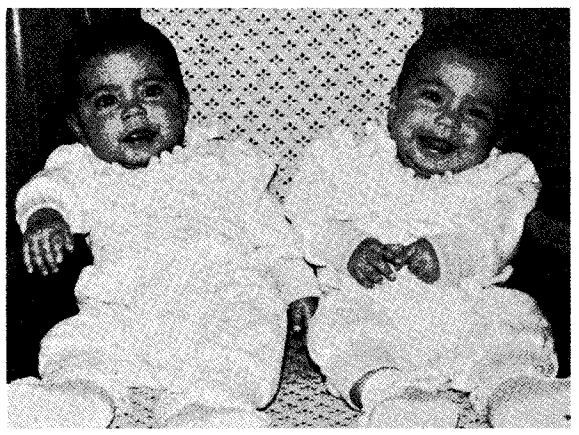
George Smith III — 2 mos.

John-Joseph Perazza III — 8 mos.

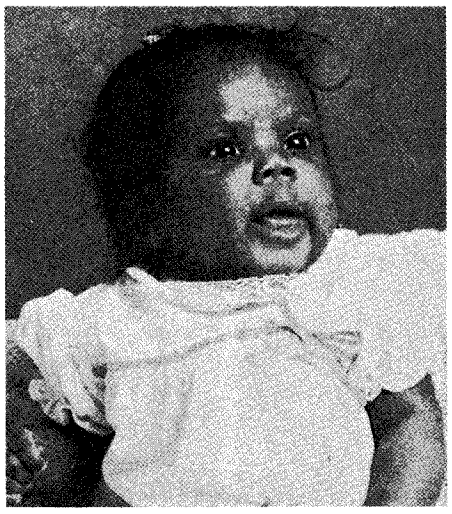


Joseph Cameron IV — 4 mos.

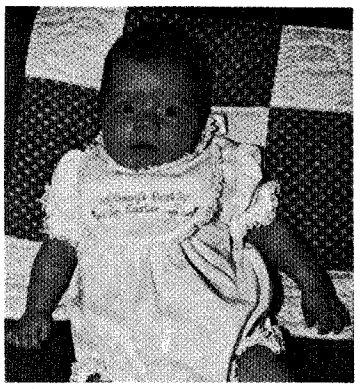
Nicole Grant — 8 mos.



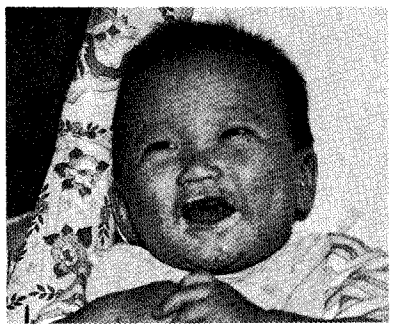
Kelly and Kristen Bily — 5 mos.



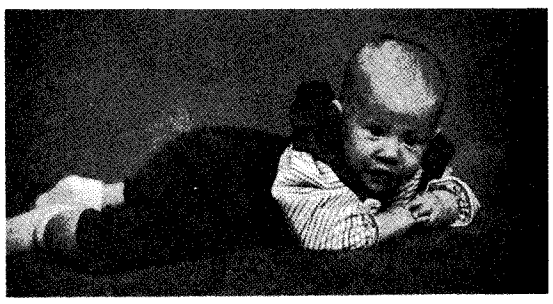
Alicia Willingham — 4 mos.



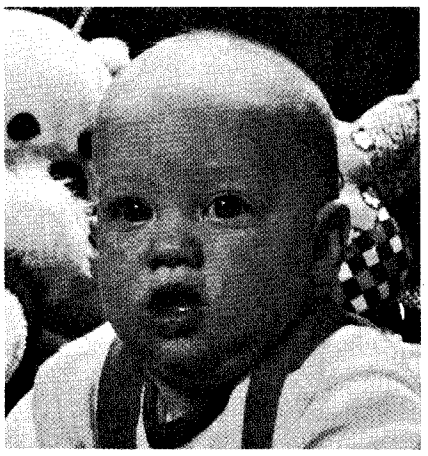
Christina Bowes — 1 mo.



Matthew Macur — 5 mos.



Melissa Bellis — 4 mos.



Scott Bellevou — 10 mos.

Child Abuse — a sensitive issue

By Evelyn D. Harris
American Forces Information Service

You've heard the horror stories. Young children who are "punished" by having their hands held over a flame; emaciated babies, victims of parents who don't want them and don't feed them; or children who are left alone in darkened rooms, closets or basements for long periods of time.

Many loving parents want to revive medieval torture to punish people who abuse children this way. But what about people who have to deal with child abusers professionally?

Captain Marty Zaworski, of the Baltimore County Police Department, has this to say: "When you're going into the home of a child abuser, you have to be careful. You're not there to make an arrest, you're there to protect a child. In most cases, the natural home with an intact family—no matter how bad that family may look to you—is the best place for the child.

"We are all potential child abusers. The difference is, most of us can stop ourselves when we get the urge to take a good hard swipe at our 'screaming brat.' A child abuser either can't control him or herself, or actually believes the 'punishment' is for 'the kid's own good.' "

Unfortunately, in both the civilian and military sectors, too many parents either can't stop themselves, or worse, actually believe they are doing the right thing by abusing their children. Child abuse figures for the United States population as a whole climb a little every year.

Col. Peter McNelis, USA, head of Defense Department's Military Family Resource Center, says that in 1983 there were 6,369 substantiated instances of child abuse and neglect in the military services—14 of which ended in the death of the abused child. Figures for 1984 are not complete, but are not encouraging.

What kind of a parent would abuse a child? Zaworski says that most child abusers were themselves abused as children, but there are other factors. Stress, financial or otherwise, figures heavily. Social isolation, a special problem for military families who live far away from extended family and old friends, is another. Change, such as frequent moves, is yet another. And finally, so is simple lack of knowledge about child development—such as a mother who expects a one-year-old to understand and obey orders.

Children most likely to be abused are those who are born prematurely, those born to unwed mothers or mothers whose husbands have left them, retarded or handicapped children, and unusually difficult children.

There is a bright side to the bleak picture of child abuse. Most child abusers can be helped. Although there are some hardcore abusers whose children must be taken away from them, most child abusers can be educated in anger management and child care, or, if necessary, assigned a housekeeper to help. According to Captain Zaworski, "We seldom have to make a second visit."

In the military, the results of sending child abusers to a workshop on anger management are equally encouraging. At Schofield Barracks, Hawaii, 83 percent of the soldiers who participated in the workshop not only resolved their family violence problems, but became better soldiers as well. According to Marti Speights, Army Family Advocacy Program Coordinator, "They were less likely to blame somebody else for their problems and were more willing to solve their own problems."

Where's the beef?!

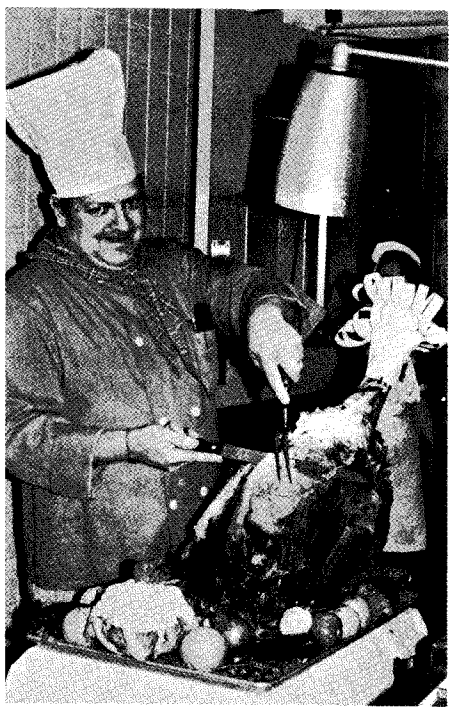


Photo by Regina Gasuk

On March 20th at lunchtime, "the beef" was in NADC's ANCHORAGE cafeteria. Two steamship rounds, at 78 pounds each, were carved to order by Assistant Chef Larry Clark.

Cafeteria Manager Jose Ferrer said, "The Macke Corporation is considering several surprise specials to delight its patrons. This was the first."

A sub . . . or not a sub

Photo be Regina Gasuk

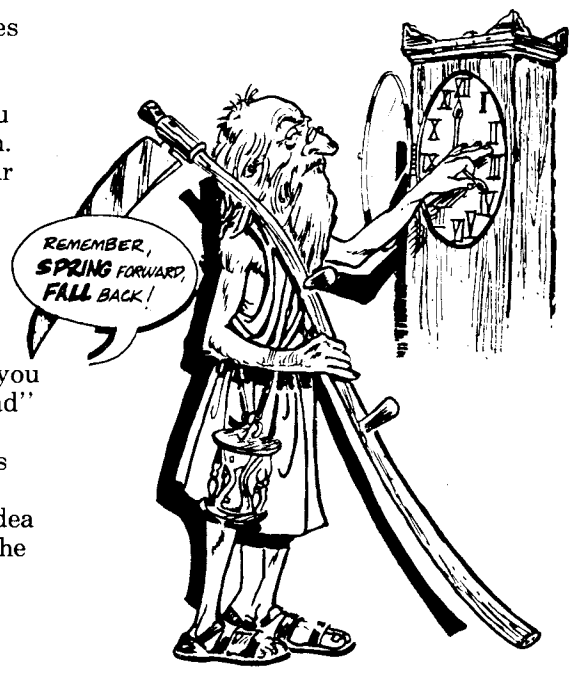
If you think these look like submarines emerging from solid ground, you're not alone. However, looks are deceiving; they are really fuel oil storage tanks. These tanks will supplement the existing three tanks and increase the Center's fuel oil storage capacity from 25 to 30 days worth. This type of fuel is used primarily for heat and hot water. The tanks should be permanently 'submerged' within a month.

Spring forward

If you live in one of 81 counties in Indiana, the state of Arizona, Puerto Rico, the Virgin Islands, Hawaii, or American Samoa, you won't have to wonder why 2 a.m. on April 27 is the appointed hour to do anything about daylight-saving time.

These areas don't observe daylight-saving time and don't have to worry about setting the clocks ahead. But if you live elsewhere in the United States, you should plan now to "spring ahead" on that date.

Official daylight-saving time is relatively new. An Englishman, William Willet, introduced the idea in 1907 in a booklet entitled, "The Waste of Daylight." The United States adopted daylight-saving time on a widespread basis as a fuel-saving measure during both World Wars, but discontinued it after each war. In 1966, Congress passed the Uniform Time Act to encourage daylight-saving time for half the year. The areas named above are exempt from the act.



On this day in April

April 1 *April Fools' Day.*

April 4 *North Atlantic Treaty Organization (NATO) formed, 1949.*

April 5 *Booker T. Washington, black educator and leader, born, 1856.*

April 6 *Cmdr. Robert E. Peary reaches North Pole and raises first U.S. flag there, 1909.*

April 9 *Civil War ends. General Robert E. Lee, commander of the Army of Northern Virginia, surrenders to General Ulysses S. Grant, commander-in-chief of the Union Army, at Appomattox Court House, Va., 1:30 p.m., 1865. Claude William Dunkenfield (W.C. Fields), famous actor, born, 1879.*

April 11 *Civil Rights Act of 1968, expanding rights of Native Americans and prohibiting housing discrimination, signed into law. U.S. Navy accepts its first submarine, the USS Holland (SS 1), 1900.*

April 12 *Confederates fire on Fort Sumter — the Civil War begins, 1861. Space Shuttle Columbia, the world's first reusable manned space vehicle, makes its first flight, 1981.*

April 13 *Thomas Jefferson, third President of the United States and author of the Declaration of Independence, born, 1743.*

April 14 *John Wilkes Booth shoots President Abraham Lincoln, 1865.*

April 15 *The Titanic sinks, 1912.*

April 18 *Paul Revere makes his famous ride, 1775. George Washington proclaims cessation of Revolutionary War hostilities, 1783. San Francisco leveled by earthquake and fire, 1906.*

April 19 *"Shot heard 'round the world" fired at Lexington, Mass., beginning the Revolutionary War, 1775.*

April 23 *Birthday of United States Army Reserve, 1908.*

April 24 *Birthday of Library of Congress, 1800. Secretaries Day.*

April 27 *Birthday of Ulysses S. Grant, commander of Union armies and 18th president, 1822. Birthday of Samuel Morse, inventor of Morse Code, 1791.*

April 30 *Congress establishes Navy Department, 1798. George Washington inaugurated president of the United States, 1789.*

NADC **Reflector**

Volume 30 Number 5 NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA. May 1985

In this issue:

Navy Superior Service Award for Stuebing

Hank Stuebing was honored recently with one of the Navy's highest civilian awards. On April 10, 1985, the Navy Superior Civilian Service Award was presented to him in recognition of his outstanding technical contributions while serving as division manager and software consultant for the Software and Computer directorate.

"I felt very good — proud, grateful, and humble all mixed together," said Stuebing. "After 27 years at the Center, I have never received anything of this magnitude. My trophy case has plenty of room in it for this honor."

Stuebing has been very closely involved in the design and production of time critical, complex software systems for airborne tactical use. The Center is so involved with these systems that age old methods of software development needed radical change in order to produce a predictable, timely, cost-efficient system. The Facility for Automated Software Production (FASP) evolved from Stuebing's efforts. Today this stands as the only significant integrated software development environment within the Navy R&D community. Through the use of FASP and under his leadership a consistent controlled approach to software development has been adopted by numerous Center and other Department of Defense projects.

"By proving that this concept was a good way to develop software for the mission critical systems," explained Stuebing, "similar systems of more advanced types are being built both within the government and industry."

In excess of 100 projects and companies have used FASP. Fifty-nine projects encompassing 687 individual computer accounts are presently using the system. More than 20 million source lines of computer code are resident on the system. In addition the system has been in around-the-clock operation since 1975 with over one million jobs processed to date.

Dave Schimsky, director of the Software and Computer Directorate said, "Hank Stuebing was among the first in the Navy to recognize the need for better, more controllable ways to develop software, especially the complex weapon system software used by the military. He set about devising means by which this software could be developed on commercially available computers, with capable, user-friendly operating systems, instead of the more restrictive and slower military computers which were used until then."

In conclusion Schimsky explained, "Because of Hank Stuebing's foresight and knowledge, the government has been the beneficiary of sound, advanced techniques in a highly complex and visible area. Dollar savings are incalculable and may not even be the most significant aspect of his achievement: the quality and timeliness of the products delivered to the fleet are the real payoffs."

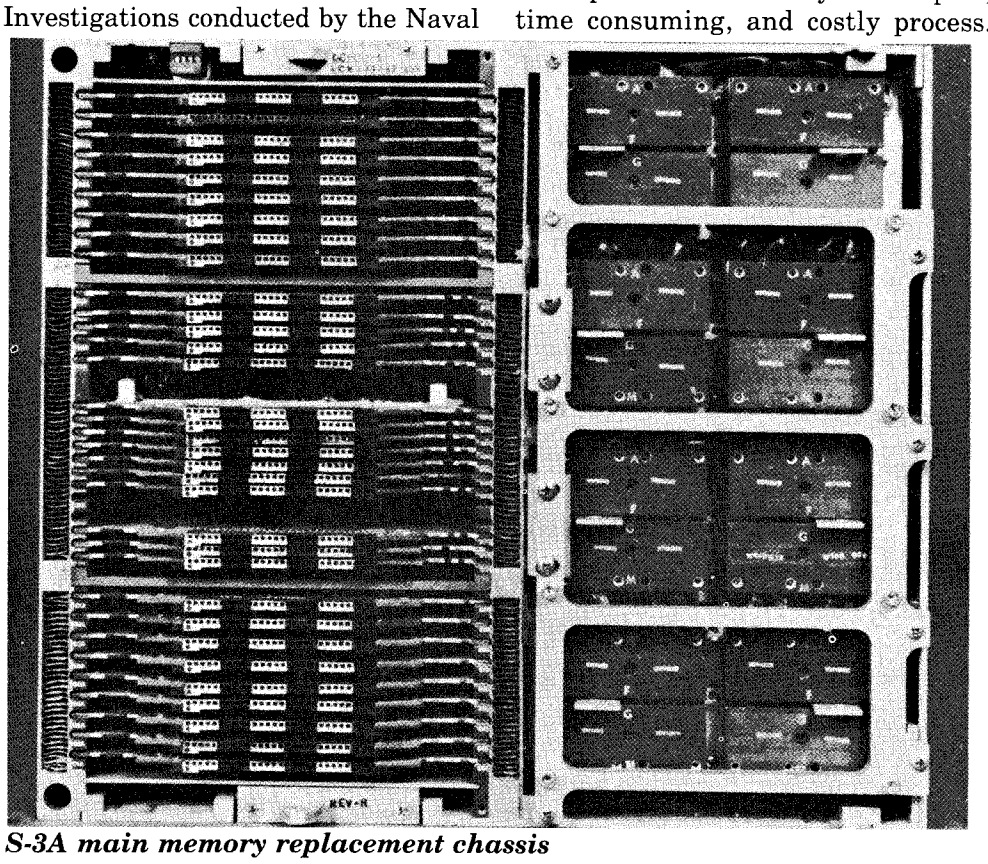
Hank Stuebing receives award from CAPT Edward Sturm.

"It is clear," said Stuebing, "that software will be a dominant item in defense systems for a long time to come; so my goals are to find the most cost-effective ways to create the software while continuing to improve the quality. There will always be the need for these new methods," he said, "whether it is automation or new techniques of design. I am interested in any and all things that affect this."

Stuebing is a graduate of Ursinus College where he received his Bachelor of Science in both Physics and Math. Subsequently he received his Masters in Computer Engineering from the University of Pennsylvania where he has also done additional graduate work in Physics. Stuebing is chairman of a Joint Service Team designing the next generation of Software Engineering Environments. He is also the national coordinator on a NATO report of the same subject.

Memory technology advances

The U.S. Navy has encountered reliability problems with the AN/AYK-10B(V) General Purpose Digital Computer (GPDC) which is the mission computer employed in the S-3 carrier-based ASW aircraft. Investigations conducted by the Naval Air Development Center and Sperry Defense Systems, St. Paul, MN, have revealed that a main source of failures, which occur in the plated wire memory module, is caused by corrosion. Repair of the plated wire memory is a complex, time consuming, and costly process. This combined with the high failure rate, has created a serious availability problem for the S-3 with a resultant impact on fleet operations. In addition the original manufacturer, Sperry Defense Systems has discontinued manufacturing of the memory module. This combined with the repair problems indicates that eventually the S-3 will be without computer memory.



S-3A main memory replacement chassis

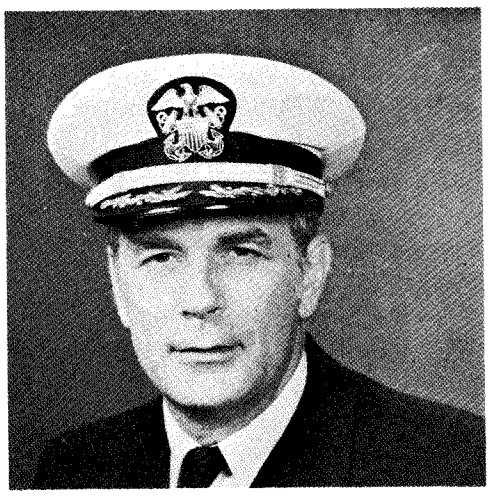
As a result of studies of alternative solutions to the problem, the U.S. Navy has established a memory improvement program. In essence, this program involves the development of an entirely new memory consisting of a random access complementary metal oxide Semiconductor Module (SCM). The new module will provide the advantages of four times the memory capacity (from 32K to 131K 32-bit words) and decreased size, in addition to providing improved reliability. The development of the SCM began in 1983 and a U.S. Navy contract to Sperry Defense Systems, St. Paul, MN was awarded for the design and fabrication of two Advanced Development Models (ADMs).

Studies conducted by the Canadian Aurora Software Development Unit (ASDU) concluded that the same memory computer exists within the AN/AYK-502 General Purpose Digital Computer and that they are faced with the same repair/discontinuation problems. A cooperative effort between the United States and Canada has worked out to the benefit of both countries. The United States would pay for the research and development of the new memory improvement program and the Canadian government would be responsible for the full scale production of the system with the United States taking advantage of their contract.

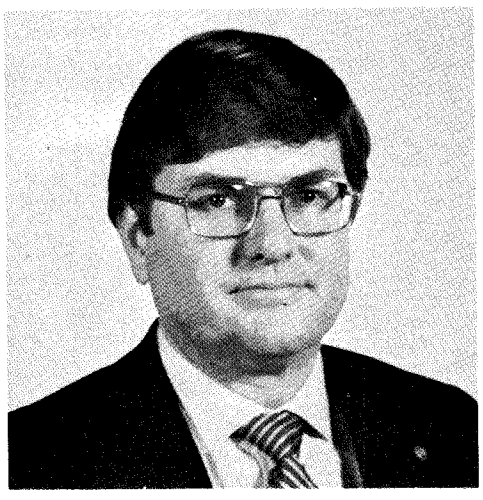
★ ★ ★ ★ ★ ★ ★

Current program planning is for the Canadian Department of National Defense to contract with Sperry Defense Systems, Canada for the design, fabrication and in-plant testing of Service Test Models during the Full-Scale Engineering Development phase. The U.S. Navy will participate in this phase by providing one SCM-ADM and technical information under the Information Exchange Program that exists between our two countries.

Command Corner



CAPT Edward J. Sturm
Center Commander



Mr. Robert S. Buffum
Technical Director

The winds of change are blowing strong in Washington. As you no doubt know, the Secretary of the Navy has disestablished the Naval Material Command Headquarters. This disestablishment is precipitating changes, many of which will impact our Center and the other Naval Material Command Laboratories.

Two of the more significant changes were primary discussion subjects at the recent CO/TD meeting.

The laboratory community, including the Office of the Director of Navy Laboratories, will report to the Chief of Naval Research who in turn will report to the Assistant Secretary of the Navy (RE&S). The System Command (SYSCOM) Commanders will report to the Chief of Naval Operations. This new reporting arrangement moves us organizationally farther away from the SYSCOMS, our primary workload sponsors, which is a matter we must be sensitive to. While in the past SYSCOM sponsor, because of NAVMAT organizational ties, would naturally look to the laboratories for his support, that tendency will be diminished. It behooves us to be aware of this new reality and renew our efforts to be responsive to the needs of our SYSCOM sponsors.

The second significant change relates to the way that the 6.2 technology work will be managed and funded. This type of work, some $50M per year for NADC, is the life blood of a Navy Laboratory and is what distinguishes Navy Laboratories from other types of Navy Shore Activities. In a move that is seen as a positive change from the Navy Laboratories' perspective, the decision has been made to fund the 6.2 program direct from the Office of Naval Technology, one of three offices under the Chief of Naval Research, to the cognizant laboratory. Commensurate with the direct funding path, the authority and responsibility to plan and execute the 6.2 program is being firmly placed in the hands of the cognizant laboratory Technical Director. The challenge of the laboratories will be to keep the technology programs relevant to the needs of the technology customer, the SYSCOMS. The mechanisms to ensure this relevancy are still being designed.

You can rest assured that Center top management is very much attuned to these external changes and, as managers of internal change, is working hard to identify and implement those changes that will be necessary to keep the Center in a position to effectively perform its mission.

CAPT EDWARD J. STURM
Center Commander

ROBERT S. BUFFUM
Technical Director

Navy reorganization

In a major change to the Navy's acquisition management structure, the Secretary of the Navy and Chief of Naval Operations announced on 9 April 1985 the disestablishment of the Naval Material Command (NAVMAT).

This action was to decentralize acquisition management in the Navy, thus streamlining the decision making process. The principal features of the new organization include:

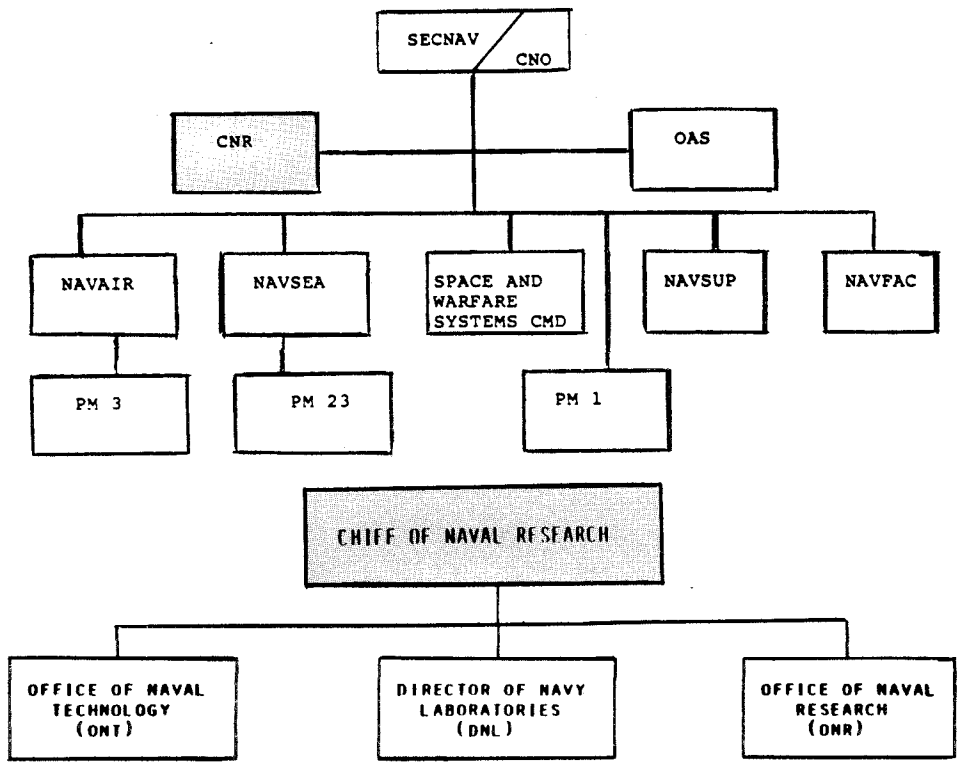
• Elimination of the CNM four star billet and the NAVMAT Headquarters Systems Commands report directly to CNO for mission execution and to SECNAV for policy matters.

• A new Space and Warfare Systems Command will replace NAVELEX and assume responsibility for space warfare and integration of command and warfare systems across the entire battle group.

• The Chief of Naval Research (CNR) will provide for and manage R&D Centers and laboratories through the Office of Navy Laboratories. The personnel currently in MAT-05 are being transferred to CNR and will form that office headed by Mr. Gary Morton, Director of Navy Laboratories.

• The Office of Naval Acquisition Support (ONAS) will be formed from the residual elements of the NAVMAT Headquarters Command.

• PM-1 will be stand-alone command. PM-3 and PM-23 will report to COMNAVAIR and COMNAVSEA respectively. These changes have been directed effective 6 May and result in the Wiring Diagrams shown below.



OOPS!

PRINTERS ERROR

In the April issue of the REFLECTOR, on page 4, the top right photo was inverted. This time the names match the photo — Greenies Golf Team kneeling left to right: George Gebert, Bill Achuff (Captain), and Chuck More. Standing left to right: Dick James, Cliff Tierney, Fred DeLarso, Ed Hughes, Tom Gledhill, John Beckum.

Letter to the Editor

Dear Editor,

In lieu of all the negative publicity NAVAIRDEVCEN is receiving, is the Center doing anything to redefine its goals and objectives, how it does business, its responsiveness to sponsors, high overhead rates, etc. Perhaps it is time to reassess ourselves and the direction in which we are going.

TED KOPP
VP Project Engineer

Dear Mr. Kopp:

The negative publicity revolves around the potential of base closure. This discussion itself generated significant positive action and publicity by elected representatives and the media. Township officials, area businessmen, and local newspapers have come together on behalf of the Center.

The Assistant Secretary of the Navy in a letter to Congressman Peter Kostmayer reaffirmed NADC's importance and assured him there is no plan of action to close NADC Warminster.

This situation has no bearing on our goals and objectives, however, as an on-going process concerning NADC's future, top management has spent considerable time in the last year defining the near-term and long-term goals for NADC. Recall in the October 1984 issue of the Reflector, six major goals were identified as a guideline for this planning. They have been expanded and will form the basis for the Strategic Planning effort currently underway. The Center Commander, Technical Director, and Center Management Group are meeting twice weekly in order to accomplish this process rapidly. As soon as the results of this planning are available they will be published in the Reflector.

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Technical Director ..... **Robert S. Buffum**
Public Affairs Officer ..... **James S. Kingston**
Editor ..... **Regina Beans Gasuk**
Assistant Editor ..... **Mary Ann Brett**

Big sisters/brothers turn apathy to empathy

You've encountered APATHETIC people, right? . . . going their apathetic ways, living their apathetic lives. This lack of concern is, in itself, the root of their's and many other people's problems.

Fortunately, Big Brothers and Big Sisters of Bucks County are in the business of turning APATHY into EMPATHY: *E*veryone *M*otivated to *P*ositive *A*ttitudes *T*oward *H*elping *Y*outh!

Big Sisters of Bucks County currently has 50 girls paired with Big Sisters and their number is growing. From 8 to 18, these girls face emotional problems and insecurities that exist from lack of a female role model. Big Sisters representatives act as case workers to match girls and Big Sisters. The Big Sister meets with her caseworker once a week for the first four to six weeks. Caseworkers meet with the girl and her family at the end of the first month and then once every three months.

Big Brothers of Bucks County has teamed about 75 boys with Big Brothers, but there is an equal number of boys on the waiting list. Big Brothers ask volunteers for a commitment of at least one year because losing a Big Brother after a short time can be interpreted by a youngster as one more rejection by an adult and these fatherless boys do not need any more rejection in their lives. Most men's commitments continue long after that; it grows into a long-lasting friendship.

All that is required for Big Brothers and Sisters is a couple of hours of your time each week to give to a boy or girl. No special talent is needed except listening, understanding and caring.

Men and boys, women and girls are matched by interests, personality, age and proximity to each others home. Judy Reademan, Big Brothers area coordinator said, "When we make a match we try to match a big and little within a six mile radius so the big brother can see his little brother with ease." Both Big Brothers and Big Sisters provides counselling, periodic meetings and group activities.

Two Big Brothers are NADC employees. Nick Tavani in SATD got started by taking over LCDR Seckinger's little brother when he was transferred to Washington. Tavani enjoys his little brother Alex, who he has been seeing for a year now. Sometimes when he visits he spends time with Tavani's own sons who are close in age to ten-year old Alex. They do ordinary things like playing computer games, playing catch, eating at fast food places, and working on Cub Scout badges. Cecilia DeMuro, area coordinator for Upper Bucks County Big Brothers feels Tavani's welcoming Alex into his family life is very beneficial because it gives Alex the opportunity to grow and learn about family life in a family atmosphere. Tavani also gives him that important time alone that makes Alex feel special. "Alex and my boys are good playmates. Alex in particular has a great personality with a good sense of humor and I enjoy the time that I spend with him," said Tavani.

Wayne Shuey of the Aircraft Department is also a Big Brother to 13 year old David. Their relationship is just a couple months old. "I got into Big Brothers because I like to work with kids. I've coached softball, soccer and baseball." Shuey feels this experience will help him years from now to understand his own son (only 13 months old) better. Shuey explained that David's mother has done a wonderful job with him and that he is very well-disciplined. He said that she is trying to teach him about responsibility and Shuey feels he is a good example of this because of his commitment to the Navy. Because of his work, he has even had to cancel a couple of meetings with David, but rescheduled them later. Pete Weaver, director of Bucks County Big Brothers said, "Mothers are very cooperative and try to accommodate Big Brothers schedules."

What's in it for the Big Brother or Sister? A chance to care and to feel good about giving a little of themselves to a child who needs them. It is an opportunity to help boys and girls help themselves toward responsible manhood and womanhood, careers and family life. Marcia Shaffer, Regional Liaison of Big Sisters for Central and Upper Bucks County, commenting on a recent Big Sisters meeting, said, "Big Sisters say things like, 'it makes me feel younger,' 'I feel more useful,' and 'sometimes I can read her mind and other times she knocks my socks off.' A lot of the volunteers say they get more out of it than the children."

A popular Big Brothers slogan once said, "You never stand so tall as when you bend down to help a child." Maybe you can stand that tall. Representatives from Big Brothers and Big Sisters will visit the Center on Wednesday, May 29th from 1100 to 1330 in the auditorium. They will have information and slide presentations and can answer any questions about their programs. Additional information can be obtained by contacting the PAO on extension 2290.

Photo by Regina Gasuk

Left to right: Cecilia DeMuro (Area Coordinator for Upper Bucks County Big Brothers), Nick Tavani (Sensors and Avionics Technology Directorate), Wayne Shuey (Aircraft Department), Judy Reademan (Big Brothers Area Coordinator).

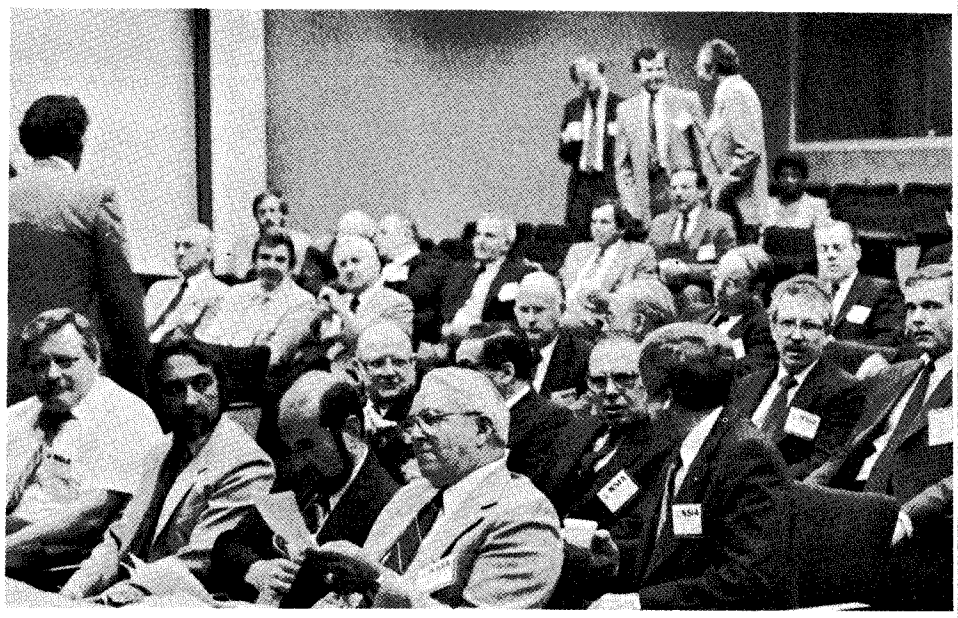


Photo by Regina Gasuk

Center hosts NSIA conference

Over 100 government and industry representatives attended the National Security Industrial Association, Aircraft, Detection and Classification Subcommittee meeting held at NADC on 8 and 9 May 1985. Peter Santi of the Sensors and Avionics Technology Directorate coordinated the many technical presentations that took place during the conference. Subjects such as Surveillance Sonobuoys, Horizontal Line Array, Arctic ASW, Broadband Sea Test, ASW Radar, P/3C UIII Enhancements and Man-Machine Information Transfer were addressed.

On the second day the group visited several laboratories such as In-buoy Processing, Acoustic Data Fusion, Vertical Flight and P-3.

The Center has hosted this meeting for more than ten years.

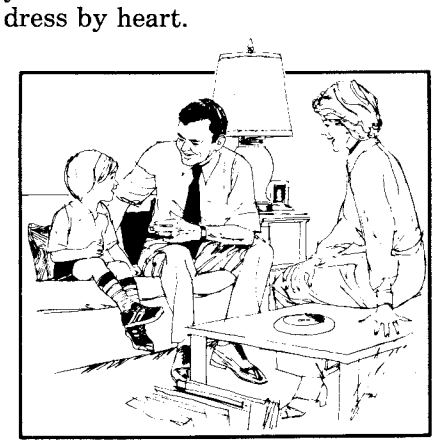
Children home alone

Helpful ideas for parents

If a school-age child is properly prepared, staying home alone for a reasonable amount of time can present an opportunity to gain in maturity. But whether you plan to leave your school-age child home alone occasionally while you run an errand or on a regular basis, he or she will be safer and happier with a little preparation.

Not all children are mature enough to be left alone even for short periods of time. "Spaces are available in school-age programs in all of the services for all parents who need them," says Bonnie Hicok of the Army's Office of Child Development Services. But if your child has the maturity, here are some tips to make his or her time alone more pleasant and safe:

- Tell your child to keep his or her key hidden—no use advertising the fact that the child will be alone. Leave an extra key with a dependable neighbor.
- Tell your child to say, "My mother (or father) can't come to the phone right now," when answering the phone. As for the door, police recommend that a child alone look through a peephole and say through the door to a stranger, "My father (mother) is busy right now." Some burglars are more likely to come in if they think no one is home. Be sure you have a good deadbolt.
- Assign some reasonable duties for the child to perform while at home. Older children can start dinner. Let the child know which friends can visit while you are
- Have a plan for emergencies. Provide the child with a flashlight and fresh batteries. Put a first-aid kit in a convenient place, and teach your child how to use it. Plan and practice a fire escape route.
- Post phone numbers near the telephone for the doctor, police department, poison center and your place of work—plus that of a trusted friend or relative. Be sure your children know their home address by heart.



CNR greets AFCEA

Admiral J. B. Mooney, Jr., Chief of Naval Research was the guest speaker on 9 May 1985 at the Armed Forces Communications and Electronics Association (AFCEA) luncheon meeting held at the Center. Captain Fred Wright, Chief Staff Officer (right) greets RADM Mooney (left). Robert Buffum, Technical Director (center) and Captain Edward Sturm, Center Commander (not shown) escort RADM Mooney.

Keane named senior executive

By Betty Anne Mauger

"I have fun making a difference" is the secret of success which has helped advance the career of John J. Keane, a 22-year veteran of NADC. Pending final SES approval by OPM, Keane was recently selected as the Director for Submarine and ASW Programs, Office of the Assistant Secretary of the Navy for Research, Engineering and Systems.

Keane cites the experience he gained on Center as a project leader on the VLAD sonobuoy development team as being partially responsible for his achievements. During that assignment, he broadened his technical background with the development of managerial skills in such areas as contract procurement and budget profiles. Keane furthered his career enhancement with a temporary NSTEP assignment as the Air ASW Assistant to the Air ASW Acoustic Systems Program Manager in NAVAIR. It was here that he gained visibility in the Washington arena and valuable insight into the political processes behind systems acquisition. "I was able to mature, gain contacts," Keane commented, "and the experience made me more appreciative of the program manager's side of the story."

Since July 1984, Keane has been on another temporary assignment, this time to OASN (RE&S), and was responsible for furnishing an AIR influence on the Low Cost Sonobuoy Program. He noted that his technical background was singularly instrumental in his efforts on that program. He observed, "I was amazed at how many policy meetings I attended that were devoid of key, technical people. I was able to draw on my technical experience, during those opportunities, to significantly influence decisions. I enjoyed being that cross-point of information."

In recognition of technical contributions made while he was the senior technical specialist in the Sensors and Avionics Technology Directorate, Keane was recently honored with the Navy Superior Civilian Award.

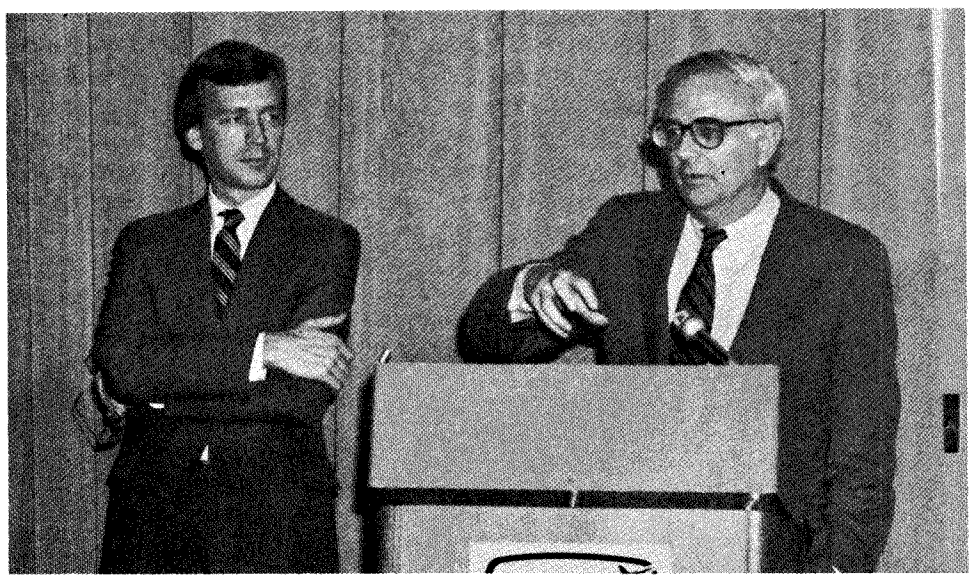


Photo by Cathy Burian

Congressmen concerned

Eighth District Congressman Peter Kostmayer (left) and Wisconsin Congressman Les Aspin, House Armed Services Committee Chairman visited NADC on 19 April. After a tour of the Center, they addressed local township officials, TV and press media, and Center personnel on the potential closure of NADC.

Navy relief springs into action

By James Tidwell

Springtime at NADC brings warmer days, thoughts of picnics, baseball games, vacations, and the annual Navy Relief Fund Raising Campaign. To the many military and civilian employees at the Center Navy Relief means the many traditional events that surround the annual drive. But to many Navy and Marine Corps personnel it means much more. It represents emergency help in times of unanticipated financial crises, assistance recovering from natural disasters, visiting nurses and medical care programs for housebound wives and widows, and many other worthy endeavors.

The annual drive for funds for Navy Relief is held each year during the period from 4 May through 6 June to commemorate the Battles of the Coral Sea and Midway which occurred on those dates. During this time all Navy and Marine personnel, and their civilian friends and supporters are asked to contribute to the Society so it can continue to provide assistance when needs arise.

Founded in Philadelphia

Interestingly, the Navy Relief Society was founded in the Philadelphia area by a physician, Dr. William White. Prior to 1903, it was a tradition aboard ship to pass a hat around the wardroom table to obtain funds to assist in caring for widows and children of Navy personnel. Dr. White suggested that instead of "passing the hat" the entire receipts of that year's Army-Navy football game be made available for the relief of widows and orphans of both the Army and Navy. The idea was accepted and the proceeds, amounting to $18,000, were divided equally between the two services. The Navy lost the football game (40 to 51), but instituted one of its most worthwhile organizations when the Navy Relief Society was incorporated two months later in January 1904. During the first year, seven auxiliaries were established. By 1924, branches were located at twenty-four major Naval stations and Marine Corps bases. Today there are over 125 Navy Relief Offices ashore and afloat around the world, with over 3,000 full and part-time volunteers manning the offices.

Local area sailors and marines are provided assistance through the NAS Willow Grove Branch Office of the Navy Relief Society. Last year 176 loans totaling over $57,000 and 15 grants of about $4,000 were made from the local office.

Strong NADC support

This year's raffle grand prize is a vacation for two to Hawaii with a stopover in San Francisco. The second prize is a trip to Disney World in Florida. In addition to the raffle, events will include a dunking booth, pool and golf tournaments, sandwich and other food sales, a "jogathon" and much more.

The Naval Air Development Center has traditionally provided strong support of the Society's annual drive. This year is no exception. Center Commander, Captain Sturm, has expressed his full support of the drive and encourages all Directorates to be enthusiastic and active participants in the campaign. Commander Mumford will be this year's Campaign Chairman.

Watch for further announcements of prizes and events in the *Plan of the Day* and *The Log*.

Parry merits medal

On 16 April 1985, CDR David J. Parry, previous S-3 Program Director, joined the ranks of those officers who have been awarded the Meritorious Service Medal.

Parry was ordered to NADC in July 1983 and retired from active duty in April 1985 with 26 years of Naval service.

As S-3 Program Director, Parry was responsible for this $20 million major command-level program supporting the current S-3A weapon system and development of the follow-on S-3B configuration. His successes in this area merited the award.

During a ceremony in the Center Commander's office, Parry was read a citation signed by ADM James D. Watkins, Chief of Naval Operations for the President of the United States:

"For outstanding meritorious service as S-3 Program Director . . . from July 1983 through March 1985. CDR Parry's superb performance during this period was highly instrumental in providing Carrier-Based Fixed Wing ASW with an improved capability through his efforts to develop the improved Communications Control Group and the improved system computer memory . . . The exceptional leadership, professional knowledge, and management ability which CDR Parry displayed were recognized and widely respected throughout the NADC, the NAVAIRSYSCOM, and the operational Carrier-Based ASW Forces. (MAB)

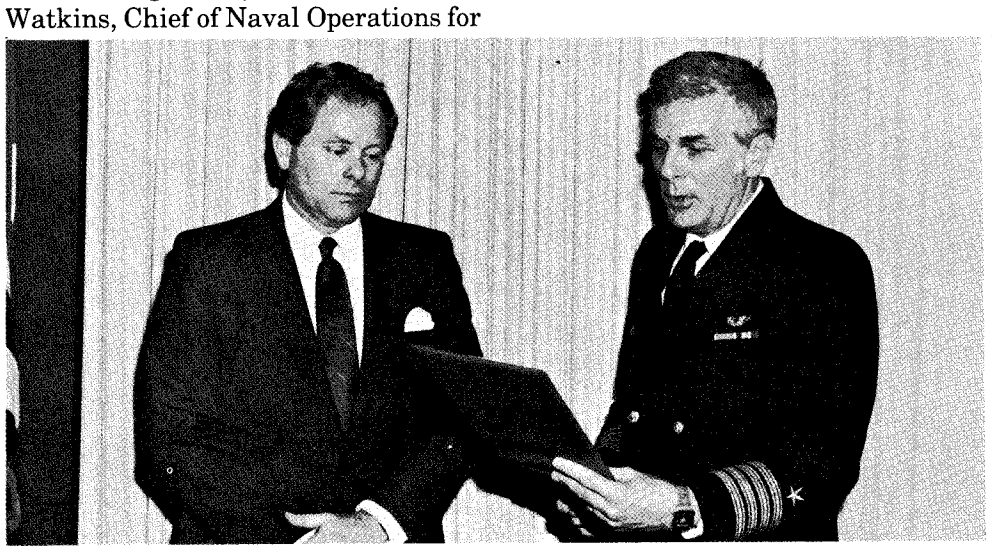


Photo by Cathy Burian

David Parry receives medal from Center Commander.

Three honored as Meritorious Civilians

On 10 April, Dominic Ottaviano, Michael Hess, and Gregory Catrambone each received the Meritorious Civilian Service Award. These awards were selected and presented by Center Commander CAPT Edward J. Sturm and earlier this year presented to John Wrigley (Code 40A) and Joseph Spodaryk (Code 02).

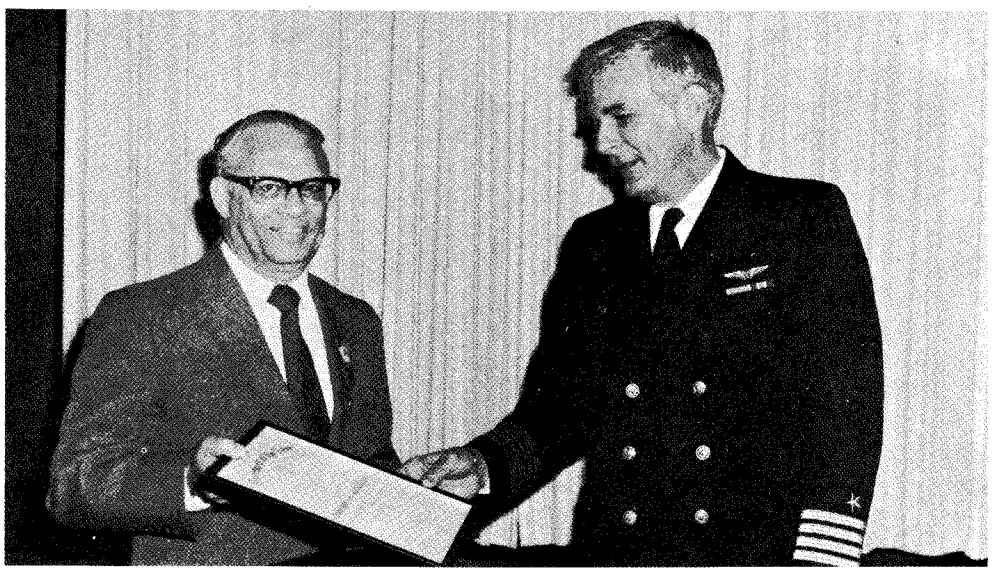


Photo by Chuck Fichera

Dominic Ottaviano receives his award from CAPT Edward Sturm.

Dominic Ottaviano

Ottaviano is the Deputy Division Superintendent of the AeroAnalysis Division in the Aircraft and Crew Systems Technology Directorate. He was selected for the award "... in recognition of his technical accomplishments, managerial skills, and administrative capabilities."

Photo by Chuck Fichera

Michael Hess receives his award . . .

Ottaviano's technical work has been principally in aerial targets and has resulted in the development of systems such as the BQM.34E Supersonic Firebee and the MQM-74A Aerial Target. These systems are utilized for anti-air weapons testing, evaluation and fleet training and have had significant impact on fleet readiness.

A 32-year NADC employee, Ottaviano has the distinction of receiving the Project Leadership award in 1982 for his work on the Aerial Target Program.

Michael Hess

Hess, an electrical engineer in the Electro-Optics Development Division of the Sensors and Avionics Technology Directorate (SATD) has his Masters degree from Stanford University. He serves as the senior technical specialist in SATD and was selected for the award because of his outstanding technical contributions in airborne infrared systems and sensor technology since 1980.

The citation on his award credited him for initiating and executing major technology programs critical to the development of advanced airborne reconnaissance and surveillance systems. It said, "Your contributions have set the direction for the next decade of research and development in naval airborne infrared equipment."

Hess said, "This award means more to me than the others. It's the first public, technical acclaim I've received."

Gregory Catrambone

Catrambone, an electronic engineer in the Microwave Technology Division of the Sensors and Avionics Technology Directorate, was nominated for this award because of "... superior and oustanding technical and programmatic contributions while providing extensive, accurate, and timely technical support and consultation in a wide range of radar and avionic technologies."

Catrambone has prime technical responsibility for the A-6F radar program. He personally defined the detail requirements of the radar system including all modes and characteristics, and personally prepared the most demanding portions of the radar specification. He also technically led the Navy's technical evaluation of radar proposals and briefed his results up through the Assistant Secretary of the Navy levels. (MAB)

Photo by Chuck Fichera

. . . and Gregory Catrambone receives his award.

Savings bonds — safe, secure, affordable

The Secretary of the Navy released a message in April 1985 addressing the 1985 U.S. Savings Bond Campaign. It explained that for more than 40 years, U.S. Savings Bonds have provided one of the safest and most secure means of saving. Bonds offer an even better deal today. Instead of a fixed rate of interest, bonds now offer a market-based variable interest rate. While there is no ceiling on how much bonds may earn, there is a built-in guaranteed minimum return to protect bond holders and buyers from a sharp drop in market rates. This new interest formula, plus the continued tax advantages, make savings bonds a favorite savings instrument for millions of Americans. The present interest rate is 10.94%.

Savings Bonds are available in affordable increments starting at $3.75 per payday for civilians and $6.25 per month for military. While there are larger increments, it is not so much the amount that is saved, but the systematic savings that builds personal security.

Secretary of Defense Weinberger was quoted in the same message as saying: ". . . One of the easiest, most dependable ways to save regularly is through our payroll savings plan for U.S. Savings Bonds. An amount you specify is automatically set aside from each paycheck toward the purchase of bonds. Money accumulates steadily providing a nest egg for future needs. Series EE bonds earn 85% of market rates when held at least five years, and there is no upper limit. Interest is exempt from state and local income taxes, and federal income tax can be deferred until bonds are cashed or reach maturity. EE bonds also offer a unique guarantee — a minimum return of 7.5%, no matter how low interest rates may drop, when the bonds are held at least five years.

"When the canvasser calls, carefully consider how bonds can help you achieve your savings goals; then sign up for the payroll savings plan or increase your present allotment. It is an easy convenient method of saving regularly that offers tax advantages and near market interest on small sums of money."

NADC's Savings Bond Campaign will be conducted during June. Edwin Sinnamon (Code 041), as in recent years, is the campaign chairman. A savings bond representative will be assigned to each Directorate/Department for the duration of the campaign. Any questions may be directed to Sinnamon on extension 2164 or to the representatives who will be assigned at the kickoff meeting. (MAB)

Men's All-Stars shine in June

By Charlie Destra

The men's softball All-Star game is fast approaching (June 20) and the league is exploring ways to drum up interest in the annual affair.

Among the suggestions put forth by league commissioner Jim Kearney: a raffle to draw a prize for a lucky fan and the introduction of a Most Valuable Player (MVP) trophy to the game's top star.

"We need to have more spectator involvement in the All-Star game," Kearney said. Indeed, last season's game was an exciting one but poor attendance put a damper on the result.

Kearney is planning to have refreshments, snacks, and bar B-Q grills available for the fans' use. He also would like to shift the game from drab Sailor's field to the Inertial field, but lack of restroom facilities (at Inertial) hinders that idea.

Three representatives from each team make the All-Star game. Selections are usually voted upon by team members. Last year's game pitted Division I against Division II, but this season the league has only one division. Kearney got around the problem by randomly alotting numbers for each team so that odd-numbered teams will face even-numbered teams in the contest.

The "Odds" will feature the Ballbusters, Phantoms, 8th Inning, Agent Orange, Bearcats, Druids and Rebels. The "Evens" include the Granfalloon, Misfits, Guzzlers, Pacer, Renegades, Nightriders and Devils.

Hopefully, this year's game will have a strong turnout. But remember what Yogi Berra said concerning declining attendance at a major league ball park: "If people don't wanna come out to the park, nobody's gonna stop 'em."

Center's twilight golf league season begins

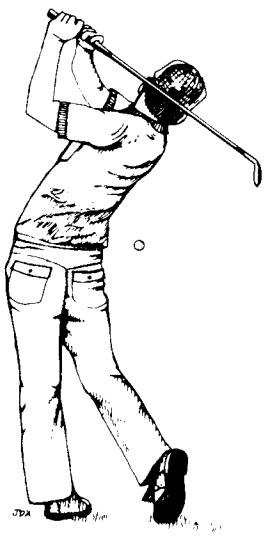
By Jim Bethke

The NADC Twilight Golf League's regular season began May 1st and will run through the summer. Golf League teams play on 3 courses: Bucks County Country Club, Northampton Country Club and Neshaminy Valley Golf Club.

The league consists of 19 teams with a total membership of 190 golfers, that are divided into two divisions. Golf matches are held on Wednesdays and they consist of individual and team competition each vying for match and metal play points.

At the end of the season the top five teams from each division compete in four weeks of playoffs which includes an 18 hole league championship match.

The year winds up with an all day/18 hole outing which includes lunch and dinner buffets and awards ceremony.



The NADC RECIPE REVIEW

Spinach Pies

This month's recipe is provided by Juliana Danche, (Code 8456, x-1734) who will receive a **$50 Bond** from the Food Service Board. This recipe will also be served in the NADC Cafeteria. Submit your recipes to Mr. Jose Ferrer, Cafeteria Manager. One winner will be selected each month.

2 pkgs frozen spinach
2 pie shells
1 pt. sour cream
1 cup mushrooms
2 cups Sharp cheddar cheese
1 tsp. salt
4 eggs
1 large onion

Brown onion and mushrooms in butter or margarine. Cook spinach as directed and drain well. Mix egg, sour cream, salt and cheese together. Add onion and mushrooms and spinach and mix well. Fill pie shells, dot with butter and sprinkle with parmasean cheese. Bake at 350° for 1 hour.
Great for dinner with salad.

LOOK FOR THIS RECIPE TO BE SERVED IN THE NADC CAFETERIA

Cut here for file card

POP - UPS

By Charlie Destra

At press time, the season was only two days old but early winners included the Guzzlers, Misfits, Devils and Bearcats .....

.....The Guzzlers edged the defending champion 8th Inning, 13-11, Jay Ward homered .....

..... The Misfits won 19-1 over the Phantoms thanks largely to Mickey Rudock's double, triple, homer and 5 RBIs. Pitcher Greg Heydet accomplished a rare feat, striking out the side on 9 pitches in the second inning .....

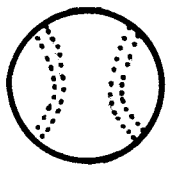
..... When I think of Heydet I think of Yogi Berra's 1963 comment regarding Sandy Koufax: "I can see how he won 25 games this year, what I can't understand is how he lost 5" .....

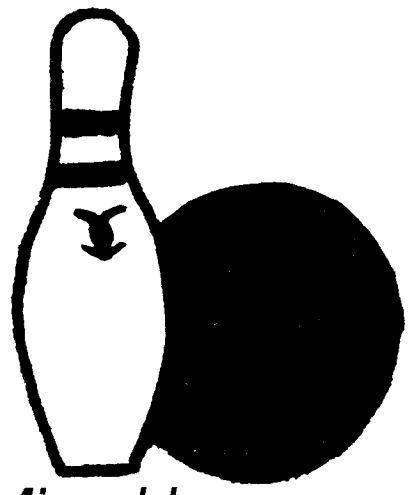
..... The Devils squeezed by Agent Orange, 5-3, paced by a George Reichl home run .

.....
The Bearcats crushed the Pacer, 17-0, on Adrian Hirbir's 2 home runs and 6 RBIs .....

.....The first league fine was assessed to Commissioner Kearney's Misfits for not having a team representative at a meeting. You can't say Kearney's partial to his team ...

.....
The commissioner expresses his appreciation for all the cooperation received from the league officials, with special thanks to John Markow and John Bowes.





Mixed league season ends

By Tom Reiter

The Mixed League ended its' regular season with a three team tie in the A Division. The Screwballs broke the tie by coming from nowhere to win a special total pin rolloff by two (2) pins. Congratulations to Captain Pat Tease's Screwballs, Cathy Burian's Lucky Strikes and the first half winners — Bob Geyer's Alley Cats and Cliff Tierney's Raiders. Results of the four team championship rolloff will be published in the next issue along with individual award accomplishments. See you at the banquet.

NADC MIXED LEAGUE -B- DIVISION
SECOND HALF FINAL STANDINGS

TEAM NAME	WON	LOST	TOTAL PINS
LUCKY STRIKES	47.0	17.0	44888
RATED X	41.0	23.0	44661
BULLSHOOTERS	40.0	24.0	45000
FALCONS	37.0	27.0	45282
WHITE WINOES	35.0	29.0	42779
RED WINOES	32.0	32.0	45317
THE STRANGE BREW	31.0	33.0	44984
ALLEY CATS	30.0	34.0	45337
WHO CARES	30.0	34.0	44552
WARVEYHALLBANGERS	25.0	39.0	44579
DYNAMIC DUOS	25.0	39.0	43777
THE BALLBUSTERS	25.0	39.0	41322

NADC MIXED LEAGUE -A- DIVISION
SECOND HALF FINAL STANDINGS

TEAM NAME	WON	LOST	TOTAL PINS
RAIDERS	39.0	25.0	45746
NEINERS	39.0	25.0	45481
SCREWBALLS	39.0	25.0	44222
PINPOPPERS	38.0	26.0	45213
GOOFERS	36.0	28.0	45754
11TH FRAME	33.0	31.0	44432
BLIPS	31.0	33.0	44572
LES CHAMPIGNON	25.0	39.0	43855
RENEGADES	25.0	39.0	43852
ALLEY OOPS	24.0	40.0	43725
MAGIC MARKERS	22.0	42.0	44078
T N T	16.0	48.0	42819

W&R offers free food to donors

Your Welfare and Recreation Association is supporting our Blood Drive program. All government employees assigned to NADC who donate blood on 4 or 5 June 1985 will receive a certificate entitling them to receive FREE, the June special at the Anchorage. The special to be held on Tuesday, 11 June will consist of he Anchorage famous cheesesteak sub with all the trimmings.

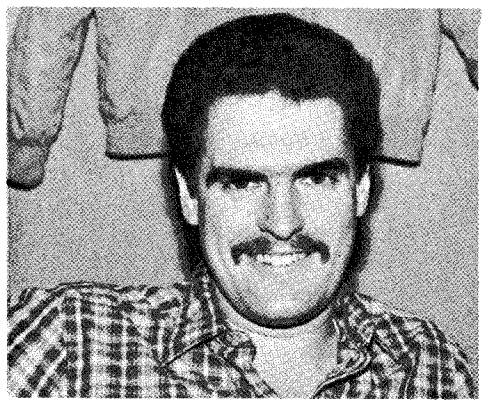
VIEWPOINT

This month's question is: "What is your personal shape-up plan for summer?"

Photos by Regina Gasuk

Ed Beach (Code 4031)

". . . play a little softball; swim in my father-in-law's pool; and drink less of that well-known summer refreshment."



Matt Berenato (Code 2022)

"I plan to do nothing to shape up for summer. I like the shape I'm in and I don't want to be loved for my body alone."

Barbara Kempf (Code 606E)

". . . keep my big mouth shut."

Diane Erdman (Code 04S)

". . . give up chocolate and junk food which I adore and take a walk every night after a light dinner.

Mary Moran (Code 701S)

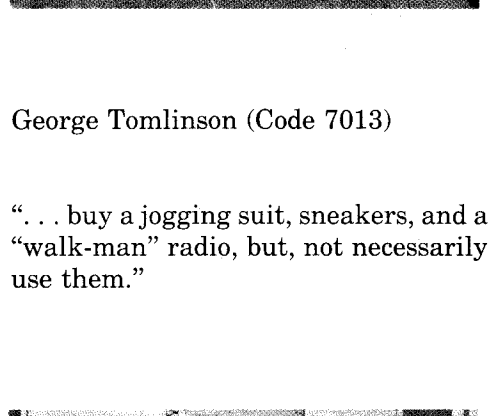
". . . get away from the children as often as possible."

Don Shaw (Code 835)
Joe Maio (Code 835)

"I lost 40 and he gained 12; shaping up is hard to do."

Barbara Ward (Code 0321)

"Besides maintaining my strict regime of nature's perfect foods (found at Dairy Queen and Dunkin Donuts), I visualize daily swimming, jogging, horsebackriding, bicycling, dancing, sailing, surfing, skydiving and preparing for a fall Hawaiian Triathelon, which, of course, I also visualize winning."



George Tomlinson (Code 7013)

". . . buy a jogging suit, sneakers, and a "walk-man" radio, but, not necessarily use them."

Reenlistments

Photo by Chuck Fichera

Selected for Chief in 1984, ADC Donell Roberson reenlisted for four more years on 15 March 1985. Roberson joined the Navy in March 1969 and has been stationed at the Center since June 1982. Roberson is assigned as a Chief Aviation Machinist's Mate in the Maintenance Department.

The reenlistment was also a milestone for ENS Cheryl Valdivieso. This ceremony was the first she has performed. YN2 Holt (far left) and YN1 Moody (in back) provide encouragement.

Photo by Regina Gasuk

"We'll go to any 'depths' to reenlist good people," said CAPT Edward Sturm as he reenlisted ETC Larry Robinson on 3 May 1985.

Robinson chose the Cold Water Test Tank as the site for his somewhat extraordinary reenlistment by the Center Commander.

"These are my last four years," said Robinson, "and I'm making them (the Navy) pay for it." Ordered to NADC in December 1983, Robinson has had a 16-year Navy career thus far and is aiming for twenty.

Safe swimming suggestions for Og

By Mike Massington

It was a miserably hot day in Rockville, and Og, our profusely perspiring prehistoric protagonist, had just returned to his cave from his job on the Ptrerodactyl Modification Project at NADC (Neolithic Architectural Design Corporation). "It's hot, complained the clammy cro-magnon. "Brilliant deduction, bozo," snapped his sweltering spouse, Lilting Lava. As their stimulating dialogue continued with increasing volume, Og's gaze fell upon a nearby lake whose shimmering waters beckoned invitingly. Suddenly, the creative caveman had a capital idea. "I think I'll invent swimming," he exclaimed. "Wonderful," responded the somewhat less than enthusiastic Lilting, "What's swimming?" "Swimming," replied her mate, "is the intentional immersion and movement of the human body in a volume of water the temperature of which is lower than the temperature of the body and the temperature of the surrounding atmosphere, which when coupled with the natural movement of ambient air currents past the wetted epidermal surface decreases the apparent temperature of said surface thus rendering a pleasurable effect and increasing personal comfort." "Huh?" asked Lilting. "You jump in the water so you stop sweating like a stegosaurus." explained Og. "Oh," replied Lilting.

Anxious to try out his new idea, Og dashed out of his cave and jumped into the waiting water. Unfortunately, almost immediately Og discovered another new phenomena called drowning which he proceeded to implement with marked enthusiasm. Luckily for Og (and especially for me since I couldn't figure out how to end this story otherwise), a passerby named Red Cross had already invented swimming and had gone one step further and invented life saving. Red quickly entered the water, calmed Og down and easily towed him to shore. Once on dry land again, Red checked the quivering caveman to ensure he was alright, and then instructed him in the following water safety rules:

a. Learn to swim well enough to survive in an emergency such as severe cramps or being selected as an appetizer by a tyrannosaurus.

b. Know the area you're swimming and diving in, and be wary of hidden rocks, debris, undertow, and the sea demon, Orto.

c. Never swim alone, and make sure whoever you're swimming with can help you if needed. A sabre-tooth tiger is not a good choice in this case.

d. Stay out of the water when overheated, after eating, and during electrical storms and/or volcanic eruptions.

e. Know the limits of your ability. Swimming across the boiling acid swamp is considered a little too advanced for beginners.

e. Should you get into trouble, don't panic. Just relax and concentrate on staying afloat. Panic is permitted however, if you are swallowed by anything larger than the average mountain.

g. Finally, if you are attempting to rescue someone else, avoid a swimming rescue. Instead, find a float, tie it to a line, toss it to them, and tow the person in. Using a piece of granite for this purpose is considered neither effective nor humorous.

Technical Highlights

FLIGHT TEST OF VOICE INTERACTIVE SYSTEM

The first operational flight test of NADC's voice interactive system was conducted at the Naval Air Test Center, Patuxent River, MD. The test was flown in a two-seat TF/A-18 Hornet with the voice interactive system installed in the rear cockpit. The rear seat operator issued voice commands to the NADC-developed voice recognition system. These commands were interpreted by "smart software" and routed to, and acted upon by other TF/A-18 avionics subsystems.

During the flight test, the pilot issued verbal commands and the system responded by presenting the appropriate changes either visually on the multi-purpose displays (CRT's) or aurally via the pilot's earphones. The pilot's voice commands allowed him to interact with the navigation, fuel and weapon systems. The system, at the pilot's request, also "Read aloud" the takeoff and landing checklists.

This is the first time in the history of aviation that a voice interactive system has been tested in flight.

COMMAND FLIGHT PATH DISPLAY (CFPD)PROGRAM — PHASE II

The CFPD program has entered the flight testing phase at the Pacific Missile Test Center, Point Mugu, CA. These initial flights were flown in the F-14. These flights successfully demonstrated the pilot could interpret the data and maintain position on the pathway displayed on a cockpit display in color video format. The information has been recorded on a video recorder. In addition, digital data on system performance has been recorded for later analysis. The full flight test using pilots of various experience levels started the end of February and continued into March. Completion date depends on aircraft availability and system performance.

P-3C UPDATE IV PRE-PROPOSAL CONFERENCE

NADC held a P-3 UPDATE IV pre-proposal conference March 1985 that was attended by approximately 100 industry personnel representing over 40 different companies. The conference followed February issuance of an RFP for the first phase of a two-phase competitive P-3 UPDATE IV Avionics Improvement Program.

As many as three Phase I contracts will be awarded for concept development and demonstration. A follow-on competitive full-scale engineering development contract will be awarded to one of the first phase contract winners. This update to the P-3 will include a new distributed data processing subsystem, a new multi-station display and control subsystem and integration of new radar, acoustic processor and communications subsystems with existing avionics. This is both a retrofit and forward fit program.

LOW COST SONOBUOY (LCS)

Development of the LCS, an acoustic sensor being designed as part of a new air Antisubmarine Warfare system for the future, achieved a significant milestone when engineering development models were successfully air dropped in the St. Croix area. The hardware performed well. The development program will now proceed to the contractor demonstration phase scheduled for June through September 1985.

MEMORY TECHNOLOGY

The Office of Naval Technology (ONT) has selected the Memory Technology 6.2/6.3 efforts as one of nine ONT programs to be presented before Congress. Vice Admiral Baciocco, OP-98, presented the ONT technologies to both the House and Senate Armed Services Committees during March 1985.

Two of the memory technologies selected were: (1) the S-3A/B main memory replacement, offering a CMOS based low power, 36 bit/word, four times current memory capacity (32K to 128K) in one-half the current volume; and (2) Electrically Eraseable Programmable Read Only Memory based on MNOS/Floating Gate technology designed for application in Crash Recorders (F-16), Radar Warning Receivers, PHOENIX/HARM missiles, Airborne Self Protect Jammers, and AN/AYK-14 Pre-Planned Product Improvement Program.

Commander Salutes

AE2 Todd Adams, AT2 Robert Collette, AMH2 Larry Goheen, AD2 Michael Kazman, and **AME2 Anthony Smiley:** For providing 24-hour emergency security protection for a temporarily-assigned, high-value DoD aircraft.

Fire Chief Don Meadows, Captain Carlos Sanchez (Code 814C) and **Mary Ann Brett** (Code 091): For contributing to the Center's good relationship with Bucks County by hosting the Sesame Street Fire Prevention Safety Workshop.

David DeSimone, Donna Nicolo, Richard Hallman, Nancy Holden, Jonathan Kaufman, Norman Warner, Peter Yost, James Hardy, Jacob Eyth, Phillip Whitley, Michael Schultz (Code 60), **Donald Furmanski** (Code 20), **John Williamson, Harry Koper, Michael Mocenter, Harvey Sokoloff** (Code 30),**James Kingston, Regina Gasuk, Mary Ann Brett, Patricia Wenclawiak** (Code 091), **Ross Barcklow** (Code 81), **William Zar** (Code 83): For assisting with and ensuring the successful visit of the Navy League of the United States.

Barbara Turner, James McDiarmid, Marguerite Hoefling (Code 20), and **Dennis Turner** (Code 50): For invaluable support to Commander, Third Fleet during the BGAREM 85-1 exercise.

Promotions

Jeannette Schenk, Mary N. Ellsworth, Suzanne E. Firth, Mary Penge, Jacquelyn R. Benner, Kathleen Drager, Judith K. Scott, Jeanine M. Peterson, Douglas C. Bellis, Marguerite V. Hoefling, Francis G. Lorenz, Robert L. Oakley, Donald J. Spry, Edward J. Sweeney, Jane E. Anderson, Rodney B. Hall, Harry Reichardt, Martha E. Snyderwine, Janice L. Stribling, John A. Williamson, Jr., Dean S. Nathans, Khien B. Nguyen, Louis P. Pelosi, Stanley J. Zugay, Jr., William J. Bermingham, Lorraine A. Dalrymple, Michael J. Kiernan, Nicholas R. Mangino, John L. Santini, Johnson Yuen, Alan E. Ankeny, Peter Ayoub, Joseph E. Bebey, R. Bradley Cope, Fred Deneen, Jerome W. Duley, Keith C. Faller, Scott L. Fowler, Charles R. Hegedus, Ronald A. Kapusta, Stephen J. Levitski, Edwin F. McGlynn, Mary E. Odowd, Mark J. Sewell, James J. Thompson, Edward L. White, Phillip E. Whitley, Linda C. Giblin, Kenneth W. Smith, Veronica P. Szfanka, Albert F. Ferkel, Sr., John R. Beckum, Floyd A. Bollinger, Jr., Margaret A. Carrigan, Eileen Legates, Dolores R. Mitchell.

W&R goes to Washington

W&R — Washington, D.C. — 2 days — 21 & 22 June. 1st day enjoy your favorite Museum in the vast Smithsonian Complex; dinner at the Orleans House; nighttime sightseeing tour of the Capital City on your Starr motorcoach; then spend the evening relaxing at the Rosslyn Westpark Hotel. 2nd day visit George Washington's stately home, Mt. Vernon; a guided tour of Washington including Ford's Theatre and the house where Lincoln died. Single $103.; Twin $84.; Triple $79.; Quad $75. per person.

Deadline: 21 May 1985.

Contact Margaret Vigelis x3307.

NADC Reflector

Volume 30 Number 6 NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA. June 1985

In this issue:

Six receive Center achievement awards

NADC's 1985 Awards Day presentations were held in the Center's auditorium on May 15th. Six of NADC's best were honored. Robert Buffum, Technical Director and Dr. E. Ann Berman, Deputy Assistant Secretary of the Navy (C3I and Space) presented the awards. To the award winners Dr. Berman said, "your accomplishments testify that you have found the recipe for success." She went on to say, "communication is our work. It is that catalyst through which we bond ideas to opportunities." NADC's six award winners have communicated their ideas and taken advantage of opportunities that have enhanced the Center's image and contributed to our Nation's defense.

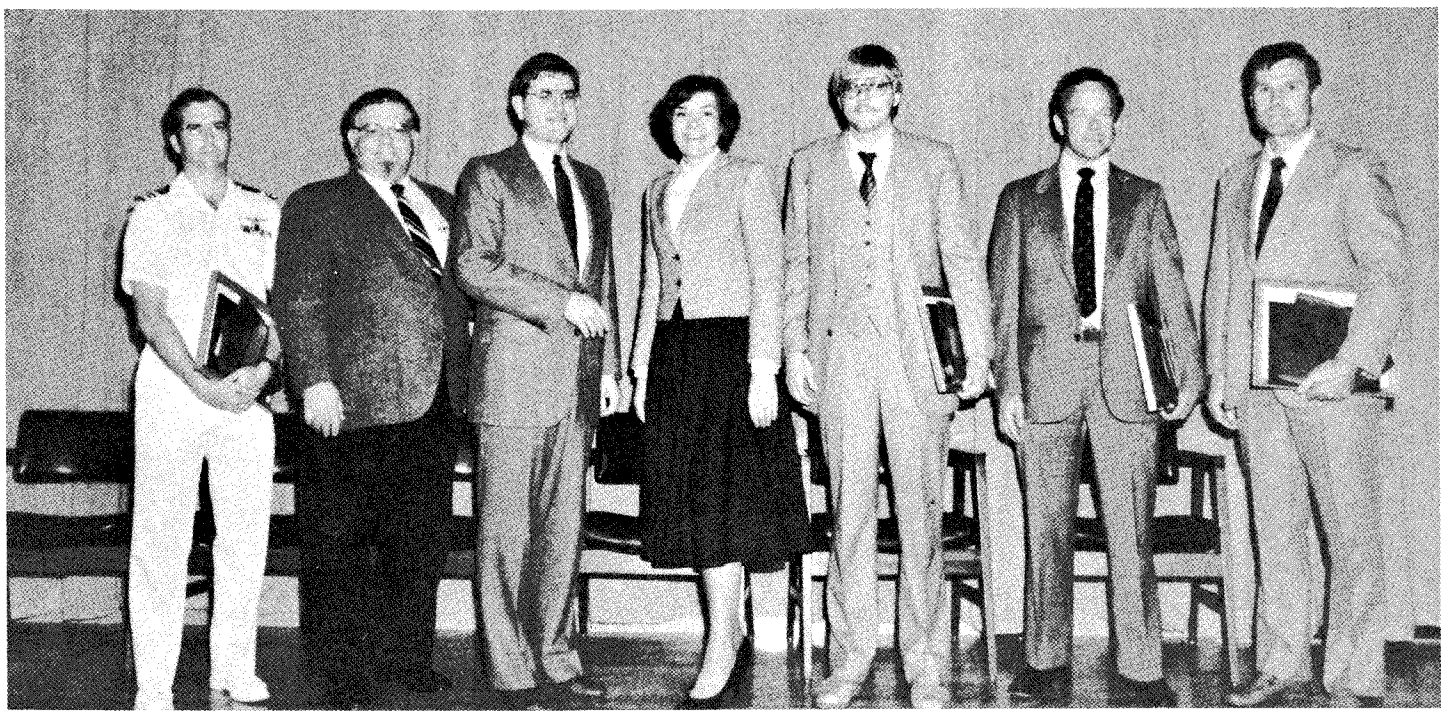


Photo by Cathy Burian

NADC Awards Day participants (l. to r.): LCDR William Mugg, George Lowenstein, Robert Buffum (Technical Director), Dr. Ann Berman, Douglas Lundberg, Dr. John Smith, and Dr. Arno Witt (Al Beans not pictured).

Technical Support Achievement

Allen Beans became NADC's 1985 Technical Support Achievement Award winner. His contributions in technical support to development programs have led to significantly improved airborne radar systems for the Navy. Beans has provided innovative circuit designs relating to both the microwave and signal processing aspects of a variety of experimental radars. He has aided in the design, and led the fabrication of, unique instrumentation systems for measuring the radar backscatter characteristics of ships and sea clutter. "A testimony to his efforts is the fact that he was instrumental in the development of three nomenclatured and currently operational radar systems, the AN/APS-116, the AN/APS-124, and the AN/APS-127," Edward Yanuzzi, Director of Sensors and Avionics Technology Directorate said. "Allen Beans' great breadth of expertise from circuit design to radar system testing and evaluation is recognized by his peers, by the engineering staff at NADC, and by radar personnel at other Naval Laboratories and private companies," he concluded.

Engineering Achievement

Dr. John Smith received the Engineering Achievement Award for his outstanding contributions to the improvement of the Navy's airborne surveillance radar systems. He is currently serving as Head, Advanced Microwave Projects in the Microwave Technology Division, SATD. Some of the major technical responsibilities that he is responsible for include technical leadership of the HARPSS (High Altitude Remote Platform Surveillance System), Passive Wing Array Program, Bistatic Radar Development, and ASAP (Airborne Shared Array Program). His contributions in the application of solid state radar development for surveillance platforms and radar technology has earned Smith the reputation of being one of the nation's leading radar technologists.

Dr. Smith received his Bachelor of Science in Electrical Engineering from the University of PA in 1967. He received a Ph.D. in Electronics Engineering from Cambridge University, England in 1973.

Edward Yanuzzi, Director of SATD said, "an important skill which Dr. Smith has demonstrated is the ability to discern and assess the risk associated with new developments. He is then able to reduce risk by analysis and experiment. He has demonstrated a long term vision which has put NADC into very competitive positions for leading new system developments."

Project Leadership

The Project Leadership Award was given to two outstanding project managers. George Lowenstein and LCDR William Mugg shared the honor. Lowenstein is the Global Positioning System (GPS) Program Director with technical and managerial responsibility for a multimillion dollar mix of projects in the development and integration of the GPS User

continued on page 10

McQuillen — 'hobo' engineer to senior executive

Bright and early on June 6th, under the guise of a Strategic Planning Meeting, Dr. Edward McQuillen was informed of his selection to the Senior Executive Service (SES). Mr. Robert Buffum, Technical Director, had the honor of introducing him to Center Managers as the newest (SES) member on Center. NADC now has eleven SES'ers to its credit.

"Now I know how a girl walking into a baby shower feels," said McQuillen, "it came as a total surprise."

McQuillen has spent 28 years at the Center, all in what's known today as the Aircraft and Crew Systems Technology Directorate. Currently Manager of the Aero Analysis Division, he began his career in the Target Systems Division. He then moved to head the Structures Division and later the Aero Engineering Division.

The Aero Analysis Division is responsible not only for a very large targets program which has virtually doubled in recent years, but also for the aircraft energy program, and propulsion and aerodynamic technology. Additionally, the group also provides aircraft performance support to the Naval Air Systems Command on high altitude, long endurance remotely piloted vehicles.

McQuillen is personally leading a NATO Science Study for use of air vehicles in NATO Maritime Operations for the year 2005.

A University of Pennsylvania (U of P) Ph.D. in Engineering Mechanics, McQuillen also has a Bachelor and Master of Science degree from the U of P and Drexel University, respectively.

"I was a 'hobo' engineer," said McQuillen, ". . . a year in one place and a year in another. Then I came to NADC — it's been a good life." (MAB)

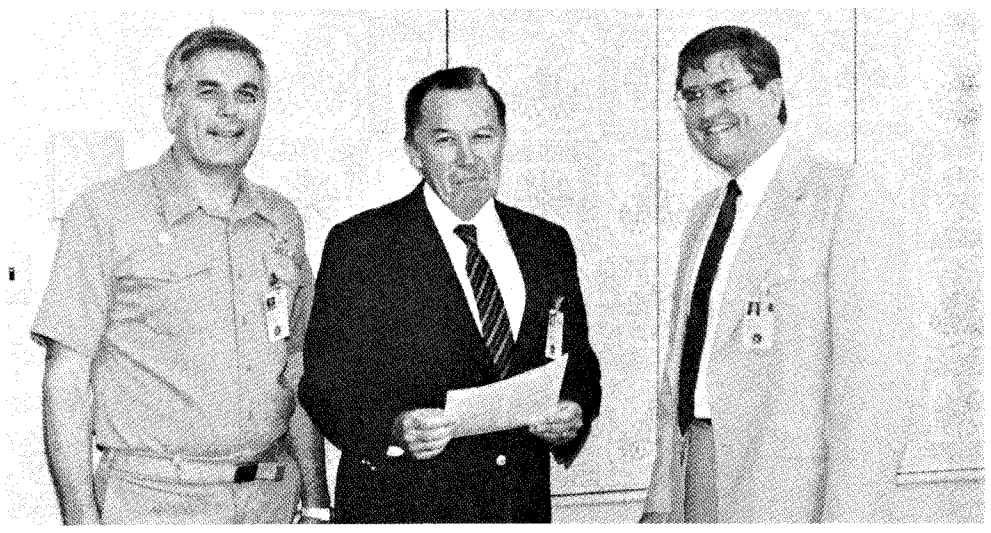


Photo by Regina Gasuk

Dr. Edward McQuillen receives official paperwork from Robert Buffum, Technical Director (right) and CAPT Edward Sturm, Center Commander (left).

Toastmasters International wants you!

by Arthur Horbach

Ever been called on in public to speak? Make a technical presentation (program review)? Chair a symposium session?

Toastmasters International offers guidance on how to do this effectively, and, equally important, on what not to do.

Improve slide presentations, for personal as well as professional use!

Overcome in - front - of - group - nervousness!

Get direct and immediate feedback on your presentations!

Develop a capability for on-the-spot responses to detailed and thought-provoking questions!

Learn how to effectively use a podium and a microphone!

All of the above are concerns of the NADC-sponsored chapter of Toastmasters International. At first glance one may feel that one is really not interested in becoming a speaker — that's for politicians, professors and preachers. But Toastmasters goes far beyond that. The techniques of speaking before small, as well as large audiences, are not necessarily obvious; but with training, even the most reticent can become a relaxed and confident speaker.

Each meeting consists of several prepared speeches of about five minutes in duration. Specific goals and objectives are being sought by the speaker each time. Following that, experienced speakers provide two minutes of positive feedback and constructive criticism.

Another significant activity, designed to teach "thinking on one's feet," is what is known as Table Topics. A question is asked, and someone is selected to deliver an appropriate response. The responder has no way of knowing in advance who will be called, nor what the topic will be. Several Table Topics questions are asked, in order to increase participation.

Variety and spice are added to the meeting by the jokemaster, who is required to provide an appropriately humorous joke (most of us would be hard pressed to tell a funny, non off-color joke), and by the grammarian, who selects a word-of-the-day (usually something quite obscure) which everyone is required to use at least once during the meeting. The grammarian also has the responsibility of keeping speakers honest, by counting the number of "ahs" used by each speaker, and by keeping track of grammatical errors.

Photo by Ken Smith

Newly elected officers of Toastmasters proudly display NADC's banner with its many award ribbons. Officers from left to right are: Joe Bebey (Secretary), Shauket Gadiwall (Educational Vice President), Jim Davis (President), Jerry Polin (Administrative Vice President), Chester Terry (Sergeant at Arms).

All attendees enjoy the meetings. The Table Topics are fun, the speakers are interesting, and people get to know their colleagues much better.

Fundamental principles of speaking are learned quickly, and may be put to use immediately. How many of us can emcee a luncheon, can offer an effective toast — or even feel comfortable about leading a group in saying grace at a meal.

Give Toastmasters a try!

The rewards are surprising!

Letter to the editor

Dear Editor:

The recent restriping of the Parking Lot #1 has everyone puzzled. Who decided on it? Why was it done? It seems we have lost a center lane, forcing drivers to go all the way up and down a lane to seek empty parking spaces. Also, why is the front lane so very wide — seems there is plenty of room for one more car at the end of each row? Did we really gain any parking spaces?

Ralph Seckel
Code 7010

Dear Mr. Seckel:

There are a number of reasons supporting the improvements being implemented in Parking Lot #1. The Center conducted a Traffic Management Study approximately a year and a half ago and found that pedestrian safety in the parking lot could be enhanced by constructing an elevated walkway with handicap ramps through the lot. The new walkway will be located down the Center aisle on top of the present construction of the new box sewer. Since the old retention basin (located near the dispensary) was not doing an adequate job and presented a hazard to flight operations it was removed. Regulations require a flat surface (no ditches) within the crash potential zone (1000 feet from runway). The new box sewer will improve drainage capabilities.

As for the wide front lane, part of the Center's long-range Master plan proposes a four lane entrance to the Center, with a divider or boulevard down the middle, instead of the current two lane entrance. The wide center lane was implemented in anticipation of the new entrance.

The new restriping and removal of the retention basin will provide the parking lot with an additional 72 parking spaces. Parking lot #1 will accommodate 852 vehicles when the project is completed. The Traffic Management Study showed that the restriping will provide a better flow of traffic (especially when the new entrance is constructed).

In order to alleviate some of the parking problems in lot #1, GM-13's are being offered the opportunity to park innercompound in lot #3 on a first-come, first-serve basis. The intent is to make available an additional 75 parking spaces in the main lot.

Construction is scheduled for completion within the next two months.

The Editor

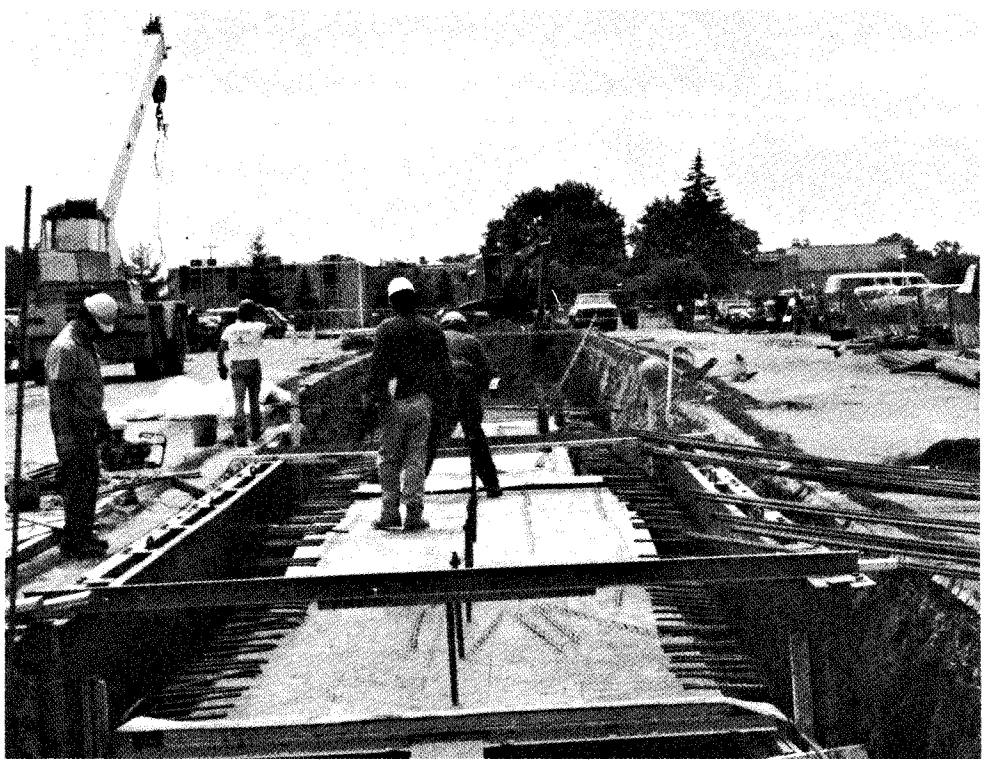


Photo by Regina Gasuk

Parking lot construction continued with the installation of a new box sewer drainage system. Finished concrete top of this system will be the new pedestrian walkway.

Murphy is still right

"The complete Murphy's law:
(1) Nothing is as easy as it looks;
(2) Everything takes longer than you think;
(3) If anything can go wrong, it will; and
(4) An open-face peanut butter and jelly sandwich, if dropped, always lands jelly side down."

—James J. Kilpatrick, columnist

NADC Reflector

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NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA

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Editor ..... **Regina Beans Gasuk**
Assistant Editor ..... **Mary Ann Brett**

Bellew receives EEO service award

Ira Bellew was the recipient of the 1985 Federal Executive Board award for Equal Employment Opportunity Service at the Career Service Awards Program luncheon on May 15, 1985 at the U.S. Naval Shipyard. Captain Fred Wright, Chief Staff Officer, members of his family and friends attended.

The Equal Employment Opportunity Service Award is presented to that individual whose contribution has the most far-reaching, positive effect on the Federal EEO program. Bellew served as Chairman, NADC EEO committee 1984-85 and will continue in this capacity for another year. "Bellew has a long history of helping others to help themselves," said Kathy Gause, Deputy EEO Officer. "He is an exemplary federal employee as well as a professional, who not only is pursuing formal education in the area of counseling, but his day-to-day application of EEO principles has a far-reaching, positive effect on Federal employees as well as the community as a whole," she said.

"The first emotion right off the bat was surprise," said Bellew, "it's still even a little bit of a shock, even though its after the fact."

Some of the committee projects headed by Bellew over the past year include: housing non-local scientist and engineering cooperative minority students; a study to investigate and collect data to determine the reasons why engineers are leaving the Center as well as why they have decided to continue working for the Center in light of recent federal plans to cutback, and the erosion of benefits and salaries (results from this study are to be used as a recruiting tool); performing an accessibility survey of the Center to determine what is necessary to ensure reasonable accommodations for handicapped employees and visitors; a series of interviews with upward mobility selectees and their supervisors to evaluate the success of the program; and acting as mentor to non-local minority engineering cooperative students who need counseling and/or tutoring.

Bellew spends a lot of his own personal time counseling NADC employees and their families. He has almost completed his Masters in Marriage and Family counseling at LaSalle College. "Employees trust in Mr. Bellew's expertise and this allows him to assist me in working 'behind the scenes' to resolve complaints at the lowest possible level," said Gause. Bellew also participates in the Minorities in Engineering program, an on-going Center activity designed to select minority candidates from local high schools and introduce them to engineering.

Apart from his Center activities, Bellew conducts drug and alcoholic abuse group therapy at the Good Friends Halfway House in Morrisville, Pa. He has done volunteer work at the Juvenile Justice Center in Philadelphia, Seighton Farms for Girls, Holmesburg State Prison, Camp Hill Prison, and the Philadelphia Detention Center. He has taught Confraternity of Christian Doctrine (CCD) classes at St. Anselem and St. John Bosco parishes to high school juniors and seniors.

Bellew is very interested in the future of the EEO program. After his next year as chairman, he hopes to serve as an EEO complaints counsellor.

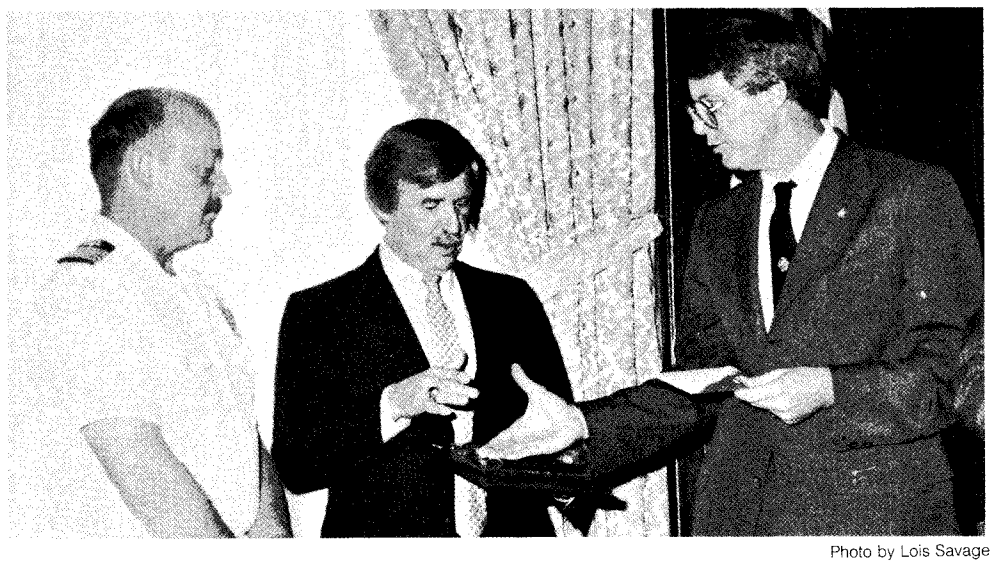


Photo by Lois Savage

Ira Bellew, EEO Committee Chairman (center), receives award from Kevin M. Tucker, Federal Executive Board Chairman (right) and CAPT Fred Wright, Chief Staff Officer (left).

Human Resources Awareness Week says "EEO is for everyone"

Black History, Hispanic Heritage, Asian-Pacific, Women's Awareness, and Handicapped Awareness Week as well as many others are all sincere efforts to recognize distinct groups of PEOPLE. But, why not recognize ALL people for their accomplishments? Certainly there are many groups who don't receive formal recognition and who are worthy of note.

"EEO is for everyone, so why not observe it that way" said Kathy Gause, Deputy EEO Officer. The Department of the Navy agrees with that theory. And, in line with their initiative, the Center's Equal Employment Opportunity Committee has coordinated the first annual Human Resources Awareness Week (HRAW) from 17 through 24 July 1985. This awareness week will highlight not only personnel accomplishments but also recruitment and retention.

LT Scott Wood, HRAW Committee Chairman, has coordinated a tentative schedule of events:

— Wednesday, 17 July, part one of the three-part Dr. Morris Massey film "What you are, is . . ." will be shown in the Center Auditorium during lunch.

— Thursday, 18 July, the Federal Women's Luncheon in the NADC dining room will highlight the week. Ms. Dorothy Meletzke, Director of the Navy Civilian Personnel Command will be guest speaker. Also, the Woman of the Year Award will be given and nominees honored.

— Friday, 19 July, a tour of the Electronics Calibration Lab will be made available and part two of the film "What you are, is . . ."

— Monday, 22 July, Handicap Activity Day — sponge noise barriers for the ears will be available to anyone who wishes to participate. The use of these sponges is meant to make people more aware of the complications a hearing impairment might cause.

— Tuesday, 23 July, part three of "What you are, is . . ."

— Wednesday, 24 July, the EEO Awards Ceremony in the Center auditorium. Ms. Betty Hambrick, Federal Women's Program Coordinator for the Department of the Navy will be guest speaker.

— Friday, 26 July, an Office of Personnel Management "Supervising the Handicapped" course will be held on Center.

Special emphasis will be placed this year on cash EEO Awards for outstanding contributions in EEO leadership, skill, imagination and perseverance.

Gause said, "Managers are doing a tremendous job with EEO and that's why these awards are so important. We strongly encourage departments/directorates to make one or more nominations in any or all of the categories." The categories are: Manager/Supervisor, Personal Incentive, Group, EEO Program Officials, and Collateral Duty Personnel. Nominations are due to Code 031 no later than Monday, 8 July 1985.

The cafeteria is making its contribution to HRAW by featuring an additional display of ethnic dishes for lunch.

Watch for details of these events in the Log, in the Plan of the Day, and over the closed-circuit TV system.

(Note: Additional information on any of the above can be obtained from Kathy Gause (03E) or the HRAW Committee: Chairman, LT Scott Wood (04), Bernie Weber (30AS), Otto Engdahl (8342), Sandra Grazioso (8422), Hodges Milton (5042), Margaret Russo (6062), Winnie Bernard (60B1), Chris Kirk (7024), Lalli Martinez (042), Lois Savage (03E) and Selina Ridpath (8422)). (MAB)

Photo by Regina Gasuk

Human Resources Awareness Week Committee meets to discuss upcoming events.

Say "cheese"

by Peg Pembroke

The NADC Photography Club is beginning its sixth year (May-April of the next year) on Center and as a member of the Photographic Society of America (PSA). The Club meets on Wednesdays before Payday at 1130 in the Systems Directorate (20) Conference Room.

Over the years, there has been a diversity of presentations at the club's biweekly meetings — from travelogs to educational "how-to" Kodak shows to intraclub contests. The members learned from and enjoyed the different perspectives except, of course, when they disagreed with the contest judge!

This year, plans are being made for a Center-Wide photo contest with PSA judges. Also, topics of the intraclub contest will be published as well as the judges for these contests. In previous years, club members judged slides and prints submitted by other club members for prizes. This procedure was a good learning situation for both judge and contestant. PSA judges may be used in the future and categories for Beginner, Intermediate and Advanced photographers may be established.

Whether a person owns a 35mm SLR or an Instamatic camera, whether a beginner or advanced photographer doesn't matter, only an interest in photography is necessary to enjoy being a member of the Photo Club. In addition to contests and biweekly meetings, the Photo Club has mat cutters, a library with photographic books and past issues of MODERN PHOTOGRAPHY and PETERSEN'S and a bulletin board near the Credit Union for displaying photographic work. To join the club, contact Doug Bellis (extension 2576) or Peg Pembroke (extension 2201). Dues are $5 per year.

Artificial Intelligence—

Editor's Note: Information for this story was obtained from interviews with Chris Heithecker (5021) and Ron Kushnier (5023). Artificial Intelligence techniques are also being utilized by the Systems Directorate in Anti-submarine Warfare and Battle Group Integration projects. Subsequent articles will address these and other AI related work.

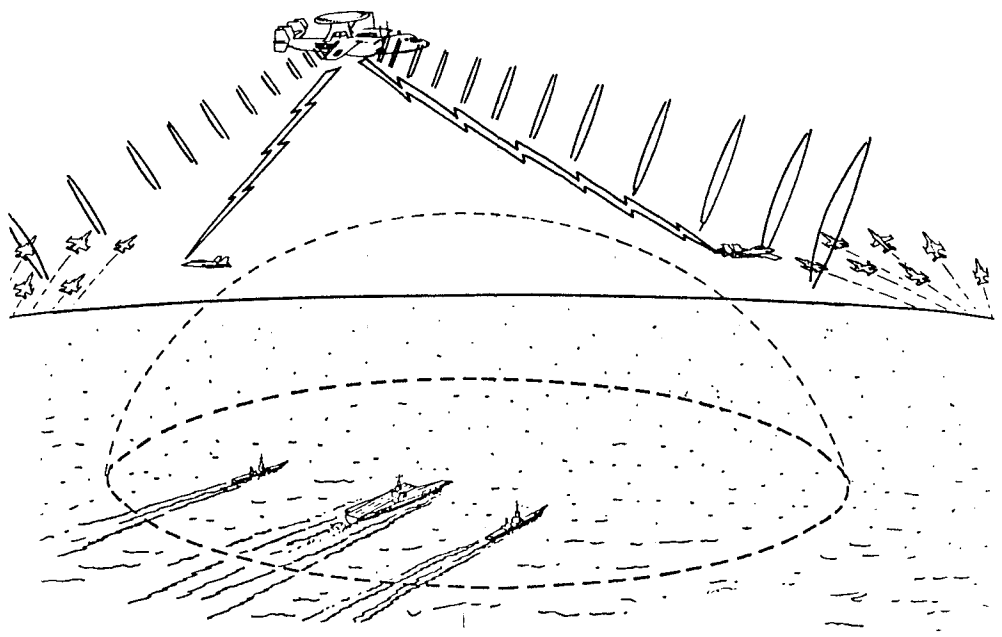
Here you are sitting in the E2-C aircraft monitoring all the instruments as an air battle rages far below. There are a few things to do. Some of your guys are hit and are in the water, not all of them have rafts. You've got to coordinate search and rescue. Two of your fighter aircraft are almost out of fuel and requesting the location of the nearest airborne tanker. In your spare time you're coordinating attack scenarios for the F-14's so they can intercept an enemy observation/ reconnaissance aircraft. You've identified an entire Russian task force; helicopters, carriers, over-the-horizon missile launchers, and you need to be in constant communication with your carriers to keep them informed of the whole situation so they can determine how many and what kind of aircraft should be launched. Meanwhile, some of your aircraft have already dropped their bombs and have to be directed back to the carriers. All this happens while you perform basic air traffic control functions for friendly aircraft in your vicinity. You need help!

A number of on-going programs at NADC are addressing just such a scenario through decision aid development using Artificial Intelligence (AI) techniques. Real-time retrieval, correlation and analysis of large volumes of data places a tremendous burden on operators who must make tactical decisions in response to complex threat situations within critical time constraints. A joint research initiative at the Center is addressing this operator overload problem by extending existing AI techniques to develop an AI based threat plan recognition model for airborne tactical alerting.

Center studies Expert Systems

AI has been studied at the major universities for the past 20 years, but mostly at the research level and without much real application. As computer capabilities have increased, so too have Artificial Intelligence techniques. Areas of Artificial Intelligence include Expert Systems, Robotics, and natural language processing. The Center has become involved in Expert Systems. An Expert System does not just perform useful tasks but is able to make decisions as an expert. These decisions are based on past experiences with the ability to recognize exceptional situations and add to or delete from previous knowledge.

Center personnel involved are investigating and exploring the potential that AI might have in time-critical, airborne, decision-making problems like those faced by operators aboard the E-2C. To demonstrate artificial intelligence concepts requires applying artificial intelligence tools and techniques for a particular problem domain. The problem domain of the E-2C Airborne Early Warning (AEW) mission was chosen because of the high-level decision problems characteristic of this mission that are not readily solved by traditional numerical/mathematical means. Rather the decision problems are of a qualitative, heuristic nature,



E2C Tactical Environment

amenable to application of AI techniques. The E-2C provides for carrier task group defense in the Outer Air Battle. The Outer Air Battle is one that takes place a good distance from a carrier. Its objective is to stop any incoming aircraft before they are able to fire their missiles or in any other way disabling the task force. Center personnel are specifically trying to get a handle on how operators on board aircraft analyze and interpret tactical situations. The key issue is that so many things happen at once the operator becomes overwhelmed. There is just so much that one can humanly do. Much more can be seen on the radar (some 250 targets) than can be processed in the human mind. AI's role is to create a surrogate operator; a computerized system that can bring the same kind of problem-solving expertise as the operator and do it quicker and cover a much larger aspect of the problem.

The artificial intelligence team here at NADC has begun its work by analyzing how an operator interprets the activity of enemy platforms. The concept of plan recognition has been postulated to explain this interpretation process and has been investigated by behavioral scientists at artificial intelligence research laboratories and universities. They have been a primary source of information to the AI team.

SCD & ASCTD join forces

NADC's AI team joins Software and Computer Directorate (SCD) and Aircraft and Crew Systems Technology Directorate (ASCTD) personnel. SCD brings the computer science perspective to bear on the problem and ACSTD is tasked with the behavioral or human factors issues critical to development of an expert system.

AI is really an attempt to understand thinking. In plan recognition the sequence begins first with a hypothesis of the intent or goal of an agent (e.g. threat aircraft). A particular plan is

Speak softly

During World War II, security posters cautioned that "Loose Lips Sink Ships." Today, though we're not at war, careless conversation at the wrong time and place has been known to compromise classified information or militarily critical technology that is unclassified. All employees are cautioned to refrain from:

— Indiscriminately using the term "black program."

— Discussing your knowledge of, or conjecture that, persons or information may be associated with or related to any compartmented program.

— Discussing classified information with anyone who does not have a valid need-to-know.

— Carrying on discussions involving classified information or information that is identified as militarily critical technology in locations not suited to such discussions.

— Expressing "educated guesses" concerning possibly compartmented information or programs.

This security reminder is prompted specifically by reports that Department of the Navy employees have been overheard making indiscriminate references to compartmented programs in conversation. The existence of and/or references to programs involving compartmented information should only be discussed in designated areas by persons assigned to such programs.

(Reprint of memo from CAPT. E. J. Sturm)

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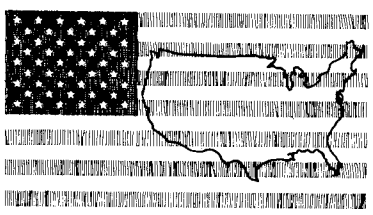


FLAG DAY

Navy makes "MONEY" magazine's top 10

The U.S. Navy was named one of the "Ten Terrific Employers" in a recent article by "MONEY" Magazine. The magazine focused on those employers which stood out "as leaders in making the unavoidable conflict between job and family easier to bear."

The article stated that while military services on a whole rival civilian employers in dealing with the problems of two-income couples with children, the "Navy's Family-Assistance Program (was) the best of the lot." The Navy was commended for: offering maternity leave; operating child-care centers for children 4-weeks to 12-years old at a reasonable cost; operating locator services for licensed child-care centers; providing psychologist, social worker and counselor service for husbands and wives on the problems of coping with deployments, and starting a program to help unemployed spouses plan their careers, write resumes and find jobs.

The magazine surveyed career counselors, employee-benefits consultants and executive recruiters in compiling their list of the top 10 employers.

(Reprinted from Navy Newsgram message)

NADC observes Armed Forces Day

During Quarters on Friday, May 17, the Center's military personnel saluted Armed Forces Day. The ceremony ended by the attendees enjoying a cake to celebrate the event.

Photo by Peg Callahan

CAPT Edward Sturm (right) and AFCM Dale Cain (left) cut Armed Forces Day Cake.

It's for real at NADC

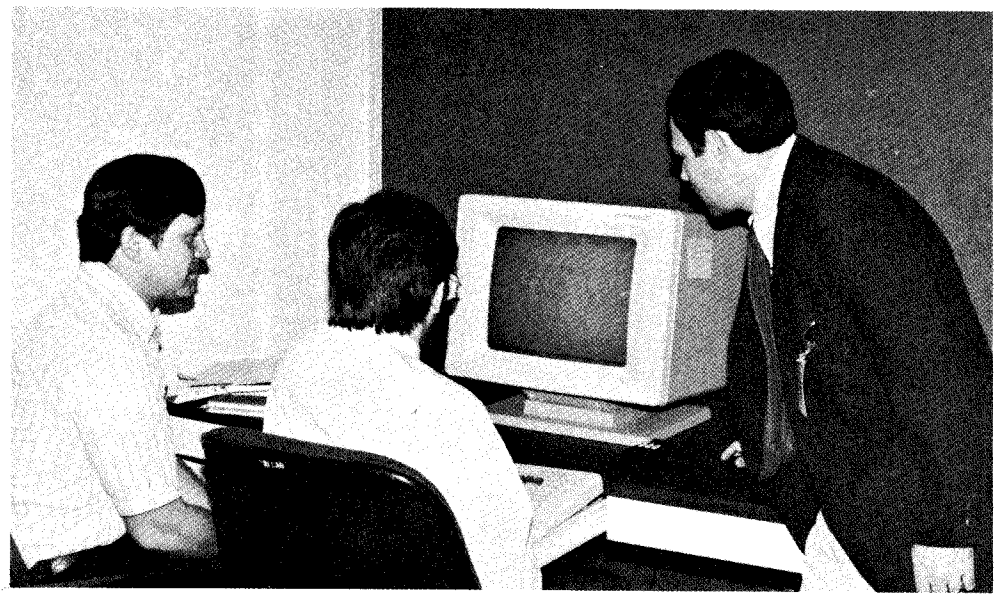


Photo by Regina Gasuk

Frank Suspic (left), Ralph Fink (center), and Ron Kushnier (right) are analyzing display on the Symbolics computer screen.

then inferred for the agent to achieve that goal. In order to determine if the plan is really being carried out, a set of expectations is formulated. If the set of expected actions actually occurs (e.g. the agent performs as expected) then our hypothesis is confirmed; if they do not a process known as revision is invoked — i.e. the hypothesis must be revised based on the discrepancies observed which do not meet expectations. Further modification of the plan in order to explain the discrepancies or totally revamping the goal may be required. This time-consuming process will be accomplished in a matter of seconds with artificial intelligence. The Center has worked out a viable, plan recognition process with reasonable determinations that can be accomplished in a matter of a few minutes vice the hours of leisurely reflection at the theoretical level. Threat plan recognition introduces a time element not present in other domains — the dynamic nature of rapidly unfolding events and the necessity for timely response. Extensions to this sequence would allow for multiple agents (threats) and multiple hypotheses.

Center personnel are really interested in the project and excited about the challenge that it presents.

Special computer used

They use a special computer for their research known as a Symbolics 3670 which is strictly an artificial intelligence type computer which uses the LISP language. LISP is one of the main programming langauges for AI. This machine is designed to operate LISP quickly and efficiently; it gives the user very good software support to develop AI programs, graphic features and special windowing capability, all of which are needed to learn AI's abstract programming techniques.

Center personnel are involved in a three year program designed to achieve a feasibility demonstration in the laboratory. ACSTD's role is to give insight on methods and techniques of extracting the operator's skills and problem solving capabilities and to capture this knowledge so that SCD's personnel can represent it in a programmable format. To capture what goes on in the human mind really transcends the computer science field and brings in the behavioral sciences. It is a multi-disciplined area and requires a blend of these sciences.

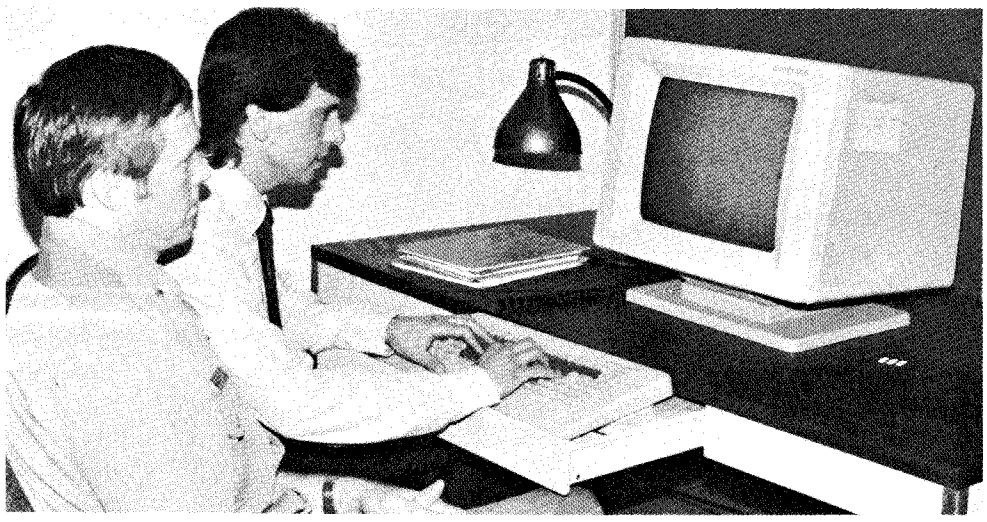


Photo by Regina Gasuk

LCDR David Blower (left) and Jerry Azarewicz (right) are inputting information using the LISP program language.

Uncertainties in the AEW environment arise from inaccurate sensor reports, sensor limitations, jamming, and analysis/correlation errors to name some of the existing problems. AI techniques hold great promise for automation of high level airborne decision problems that are not easily resolved by traditional numerical and mathematical methods. The future of the viability of carrier battle group operations depends on the successful resolution to the problems revolving around time-criticality, complexity of operations and the uncertainities that arise. That is why the Center's AI team is studying this problem; because it is very important. When you talk about the increased sophistication of the threat, and higher data rates made possible by advanced technology it becomes obvious that the human capacity of the crew members is not enough. With AI the possibility to exceed human capabilities becomes a reality. Carrier task force operations will not be a viable issue in the 1990 timeframe without these decision assists.

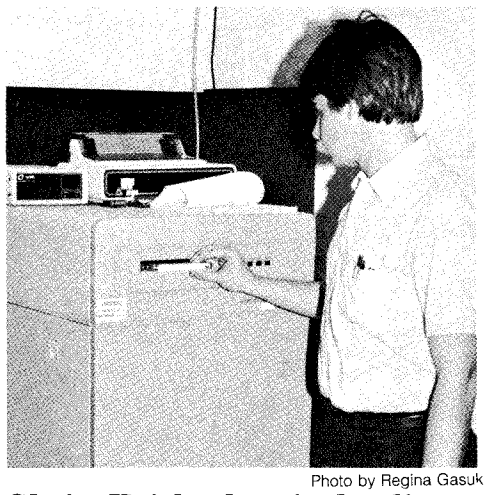


Photo by Regina Gasuk

Chris Heithecker is loading a program tape into the Symbolics computer.

Sturm chairs Red Cross Campaign

The Lower Bucks County Chapter of the American Red Cross raised $7,219.56 — 125% of its goal — during its recent African Famine Relief Campaign. The campaign, chaired by Naval Air Development Center's Commander, CAPT Edward J. Sturm, was conducted during March and April. Monies were donated by federal employees, local corporations, businesses, and service clubs. (MAB)

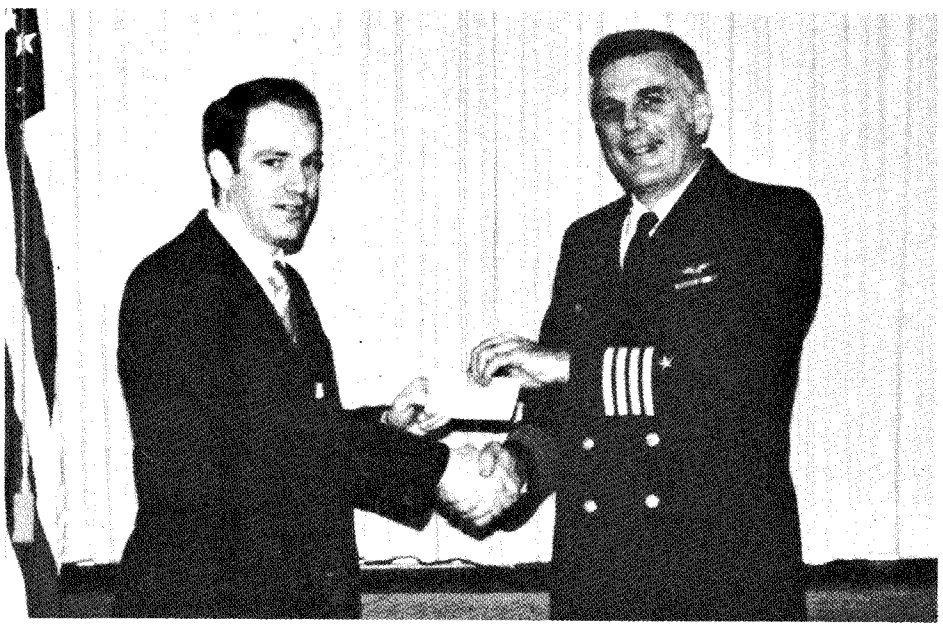


Photo by Regina Gasuk

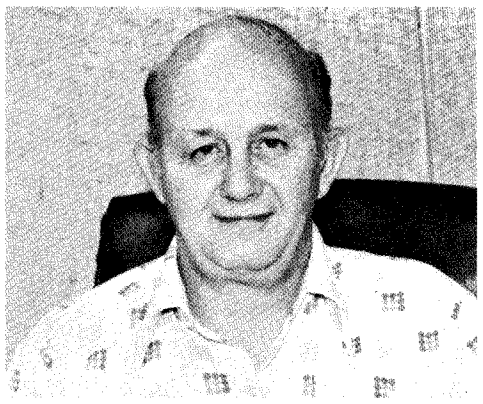
CAPT Edward Sturm, Center Commander, gives famine relief contribution to William Reardon, Executive Director, Lower Bucks County Chapter of the American Red Cross.

NCAA news highlights

By Joe Clay

Mr. Dave De Simone, President of the NAVAIRDEVCEN Chapter, Naval Civilian Administrators Association (NCAA), represented the chapter at the NCAA National Convention held in Napa, California, 6 through 10 May. While at the convention, Mr. De Simone presented two position papers, developed by the Chapter. The first paper, on the Federal Employees Health Benefits Program, recommended the abandonment of the "voucher scheme" in favor of a competitive and unified program. The other paper addressed Emergency Base Closures and Realignments. The paper drew attention to the amendment to the FY-86 DOD Authorization Act which allows SECDEF to unilaterally close or realign any military installation at any time within 24 months of a presidential submission of a budget that contains a deficit.

The Naval Civilian Administrators Association is an organization of senior civilian personnel who regularly participate in the determination of management policy. The objectives of the NCAA include promoting efficiency, cultivating cooperation among various elements of the Department of the Navy and fostering active interest in the welfare of subordinates. The NAVAIRDEVCEN Chapter meets regularly to discuss items of interest and concern and to hear presentations from invited guests on topics which broaden the horizons of its members.



Harry Davis, Maintenance and Utilities Manager

Maintenance, Utilities, Transportation

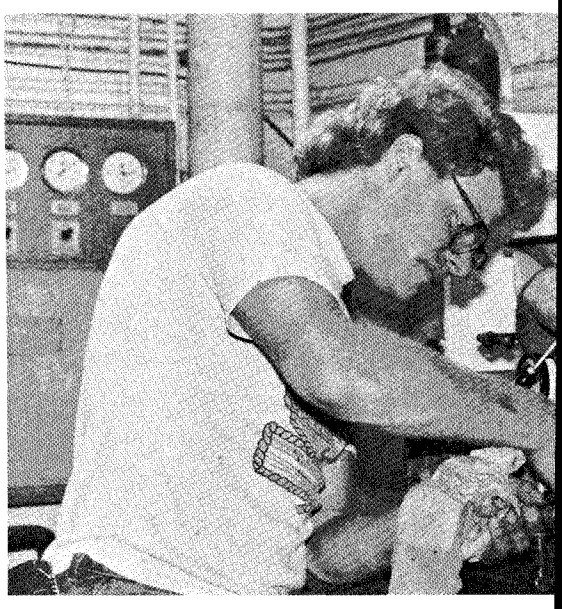
From basement to rooftop, th

The Maintenance and Utilities Division of the Public Works Department is responsible for keeping the Center operating even when most of us are safely tucked away at home sleeping. Under the leadership of Harry Davis, division manager, the day-to-day maintenance operations run smoothly. Davis's group answers calls for assistance ranging from waterpipe bursts, roof leaks, and high voltage power breakdowns to lock changes and fire alarm repairs. The wide range of responsibilities keeps the division's building systems, mechanical systems and utilities branches busy as they maintain and repair all buildings, ground structures, and utility plants. They work on electric, water, steam, fuel oil, sanitary and industrial waste, refrigeration and air-conditioning systems. They even provide pest control services. Mechanically operated equipment such as overhead doors, ventilation, blowers and fans are repaired and maintained. Fabrication of sheetmetal applications is also performed here.

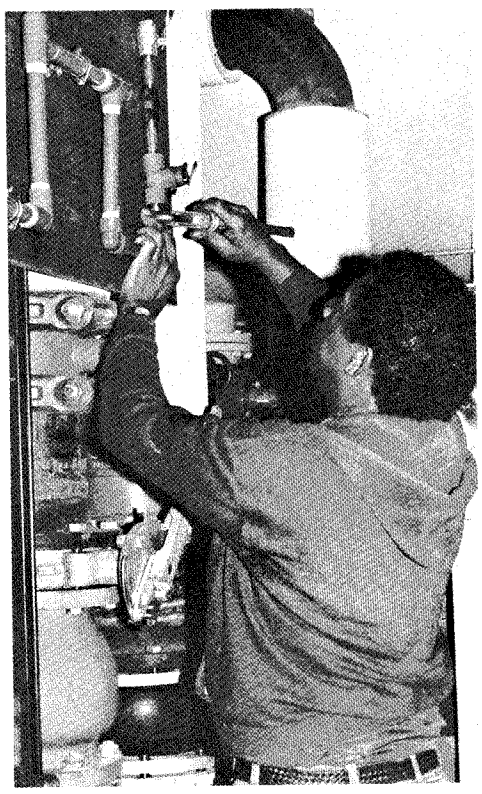
A brand new branch known as the Service branch is responsible for service and emergency type work. Personnel in this branch respond to trouble calls and operate the Energy Monitoring Control System which controls the main heating and air conditioning system.

Everyone on Center has at one time or another needed the services of the Rigging Branch. Besides moving your furniture and safes around or delivering your new computer, they collect and dispose of salvage materials, provide crane service, erect scaffolding, clean sumps and drains, and perform manual snow removal. All the special events hosted by the Center usually require the services of the Riggers.

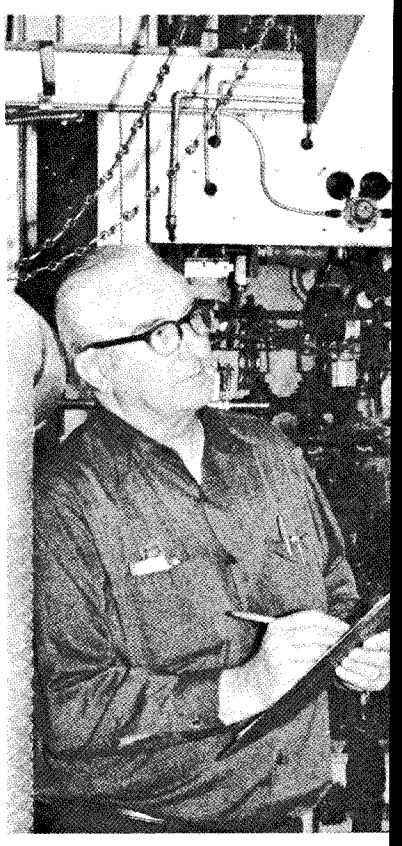
And where would we be without Transportation? The Transportation Division's 10 employees under the direction of Ed Linke, division manager, assure equipment and vehicles keep rolling along. The maintenance and upkeep of government vehicles, such as cars, trucks, truck-trailers, cranes and heavy equipment like loaders and graders is performed daily. They are responsible for all runway and street sweeping that is needed. Personnel also maintain the fire department's crash and rescue equipment and vehicles. They plow snow from roads, parking lots and airfield pavements so Center activities don't get put 'on ice' during winter months.



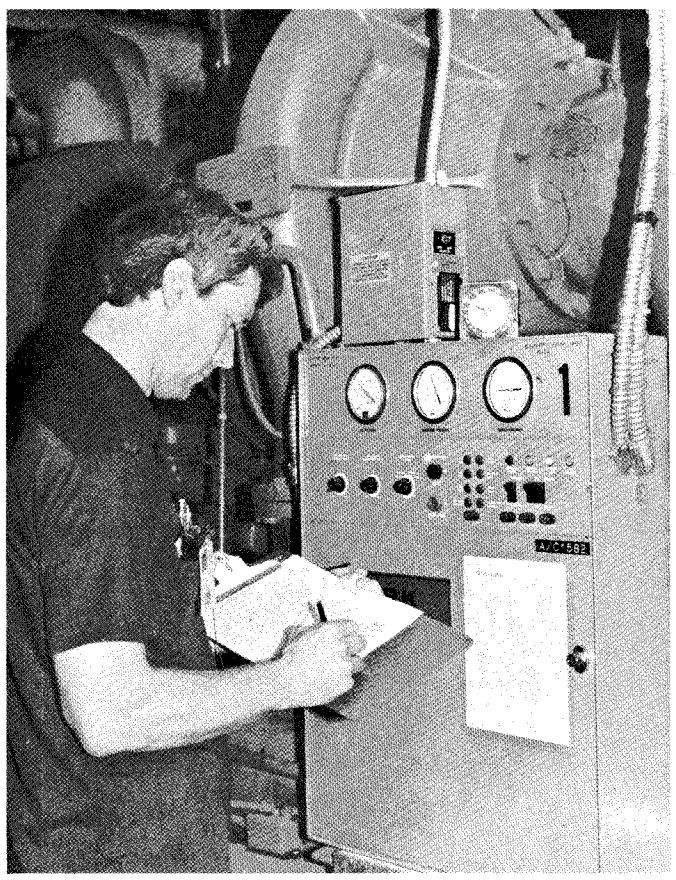
Bill Brown (left) and Joe Cleghorn (right) air compressor.



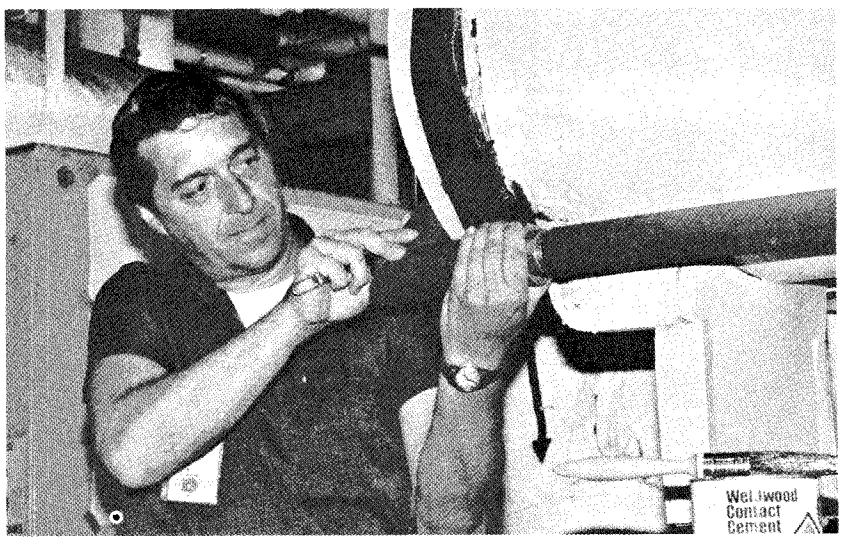
Len Broomer is repairing a leak on a chemical system



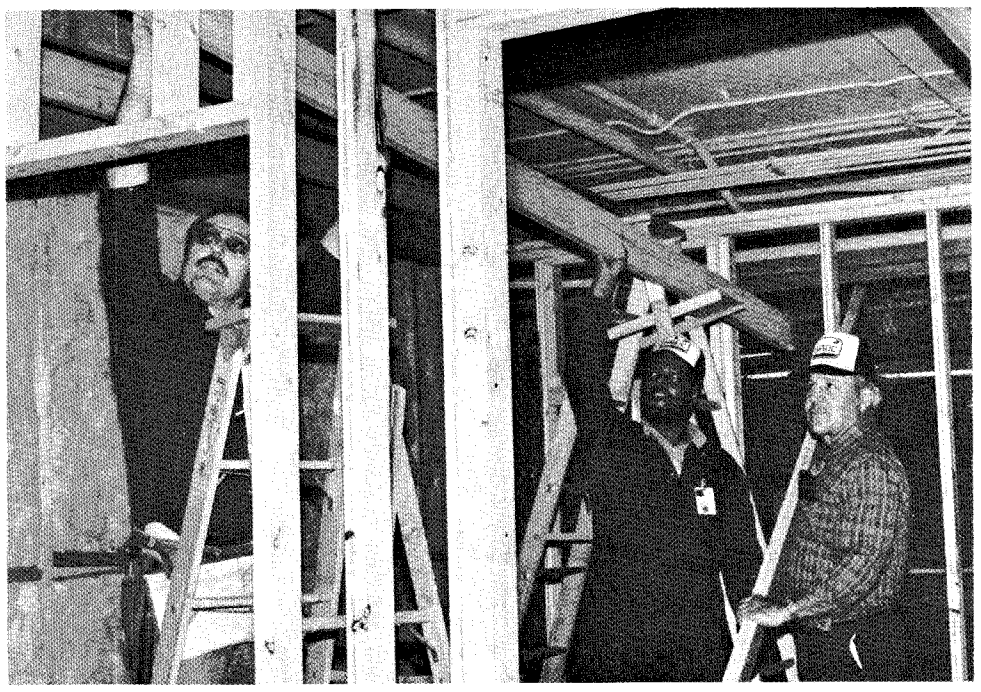
John Dougherty is logging steam output levels in the m



Bill McKenna is checking the instrument operational readings on the big chiller.



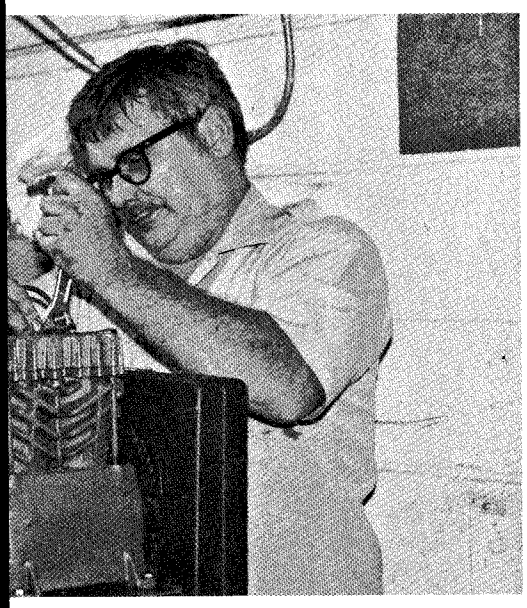
David Varner is insulating air conditioning pipes.



Charles Yeastedt (left), Frank Sherard (center), and Peter DePaul (right) are building an office.

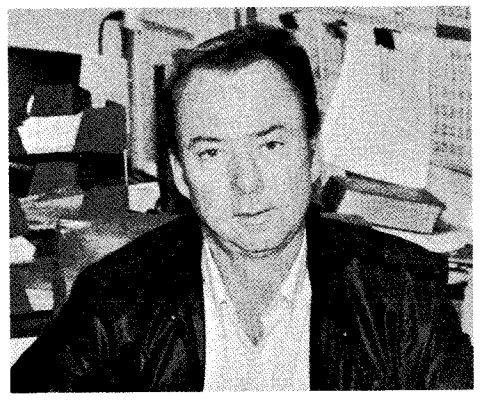
Photos by Regina Gasuk

y keep NADC running strong

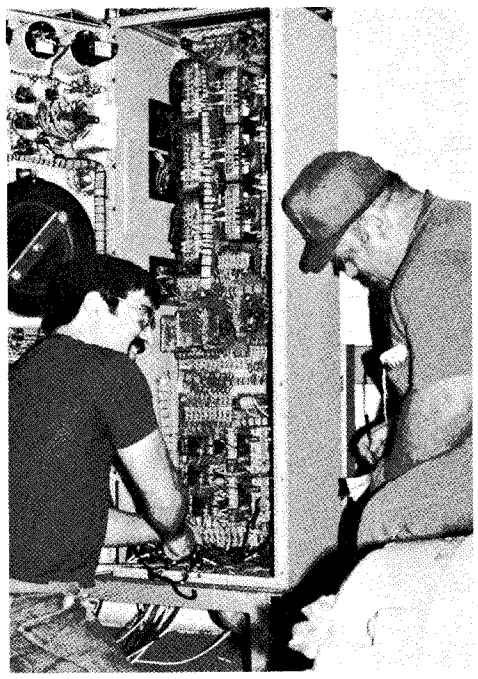


performing routine maintenance on an

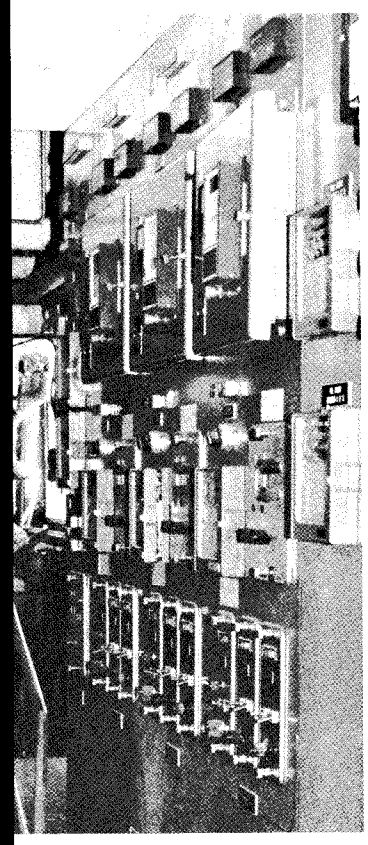
Donald Laderer (left), Donald Shaw (top), Richard Capaldi (right) perform maintenance on P4A crash truck.



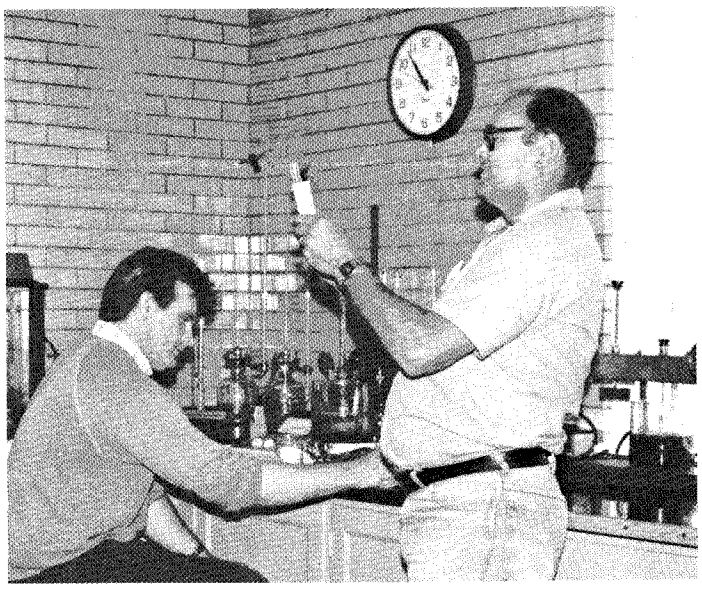
Ed Linke, Transportation Manager



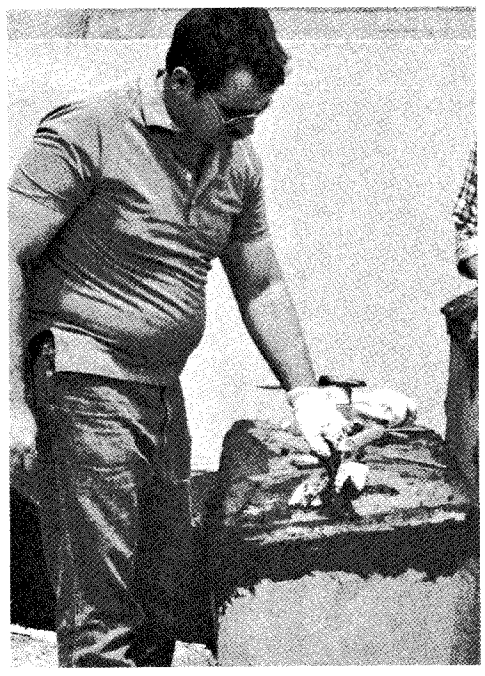
Frank Tarlecki (left) and Otto Engdahl (right) are working on the 400 Hz generator control board in the VP lab.



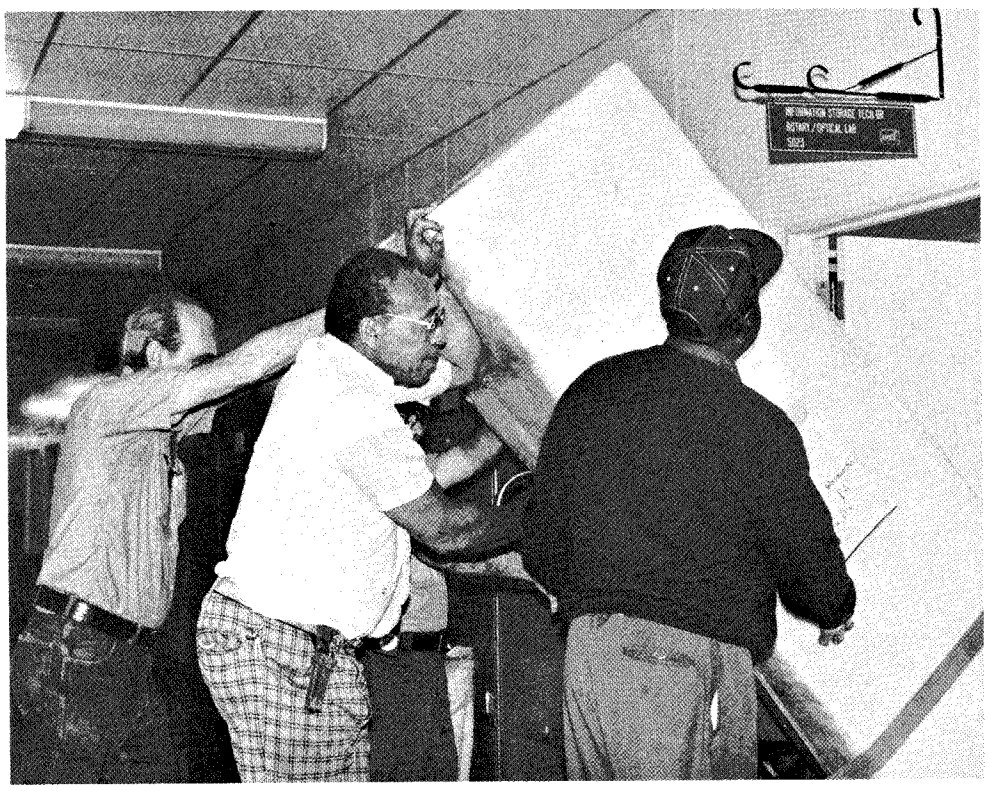
operational statistics on oiler plant.



Jim McKeown (left) and Leroy Eckbold (right) perform laboratory analysis of waste water at the sewage plant.



Bill Urban is weatherproofing air conditioning duct on the roof of hangar bay 1, building 4.



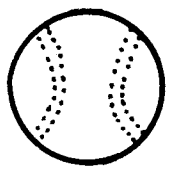
Dale Jackson (left), John Boney (center), Lister Ransom (right), and William Waldo (back) deliver a computer tape drive to its destination.

Richard Capaldi tows a disabled bus.

POP - UPS

by Charlie Destra

There have been a lot of high batting averages in the early going around the league and some of the teams' top hitters are listed below .....
The Granfalloon's big stars so far have been John Tralies (.667 ave.) and Mark James (.478, 2 HRs) .....
Jim Mitchell's .455 average has carried Agent Orange .....
Mickey Rudock (.458, 17 RBIs), somewhat overshadowed by teammate Heydet, has been having a great year for the Misfits .....
In addition to Bretton, the Guzzler's Jay Ward (.600, 8 RBIs) and Dave Gleisner (.555, 11 RBIs) have been driving in the runs .....
The Pacer has been paced by Jim Wolsky (.667) and Rich Brodeen (.529)
Dave Popeck's .637 and Criag Volker's .600 have led the Rebels .....
The Nightriders have good balance but my average (.600) along with John DeValle's (.545) head the cast .....
Mike Wagner (.535, 2 HRs) has supplied good power .....
The Bearcats have gotten big years from Craig Krauss (.620) and slugger Adrian Hribar (5 HRs, 23 RBIs) .....
The Phantom's Steve Rosenthal is hitting at .630 .....
Greg Chase (.626) and Rick Kinsch (.800) are tops for the Druids .....
Why are the Rebels 0-5 after making the playoffs last season? Because they split into two teams this year and the "other half," the Devils, has the original nucleus .....
Agent Orange has won only two games over the last two seasons. Manager Scott Kee must be muttering Casey Stengel's old line: "It's like I tell my barber — a shave and a haircut, but don't cut my throat. I might want to do that myself" .....
But Casey also philosophized, "Without losers, where would the winners be?" .....
And last but not least, restroom facilities are now available at the Inertial Field, thanks to Commissioner Jim Kearney's efforts.



8 of 14 teams make playoffs

by Charlie Destra

The Men's Softball League playoff picture was already taking shape with a little more than a third of the season played. Eight of the 14 teams made the playoffs, and at press time, the first eight teams in the standings look strong for post-season berths.

The Misfits, as expected, are leading the pack for the first place in the early season. They had an 8-0 record and the distinction of being the league's only undefeated team.

The Misfits have all their cylinders going: offense, defense, pitching and depth. They've scored their opponents by a whopping 105-18 margin and pitcher Greg Heydet's (six strikeouts per game) earned run average has been a miserly .50. Heydet has been the big man at the plate, too, with a team leading .700 batting average, five homers, and 22 RBIs.

The Guzzlers (5-1), having played a tough early season schedule, have shown they're ready to challenge for the crown. Joe Bretton has led the hitting attack with four HRs, 14 RBIs, a .588 ave., and a fat .824 on-base percentage. Ron Lang has been giving the team the pitching consistency that's been missing in recent years.

The surprising Devils, also 5-1, have been getting good pitching (3.00 ERA) and hitting (.647 ave., 12 RBIs) from hurler Andy Paglia. And opponents are finding it hard to punch any fly balls

through the fine outfield tandem of George Reichl and Tim Barry.

While the Misfits, Guzzlers and Devils look like locks for the playoffs, the next five teams in the standings are in comfortable shape. The Nightriders, Bearcats and Granfalloon are breezing at 5-2, the Druids are at 3-1, and the 8th Inning, looking to defend their championships, are 4-2.

The final six teams have a tough uphill climb with the Renegades (2-5) and Pacer (2-6) having the best chance. The remaining teams are Agent Orange, Phantoms (both 1-6), Rebels (0-5), and Ballbusters (0-7).

But I think everyone's remembering last season when the 8th Inning won only one of their last nine games, barely made the playoffs, and went on to win the whole thing.

Lucky Strikes take it all

by Tom Reiter

The saga continues — last month we worked out the final four as the Screwballs scored a two pin victory in their Divisions' second half, three game, tie-breaking rolloff. The Championship round pitted the Screwballs, Raiders, Lucky Strikes and Alley Cats across six lanes. Donna Conway tried to carry Cliff Tierney's Raiders with a handicapped 274 game, but it didn't help. After much "wine"ing and gnashing of teeth, the Lucky Strikes took it all. Cathy Burian, the winning captain, expressed her feelings in the accompanying prose:

Twas the day of the rolloffs and all through the halls,
I heard teammates crying "I'm climbing the walls."
We've got 3 more hours, God am I tight
I just hope that we can put up a good fight.
We must bowl the Alley Cats, formidable foes
they could cause my team considerable woes.
They have Janet and Kevin, they even have Gene
Some of the best bowlers I've ever seen.
We have David and Edward, Mary, Mary and Paul
and Cathy the Captain, only average after all.
We're finally bowling, we've won the first game
and I've heard that the Screwballs have just done the same.
I just heard from Debbie that we're up 30 pins
and all we need now is two little wins.
We're bowling our hearts out, we're doing just fine
I'm still really nervous, I need some more wine.
Game two's in the bag, game 3 has begun
all we need to do now is win this last one!
The tension is building the game's half way through,
but the Raiders and Screwballs want to win this thing too!
The game's finally over the shoutings begun
and miracle of miracles my team actually won!
Three cheers for the Lucky Strikes, Hip Hip Horray!
We actually lived through this to bowl another day.

Cathy Burian

Photo by Chuck Fichera

Lucky Strike team members (l. to r.): Ed Reidinger, Dave Harrison, Bob Gindhart, Mary Feeley, Peg Clark, Cathy Burian, Paul Haas, Dolores Wilson (not pictured, Mary Mullen and Ken Smith)

Photo by Cathy Burian

In the presence of Frank Drummond (far left) and Jose Ferrer, Cafeteria Manager (far right), Food Services Board Manager Aris Pasles presents $50 savings bond to Juliana Danche for her winning Spinach Pie recipe.

The NADC RECIPE REVIEW

Chicken Francaise

This month's recipe is provided by Suzanne McNellis, (Code 7012, X1507) who will receive a **$50 Bond** from the Food Service Board. This recipe will also be served in the NADC Cafeteria. Submit your recipes to Mr. Jose Ferrer, Cafeteria Manager. One winner will be selected each month.

Chicken breast, skinless (5 oz.)
Seasoned Flour (Salt, Pepper, Paprika)
Egg Batter (egg and milk or water)
Oil for cooking

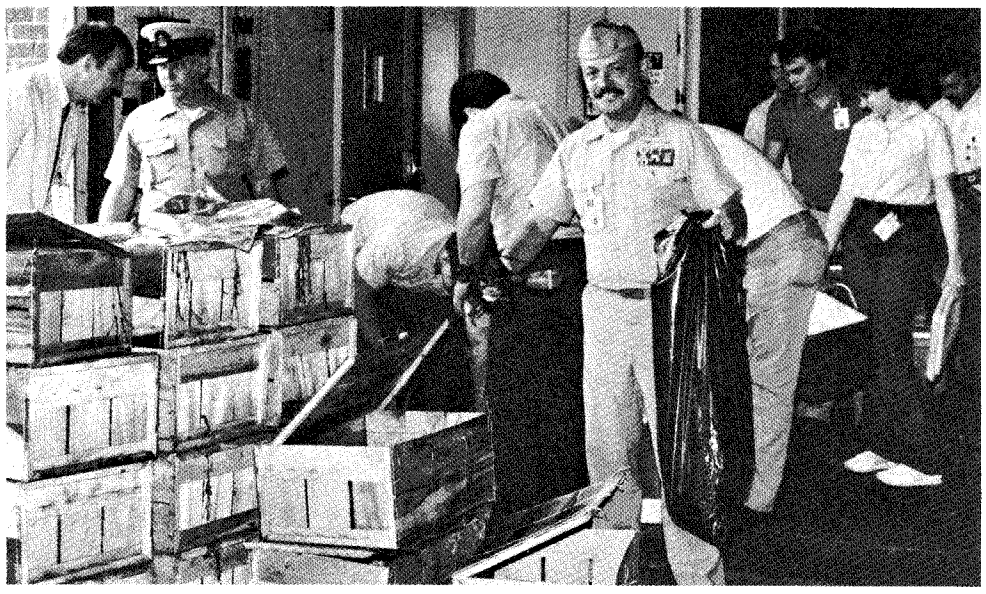
Dredge breast in seasoned flour. Place in egg wash batter allowing enough time to marinate (2 min.). Place in saute pan with 4 oz. oil and saute until both sides are golden brown. Hold until needed. Place portion in saute pan with 1 oz. of chicken broth and 1 oz. sauce for chicken francaise. Saute until hot. Sprinkle with parsley.

LOOK FOR THIS RECIPE TO BE SERVED IN THE NADC CAFETERIA

Cut here for file card

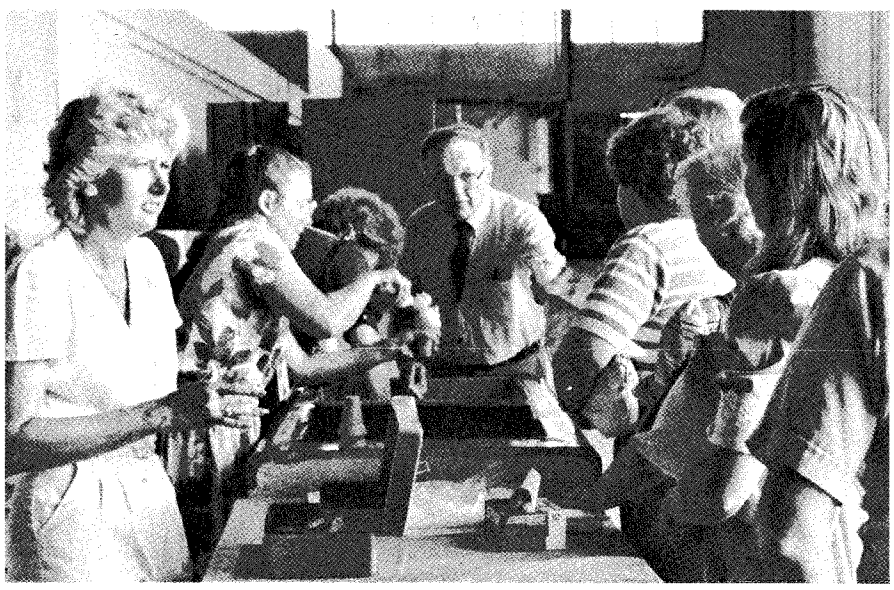
Navy Relief — hard work, happy faces

Photos by Regina Gasuk

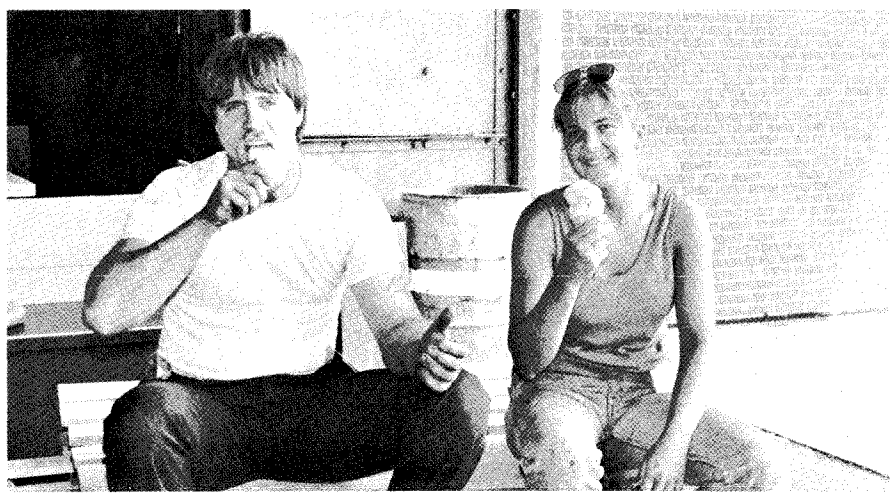


CAPT Fred Wright, Chief Staff Officer, picks up his live lobster during a recent sale.

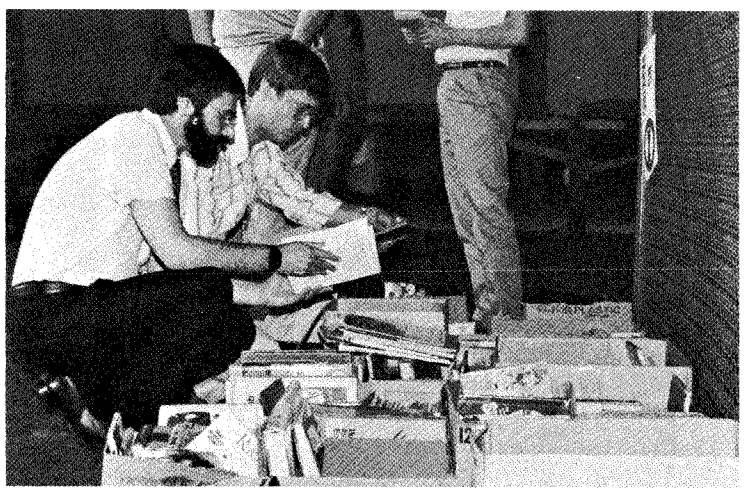
Two incognito Navy Relief supporters sell Navy Relief Raffle Tickets in the Credit Union lobby.



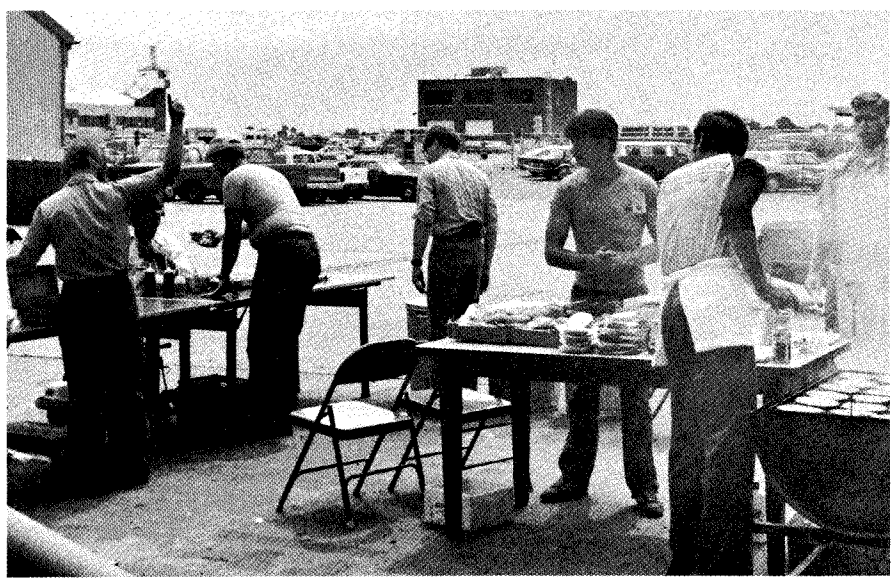
L. to r.: Lynn Peaslee, Debbie Stzubinski, Kathy Montrey, and Harry Ubele scoop mounds of ice cream in the hangar at lunchtime to help raise money.



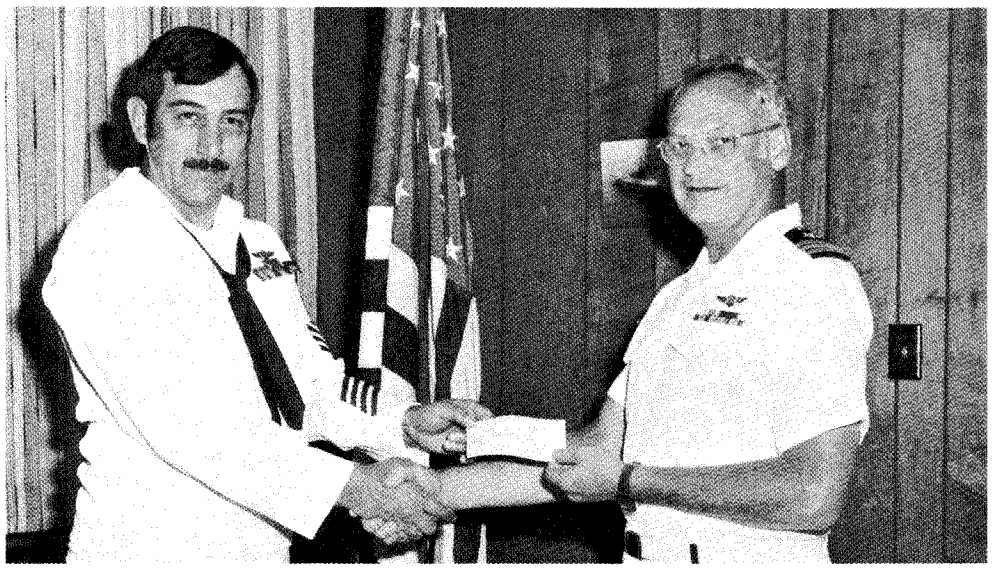
Two roofing contractors take a break to enjoy an ice cream cone during the mid-day heat.



Center personnel rummage through hundreds of books during a sale in support of the drive.



Military personnel barbecue hamburgers with all the fixin's outside of hangar 1 for Navy Relief.



AE1 William Wiley (left), representing the First Class Association, presented CDR Thomas Mumford (right), this year's Navy Relief Campaign Chairman, the first contribution of $100 for the 1985 Navy Relief Campaign. The First Class Association raffled off a gas barbecue grill to raise the money.

Photo by Chuck Fichera

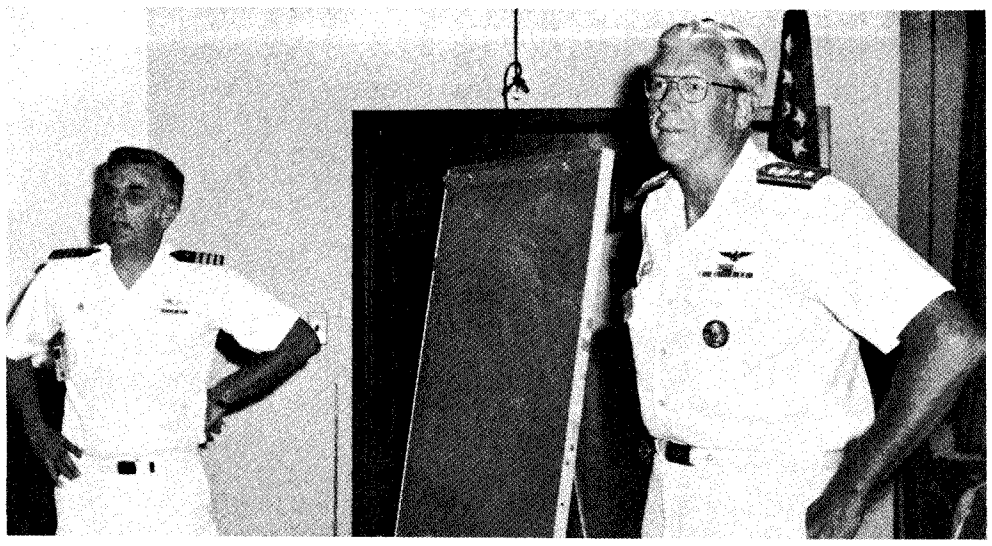


Photo by Regina Gasuk

RADM Johnson visits Center

On May 23, 1985, RADM Roger D. "Spider" Johnson from the Defense Systems Management College, Fort Belvoir, Virginia, visited the Center to brief NADC on DoD's material acquisition college.

Six receive Center awards

continued from page 1

Equipments. Under his leadership, this satellite based radio navigation system development has grown into the largest program in the Communication Navigation Technology Directorate (CNTD) and one of the most important for the Center in its role as the Navy's lead navigation laboratory.

Bill Lyons, Director of CNTD said, "the work performed under the GPS Program is varied and ranges from the complexities of advanced development to the demands of life cycle support. They share high visibility within the sponsoring activities, test agencies and Fleet user commands. His persistence and excellence in all GPS efforts have resulted in increased engineering and management responsibilities for the Center and in excess of $4 million of new R&D work for FY85."

Lowenstein graduated from City College of New York with a Bachelor's degree in Electrical Engineering in 1961. He completed his Master's degree in Electrical Engineering there in 1967. He further received a Master of Science in Applied Statistics in 1973 from New York University.

The Project Leadership Award was also presented to LCDR William Mugg, USN. Since November 1983, LCDR Mugg has been the CV-ASWM Program Director, and has been the primary NADC individual responsible for the overall management and direction of the CV-ASWM Program and its individual projects. Soon after LCDR Mugg began as program director, CV-ASWM was faced with a 45% budget cut in the CV-ASWM 4.1 project for FY84. Mugg was able to muster the resources of project and contractor personnel to identify and propose a low-cost alternative approach to still provide the fleet with needed improvement to their mission software but on a longer schedule, resulting in the 4.1 project staying on schedule.

Captain Richard Fidlar, Director of Command Projects said, "because of LCDR Mugg's superior performance the fleet will receive new mission software tailored to perform on new state-of-the-art technology display systems, plus a major upgrade to the Acoustic Processing System."

Mugg graduated from the Naval Academy in 1970 with a Bachelor of Science in Aeronautical Engineering. He received his Master's from North Carolina State University the following year in Mechanical Engineering.

Administrative Support Achievement

Doug Lundberg is Manager of the Personnel Services Division of the Civilian Personnel Department (CPD). This year he is recognized for outstanding administrative support achievement. Noteworthy are his personal efforts and leadership abilities that are responsible for the timeliness and quality of our staffing and high grade classification action being among the best in the Navy.

Ron Young, Director of Civilian Personnel said, "Doug Lundberg has provided the leadership, direction, and motivation to the Personnel Services Division that has resulted in continued excellence in providing staffing and classification services to the Center during periods of sustained growth, high division turnover, increased day-to-day operations, and a relatively constant ceiling. He provides an outstanding balance between meeting the operational needs of the Center and the numerous regulatory and procedural requirements of the Federal Personnel System."

Lundberg received his Bachelor of Arts in Labor Relations from Pennsylvania State University and has completed graduate work there in Public Administration.

Scientific Achievement

Dr. Witt is this year's recipient of the Scientific Achievement award. He is being recognized for his many major accomplishments in the area of air-to-underwater laser radar and communication system performance testing and analysis. Dr. Witt presented and published the results of a study validating the air-to-underwater laser system range equation which has become the standard reference used today by the technical community.

Edward Yanuzzi, Director of SATD said, "Dr. Witt has done an excellent job in expanding the in-house laser technology work and capability. His efforts have cultivated nationally recognized expertise and fostered interaction with the technical and sponsor communities. At the same time he has expanded into new areas of research such as a scheme to measure magnetic fields remotely with an ultraviolet laser. This program has gained wide attention at high levels in the Department of Defense," concluded Yanuzzi.

Dr. Witt received his Bachelor's and Master's in Physics from the University of Pennsylvania. In 1973 he received his Ph.D. in Physics from Drexel University.

Robert Buffum, Technical Director said, "the contributions of these members of the NADC team cover the full spectrum of our program. The number of high quality nominations this year, as in the past, is indicative of the high level of achievement and the recognition of that achievement by the nominee's peers.

"Our awards are now recognized throughout the Director of Navy Laboratory System, as an indication of significant personal commitment, excellence, and stature in the Center and the Navy," concluded Buffum.

Technical highlights

LOW COST SONOBUOY PROGRAM (LCS)

The LCS program includes the development and implementation of a baseline system (sonobuoy, launches, avionics and P-3/S-3 software) as well as the investigation of an advanced system to cope with future threat submarines. In parallel with the baseline development which is proceeding into the contractor demonstration phase this summer, NADC has been fabricating a series of over-the-side acoustic measurement buoys to obtain data on which to base the design of the advanced sonobuoy. These buoys contain various horizontal and vertical hydrophone array configurations and will be deployed in seven ocean locations to obtain measurements that will enable the evaluation and comparison of several acoustic detection concepts that are candidates for the advanced sonobuoy. During the month of April the measurement buoy hardware was given a "shakedown" test from the Moored Barge Facility at St. Croix, VI. Accomplishment of this test has provided valuable feedback on the suitability of the hardware and the assurance that the system will be ready for the start of the actual measurement program in June.

STRAPDOWN RING LASER GYRO NAVIGATOR (SRLGN)

NADC is currently engaged in an Exploratory Development (6.2) program to investigate the feasibility of SRLGN to meet the new surface ship navigation operational requirement. The second of the candidate SRLGN systems, provided by Honeywell for at-sea evaluation at no-cost to the government, is currently undergoing evaluation.

The Honeywell SRLGN was installed aboard the USNS VANGUARD on 22 January 1985. Since then, tests have been conducted during five at-sea test periods. Fourteen at-sea performance runs have been obtained to date. The ensemble time-RMS radial position error with nominal 48-hour fix/resets was 90% of that allowed by the new Operational Requirement for surface combatants. One or two more at-sea test periods will be required to provide an adequate data base for detailed performance analysis. The test of the Honeywell SRLGN will conclude following those periods.

Photo by Ken Smith

OWC presents scholarships

Annette Sturm, Officers' Wives Club (OWC) Advisor (far left) and Debbie Streicher, OWC President (left), present a scholarship check to Sally Mahon, Director of Financial Aid at Bucks County Community College. Susan Jones (right), Ginger Brounce (far right), and Deborah Spaulding (not pictured) are the scholarship recipients.

VIEWPOINT

Photos by Regina Gasuk

This month's question is: "If you could do it over again what would you do?"

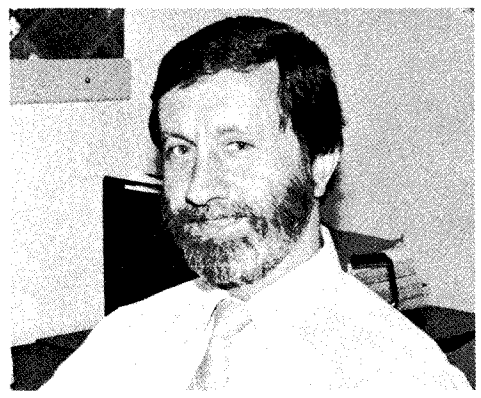
Mary Anne Kane (Code 8444):

"I would not be as shy as I was when I first started working here, I would be more independent, be able to deal with people as they are and enjoy life to the fullest."

P.S. "I'd be a green-eyed blonde driving a corvette and enjoying life."

Arthur Horbach (Code 3031):

"Up until recently, the same thing. The Navy has financed my way through undergraduate and graduate school; I've worked at fascinating projects; and I've travelled all over the world! But, new civil service policies may soon re-direct me!

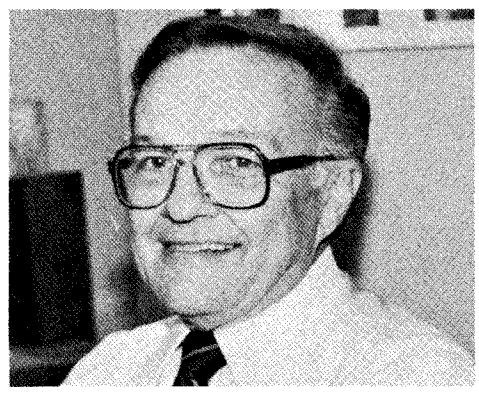


Dorothy Grygiel (Code 1003):

"I'd be born at 40 rather than zero because I've been more content the second half of my life."

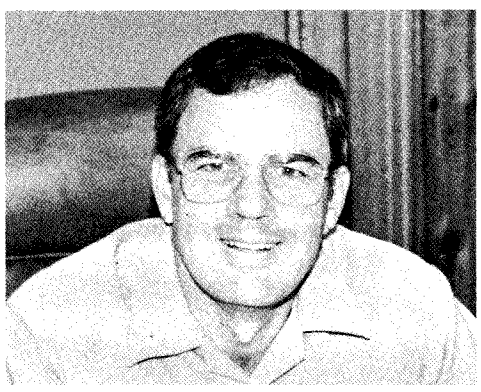
George Lange (Code 1BA):

"In a college career aptitude test it was said I would be equally good as a forest ranger or as an engineer. I should have been a forest ranger; I had no idea it would be like this as an engineer."



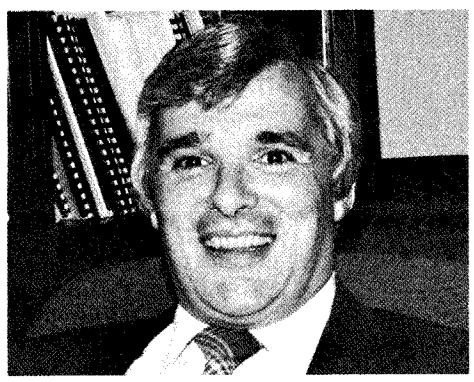
Harry Ubele (Code 1E31):

"I would major in economics and shoot for Chairman of the Board of General Motors."



CAPT Bob Bondi (Code 30A):

"I would find a way to decouple Ed Yannuzzi from whatever he uses as an energy source." ..... "I'm a mild mannered Naval officer; next time around I'd be more aggressive in my formulation and expression of opinions."

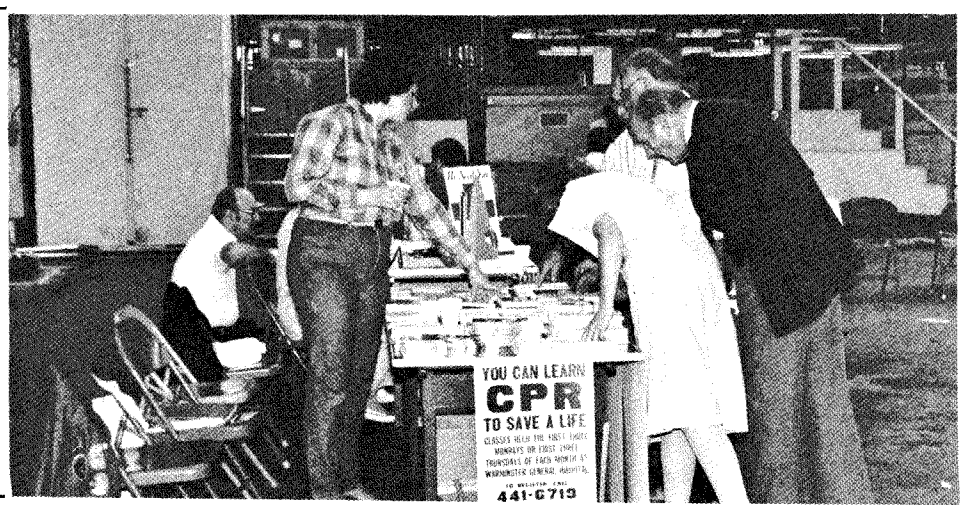


David DeSimone (Code 60B):

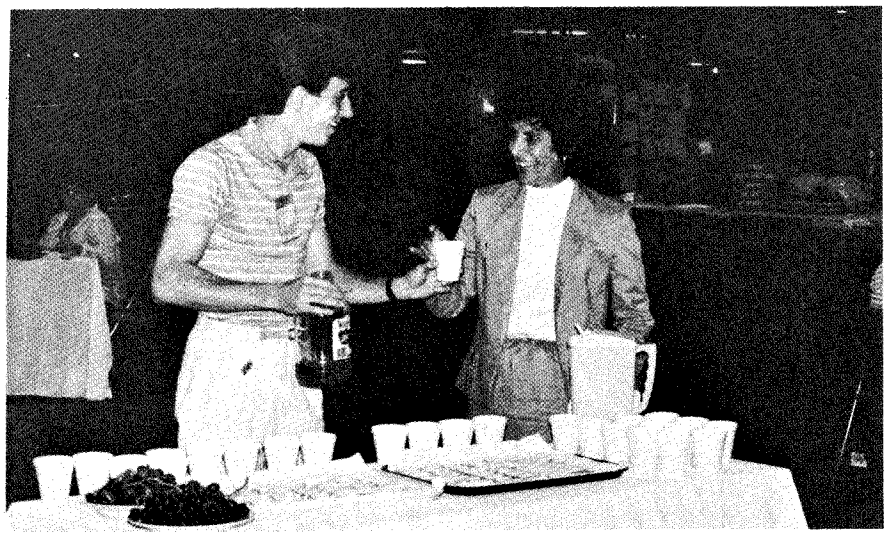
"For the sake of career development as a GS-5, I would not have deliberately challenged my Division Superintendent (Dino Mancinelli)" .. .."I would have taken a course on 'How to Keep One's Mouth Shut' in order not to gather feet." ...."I would work for Congress inventing base closure lists." ...."I would have sought employment at CNM and got an early out." ...."I would shut down the Centrifuge to reduce my workload." ...."I would have told Vice President Bush to come back another day when we weren't so busy." ...."I would have been nicer to John Lehman when we were in school together."

NADC holds first "Health Fair"

Monica Bareis, American Red Cross CPR instructor, provides information brochures and advice to curious NADC employees.



Sheri Ganas from the PA Dept. of Health takes blood pressure reading for Dorothy Littley (Code 204).



Paul Scelsi (NADC summer employee) offers Rae Routzahn a cool glass of apple juice and other healthful snacks . . . compliments of the Civilian Personnel Department.

NADC & Grumman work together

by Paul Scelsi

The development of new technology for Naval aircraft is one goal of the Naval Air Development Center. Technological advancements in aircraft must withstand the scrutiny of both the manufacturer and the Navy. Safe, durable, and affordable are the basic requirements. It is not easy to meet these standards yet, it is possible.

NADC and Grumman Aerospace Corporation teamed up to make advancements in Naval aircraft and win an award for their efforts. Together they produced a fuselage structure with a new composite material.

Lee Gause, an aerospace engineer in the Aircraft and Crew Systems Technology Directorate (Code 6043), was the technical overseer/manager from NADC, the sponsor. After NADC allocated the needed funds for the project, Gause specified the requirements. The results?

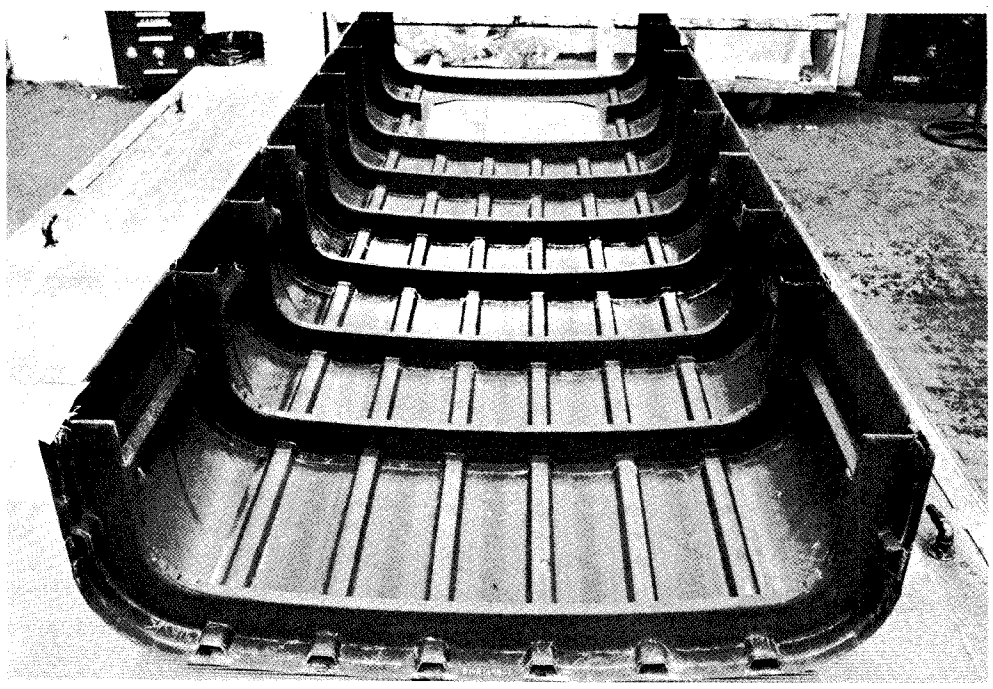
Grumman, the New York-based manufacturer, designed a fuselage structure for aircraft with a new composite material, graphite bismalemide. This material is unique in that it is capable of sustained operation in the 350-400°F range, much higher temperatures than previous composite materials could operate.

They entered the structure in the 40th annual Reinforced Plastics/ Composites Conference in Atlanta, Georgia and left with honors. An Award of Excellence and a Developmental Award were presented to Grumman for their efforts in the design of the structure. Gause was also recognized for his work as manager of the entire mission.

"I made sure they understood what was needed and that they did not go astray," said the 15-year employee out of Drexel University. "We have a requirement for an aircraft and we give it to the manufacturers. . . . This is a real push for the technology, and the manufacturer, but the real winner is the Navy."

Gause said the project is still in the testing stage at the Center but, "for any new aircraft, this would be something seriously considered."

Teamwork resulted in honors for Gause and Grumman. More importantly, teamwork resulted in aircraft advancements, which is what NADC is all about.



The award-winning fuselage structure built with graphite bismalemide.

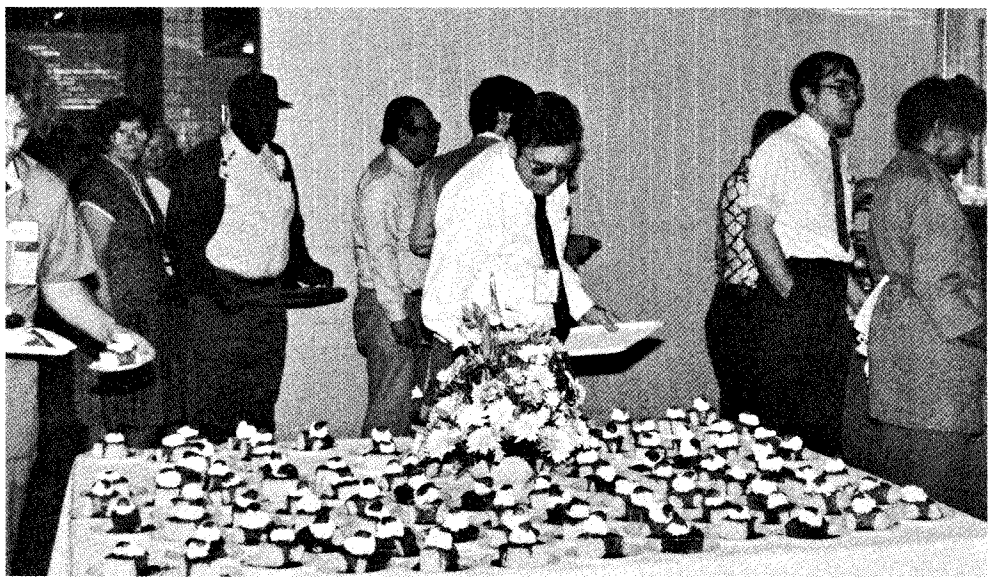


Photo by Regina Gasuk

Anchorage special delights

Compliments of the Food Services Board, the ANCHORAGE Cafeteria presented a "May Summertime Special" on Thursday, May 16th. Traditional summer picnic delights were offered: barbeque rib sandwich, corn on the cob, potato salad, beverage, and the tempting cupcakes you see pictured.

Sailor of the Quarter

AMS1 Kimberly Grard

AMS1 Kimberly B. Grard was recently selected as NADC's Sailor of the Quarter (SOQ) for the first quarter 1985.

Nearly a ten-year veteran, Grard reported aboard in April 1984 as a Petty Officer First Class Aviation Structural Mechanic in the Aircraft Maintenance Department.

He was selected as SOQ by the Chief Petty Officers of the Center as formal recognition for his consistent support and superb performance.

Chosen for a difficult and critical assignment as Maintenance Control Production Petty Officer, Grard was commended for tireless attention to detail and a commitment to excellence.

In a command letter of congratulations, Center Commander, CAPT Edward Sturm praised Grard: "Your superb dedication and demonstrated proficiency have inspired your peers and superiors alike. It is personnel of your character and enthusiasm that have made the Navy the honorable profession that it is today."

The SOQ Award is accompanied by some tangible benefits, too. A $50 bond from the Officers' and CPOs Association, a Navy League plaque, a free swimming pool pass for Grard and his family for the summer and last but not least, the coveted parking spot — close to his work site and at the Exchange. (MAB)

W&R pushes paintings

Photo by Regina Gasuk

The recent Welfare and Recreation sponsored oil painting sale in Hangar 1 netted just shy of $800. Proceeds will be applied to the annual Dorney Park picnic on July 20, 1985. The picnic is open to all NADC civilian and military employees. The oil painting sale will be repeated in November 1985, just in time for holiday gift giving! The proceeds of that sale will be applied to the Orphans Christmas Party in December 1985.

Commander Salutes

AT2 Robert Collette (Code 10), **ACAN Ginger King** (Code 70), **AXC Kenneth Pratt, AE3 Dwayne Nelson, AD3 Norman Watson** (Code 80) — For serving as a member of the detail at a recent funeral service.

John Wullert (Code 20) — For the informative briefing presented to the Technology & Strategy Working Group at NAVAIRSYSCOM.

Thomas Sanders (Code 10) — For valuable contribution as Position, Location and Navigation Symposium '84 Vice Chairman.

Dr. Lloyd Bobb, Stephen Campana (Code 30), **Walter Schoppe** (Code 40) — For an excellent briefing presented to the Naval Reserve Unit 0193.

Jerome Bortman (Code 70) — For the informative briefing presented to the National Association of Management and Technical Assistance.

Jerome Bortman, John Scott (Code 70) — For valuable briefing presented to the Federal Aviation Administration.

Harry Koper, Dr. Bruce Steinberg (Code 30), **Edward Beals** (Code 40), **Dennis Herbert, CDR William Moroney** (Code 60) — For donating time and expertise in judging the Archbishop Wood Science Fair.

Dr. Harold von Beckh (Code 60) — For receiving the Hubertus Strughold Award at the 23rd Annual Meeting of the German Society of Aerospace Medicine in Seeheim, Germany.

Dr. Vinod Agarwala (Code 60) — For noteworthy accomplishment in winning the 1984 Captain Walter S. Diehl Award.

Mark Zehner (Code 50) — For excellent leadership provided for the Air Common Acoustic Processing Program.

MAJ Dale Tremblay, CF, MAJ Grant Bristow, CF, John Strobel (Code 20), **Eric Alfonsi, Stanley Greenberg** (Code 50), **William Mulley** (Code 60) — For excellent assistance provided during the visit of LCOL Poole of the Canadian Sea King Replacement Project.

NADC Reflector

Volume 30, Number 7 NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA. July 1985

In this issue:
—Military awards
—Sesame Street
—Softball stats
—Runners club
—Mailroom personnel

ADAPT facility renamed in memory of Rosso

Early this year, Edward Yannuzzi, Director of Sensors and Avionics Technology Directorate (SATD), approached the Center Commander with a request to dedicate NADC's Advanced ASW Processing Techniques (ADAPT) Facility to the memory of Daniel A. Rosso, Jr. (NAVAIR-370), former Center employee who died in November 1984.

The Naval Air Development Center and Washington community commended the idea and on Friday, June 21st, the ADAPT laboratory was renamed the Daniel A. Rosso, Jr. Processing Laboratory. The momentous occasion was witnessed by an auditorium full of Navy officials, Rosso's family, friends and peers.

Under Rosso's direction funding was provided for part of the construction of the laboratory as well as labor and maintenance costs. Through funding provided by his efforts the equipment and processors that outfit the lab were also purchased. Rosso was involved with many of the laboratory's current projects as well as those that have taken place over the past 7 years.

Don Russo of SATD organized the event which began with a welcome and introductory address by Pete Santi, who worked for Rosso for about 2 years at NAVAIR. He spoke of his excellent managerial abilities and their friendship. Jim Howard related humorous personal experiences about his and Rosso's travel exploits and Russ Mason former NADC Technical Director spoke of the long hours and dedication so characteristic of Rosso's working days.

RADM Daniel Wolkensdorfer (OP-951), Captain Edward Sturm, Center Commander, and all the speakers commented on Rosso's "get the job done, no nonsense," approach to his work and the strides made in ASW because of his perseverence and dedication through both prosperous and budget constrained times.

Mrs. Daniel Rosso was deeply moved by this show of admiration and respect for her late husband and spoke proudly of his strong family ties and dedication to her and their four daughters.

Rosso was an engineer at NADC until 1957 then held various positions at NAVAIR including Technical Administrator for AIR-370, a position in which Center personnel interfaced with him. Rosso was a charter member of the Senior Executive Service since 1979 and received the Navy Superior Civilian Service Award in 1982. Throughout his career, Rosso received letters of Commendation and Appreciation from various Branches of the Department of Defense and the private sector.

The Rosso Laboratory is a hybrid computersignal processing facility for the design, test, and evaluation of hardware, algorithms and software used in the Navy's airborne signal processors. The laboratory was designed primarily for advanced research and evaluation, but spin-offs and transition to platforms are enhanced by investigating and demonstrating all aspects of introducing a new capability: i.e. key interfaces, sensor processing, pre- and post-processing, display formatting, recording and playback, operator interaction, and operating aids. The laboratory provides the facility to support technology developments of multiple sensor subsystems as well as platform intergration.

NADC is privileged to honor the memory of the late Dan Rosso. He will now be long remembered for his dedication, encouragement and support in establishing this facility.

Photo by John Jones

Center Commander CAPT Edward J. Sturm (right) presents memorial plaque to Mrs. Mary Rosso. Admiral Daniel J. Wolkensdorfer (left) participated in the ceremony.

New Deputy Director for Engineering Support Group

The Engineering Support Group has a new Deputy Director. Joe Clay was selected for this position at the end of June. Clay felt a sense of relief upon being selected. "I have a good background to do the job, but very stiff competition," he said. "After being Deputy in Public Works for a while, I saw this position as the logical next step," continued Clay.

Clay started at the Center in April, 1979 as Head of the Engineering Division in Public Works, a position he held for a year. He then became Deputy Public Works Officer in April 1980.

Before coming to the Center, Clay spent 15 months at the Naval Facilities Engineering Command, Northern Division, as a project manager. Prior to that Clay spent 2½ years at Montgomery County as their water and sewer program coordinator. Ten and one half years active duty Navy preceeded that.

"I thought it would be easy to tear myself away from Public Works; I have emotional ties," Clay said, "but I think it is going to be a challenge; to broaden my perspective, to see exactly what goes on throughout the entire directorate."

Clay is concerned about how efficiently Center resources are being used in support areas. "It should be our interest to make sure that for the resources input as dollars, the most service comes back," said Clay.

Clay received his Bachelor's in Civil Engineering from Villanova University in 1964. In 1971 he completed his Master of Science, Civil Engineering and Master of Public Works at the University of Pittsburgh.

Photo by Regina Gasuk

Joe Clay sits behind the Deputy Director's desk for his new view of the Engineering Support Group.

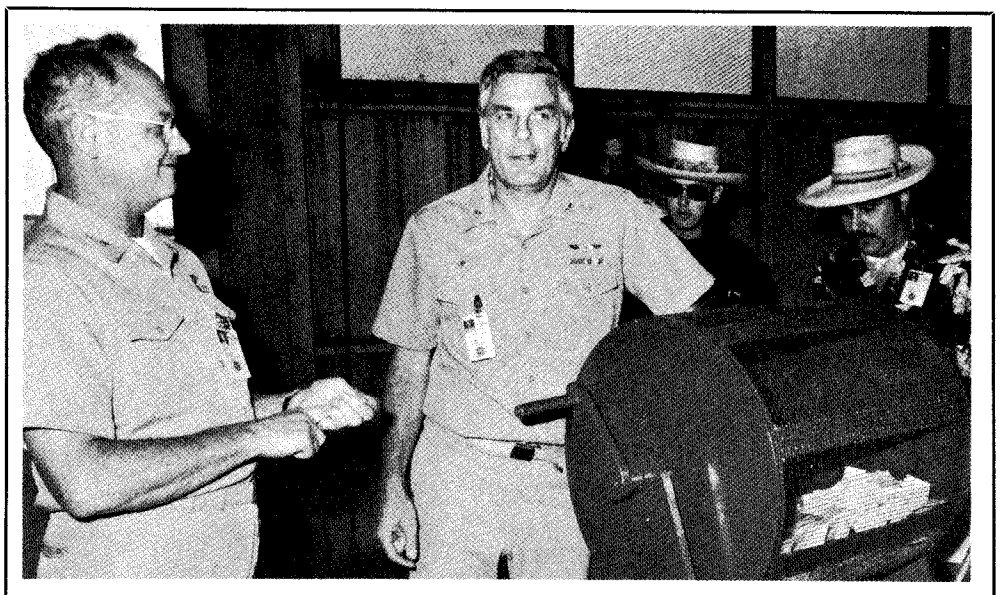


Photo by John Jones

Sturm picks winners

CDR Thomas Mumford (left), 1985 Navy Relief Chairman, urges CAPT Edward Sturm to pick the winners of the last raffle ticket drawing for this campaign. AE1 Albert Heinz won the grand prize Hawaiian vacation.

Command Corner

CAPT Edward J. Sturm
Center Commander

Robert S. Buffum
Technical Director

Recent incidents of espionage involving U.S. citizens both civilian and military have made a review of individual security responsibilities necessary.

Once an individual has been granted a security clearance on the basis of a favorable security determination, usually the result of a personnel security investigation, any information which could place that individual's loyalty, reliability, judgement and/or trustworthiness in question should be reported and evaluated from a security standpoint. OPNAV Instruction 5510.1G discusses these concerns and Center personnel who are not familiar with this instruction are urged to review it.

Supervisors at all levels and individual employees alike should be alert to any behavior indicating unexplained affluence, financial instability, alcohol and drug abuse, mental or emotional instability, or criminal conduct. If anyone has any information concerning these matters it should be reported immediately to the Security Officer (Code 044).

CAPT Edward J. Sturm
Center Commander

Robert S. Buffum
Technical Director

Photo by Regina Gasuk

Welfare and Recreation ***Vice-Chairman Len Roach (standing) distributes complimentary coupons good for free summertime special at The Anchorage.***

Letter to the Editor

Dear Editor:

The sign reads "If you had Direct Deposit, you wouldn't be reading this now." I have direct deposit and read the sign every payday. At the same time I read the sign "the average worker spends 8½ hours standing in line depositing his/her paycheck. The Direct Deposit system works well but we need a direct withdrawal speed line. It is frustrating to say the least as I wait in line for my money every two weeks watching the Credit Union cater to those people who don't have Direct Deposit, by opening a window marked "check cashing only."

What's the purpose of Direct Deposit? To eliminate the cost of printing and delivering checks. I feel by offering a "speed line" to check cashers the Credit Union is fighting the Direct Deposit system. How about trying a cash withdrawal only window?

Thanks for reading,
J. E. McGeehan

Dear Mr. McGeehan:

The Fort Monmouth Federal Credit Union is aware Pennsylvania Direct Deposit participants sometimes wait in teller lines when trying to make a cash withdrawal.

In response to this problem and for the convenience of all of its members, beginning in mid-July the Credit Union is tapping into CIRRUS — the nation's largest Automatic Teller Machine (ATM) network.

What this means for Pennsylvania members is that soon the TREASURER ATM card will be able to access the 7-11 Cashstream machines and the ATM's at Mellon Bank and PSFS branch offices in the Warminster area.

There are other financial institutions in the area that will also offer the convenience of ATM cash withdrawal by using the TREASURER card in the CIRRUS Cashstream networks. To find the two nearest CIRRUS machines, all you will have to do is dial the toll-free number: 800-4-CIRRUS.

Applications for TREASURER cards are available at NADC Warminster and Willow Grove branches. They urge you to take advantage of this new service which offers "no waiting" cash withdrawal anytime of the day or night.

The Editor

(Information was provided by Ft. Monmouth Credit Union Marketing Manager, Leslie Pasdon Deady.)

Worth Repeating

"Tact is the ability to describe others as they see themselves."

—Abraham Lincoln

"A bureaucrat's idea of cleaning up his files is to make a copy of every paper before he destroys it."

—Laurence J. Peter, author of "The Peter Principle"

"I have found the best way to give advice to your children is to find out what they want and then advise them to do it."

—Harry S. Truman

Commander Salutes

Raymond Satterfield (Code 81): For outstanding achievement in the Special Television Program (Non-AFRTS Outlet) Category.

LT Warren Harner (Code 30): For professional attitude and sharing time with students of Our Lady of Mount Carmel School on their Career Day.

LCDR James Burd (Code 10): For aviation safety practices which merited the Commander, Naval Air Pacific "Pro of the Week" award.

AWCS Christopher Kaiser, AWCS Curtis Moss, ATCS Peter Remington, AW1 Jeffrey Pelton, AW1 James Hahn, AW1 Harold Parks, AW1 William Dearie, AT1 Charles Collins, AW1 Robin East, AW2 Gary Tarantino (Code 60): For contributing directly to the design of the new Update III Commandable Manual Entry Panel and to the definition of requirements for Update IV operator consoles.

David DeSimone and **John Harding** (Code 60): For valuable support during the recent East Coast Chapter SAFE meeting.

Russ Gombos (Code 80): For outstanding contributions to the Flight Clearance Office of the Naval Air Systems Command during the last three years.

Ferdinand Reetz (Code 30): For significant efforts on the Naval Weapons Center Cheap Night Task Team on light attack aircraft.

Valentine Freitag (Code 60): For valuable support during an NSTEP assignment at the Naval Material Command.

Harry Koper (Code 30): For contributing to the Center's image by participating in the Archbishop Wood High School Math Education Week.

Fred Shocket (Code 50): For valuable contribution as co-chairman of the Software Management Working Session of NAVAIR's Research and Development Workshop II.

Patricia Wenclawiak (Code 091), **Lois Kieserman** (Code 044), **Mary Feeley** (Code 30), **Arthur Duhaime, George Werts** (Code 81): For contributing to the success of the Navy Data Fusion Workshop.

Tor Jansen, Michael Burch, Mary Conyers, Anthony DeGennaro, Christine Gallagher, James Grubb, James McNamara, Vera Robbins, John Tyburski, William Wiesemann, Mieczyslaw Zurko (Code 60): For significant efforts contributed to the MV-22A Aircraft Project.

Donald Meadows (Code 814C): For hosting the Area Fire Marshal's Training Sessions for Fire Chiefs.

Michael Korth, HM3 Thomas Campbell, YN1 Ronald Moody, YN2 Steven Holt, AD3 Jamie Jaromay, AME3 Michele Williams, AD3 Michael Anderson, AN Ginger King, AC2 Brandon Bentley, AMS3 Jonathon Hester, AZAN Brenda Milner: For consideration demonstrated by volunteering to assist with the funeral service of HM2 Walsh.

NADC Reflector
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NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA.

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Views and opinions expressed in this publication are not necessarily those of the Department of Defense.

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Commander, NADC ..... **CAPT Edward J. Sturm**
Technical Director ..... **Robert S. Buffum**
Public Affairs Officer ..... **James S. Kingston**
Editor ..... **Regina Ann Gasuk**
Assistant Editor ..... **Mary Ann Brett**

Military keep Navy traditions alive

CDR Wayne Savage Defense Superior Service Medal

CDR Wayne Savage

CDR Wayne Savage was recently awarded the Defense Superior Service Medal, endorsed by the Secretary of Defense, for his exceptionally superior service as Director, Dual Source Project, Joint Cruise Missiles Project in Washington, D.C. from June 1981 to January 1985. His skill, management ability, and leadership brought this Dual Source Project into being — a major organizational and acquisition accomplishment within the Department of Defense.

Savage established a competitive and cost saving dual source procurement for TOMAHAWK, saving millions of dollars and ultimately ensured the success of the Congressionally-directed Dual Source Project.

Currently the VS Program Director, Savage arrived at the Center in late February. (MAB)

CDR Russ Hallauer

CDR Russ Hallauer, TACAMO Program Director, received the Meritorious Service Medal for July 1982 through May 1985. He provided the National Command Authority the Airborne Communications System improvements necessary to provide trans- and post-nuclear war communications capability into the next century.

Hallauer directed and personally prepared sections of the critical Communications System Alternative Study endorsed by the US Congress. He worked intensely with fleet operation squadron personnel identifying and solving problems with the E-6A trailing antenna wire resulting in a new antenna and the respect of the Naval Air and Naval Electronic Systems Commands. (MAB)

CDR Russell Hallauer Meritorious Service Medal

LCDR Burton Streicher Navy Commendation Medal

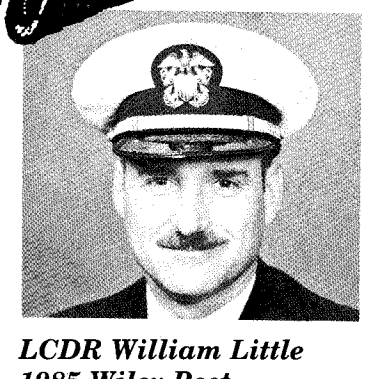
LCDR Burt Streicher

Public Works Officer, LCDR Burt Streicher ". . . vastly improved facility and utility systems in support of the Center's R&D mission," stated the citation signed by the Chief of Naval Operations. This accomplishment merited him the Navy Commendation Medal for July 1982 through July 1985. He also was commended for the markedly improved Public Works Department productivity.

Streicher directed an improvement program awarding more than $22 million in construction contracts. He saved the Navy $2 million by developing an engineering solution to provide reliable electrical power to the Center's computer facilities.

Streicher came to the Center in July 1982 and is scheduled to leave in July of this year. (MAB)

". . . upheld the highest traditions of the United States Naval Service."



LCDR William Little 1985 Wiley Post Award

LCDR William Little

LCDR William Little, an aerospace physiologist at NADC since January 1984, recently received the 1985 Wiley Post Award for dedication and excellence in aeromedical safety.

Previously, at the Naval Hospitals in Norfolk, VA and Beaufort, SC, Little made contributions aiding on-site training in egress and survival. This training is now used throughout the Naval Aviation Physiology Training Program.

While on the Naval Safety Center Staff, he began a newsletter summarizing mishap investigations. It was used by all members of the aeromedical community to integrate current problems with theory by providing emphasis on aviation physiology and water survival training. At NADC Little directs the development of operator indoctrination training packages for fleet aircrew personnel. (MAB)

AFCM Harold Garnsey

A 15% increase in flight hours, a 27% in RDT&E project flight hours over last year, and an aircraft mission capability rate of more than 70%, all contributed to Senior Chief Harold Garnsey's receipt of the Navy Commendation Medal for October 1983 through September 1984.

Garnsey, Aircraft Maintenance Chief Petty Officer at NADC, revitalized maintenance programs and improved mission readiness. "His superior management of aircraft maintenance, liaison with contractors, Depot level, and logistics facilities markedly increased aircraft availability." stated his citation signed by the Chief of Naval Operations.

Garnsey also successfully improved department technical skills through professional training resulting in decreased aircraft maintenance backlog. (MAB)

AFCM Harold Garnsey Navy Commendation Medal

Sesame Street Aids Navy

Children's fire safety aim of NADC

In cooperation with Warminster Parks and Recreation Department, NADC is taking the lead in promoting fire prevention safety. On June 27th, Warminster provided an audience of 150 children at the Navy Housing Park. NADC fire fighters staged the first "Sesame Street Stop, Drop, and Roll" show for them, with the help of familiar Sesame Street characters, Bert and Ernie.

At the end of March, the Center hosted the Sesame Street Fire Prevention Workshop presented by Children's Television Workshops, producers of Sesame Street. Local fire fighters, day care personnel and safety personnel attended. They learned how to teach fire prevention safety to children in a manner children can understand. The attendees were encouraged to pass this information onto schools and day care centers in the area.

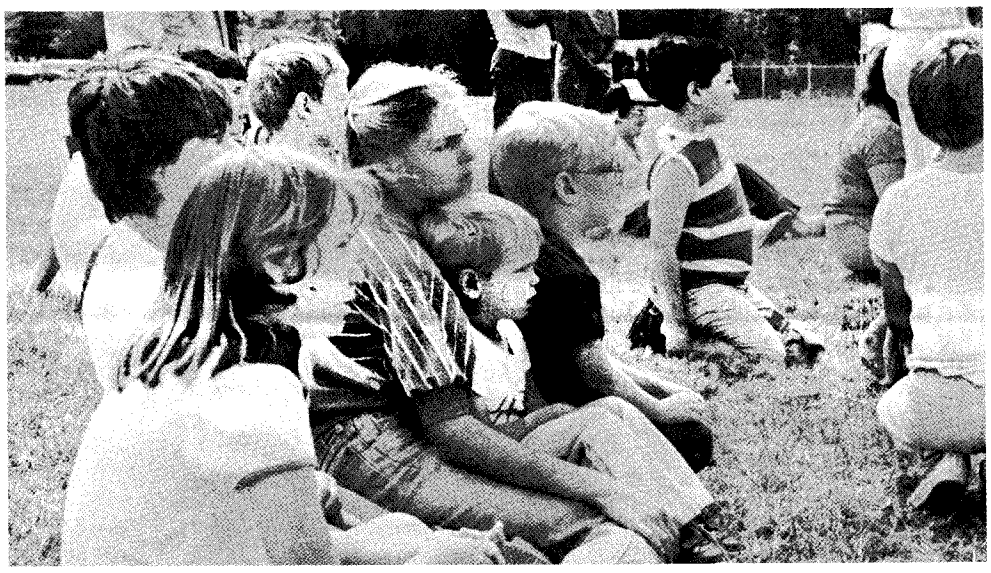
NADC's fire department was so enthusiastic about the program that they built a float-like puppet stage complete with smoke alarm and pickett fence. Fire fighter Ken Sims designed and constructed the stage on his personal time with assistance of driver/operator Bob Hewins. Other NADC fire fighters contributed their best Bert and Ernie voices to accompany the skits while still others appeared in full gear, passed around equipment, or demonstrated stop, drop, and roll techniques to music.

Children and adults alike were very enthusiastic and Warminster has requested these additional sessions:

Monday, July 15, 10:00 a.m. — Willow Dale Elementary School
Tuesday, July 16, 10:30 a.m. — Johnsville Elementary School
Tuesday, July 23, 10:30 a.m. — Navy Housing Park
Monday, August 5, 10:30 a.m. — Willow Dale Elementary School

For more information on the program, contact Karen Whitney of the Warminster Parks and Recreation Department on 443-7005, Fire Chief Don Meadows, extension 2222, or Mary Ann Brett, Public Affairs Office, extension 1842. (MAB)

Narrator John Dworsky describes the use of each piece of equipment and passes it around so the children get more familiar with the strange apparatus.



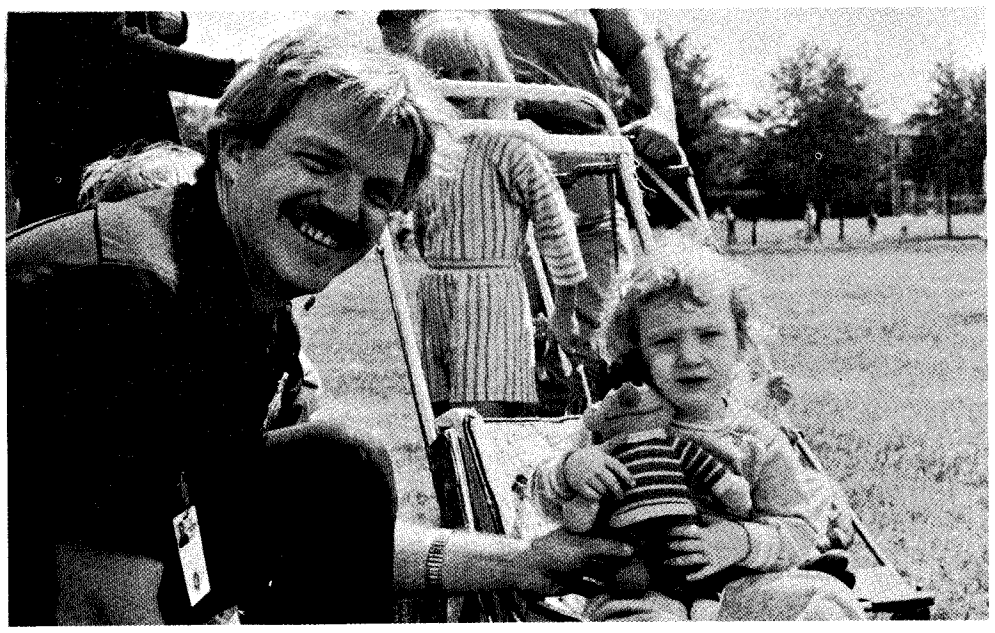
Children watch and listen intently to what's going on.

A close up of the Sesame Street puppet stage, hand built by NADC firemen. It even has a working smoke alarm for Bert and Ernie's safety.

The crowd begins to gather as children come running to see the entertaining and educational production.

Firefighter Ann Jones from the Willow Grove volunteer fire company helped demonstrate equipment and made friends with the crowd.

Even the smallest fans are familiar with Sesame Street characters. This fan sports Kermit the Frog on his back pocket.



Firefighter Michael Hartman makes friends with one of the smaller attendees and her good friend, Ernie.

Photos by Regina Gasuk

Guzzlers take lead in last third of season

Photo by Nelson Torres

Tom Weiss of the Granfalloons at the plate for the Evens. Eighth Inning's Bruce Heath catches for the Odds.

by Charlie Destra

The Guzzlers (11-1) have vaulted in front of the pack with a little more than two-thirds of the season played. They have been scoring 13.6 runs per game and giving up only 4.5 along the way.

The big test came for the Guzzlers when they faced the Misfits with both teams owning only one loss. It was the battle for first place and bragging rights, and the game lived up to its lofty expectations.

The game was tied 5-5 after regulation (seven innings) and went scoreless for four more innings. In the top of the twelfth, the Misfits scored twice and looked to be in the driver's seat. But the Guzzlers, showing championship-style character, came back with three in the last half of the inning to win the nailbiter, 8-7.

John Markow drove in the winning run with a sacrifice fly, scoring Dave Gleisner. Ron Lang continued his tough pitching.

The Misfits have eleven wins against two losses but it must be emphasized that starting pitcher and top hitter, Greg Heydet, did not perform in those losses. They still have the best earned run average in the league, giving up a scrimpy 3.69 per game.

Not to be forgotten, and close behind the Guzzlers and Misfits are the 8th Inning (9-2). The defending champs started slowly, but have come on to play outstanding ball in recent weeks.

The next five teams, barring unexpected developments, appear to have berths in the playoffs: the Druids (7-3), Granfalloon (8-3), Devils (8-4), Bearcats (7-4), and Nightriders (8-5).

Lost in the shuffle this year appear to be the Pacers (5-8), Renegades (4-8), Rebels (2-9), Phantoms (2-10), Agent Orange (2-11), and the winless and luckless Ballbusters (0-13).

Odds upset Evens

By Charlie Destra

The underdog "Odds" exploded for nine runs in the seventh inning to upend the "Evens," 10-7, in the annual Men's Softball League All-Star game. The game, played 20 June at the Inertial Field, was a tight, tense pitching duel until the Odd squad broke it wide open.

The Evens took a 2-0 lead in the first inning on RBI singles by Joe Bretten (Guzzlers) and Jim Kearney (Misfits). The Odds got one back in the second when Craig Volker (Rebels) singled home Mark Cahill (Druids). In the top of the sixth, the Evens scored what looked like an insurance run and breezed into the seventh with a 3-1 lead. Steven Torok (Granfalloon) and Ron Lang (Guzzlers) had given up only four hits at that point.

But the Odds' bats suddenly came alive. They pummeled Pacer pitcher Rich Brodeen for nine runs on nine hits, highlighted by Bob Larr's (8th Inning) two-run homer. Suddenly, the score was 9-3, and the Evens had only two chances to come through. After a scoreless 8th inning, the Evens managed four runs in the ninth, but it was a case of too little, too late.

The Odds amassed 13 hits in the game, but they won primarily because they got adequate pitching from the threesome of Larr, Glen Savage (Druids) and Tom Leahy (Bearcats). They held a very potent Evens lineup to nine hits.

Top stars for the winners were Larr and Cahill (two hits). Mike Stevens (Pacer) hit one out for the Evens.

The game looked as though it wouldn't be played as it rained heavily but briefly right before start time. However, the sun came out and eventually so did the fans — over a hundred vocal spectators cheered on their respective teams.

BOXSCORE

ODDS	AB	R	H	RBI	EVENS	AB	R	H	RBI
Dummeldinger, SS	1	0	0	0	Barry, LCF	2	1	1	0
Houghton, LCF	2	0	0	0	Gleisner, 3B	3	1	1	1
Briber, LF	1	0	0	0	Rudock, SS	3	1	0	0
Groshnef, 3B	2	0	0	0	Bretton, 1B	2	0	1	1
Cahill, RCF	3	1	2	0	Kearney, C	2	0	1	1
Lorenz, C	2	0	0	0	Torres, RCF	2	0	0	0
Krauss, 1B	1	0	1	1	Lang, P	1	0	0	0
Volker, 2B	3	0	1	1	Risbon, 2B	2	0	0	0
Mitchel, RF	1	0	0	1	Geyer, LF	1	0	1	0
Savage, P	0	0	0	0	Hynes, RF	1	0	0	0
Askew, SS	3	1	0	1	Destra, LCF	2	0	0	0
Hay, LCF	2	0	1	1	James, 3B	1	1	0	0
Elicker, LF	2	1	1	1	Bubb, 1B	2	0	2	2
VantSant, 3B	2	1	1	1	Weiss, C	2	1	0	0
Larr, LCF	1	1	1	2	Stevens, RCF	1	1	1	2
Heath, C	2	1	1	0	Torok, P	1	0	0	0
Henderson, 1B	2	1	1	0	DeValle, 2B	2	0	1	0
Carroll, 2B	2	1	1	0	Morlock, LF	3	0	0	0
Daum, RF	2	1	1	0	Myrik, RF	2	0	0	0
Kuster, DH	3	1	1	1	Brodeen, P	2	0	0	0
Leahy, P	0	0	0	0					
	37	10	13	10		37	6	9	7

WP-Leahy; HR-Larr, Stevens; 2B-Heath, Gleisner

By Charlie Destra

POP - UPS

A late score that just got in at press time was the rematch between the Guzzlers and Misfits. The Misfits won 4-3, and have tied for first place .....

.....John Cerkan (Nightriders) performed a rare feat, clubbing three homers in one game against the Ballbusters at Inertial field. Cerkan has nine roundtrippers in 13 games .

.....An even rarer feat was accomplished by the Renegades' Mark Lilly, who hit three inside-the-park homers against Agent Orange at Tyler Field .....

.....

What is it with the Ballbusters and Granfalloon when they play each other? They've totaled 75 runs in two games this year (16-15 and 26-18 Granfalloon wins). In their latest slugfest (26-18), the Granfalloon pounded out 30 hits, paced by Mark James' two homers .....

.....The Renegades' Steve Myrick (.464, 5 HR) drove in nine runs in a game against the Rebels. Teammates Mark Lilly (.454) and Steve Hines (.400) also have had fine years thus far .....

.....The Phantoms' Mike Deshield (.467) has hit .631 with 18 RBIs in the last six games. Jim Palmer's .581 leads the club and Greg Askew has been a defensive standout .....

.....Jim Mitchell (.500) and Tom Knott (.478) have been carrying the load for Agent Orange ..

.....

Dave Popeck and Craig Volker are both hitting at .550 for the Rebels ...

.....The Misfits are still getting great run production from Greg Heydet (.667, 24 RBIs) and Mickey Rudock (6 HR, 26 RBIs). Joel Wexler has scored 23 runs .....

.....

The Bearcats' Craig Krauss (.571) and Adrian Hribar (.500) have had great years .....

..... The Granfalloon's leading hitters have been Mark James (.571) and Garth (.530) and Steve (.458) Torok .....

.....

Gary Chase (.538) and Mark Cahill (.424, 4 HR) are the top guns for the Druids .....

.....The Pacer's leading hitters are Dave Speidel (.488) and Mike Stevens (.487).

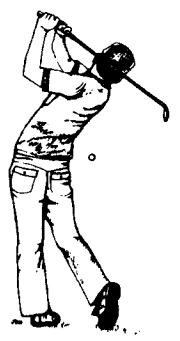
W&R golf season news

The W & R 1985 golf tournament season began in April with a "warm-up" tournament (no prizes awarded) at Neshaminy Valley Golf Club in Jameson. The initial "prize" tournament was conducted on May 7 at Montgomeryville Golf Club in Montgomeryville. A total of 33 NADC golfers participated under the overcast skies. The two players who won the low net and low gross prizes, respectively, were Lou Daouphars (61 net from a gross score of 89) and Scott Perry, who posted a fine round of 80. A trophy was awarded to the low net score winner.

Second, third, and fourth low net prizes were won by Bill Hines, John Vincent, and Greg De Larso. Closest-to-the-pin prizes were given on two of the par-3 holes to Walt Blizard (8'6") and Bob Loewenstern (26').

The two remaining W & R monthly tournaments are scheduled for August 20, Limekiln G.C. and in Warrington C.C. on September 17.

The W & R tournaments are open to NADC employees, contractors, and retirees. Four tournament scores are needed to establish a personal W & R handicap. The Calloway handicapping method is used for the first three tournament rounds.



On your mark, get set, — run, run, run

By Paul Scelsi

There are many popular methods of staying in top physical condition, one of which is running. You need not run to stay in shape, but it is a means to this end. The NADC Runners Club is one means. Few people know about the club. "We may be one of NADC's best kept secrets," said member Ed Lucas. It is time to unveil the mystery.

Back in 1978, in response to a national trend to form local runners clubs, LCDRs Ken Spencer and Bob Bondi initiated organizing the club. Regulations and a charter were drafted and the Runners Club was on track. Ever since, it has been a smooth course.

Today the club has 15 members who informally get together to run, nothing else. No meetings, no guest speakers, just running. Before work, lunch time, after work, anytime, the club just runs. Each member is free to choose the best schedule for himself, length of the runs, pace, and frequency of practice.

"Basically, we share the common interest of running, staying physically fit, and occasionally entering organized races," said member Bob Richey. However, Lucas points out that competition is an ulterior motive. "We were not established as a competitor club: rather, our goal is to bring people together to run, interact, and stay fit."

Competition may be secondary, but as a representative of NADC, the Runners Club races at the top of the pack. On the first weekend this summer, they competed in the Lansdale Love Run against 14 other Delaware Valley corporate teams, such as Mobile Oil, Bell Telephone, and Rohm & Haas. The Center was well represented with Joe Kern being the sixth runner to cross the finish line of the 6.2-mile course. Placing second is not bad for a club whose primary concern is anything but competition.

How do they handle their priorities? As planned, they run throughout the year and keep in shape. In fact, 57-year-old Ed Tankins piles up 60 miles a week on the odometer. No car, just legs. He's in shape. Besides Lucas and Tankins, club members Joe Perrine and Jack Abbasi have completed the 26-mile course of the Boston Marathon. On the other hand, Richey likes the variety of the triathlon. During the last weekend of June at the Philadelphia Navy Yard, he participated in the Philadelphia Turnaround Triathlon, benefitting the American Cancer Society. After swimming one-half mile and riding his bicycle another 12 miles, he finished off with a 5-mile run. Yes, they're all in shape.

"If people want to prepare for long-distance running, as I do," said Tankins, "they can put in five, six, seven miles at noon; go home and do another seven or eight miles; and on weekends do 30 to 40 miles. This way you can get up to 100 miles a week and prepare yourself for marathons and long distance running."

The club is available to answer any questions that runners who are non-members might have. "We offer advice to anyone," said Lucas. "Some of our guys have sustained injuries that other employees may have, or we can give suggestions about shoe wear and exercise drills. We want to interact."

There are even some dietary suggestions. Although there is no special diet, Richey recommends that meat be limited in any serious runner's menu because it fails to provide the necessary energy for long runs. "Carbohydrates such as fruit, macaroni, and rice are a good source of such energy," said Richey.

If you have an interest in running, you can be part of the Runners Club. The word is out. Run, keep good company, and stay in shape. On your mark, get set, GO!

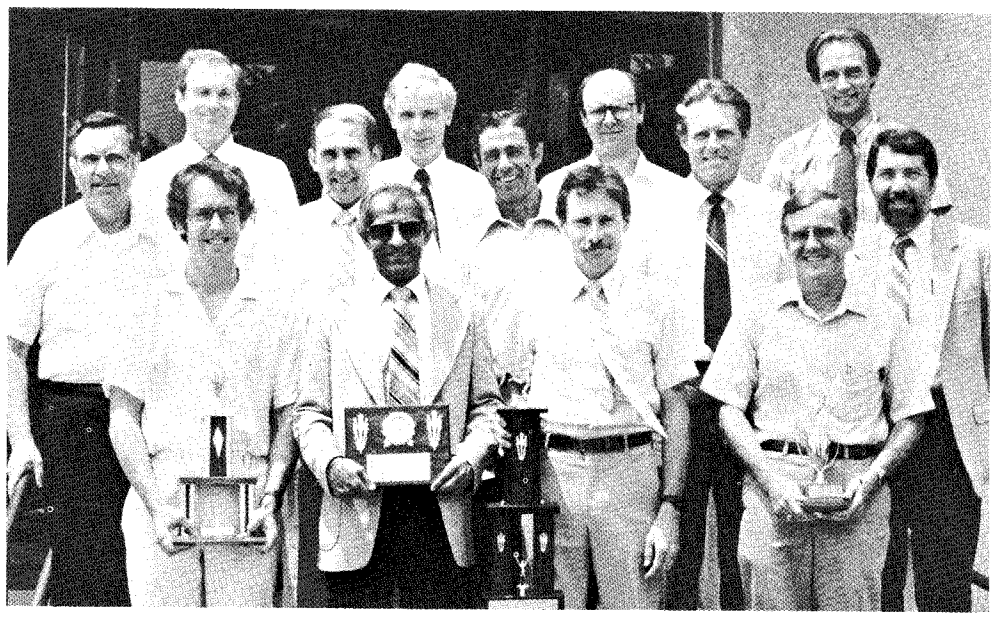
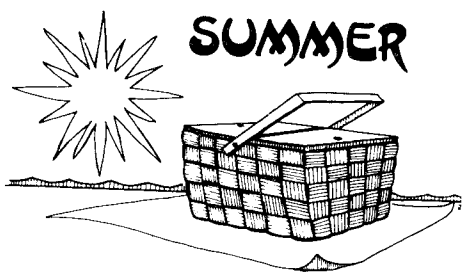


Photo by Regina Gasuk

Top row, l. to r.: Bob Berry, Ed Lucas, Bob Peck, and Joe Perrine. Second row: Dave Lutz, Tom Canniere, Ed Tankins, John Auerback, and Roger Furlong. Bottom row: Bob Richey, Jack Abbassi, Joe Kern, Larry Hart.



VIEWPOINT

This month's question is: How would you improve the Center?

Photos by Regina Gasuk

LCDR Dave Mills (Code 60B4)
"Approach our work and problem areas with a more aggressive and positive attitude; don't settle for mediocrity or passing the buck."

Chris Biscardi (Code 1EE)
"Go to a 2-day work week and have a 5-day weekend."

Frank Drummond (Code 845)
"Supply Department's position management plan should be promptly implemented so that we can get some timely contracting done."

Ron Pepka (Code 8455)
"In today's atmosphere of base closure threats and attacks on DoD employees' wages and benefits, I still think employee morale would be one of the best ways to improve the Center. A simple way to accomplish this would be to remove little frustrations that face Center employees."

Ruth Fuller (Code 2001)
"Build a parking garage. Then provide valet service, but only in foul weather."

Blaine Price (Code 021)
"Get an executive parking spot closer to my office, so I can spend more time balancing the debits and credits."

Joel Lenko (Code 5031)
"As an organization we should strive to be accommodating and more service oriented."

Mailroom personnel — NADC's Federal Express

Photos by Regina Gasuk

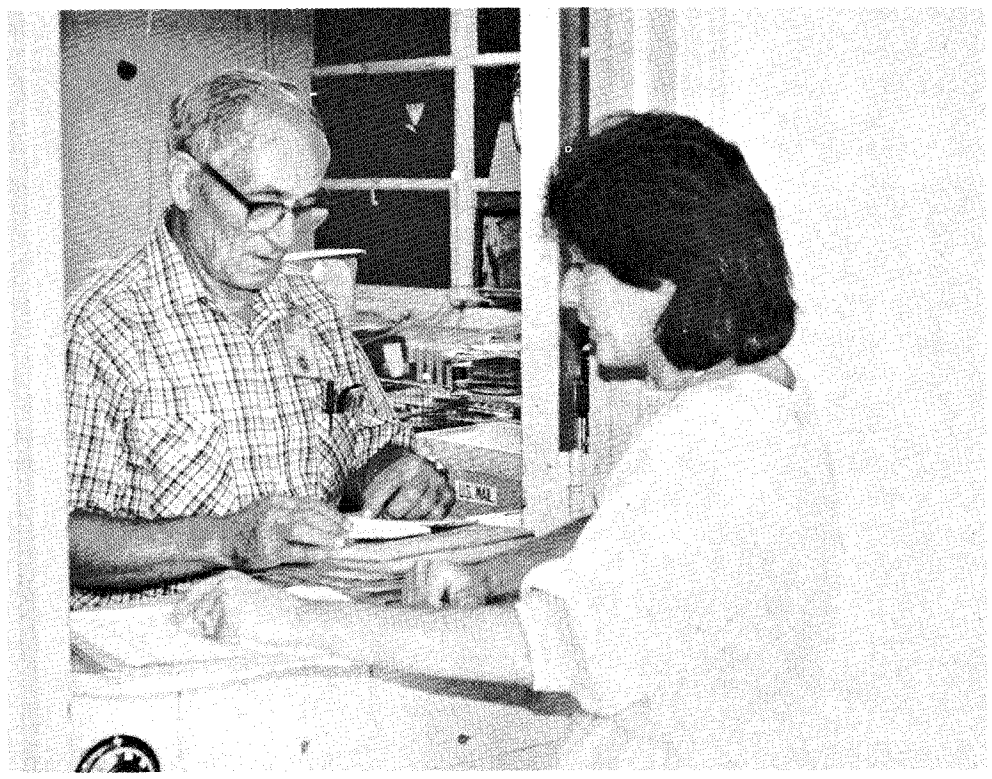
The Opening of the Federal Records Management Handbook states that "mail has been described as the lifeblood of an agency." NADC is in robust condition then, as mailroom personnel manipulate 10,000 pieces of mail daily. Approximately 2000 pieces of mail come into the Center from the outside and about the same amount leaves daily. In addition, the Center's 2500 employees generate 6000 pieces of intra-Center correspondence every day. Who keeps all this mail flowing? Under the direction of Rebecca Gray, mailroom supervisor, Rich Housel, Rudy Hluchan, and Charles "Mitch" Mitchell are responsible for this enormous job.

Mailroom activities include receiving and sorting, in some cases recording the receipt and referral of selected types of mail, routing and distributing. Mailroom personnel also update most of the Center's bulletin boards.

During the summer months, the mailroom staff receives a little help from some friends in carrying those heavy loads. Three Temple University students, David Davis, Darryl Ruffin, and Kevin Faison, are assisting regular mailroom personnel with their duties.

What happens in the fall and winter months? Joe Cody, Command Administration Officer tells us that the Center is recruiting for a fourth full time mail clerk. "There has been a 30 percent increase in the volume of mail handled at the Center in the past two years," Cody said. "We are confident that the additional help, combined with the advantages of a new, specially designed mailroom, scheduled for completion this fall, will enable the mailroom to absorb the increased volume and continue with efficient mail service."

How can you assist mailroom personnel? Rich Housel comments, "One thing I would like to emphasize is that whenever people are corresponding, either on Center or off Center, they should use their codes. And, please don't confuse codes with telephone extensions. When moving to another location or leaving the Center, contact the mailroom with forwarding information. Housel also asked that office personnel make "in" and "out" baskets easily accessible and that they not be cluttered with books and directories that hinder delivery.



Rudy Hluchan provides courteous service to Maria Nahill at the Mail Room window.

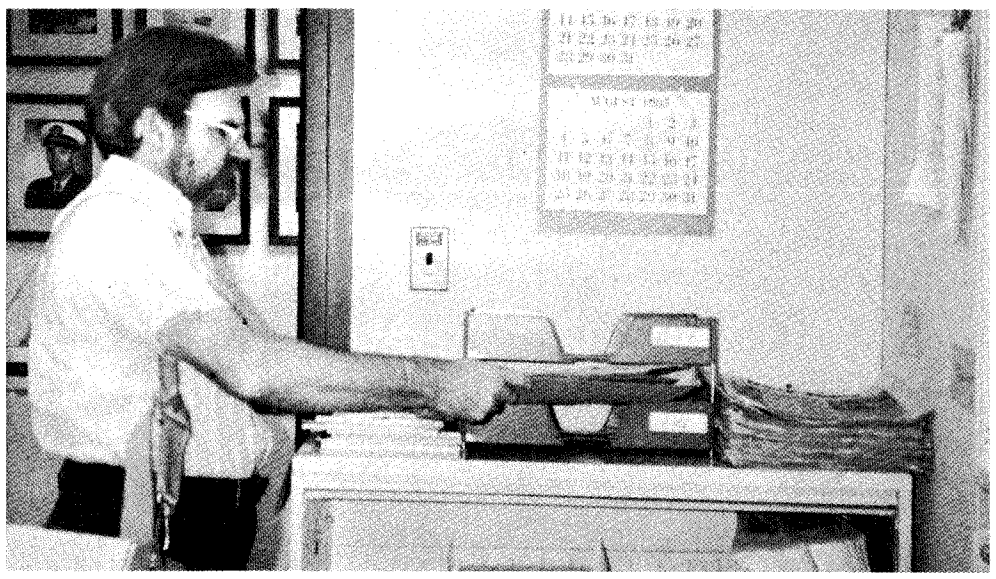
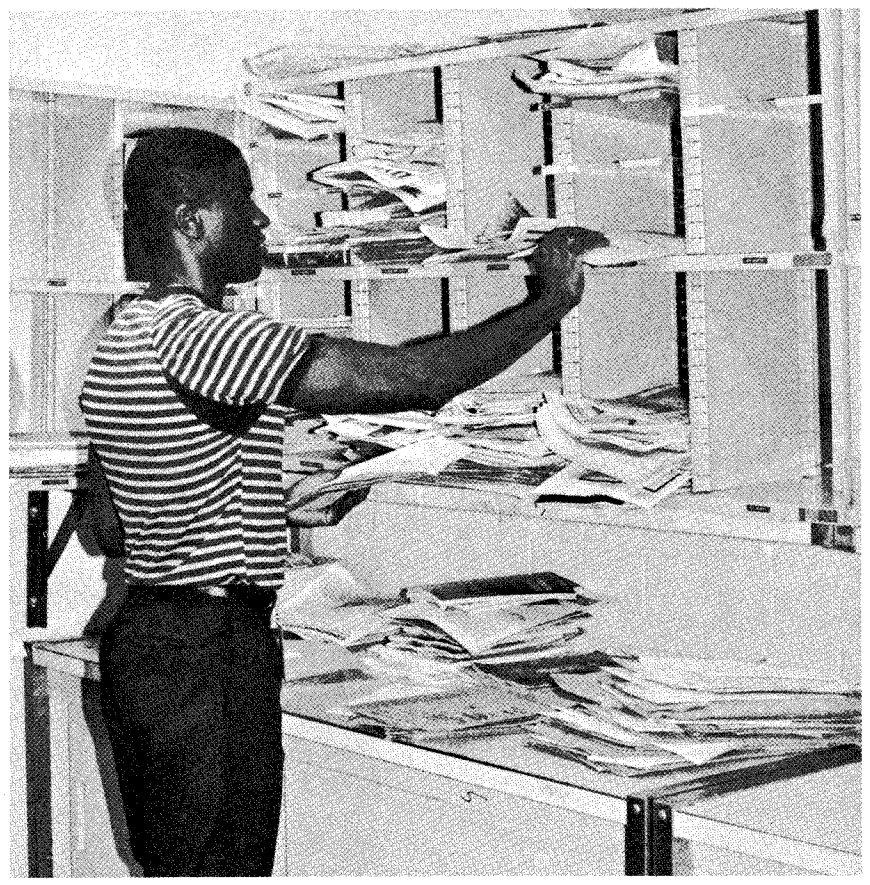
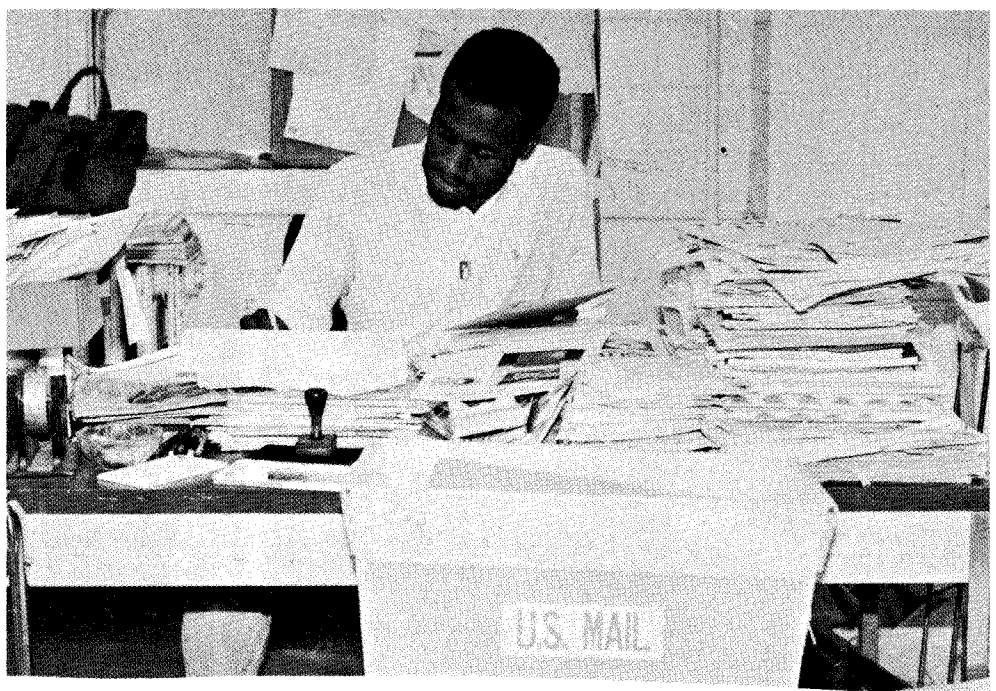


Photo by Mary Ann Brett

Rich Housel makes his daily deliveries which include in excess of 100 mailstops.



Darryl Ruffin sorts the 6000 pieces of intra-Center correspondence that pass through the mailroom every day.



Kevin Faison records the receipt of mail delivered to the Center and updates the personnel directory.

"Our mailroom handles 3,000,000 pieces of mail annually. They do it efficiently with less than half of the people recommended by the General Services Administration."

Joe Cody, Command Administration Officer

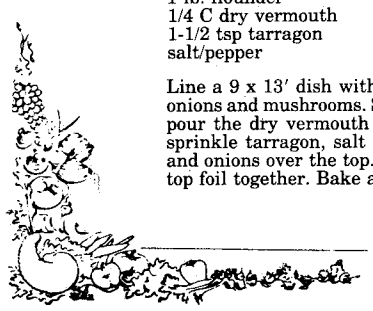
The NADC RECIPE REVIEW

Flounder with Tarragon and Mushrooms

This month's recipe is provided by Robert Johnstone, (Code 6091) who will receive a **$50 Bond** from the Food Service Board. This recipe will also be served in the NADC Cafeteria. Submit your recipes to Mr. Jose Ferrer, Cafeteria Manager. One winner will be selected each month.

1/4. lb mushrooms, sliced
1 small onion, chopped
1 lb. flounder
1/4 C dry vermouth
1-1/2 tsp tarragon
salt/pepper

Line a 9 x 13' dish with foil. Melt butter (enough to saute) and then add onions and mushrooms. Saute until soft. Place flounder on the foil and then pour the dry vermouth over the flounder. Dot flounder with butter and sprinkle tarragon, salt and pepper over the flounder. Spoon mushrooms and onions over the top. Cover top with foil and then seal bottom foil and top foil together. Bake at 350° for 30 minutes.



LOOK FOR THIS RECIPE TO BE SERVED IN THE NADC CAFETERIA

Cut here for file card

Technical Highlights

TACAMO ANTENNA DELIVERED FOR TESTING

A new Long Trailing Wire Antenna (LTWA) has been delivered to the Naval Air Test Center, Patuxent River, MD for evaluation. Fabrication of the 3'x7' long wire VLF transmit antenna was completed on 24 May 1985 under NADC contract. The new antenna is constructed of copperweld filaments which are twisted and swaged into three strands of seven filaments each. The three strands are twisted and swaged to form the final 28,000 foot antenna wire. The new antenna will provide greater tensile strength, lighter weight, greater torsional stability, increased fatigue life and lower resistivity at a price competitive with the current copper ribbon wrapped wire. This will translate into greater mission flexibility and improved availability for the TACAMO system, which is an airborne strategic communication system that relays messages to submerged submarines. Message transmission is accomplished by deploying up to five miles of the long wire antenna from specially configured EC-130 aircraft and transmitting at very low frequencies.

RADAR TARGET DISCRIMINATION METHOD PROJECT (RTDM)

The Radar Target Discriminant Method project is aimed at developing techniques to employ the advantages of the polarimetric radar, as compared with the conventional modern radar, to obtain better performance in target detection. During the period 6 May to 14 June polarimetric radar data was collected at the NADC radar test site at Molokay Island, Hawaii. A suité of data collection equipment was used including two instrumentation-quality polarimetric radars (X and L band), a dual-channel high-speed data recording system, and accessory equipment for controlling antenna orientation and printing data.

OBLIQUE WING PROGRAM

Significant progress has been made on the joint NASA/NADC Oblique Wing Program. NASTRAN analyses have identified important composite laminate properties for aeroelastic tailoring and FLEXLOADS analyses have been successfully applied. Results prove the feasibility of and successfully performing sophisticated aeroelastic analysis required for designing this wing. NADC has increased its involvement in this program by accepting the responsibility for the strength and design and analysis of the wing to fuselage pivot attachment.

FIRST PRODUCTION AN/AUYQ-21 RECEIVED

NADC received the first production unit AN/UYQ-21 Navy Standard Display System with the Common Digital Television Generator (DITEG) for use in the Carrier Based Anti-Submarine Warfare Module (CVO-ASWM). Originally, a custom DITEG had been designed by Hughes but the CV-ASWM team, in reaction to CNO preference, enthusiastically pursued a conversion of these capabilities to the AN/UYO-21 family of Navy Standard Displays. NAVAIRDEVCEN technical personnel participated extensively in the planning and development of the performance and interface specifications, test specifications and test procedures for this unit whose implementation will result in lower life cycle costs to the Navy.

THREAT MISSILE DETECTION SYSTEM

A formal agreement for a joint U.S.-French flight test of a French developed Missile Detection System (MDS) is nearing establishment. The infra-red technology based MDS will be tested on a Mirage III aircraft beginning in July at the Cazaux test range in the south of France. A representative from NADC's Microwave Technology Division visited France in mid-June to review the test plan and inspect the MDS installed aircraft. Provisions for follow-up visits were made to allow Navy participation in the test data analysis. The comprehensive flight test program will run through December and include firings of a variety of both U.S. and French missiles. The Navy is evaluating the MDS for its potential in meeting TACAIR self-projection requirements.

Benefits of being a better barbecuer

By Mike Masington

As we perceived in previous passages Og, our prehistoric protagonist perennially preoccupied with precipitous predicaments, was in fact aware that meat was a food item. How exactly this discovery was made will not be discussed here for fear of upsetting innocent children, the faint of heart and more militant of vegetarians. Og had noted however, that while meat was tasty, the fact that it was always served raw definitely limited the potential cusine. To remedy this situation, he decided to develop a method for improving the taste of this prehistoric protein. First, he added rocks and sand, but this provided a bit more roughage than most folks needed. Ice also produced a significant change, but stegosaurus-cicles were not a big hit. Finally, he thought of fire. Everyone of course knew about fire. It came from lava and lightning and Zippo lighters, but other than a novelty item, no one had really found a use for it. To try out his new theory, Og dropped a couple of brontosaurus burgers into the local volcano. This seemed to produce the desired effect, but retrieval of the cooked meat proved to be a bit difficult. He then tried holding a mastadon steak on a stick in front of a fire-breathing dragon. The dragon promptly ate the steak, the stick, and tried to transform him into a flaming desert. Again, not a rousing success.

Finally, the inveterate inventor decided to design something called a barbecue (from the Spanish barbacoa meaning framework, and the letter q which doesn't get used much and therfore should be included in all new words.). His prototype was rather unsteady, and as he put the first chicken leg onto the grill, it toppled over. (Please keep in mind that at this time the average chicken was 8' tall, and each leg weighed approximately 230 pounds.) The hot coals promptly rolled into the door of his cave, setting fire to the interior and allowing his wife, Lilting Lava, to become the first fire walker in recorded history. (Lesson 1 — Make sure your grill is stable, and located away from the house or any other combustible. This reduces the possiblity of fire, prevents smoke from entering your dwelling, and lessens your chances of divorce.)

After redesigning the grill and extinguishing the cave fire, he put in more charcoal and sprinkled it with 81 octane tyrannosaurus oil (since charcoal lighter fluid had not been invented yet). The fire flared for a while and then seemed to die out, so he impatiently reapplied a liberal dose of the volatile oil. The resulting explosion promptly removed his hair, beard, and eyebrows, and gave him a tan that was the envy of the tribe. (Lesson 2 — Use only charcoal lighter fluids, and allow the coals to fully ignite *gradually* without adding more fuel. Failure to do so could transform you into the main course.)

The fire was now going successfully, and the steaks were sizzling. Og bent over to pick up his can of Rolling Rock, and the tail of his bearskin hit the flames on the grill and ignited. Og then invented the ritual fire dance as he sped off in the direction of the nearest lake. (Lesson 3 — Never wear loose clothing near a barbecue unless you are interested in posting a record time for the 440.)

Finally, the meal was ready and Og's family sat down to eat. Suddenly, a terrible rumble was heard and the horizon darkened ominously. Was it an earthquake? Was the sky god Bobo angry? Worse, it was thousands of Og's hungry relatives descending upon them from the nearby village. Like ravenous locusts, they devoured the steaks, the grill, the charcoal, the picnic table, etc. etc. (Lesson 4 — If you have any living relatives, never move to the suburbs, and if you do, only cook quietly in the privacy of your own home.)

Promotions

William K. Arnold, II, Frederick A. Barker, III, Edward C. Beach, Douglas S. Beyer, Mary T. Borkowski, Reynolds Brooks, Peter Brown, Michael E. Bubb, Denise Byrnes, Joseph H. Cleghorn, Mary B. Conyers, Carlos A. Cordova, Louis A. Daulerio, Gary P. Delserro, Steven DeLuca, Edward W. Deska, Annette M. Dietz, Mary M. Dockwell, Helen T. Eddowes, Stephen Elchenko, Leonard K. Elliott, Holly B. Ewan, Catherine Fertner, James C. Hardy, Richard Hate, Diane M. Heal, Evelyn G. James, Jon L. Jones, Earl Kauffman, Philip F. Kaufman, Alkis Koutsiouroubas, Mary E. Kuna, Kenneth N. Langer, Cindy A. Mathers, Milan A. Matura, Brian P. McElvaney, John T. Mehr, Norwood J. Metcalf, Jr., Lilia Mendoza, Thomas A. Michalski, Robert E. Minder, Richard Nicoletti, William Palmer, Alan R. Park, Robert C. Polaneczky, Blaine Price, Martha H. Purchase, Karen Jane Refsnyder, John G. Samaras, Lynn Scott, Lynn D. Sherr, Lester C. Smith, Jr., Mark A. Thomas, Jine S. Tseng, Joan I. Walter, Luke S. Wassum, Joseph E. Wolfe, Brian J. Wynne.

Do you know?

Amount of ice cream consumed per person in the United States last year:
15.4 quarts

Welfare & Recreation

W&R presents a tour of elegant Newport-3 days-20 — 22 September. Included in tour: 2 nights at the Biltmore Plaza Hotel; transportation; admission to Mystic Seaport Museum; guided tour of Newport; admission to the elaborate Vanderbilt Mansion, the Breakers; and Hamersmith Farm, where J.F.K.'s wedding reception was held; Lincoln Downs for greyhound racing; cruise on the Newport Harbor; 1 dinner; and 1 lunch. Cost per person: $195. ea single; $165. ea dbl; $155 ea triple; $149. ea quad. Contact Margaret Vigelis, X3307, before 16 August for reservations/information.

W&R offers a fantastic 7 day cruise — right now it's warm & sunny, but ole man winter will be back — picture January, picture cold, picture snow, then picture you on the beautiful ship the SS Veracruz (the friendly ship) relaxing in the sun. Visit exotic ports of Playa del Carmen with Cancun and Cozumel, Mexico, and the lovely little port of Key West, Fla. We set sail for 7 days of fun and sun on 1/25/86 from Tampa, Fla. Cost $784. per person double occupancy, includes cruise, air fare, port taxes, and transportation to and from NADC and Phila International Airport. Wouldn't this be a terrific Christmas present! Reservations now being accepted — only 15 cabins available. For more information/reservations/payment schedule call Margaret Vigelis, X3307.

NADC Reflector

Volume 30 Number 8 NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA. August 1985

In this issue:

Hura selected NADC's "Woman of the Year"

"Now we are seeing more women and minorities studying programs to prepare them for the key jobs in the marketplace," so says Dorothy Meletzke, Director of the Naval Civilian Personnel Command in Washington, DC. Presiding as special guest speaker at the Center's 11th Annual Women's Awareness luncheon she also noted, "looking at your numbers here at NADC, you are now also in the position of being able to grow, to build on your successes and employ increasing numbers of women and minorities in your mainstream occupations."

One of those successes, Maria Hura, a project engineer in the Aircraft and Crew Systems Technology Directorate has been recognized for her outstanding efforts by being chosen this year's Woman of the Year. She is being honored for her outstanding technical achievements and her continued participation in a variety of women's support activities. Hura is currently the vice-president for Federally Employed Women, an active member of the Society of Women Engineers and was Chairperson of the Women's Advisory Committee from 1981 to 1983. During that period her accomplishments and organizational efforts had a far-reaching effect both in support of women at the Center and in aiding all Center employees.

Hura represents the Center through career day recruiting efforts and by advising/counseling newly hired young women. She is a member of a core team of women recently established to discuss perceptions of the science and engineering environment at the Center. Her technical/project engineering skills have been demonstrated in a number of challenging positions including the Rapidly Deployable Surveillance System, DWARF sonobuoy system and the Lighter Than Air program.

"I was very surprised at the luncheon; I did not expect to be Woman of the Year," said Hura. "It was a real honor, especially because I have worked with most of the other nominees and I really respect them and know that they have done a lot for the Center."

Hura graduated from the New Jersey Institute of Technology in 1975 with a B.S. in Engineering Science and has taken several graduate courses from Penn State.

According to Kathleen Gause, Deputy EEO Officer, seven women were nominated for this year's award. She said, "Each nominee, in my estimation, deserves an award — they not only serve as role models who have excelled in their own careers, but they have taken the time to reach out and help others — thus, due to their efforts, we all are winners." Gause noted that of the 655 women working at the Center the seven nominees represent the top 1% of the Center's female workforce.

Hura hopes to become more involved working with high school girls. "I feel that getting young women interested in technical careers is worthwhile," she said. "Women don't see themselves in technical fields and they shy away from math and the sciences." Hura continued "encouragement is needed so that women will know that there is a viable career out there that will allow them to better support themselves. The technical career fields are generally better paid. In the future, due to social and economic changes in our society, women are going to have to be financially self independent," she concluded.

"We all need to continue to keep our eyes, attention and energy on the main issue of the EEO program," said Meletzke as she concluded her address to those present at the Women's Awareness luncheon, "building a work force with the representation of women, minorities and handicapped people performing at all levels in all occupations so we can do the very best job we can in accomplishing the Navy's mission." The work Maria Hura and the other six nominees perform is evidence that NADC's women are making their presence known by their significant achievements in support of Center goals and the Navy's mission.

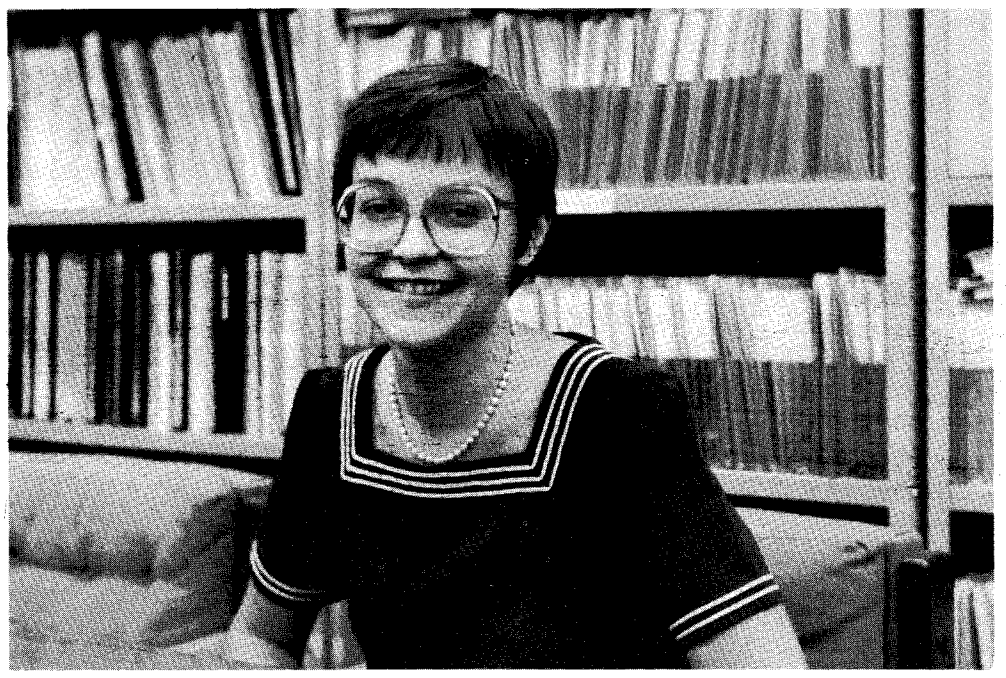


Photo by Regina Gasuk

Maria Hura of the Aircraft and Crew Systems Technology Directorate is still smiling after receiving the Woman of the Year Award.

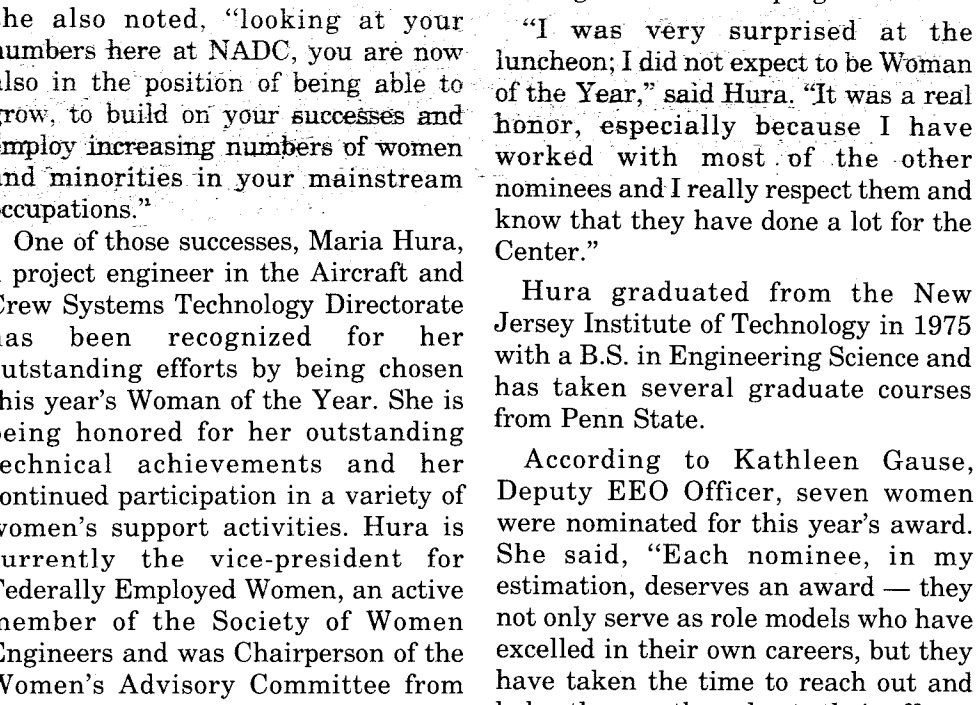


Photo by Cathy Burian

Library Officially Opened

A crowd gathered as CAPT Edward J. Sturm, Center Commander, held the ceremonial scissors for the ribbon cutting ceremony which officially opened the new Technical Library.

See Story and Photos Page 4

Smith new Public Works Officer

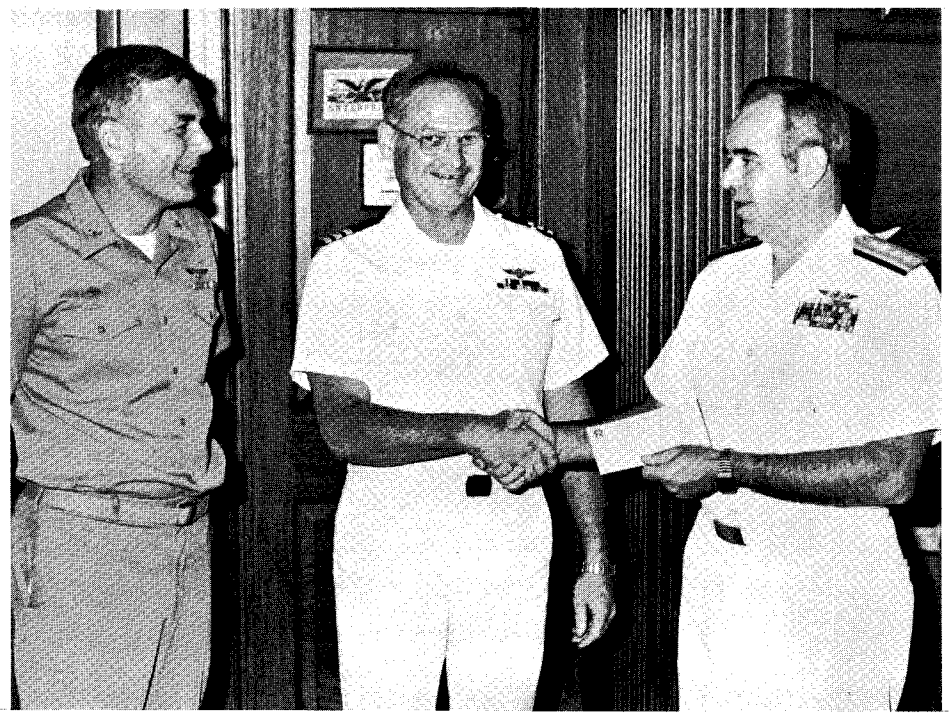
LCDR Earl Smith, Jr. recently arrived at the Center to take over as Public Works Officer (PWO) for the next two years. Smith replaced LCDR Burt Streicher now assigned as the Resident Officer in Charge of Construction (ROICC) at Newport, Rhode Island.

Smith, a 17 year Navy man, has a prior relationship with NADC. From 1970 through 1972 he served here as the Maintenance Officer for Public Works. After NADC, he moved on to the Naval Communications Station in Guam as Civil Engineer until 1974. His next assignment through 1976 was as the Assistant ROICC at the Naval Facilities Engineering Command in Long Beach, California. In 1978 Smith transferred to NAS, Lemoore, California as Assistant PWO. A tour at Chief of Naval Technical Training, Memphis as Facility Planning and Program Engineering Manager followed. Since 1983, he served as the PWO and OICC at the Naval Air Propulsion Center in Trenton, New Jersey.

"My first priorities," he said, "are to concentrate on local execution of planned major projects and to try to improve the effectiveness of the new

Continued on Page 3

LCDR Earl Smith, Jr.



Navy Relief goes over goal 1985 campaign a success

Center Commander CAPT Edward Sturm (left) was pleased to see CDR Thomas Mumford, this year's Navy Relief Campaign Chairman (center) hand over the campaign proceeds of over $13,000 to Admiral Austin, Commander Naval Base, Philadelphia. Campaign workers and supporters alike worked hard to ensure that NADC surpassed its goal of $10,000.

Naval Air Reserve provides profitable part-time career

Interested in a second career which offers professional growth, economic benefits, and excellent promotion opportunities? The Naval Air Reserve offers the Air Systems Program. It could be of interest to an inactive naval aviator, flight officer or a federal government employee who is a recent engineering/technologist graduate who desires a career in Navy Technical Management.

The Air Systems Program is staffed by naval reservists who have varied technical skills and management qualifications. They train to support NAVAIR and selected field activities in the acquisition and logistic support of naval aircraft and Air Weapon Systems. There are thirty Air Systems Program reserve units nationally, of which three units are located at NAS Willow Grove. Members of units NADC 0193 and NADC 0293 spend one weekend per month at the Naval Air Development Center in support of project tasks in codes 10, 20, 50 and 70. In addition, members work on a multitude of diverse projects for NAVAIR, OPNAV and other DOD organizations during two weeks active duty for training each year.

The Air Systems Program is the dominant affiliation for the Aeronautical Engineering Duty Officer who provides management and technical direction in development, design, procurement and production of naval weapon systems. An opportunity exists for civilians to get a direct commission to the Navy AEDO designator. Prospective direct commission candidates must meet the prerequisites of an undergraduate degree in engineering or a physical science degree, and have current civilian or prior military experience involving aviation weapon systems with government agencies or the aerospace industry.

As a naval officer, benefits include a monthly paycheck for reserve duty and full pay for all active duty training. In addition to sick and annual leave, federal government employees are entitled to an extra fifteen days of military active duty leave. It is a long-term career program that broadens the technical and management skills that could also provide a competitive edge in your civilian career.

Anyone who qualifies for the Air Systems Program and desires to affiliate or who needs additional information on a direct commission as an aeronautical engineering duty officer is encouraged to contact John Shannon at X2441. Shannon is P3 Update IV project manager at NADC and is a Lieutenant Commander in the Air Systems Program.

Editor's Note: This article was submitted by CAPT T. H. Schneider, USNR who recently served his two weeks active duty assignment at NADC. Schneider is Commanding Officer of Reserve Unit NADC 0193.

Technical Highlights

ELECTRICALLY SUSPENDED GYRO NAVIGATOR (ESGN)

NAVAIRDEVCEN has successfully completed a Preliminary Design Review to modify the ESGN System. These modifications include repackaging of the control console, development of a new Inertial Measuring Unit shock isolation system and design and development of approximate interfaces. It is expected that the design phase will be completed by the end of calendar year 85 and that the system fabrication will begin about mid-calendar year 86.

HELICOPTER EMERGENCY FLOTATION SYSTEM (HEFS)

Design verification tests of the HEFS float and pod were conducted at Boeing Vertol Company during the period of 25 June through 1 July 1985. System inflation tests from a fully submerged pod were conducted for a one-cell float inflation and a two-cell float inflation. Also, float pull-down tests to full submergency to evaluate structural integrity were conducted for the one-cell and two-cell conditions. All four tests wre successful.

TAV-8B PROGRESS REPORT

A zero altitude/zero airspeed dual ejection test was conducted at NWC China Lake in June. This was the first design verification test in a series of three to evaluate the TAV-8B Ejection Seat System. This system has improved divergence and interseat sequencing over the TAV-8A system. The 0/0 test was successful with adequate divergence observed, and both dummies recovered with full parachutes. The remaining two tests of the DVT series (225 knots and 600 knots) are to be completed in July 1985.

DRAFT TACAMO FULL SCALE DEVELOPMENT SPECIFICATION DELIVERED

A draft TACAMO Advanced Communication System (ACS) Full Scale Development (FSD) specification and draft RFP were delivered to NAVAIR on July 2nd. This development effort, carried out by NAVAIRDEVCEN as lead laboratory, will result in a major modernization of the entire TACAMO communication system. The ACS will improve overall system performance, reliability maintainability, workload and crew efficiency and also accomodate future growth potential. The production ACS will meet TACAMO mission requirements through the year 2000.

AIRBORNE INFRARED BACKGROUND MEASUREMENT

The airborne part of Background Measurement and Analysis Program (BMAP) got underway with the collection of the first radiometric imagery in two infrared spectral bands: 3-5 um and 8-12 um. Under the direction of NAVAIRDEVCEN dual band imagery of cloud clutter was acquired airborne on a P-3 aircraft operated from Patuxent River. To date cloud data has been recorded over the Atlantic, Gulf of Mexico and over Lake Erie. Cloud images will be used to develop, test and demonstrate signal processing techniques for discriminating air targets against realistic backgrounds. The techniques will be employed in infrared search and track (IRST) equipments for use on fighter and surveillance aircraft.

Promotions

Brian J. Adams, Patricia A. Adams, Jocelyn M. Alston, Robert P. Andriszak, Rose M. Aquila, James G. Atkins, Sharon A. Bebey, Carol A. Beckett, Sylvia Z. Bentley, Georgia W. Bernard, Jonathan A. Buck, Victor A. Caddick, Robert D. Carter, Stephen Chung, Joseph F. Clay, Edward P. Coleman, Michelle A. Cook, Katherine Y. Dejneka, George J. Delisi, James T. Eck, Lynne Y. Edwards, Harriet P. Feder, Brian R. Fillette, Wilda E. Flynn, Tammy Sue Gardner, Thomas F. Giampa, Robert N. Greenblatt, Gary L. Groshner, Janice Hammond, Patricia L. Hartman, Eileen M. Healy, Timothy B. Hediger, Donald J. Hirst, Kenneth G. Kelly, Patricia S. Kennedy, John J. Kraus, Jeffrey H. Lamb, Joel A. Lenko, Richard A. Lewis, D. Joan MacKenzie, Saroja Mahadevan, Jeffrey P. Mansfield, David J. McGee, Thomas J. McGovern, Russell J. McWilliams, Frank W. Mellert, Barbara Miller, J. Jayme Miller, Janice M. Moser, John A. Petro, Lawrence R. Pitrone, Eric O. Pudpud, Jaime A. Pupek, John J. Quartuccio, Catherine A. Ramirez, Elizabeth R. Randazzo, Gregory K. Reh, Doris M. Reilly, Janet L. Russell, Donald W. Sawyer, Michael Schnecker, Susan P. Scott, Robert M. Seltzer, Steven S. Shelikoff, Theresa H. Spencer, Michael Strizak, Robert W. Taggert, Neville A. Thompson, Anthony M. Vendetti, Alan S. Victor, Jane M. Weber, Roseanne V. Wehrs, William J. Williams, Barbara K. Zentner, Theresa M. Zoltowski.

NADC Reflector

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Commander, NADC ..... **CAPT Edward J. Sturm**
Technical Director ..... **Robert S. Buffum**
Public Affairs Officer ..... **James S. Kingston**
Editor ..... **Regina Ann Gasuk**
Assistant Editor ..... **Mary Ann Brett**

First Human Resources Recognition Day celebrated

by Paul Scelsi

A packed auditorium, live television coverage, and a special guest speaker were all part of the First Annual Human Resources Recognition Day ceremony in late July.

It was a day in which Center Commander, CAPT Edward Sturm expressed his deep pride by saying, ". . . those employees who have invested their time and energy into making our human resources . . . more productive, deserve public recognition."

NADC Commended

Representing the Deputy Assistant Secretary of the Navy for Civilian Personnel and EEO, Betty Hambrick was on Center to commend NADC employees.

"Our primary focus," she said, "is to assure that all of our human resources — military, civilian, male, female, minority, non-minority, disabled, and veterans are maximized to the fullest extent possible . . . The reality can only happen with the type of committment you have shown at NADC."

The acknowledgement of NADC's success extends to outside organizations as well. The Philadelphia Federal Executive Board EEO presented the Center with two awards earlier this year, and the honor was relived for Human Resources Day. Ira Bellew was recognized for his work as chairperson of NADC's EEO Committee, counselor and his community work.

All Directorates represented

The second award was presented to the Center's Minorities in Engineering Program (MEP), a program involving 25 employees who volunteer their time to provide local students with an introduction to engineering.

"I don't think there is one directorate that was not represented," said Bob Jones, who Kathy Gause described as the 'backbone of the MEP program.' "This award is really for the Center," he concluded.

CAPT Sturm said, "We do indeed have a good EEO program at the Center, it is in our best interests to have one, and it is very gratifying when people on the outside recognize this fine program."

Six Outstanding

The Center likes to recognize their own, so six awards were distributed to NADC employees for demonstrating excellence in leadership, skill, innovation, perseverance, and extending equal opportunities.

The envelope please . . .

From Supply Department, Frank Drummond was honored for consistently pursuing a policy of fairness and instilling a sense of achievement in his staff. Also from Supply Department, Hasel Andrews was recognized for her dedication to the goal of EEO and her genuine concern for and an ability to solve human relation problems.

Photo by Peggy Callahan

(from l to r) Robert Buffum Technical Director, Ira Bellew, Robert Becker, Frank Drummond, Robert Jones, Betty Hambrick, Jeffrey Davidson, Barbara Kempf, Robert Moore, Hazel Andrews, CAPT Edward Sturm, Center Commander.

Robert Moore, from the Technical Services Department, was recognized for his patience, tact, and other personal qualities which aid him in serving as mentor to his peers.

From Software and Computer Directorate, Conrad Czaplicki was presented with a human resources award for his instrumental work in completing the most sustained successful recruitment effort on Center of female and minority professionals.

Through his EEO Counselor collateral duty role, Jeff Davidson of Systems Directorate demonstrated leadership, imagination, perseverance and communication skills which won the trust and confidence of both management and counseled employees.

Barbara Kempf, the EEO Committee Chairperson for her directorate, was honored for helping the directorate meet or exceed all of its EEO goals.

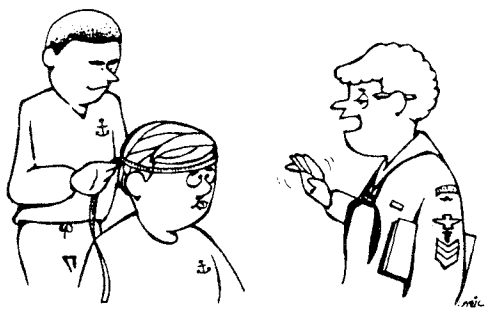
Finally, the ACSTD was honored as a whole because its supervisors, managers, and other personnel aggressively participated in every phase of the Center's EEO program and in the achievement of its affirmative action plans.

NADC is known for its advancements in aircraft technology, but behind the progress there are human resources. It is no coincidence that NADC has an abundance of both.

NADC's military complete physical readiness testing

Once a year NADC's military personnel must complete a Physical Readiness Test. A 1.5 mile run-walk, sit-ups, and body composition measurements make up the testing. Those not inclined toward running or walking could substitute swimming as an optional cardiovascular exercise. Of course, all this physical effort is timed to the second by stop watch. Percentage of body fat for men is calculated by measurements taken at the neck and abdomen; for women by biceps, forearm and thigh measurements as well. All measurements are converted to fat percentage points using a standard table which provides ratings for both men and women according to their ages. All three test areas are ranked from "minimally standard" to "outstanding" rating. For example, an under 30 year male must complete 100 sit-ups in less than two minutes and run 1.5 miles in 9 minutes, 45 seconds to qualify for an outstanding rating. If you are 20 years older, you can do 20 less sit-ups and are permitted 20% more time to run 1.5 miles and still be outstanding. Women are allowed a 15% handicap in each of the areas tested.

All 250 of the Center's military personnel (52 officers: 198 enlisted) had to complete the testing. Here are the results: Six of our military were "outstanding," 59 "excellent". Of all the military personnel 4.8% did not meet the minimum requirements. Those who did not pass the body fat testing will receive dietary counseling. Motor skill failure requires supervised workouts until body strength is developed to meet standards.



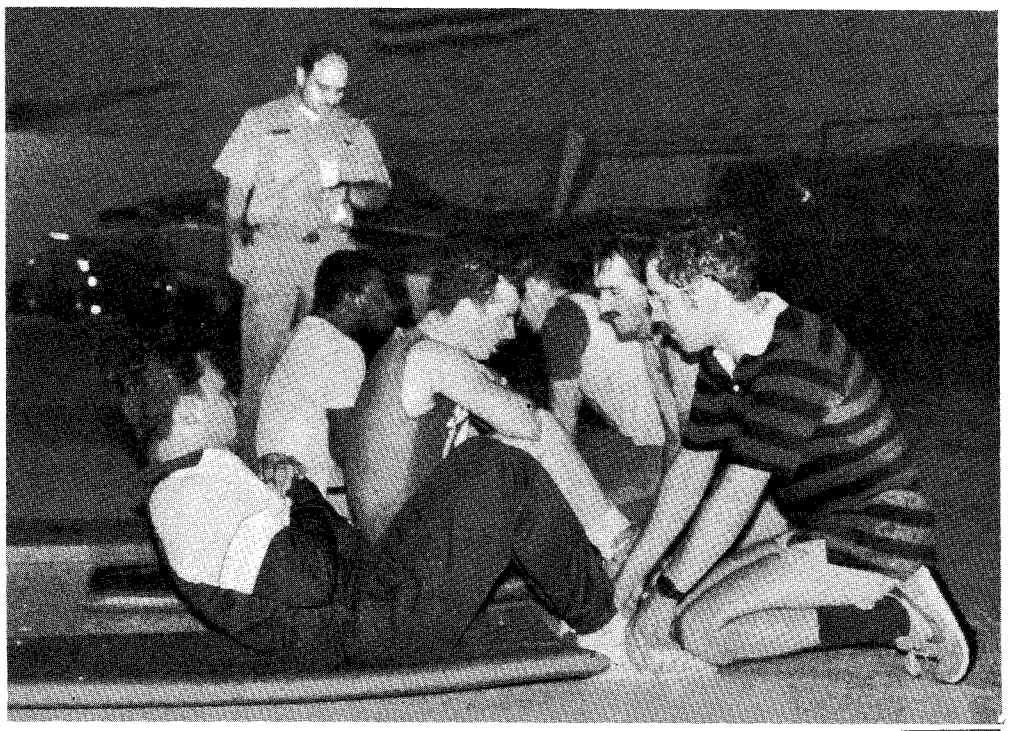


Photo by Regina Gasuk

"No pain—no gain," the saying goes. If that's true these enlisted personnel must be gaining a lot.

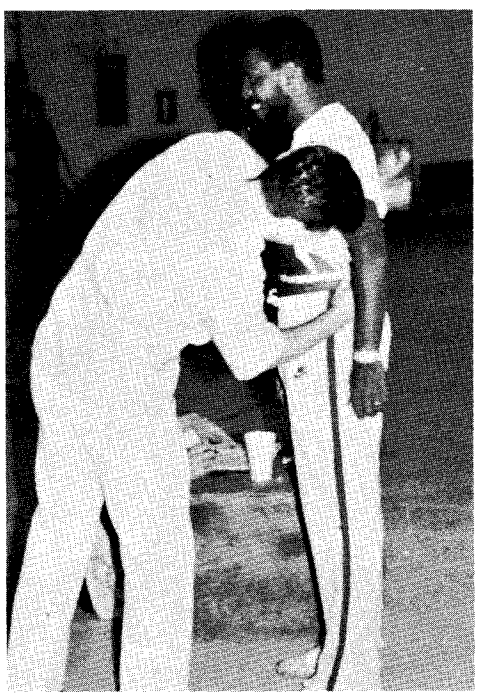


Photo by Regina Gasuk

Could this sailor be taking a deep breath in hopes that the inches will decrease?

Smith new PWO

Continued from Page 1

and better organization LCDR Streicher put together." Smith added, "In between, I'll be trying to find my way around again. The place looks familiar but a lot of new walls have gone up."

Smith is a mechanical engineering graduate from the University of California with a Master's in Financial Management from the Naval Post Graduate School, Monterey, California.

His wife, Diane, and seven year old son Stephen have accompanied him to their home in Yardley.

"I'm happy to be back," said Smith, "and working with this effective group of people. My motto will be: Don't fix it if it's not broken!" (MAB)

Library gets face lift and new location

Photos by Regina Gasuk

You might not be able to judge a book by its cover, but the new cover on the Center's Library is quite impressive. The ribbon cutting ceremony to officially open the facility, now located on the ground floor of building 2, was conducted on July 15th.

Dora Huang, Head Librarian said, "We finally have a functioning library space. The 5,000 sq. foot facility even provides an area for patrons to sit and conduct their research."

According to Huang, NADC's library has been a leader among Navy labs in computer-aided library services for twelve years. "In addition to borrowing from and lending to other libraries by computer," said Huang, "three years ago NASA offered us the capability to automatically retrieve information from them."

Although there's no fiction or popular magazine section, there are over 500,000 science-oriented books, magazines, DoD and technical reports, and classified documents lining the expanded shelves. Center engineers and scientists are encouraged to assist the Library in developing its collection by recommending titles for acquisition.

Nine people (including two part-time employees) generally staff the Library from 0730 to 1600 on normal workdays. Huang explained that much of their time is spent on over-the-counter services. These services include locating information through data base searches, making reservations for items already in circulation, interlibrary loans, requesting photocopies from another library, and preparing bibliographies on specific subject areas. Every week some 250 borrow/return transactions take place and over 100 classified documents are circulated.

Additionally, there are microfiche, microfilm, and paper copying machines. Microfiche readers are available for loan to be used in the office areas. (MAB)

Dora Huang, Head Librarian (left) and Ida Briggs (right) work at the microfiche conveyer, the Electrievor. DoD technical reports are stored on microfiche at this particular site.

Fay Roseman, part-time library aid, is responsible for the periodical section which includes restocking the shelves.

Robin Metersky, summer worker, ensures that new library acquisitions are displayed on the rotating rack for easy recognition.

Mary Hellings, library technician, 'mans' the eye-pleasing reference section. This area was redone to include a seating area for patrons to do research. New world globes add to the aesthetics.

Kay Aydelotte, library technician, retrieves information from the shelves lined with technical manuals.

Do You Know?

Percentage of all new cars bought in the United States which are purchased by women:
40

Atoms of "air" in a human breath:
A trillion trillion

Acres of pizza eaten by Americans in one day:
72½

Bowling begins again

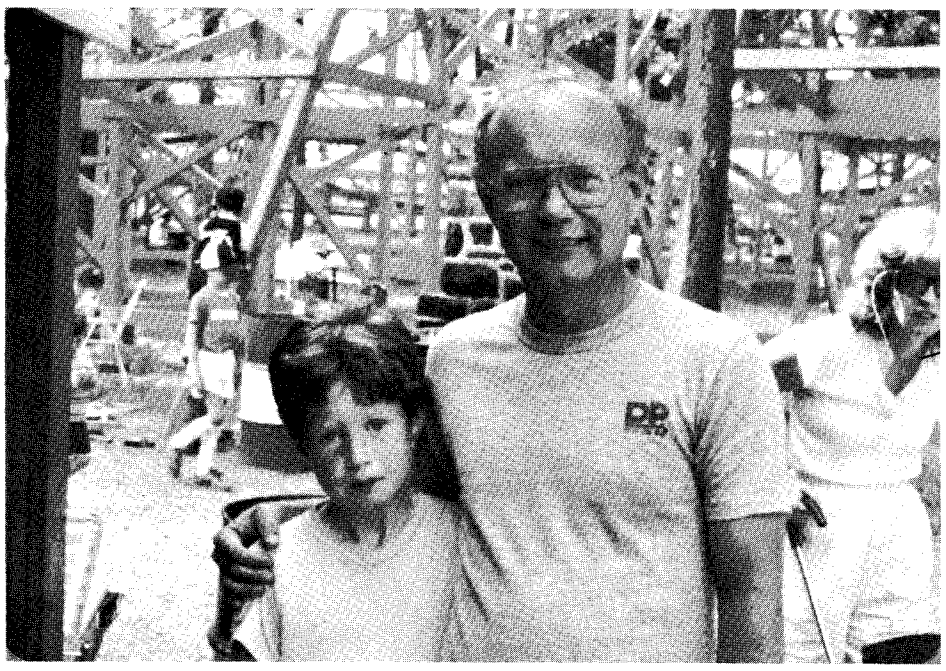
by Tom Reiter

We're getting ready for another partying season. Last year saw four new teams reach the playoffs—parity is here. Will the Lucky Strikes repeat? Will the Pinpoppers regain their superiority? What happened to the Goofers? Were the Screwballs for real? Who cares?

The fun begins Wednesday night, September 4th, at Tudor Lanes about 6:00 p.m.

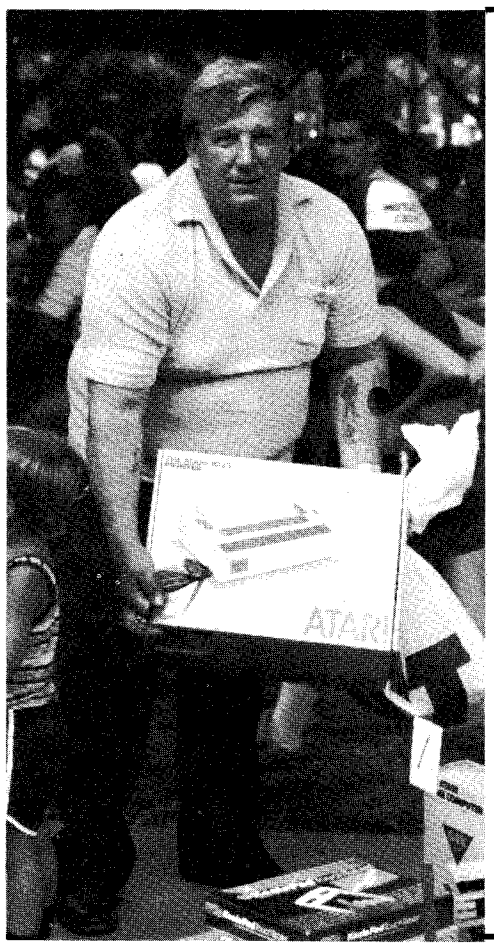
W&R summer picnic at Dorney park

Photos courtesy of W&R Association



After six times on the roller coaster, John Scott and Tom, his son, are still standing and living to tell about it.

Come and get it! Happy, hungry faces line up for food, shade and a place to sit and rest during the day's activities.



Don Rothrock of Public Works won first prize, an Atari Computer System. Fifteen prizes were awarded including second prize, Ricoh FF-3AF Super Auto Focus Camera to Jim Duke and third prize, TMK AC/DC Battery 5 inch TV to Rick Willers.

Some of the W&R Board members present at the picnic: (l to r) Lou Rakszawski, Barbara McGrath, Mike Hannon, Len Roach, Jim Davis, Carl Geist (with son) and Otto Engdahl.

Commander Salutes

Michaela Dipasquo (Code 10): For outstanding support to the Critical Design Review on the Boeing E-6A TACAMO Aircraft.

LT Richard Erickson (Code 60): For assistance in scheduling VPU-1 personnel for Aviation Physiology Training.

CDR Thomas Mumford (Code 70); For a superb job as 1985 Navy Relief Society Campaign Chairman.

William Graff, Thomas Bahnck, Terry Shepherd, and **David Harrison** (Code 30): For important contributions to the Naval Ocean Systems Center in developing the Prototype Array Element Location Sonobouy.

Donald Furmanski (Code 30): For outstanding performance as a team member during the Command Inspection of the Naval Air Systems Command.

Aaron Burstein (Code 20): For outstanding efforts in support of the Advanced Anti-Air Working Group.

LCDR Karl Kail (Code 70): For an excellent briefing to the Naval Reserve Unit 0193.

Peter Krailo (Code 40): For excellent contribution to the success of the TICP STP-8 Technical Panel.

William Lyons (Code 40): For outstanding performance as Chairman of the Independent Review Team of the Airborne Self-Protection Jammer.

CDR Michael Milchanowski, John Shannon (Code 10), **Sidney McCleary** and **Francis Mulholland** (Code 30): For informative briefings to the visiting Commander Patrol Wings Atlantic Staff.

Salvatore Picard, (Code 70), **John Cunningham** (Code 30), **Carl Frey** (Code 50): For significant contributions as members of the Independent Review Team of the Joint Navy/Air Force Airborne Self-Protection Jammer System.

William Hart (Code 04): For active participation in the fingerprinting indentification program at Shenandoah Woods.

Albert J. McGlynn (Code 20): For significant contributions to the Technical Evaluation of the AIM-54C (ECCM/SEALED) source selection evaluation process.

William Malley, Norman Warner, CDR William Moroney, Elizabeth Goehring, Carole Preston, Kathleen Tustin (Code 60), **Lawrence Ott** (Code 50), **Lois Kieserman** (Code 04), **Raymond Satterfield, Ross Barcklow, Arthur Duhaime, George Werts** (Code 81), and **Patricia Wenclawiak** (Code 83): For outstanding support was vital to the success of the Tri-Service Topical Review of Combat Aircraft Cockpit Automation.

The NADC RECIPE REVIEW

Hungarian Goulash

This month's recipe is provided by Joe Cooke, (Code 023-1, x1290) who will receive a **$50 Bond** from the Food Service Board. This recipe will also be served in the NADC Cafeteria. Submit your recipes to Mr. Jose Ferrer, Cafeteria Manager. One winner will be selected each month.

Use at least a 5 quart aluminum pot
4 pds of beef cubes washed, trim off excess fat, cut into about 1 1/2 inch cubes
3 1/2 medium size onions (Chopped course)
1/4 cup plus 1 T of Crisco or white shortening
1/2 teaspoon of salt
4 Heaping Tablespoons of paprika
3 1/2 cups of water

Put Crisco into pot melt over low heat, add onions cook over low heat about 5 min. stir often, do not brown — just to soften the onions. Add salt & paprika; stir well into onions over low heat. Add meat and any excess liquid from the meat to onion/paprika mixture. Stir until meat and onions are mixed well. Add water to this mixture, make sure enough water to cover meat. Bring to a good boil. Turn down to simmer, cover pot with lid allowing a little opening. Cook like this for 2 hrs.; stir every 20 min. test meat after 2 hrs, meat should be tender, if not add a little more time.

Makes enough for 6-8 servings. Serve over rice, noodles, or mashed potatoes. Add more salt to taste when serving.

Cut here for file card

Table topics cafeteria style

What do you talk about at lunch?

Photos by Regina Gasuk

(l to r) Sonya Lott, Migdalia Martinez, Doneene Keemer, Michelle Smith, Karen Holmes, Bridget Hines, and Andrew Loften.
What a variety! No topic of conversation went without mention at this table: failing school, guys, girls, what each of them likes about the other sex, and the trick to car pooling without having to pay for gas.

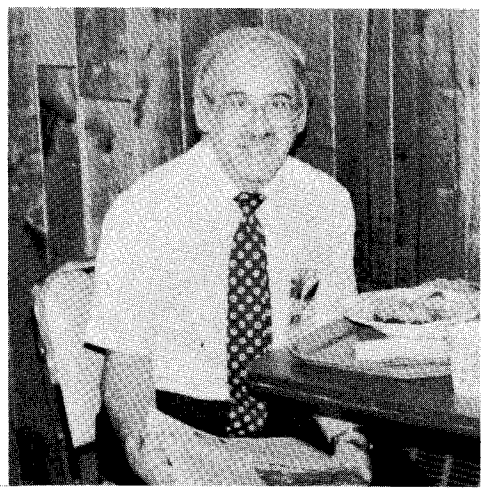
(l to r) Helen Petrun, Marty Clark, Dot Petrun, and Jean Averell. (Sitting at a no-smoking table) . . . "We think it is a great idea having 'no smoking' sections in the cafeteria. We like to enjoy our lunch without inhaling fumes."

(l to r) Chief Stephen Hughes, Chief Ron May, and Senior Chief Steve Markham.
Since Senior Chief Markham is a new employee, Chiefs May and Hughes treated him to an NADC cafeteria lunch. So? He loves the cheesesteaks. In fact, they each enjoyed their cheesesteaks so much, it was a unanimous decision that a good cheesesteak is worth four napkins. Hughes said his was so juicy and messy he would have to send his uniform to the cleaners.

(l to r) Bob Angiolillo, Shawn Donley, John Ierardi, and Anthony Dalileo.
"As a matter of fact, we were talking about the periodontal work each of us has undergone recently." Bob, John and Anthony each had his gums cleaned and were exchanging stories about the cost and effects of the treatment. Shawn, meanwhile, was massaging his gums with spaghetti and white clam sauce, wondering why he was sitting at this table.

(l to r) Joe Callaghan, Chris Woodrow, Gordon Moore, Bart Boodey, Richard Paciey, Kim Rosen, and Jim Thompson.
What do engineers talk about at lunch? We interrupted them in the middle of a discussion on the corrosion of high strength aluminum alloys. Before that they took a survey of women's magazines and here are the results . . . First place, "Cosmopolitan"; second place, "Glamour"; third place, "Vogue"; and fourth place went to "Seventeen". One of the guys recently married and the wedding pictures were circulating.

(l to r) Peter Bojanoski, David Gauntt, Matt Baker, Janet Plantarich, Julie Hamel, Cindy Plantarich, and Joanne Cenci.
This party of seven took their conversation into the cafeteria instead of to the Red Stallion because they were broke. Not having seen the NADC men for a while, Janet was pointing out the good-looking guys and Julie was rating them. (Peter, David, and Matt will be happy to know their table scored two 7's and one 9.)



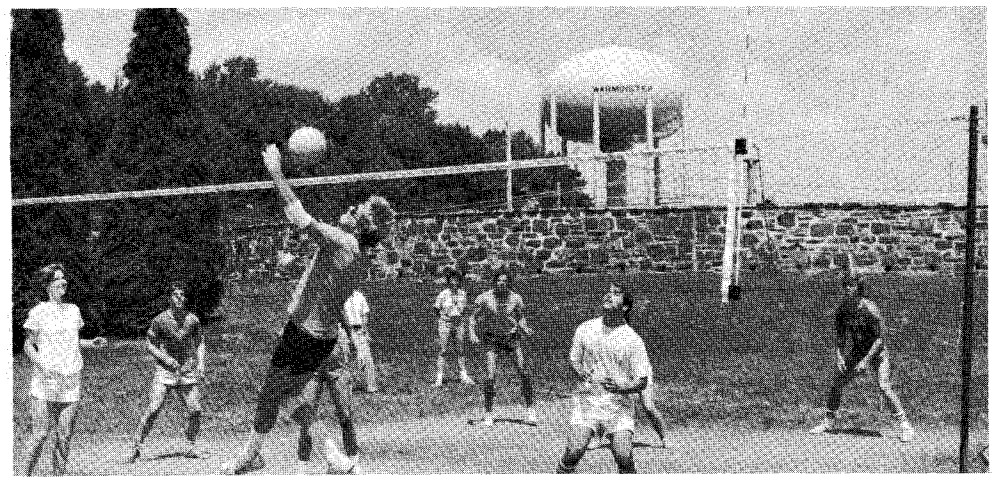
Sheldon Weisman
Who said there had to be a minimum of two people? Sheldon was reading about the Live Aid concert in the Daily News while he ate his lunch. He likes to be alone sometimes. Good for you, Sheldon.

(l to r) Mike Faherty, Bob Seltzer, Mark Lilly, Tom Marchione, Gary Hoffman, and Chris Economy (he brown-bagged his lunch).
The hot topics at this table include the difference between a GS-9 and a GS-11 in the Center's pay scale system and rock-n-roll. Bob and Mike, members of the 8th Inning softball team, inaccurately predicted their second consecutive reign as NADC champions.

Volleyball — lunchtime fare at NADC

Photo by Regina Gasuk

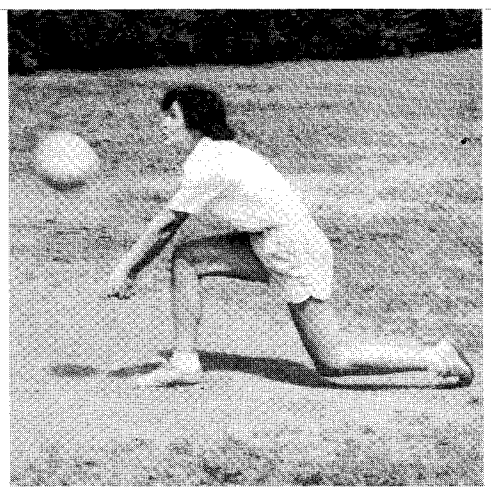
Jetsons jump to block the Networks volley.



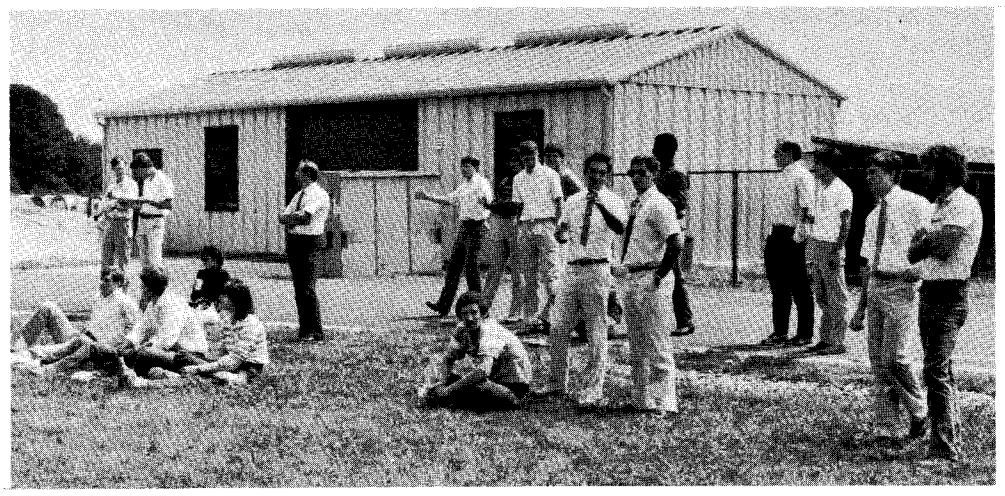
The Longshots try to anticipate where Marauder Doug Lundberg's shot will come down.

Tracy Burns and Jim Grubb of Rif Raf both go for the ball against Who Cares.

The Beefs and Air Patrol jump high for the block.



Great form! Eileen Beans of the Spasmatics stretches for one from the back line.

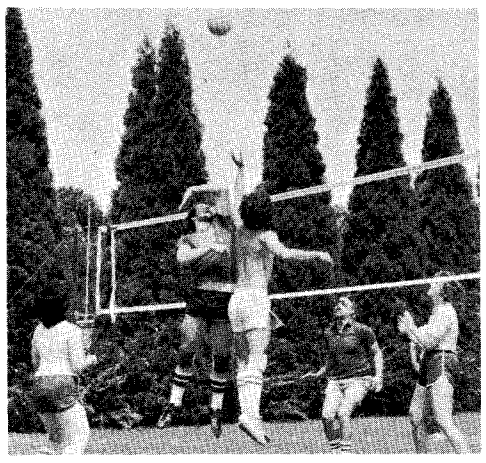


Volleyball seems to provide almost as much enjoyment for spectators as for participants.

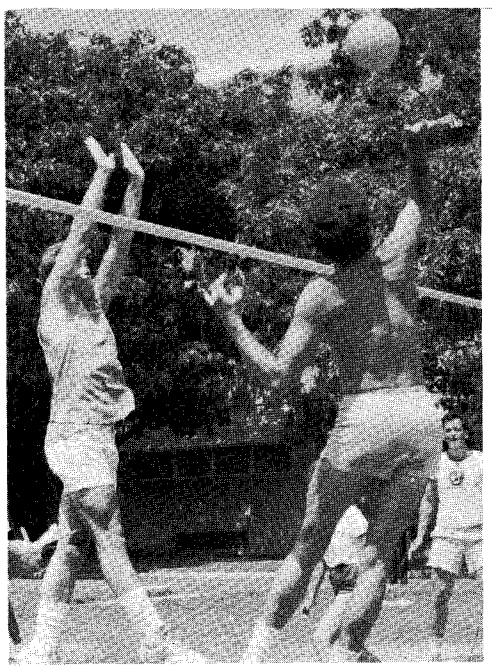
Garth Torok of Air Patrol concentrates on a good bump.

A little bit higher—That's what Serves You Right's Dean Mondelblatt should have done against Air Patrol's Garth Torok.

Serves You Right huddles for new game strategy.



The Spasmatics watch to see which of the Youngbloods can tap the ball over the net.



Airpatrol and the Beefs go one on one at the net.

Og finds formula to keep feet faithfully floored

by Mike Masington

Og's digital sundial read 7:59, and our paleolithic proponent of perennial punctuality promptly perceived that he had only one minute to get to his desk at the Pterodactyl Modification Project Office. He screeched his wheel into a parking space in Tar Lot #1 (approximately 2 eons away from the nearest structure), and ran for the side entrance of Cave #3. Unfortunately, the weather god Nppsbo had been angry the night before, and had covered the ground with snow and ice, but Og dashed through it anyway undaunted by the danger. Suddenly, he experienced a free floating feeling as his feet left the ground and launched him into the air. This rapture of flight was fleeting however, as the cold, hard reality of the pavement abruptly announced itself to his head, back, elbows, etc. After he was helped to his feet by Charon, the gate guard, he slowly (and now painfully) made his way into the cave.

As he entered the "safety" of the familiar halls, he resumed his rapid pace, but almost immediately his slush covered right foot slid on the floor and attempted to arrive at his office several minutes before the rest of him. Helpful co-workers stopped laughing long enough to rush to his aid, and again got him vertical, but now bruises to his side, rear and ego were added to his previous injuries. Still determined, our purposeful protagonist continued his trek. As he descended the stairs in Cave #1, he saw Carla Cougar, the Tribe Chief's secretary, coming from the opposite direction. As the pretty distraction passed him on the steps, he gave a friendly leer and wave and consequently missed the next two steps. This time, NADC's emergency rescue dinosaur was dispatched to police up the wreckage, and transport him to the infamous Dr. Rock Zock. Several incantations, three ice packs, and eye of newt and two ace bandages later, the ailing Og resumed his quest to get to work.

Finally, he made it to his workcenter, and as he concentrated on sneaking past his boss, he immediately tripped over the bearskin rug on the floor of his cubicle. This sent him sailing across his desk and into his potted plant, which unfortunately was a 6 feet tall, man-eating geranium. The battle was a furious one, but Og finally succeeded in beating the voracious plant to death with his copy of the Safety and Health Manual. The commotion however, had not gone unnoticed, and Og's boss came over to inform him that the Safety Manager was waiting to see him about the morning's "adventures." The thought of having to see Mike Mastadon, the Safety Manager, made Og's remaining blood run cold. Mastadon had the personality of Conan the Barbarian and a reputation for sacrificing accident victims to the local volcano, and these were his good points. Reluctantly, he made his way to the safety office located in Cave #2, next to the dungeon/torture chamber complex. Mastadon proved to be his usual charming self as he focused the eye in the middle of his forehead on Og, and bared his fangs as he smiled in greeting.

"Og," muttered the malevolent Mastadon, "I understand you have launched a personal crusade to single-handedly ruin my accident record and make me look bad." Without waiting for an answer, Mike continued. "I want you to understand that I genuinely care about your well being. My sole purpose in life is to protect you, and to make you constantly vigilant about your own safety. And, if you aren't vigilant, I intend to break every bone in your body, slowly. Let's take a look at your case file shall we," he said as he rolled out two large stone tablets. "Your accident in Tar Lot #1 probably could have been prevented if you took your time and looked to avoid the icy patches on the pavement. Then although you knew your sandals were wet and slippery, you still tried to dash down the hall even though you should have realized the risk. Then you became distracted on the stairs, didn't look where you were going, didn't use the handrail, and again injured yourself. Finally, still in a hurry, you tripped over your own rug, a potential hazard you became so familiar with that you ignored it."

Now Og, there are several corrective measures we can take in cases like yours. The rack, the thumbscrew, boiling oil and of course the volcano, but in this case I'm going to give you a break (figuratively speaking of course). I want you to realize that there are potentials for a lot of slip and trip injuries in any working environment, and it takes awareness and caution on your part to avoid them. If you do see a hazard that you can't correct, report it to me as soon as possible. Now go and have a nice day."

Being one of the few survivors of a "discussion" with the Safety Manager, Og considered himself very lucky, and walked back to his office very cautiously, vowing not only to make a sacrifice to Clyde, the god of good fortune, but also never again to risk the wrath that could have shortened his career substantially.

Authors Note: Modern accident prevention techniques have of course progressed enormously since Og's time. We, as safety and health professionals, approach our work in what we hope is an intelligent, enlightened, friendly and cooperative manner. Consequently, the volcano is no longer in use.

FORMER POW'S COME FORWARD

The President of the United States has signed into law a Congressional Joint Resolution designating July 19th, 1985 as National POW/MIA Recognition Day. In honor of returned prisoners from all wars and in keeping with this current priority, the *REFLECTOR* staff would like to talk with any NADC employee who has experienced the horror of a POW camp.

If you are one of those survivors and are willing to share your experience, please call the Public Affairs Office on extension 2290 or 1842. (MAB)

Blood drive a success

Over two hundred donate in second drive this year

01A Staff — Jean Dowds, Theresa J. Spencer.

02 Comptroller — Matthew D. Baker, Sylvia M. Fiumara, Kathleen J. Martin, William A. McDonald, Margaret W. Rudolph.

03 Civilian Personnel Office — Neil Abramson, Rita Brownlee, Geraldine Keenan, Kathleen McPeak, Robert Pomrink, Lois Savage, Margaret Vigelis.

04 Command Administration — Sara Popdan.

05 Computer Department — Margaret Douglas, Robert Smith.

09 Staff Assistants — Dennis Bing, Michael Masington.

10 Directorate Command Projects — Joseph Colombo, Peggy Newbrough, Lynn Peaslee, Jeanine Peterson.

20 Systems Directorate — Leonard Cantor, William Borkowski, Frances Davis, Carlos Falcon, Gale Gartling, Rolana Hall, Wilbur Knerr, Edward Koszarek, Carla Mackey, Suzanne McNellis, Joan Oakley, Kimberly Pugles, David Steiner, Stephen Sterchak, Joyce Sweeney, Debbie Sztubinski.

30 Sensors and Avionics Tech Directorate — Patricia Aspinall, Walter Beamer, Roland Bender, Richard Brookes, Stephen Campana, Wayne Everett, Joseph Farace, Kenneth Foulke, Robert Gallis, John Harris, Joseph Kaszupski, Dawn Keiser, H.F. Kaper, James Marshall, Elaine Mears, Robert Melby, Paul Moser, Joseph Oriti, Louis Raksiawski, Michael Rankin, Harry Ricca, Frank Plonski, Leonard Roach, Russell Rud, John Samaras, Edward Schmidt, Richard Sensenig, Stinson Swyers, John Tepper, Tania Trautman, Barbara White, John Wilks, John Williamson.

40 Communication and Navigation Technology Directorate — Edward Beals, Carol Blakey, Tomasa Castro, Frank Corredine, Vivian Dicristofaro, James Ferris, John Fitzpatrick, Steven Fleischut, Charles Halko, Gordon Heal, Jane Gibbos, Edward Mansfield, Thomas Murphy, David Mutschler, Louis Pelosi, Vincent Rice, Philip Janborn, David Schuck, Leon Smith, Marous Wolf.

50 Software and Computer Directorate — James Atkins, Edward Beach, James Campana, Margaret Fisher, Karl Geist, Stanley Greenberg, Holly Hake, Roger Hontz, Jeffrey Irvin, Clyde Jackson, Helen Keller-Surman, George McElhinney, Edward Monaghan, Robert Piras, James Rachiele, Ted Risko, John Santini, Timothy Springer, Frederick Stowell, Dennis Sutton, Abdul Syed, John Supp, Maureen Talley, James Ward, Jr., John Whalon, Robert Zwissler.

60 Aircraft and Crew System Technology Directorate — Robert Ackerman, James Alper, Doug Bagwell, Brian Brady, Reynolds Brooks, James Butt, Frank Crea, Mark Dahlberg, Edward Deesing, Moise Devillier, Jr., Dan Darrigo, Lori Dinney, Michael Doyle, Bernard Dupee, Ronald Emery, Albert Ferkel, James Grubb, Thomas Haug, Charles Hegedus, James Henderson, Marshall Hynes, Jonathan Kaufman, Stephen Kinsley, Fred Kuster, Richard Lee, Mark Lilly, Anthony Manilla, Tom Marchione, Leonid Markushewski, Laura McHugh, Charles Miller, Mary O'Dowd, Mykola Procyk, David Pulley, Glenn Rhodeside, James Robinson, Mark Salamon, Charles Schweitzer, William Schork, Marshall Thomas, Jr., James Thompson, Nancy Toppring, Robert Mirzanski, David Waldman, David Walter, Craig Wood, Chris Woodrow, Thomas Zenobi.

70 Planning Assessment Resources — James Bethke, Henry Beyer, Stuart Beyer, John Bewes, Christopher Kirk, Mary Moran, Gordon Safley.

81 Technical Services Department — Joseph Armstrong, Catherine Burian, Eugene Byers, Jr., William Daymon, Thomas Gould, Phyllis Grant, Robert Hall, Janice Hinchliffe, Phillip Kaufman, Lawrence Miller, Robert Moore, Michael Rogalski, Ervin Rothermel, William Wiggs.

82 Aircraft Department — Albert Ferkel.

83 Public Works Department — Lenwood Broomer, Susanna Dougherty, Susan Farne, John Kelly, Robert McFetridge, William McKenna, Frank Tariecki, Clifford Tierney, David Varner, William Zar.

84 Supply Department — Clare Ashley, Loretta Dunn, Norman Mitchell, Dennis Stadler, Milton Weaver.

85 Computer Department — Lisa Helock, Stephen Jeroan.

901 Navy Publication & Printing Offices — Rose Hendricks, Arthur Kelly.

93 Patent Counsel — Donna Conway.

95 Naval Regional Medical Center Branch — Ronald Thompson.

Others — Grace McCaffrey, Robert McCaskey, Karen Churnetski, Judith Anderson, Janis Safley, Elliston Morris, James Kearney, Michele Moran, Dorothy Mahaffey, Beth Mumford.

NADC Reflector

Volume 30 Number 9 NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA. September 1985

In this issue:

Yannuzzi and Brennan take new positions

Two major management changes have taken place on Center. After five years of guiding the Sensors and Avionics Technology Directorate (SATD), Edward Yannuzzi will now apply his management ability to the Software and Computer Directorate (SCD). Replacing Yannuzzi as head of SATD is Thomas Brennan who has just completed a one year assignment at Teledyne Corporation in California as part of the President's Commission on Executive Exchange and was previously our Associate Technical Director. The changes were effective September 15th.

Yannuzzi has mixed emotions about leaving SATD. "I feel I had about another year's effort to accomplish some organizational functions such as potentially upgrading some branch positions. The people in SATD have been doing an excellent technical job, a difficult thing to measure because of the many aspects of R&D in this directorate."

His management policy contains these elements: to set Directorate's direction with the participation of key directorate personnel; to delegate authority and responsibility to the lowest level; and to encourage communication in both directions by an open door policy. "I want the Directorate to be responsible and responsive to sponsors. I encourage exploration, i.e. taking risks in R&D development. I expect efficient performance from all personnel and reward top performers. The recognition of my people by the Center and sponsors speaks for itself."

"When I look at going to SCD, it is not new to me. When I was Chief Systems Engineer (March 1976 to July 1977), two of the divisions worked for me." As director of Command Projects (July 1977 to January 1981), Yannuzzi interacted substantially with SCD. "One advantage that I have is that I am respected in the DCP organization and since a good portion of SCD's work depends on interrelations with Command Projects, I hope to help out in that area." Yannuzzi intends to take the same operational policies that worked in SATD into the SCD organization.

Yannuzzi sees himself as having dual responsibilities: one is to the directorate and the other to the Center. "I would be naive to only look internally; if a directorate does not support the Center, its foundation becomes weak. As a director I need to look at the whole organization and make sure the people within my organization understand the directorate's role as part of the Center. In this way both the Directorate and the Center are strengthened.

Photo by Regina Gasuk

Edward Yannuzzi (left) and Thomas Brennan (right) discuss Brennan's transition into the Sensors and Avionics Technology Department.

The management philosophy which he feels has been very sucessful for him, is that power is not derived from the position, but from the people. "If the people feel you have their best interests at heart they will support you 110%. If the people feel you get the power from the position they will support you reluctantly. My management philosophy has not changed and I plan to take this philosophy to SCD."

Yannuzzi has a BS in Physics from Texas Western College plus additional graduate technical and management courses at the University of Pennsylvania.

Tom Brennan was Associate Technical Director from March 1982 to September 1984. Prior to that he was Director of the Planning, Assessment, Resources Directorate for a year. Brennan served as Associate Director for Air Vehicle Technology and has a substantial background in VSTOL.

The new assignment to SATD has pleased Brennan, "when the Commander and Technical Director informed me that SATD was to be my next assignment, my immediate reaction was to recall the many accomplishments and challenges that the directorate has historically achieved through the years. The quality and dedication of the SATD personnel to consistently place their products in the fleet has always been an impressive statistic and an endorsement of their talents."

The management style of Brennan and Yannuzzi do not differ too drastically from one another. Specifically Brennan endorses participative management with appropriate delegation down as far into the organization as possible. "I'd like to emphasize the continuation of realistic and measurable goals for the directorate, and the patience to achieve them. I want to make sure there is a genuine respect for the ideas of others and a free and open communications link up and down the organization chain."

Brennan noted that he had two primary management goals: "the first is to continue the eminence of SATD as the 'technical flagship' of the Navy in sensors technology. The second is to ensure the products that we do develop are both useful and used by the fleet."

"My recent year in industry has heightened my perspective and the need to think at the systems level. Accordingly, I will stress close interaction internally within NADC as well as with the Navy labs and industry. Unless we maintain a commitment to system excellence at the front end and specify it accordingly, then there will be some separation between the directorate goals and the

Continued on page 7

Hood — new Director Command Projects

Photo by Regina Gasuk

Captain John M. Hood

CAPT John M. Hood, 22-year Navy man, recently replaced CAPT Richard A. Fidlar as Director of Command Projects. Fidlar will remain on Center until his retirement in October.

Hood, scheduled to be here for two years, is not unfamiliar with the Center. In fact, he has dealt with the Center continuously over the past ten years. His exposure to NADC while LAMPS Deputy Program Manager for the Naval Air Systems Command (NAVAIR) from 1975 through 1979 and his tour with the Commander, Naval Air Pacific Fleet (COMNAVAIRPAC) from 1983 through 1985 provided valuable knowledge of Command Projects.

"I'm even more impressed with the quality of people (at the Center) than I was ten years ago. You have a technically competent civilian staff and some of the best military I've seen."

Hood is an aviator and holds a Bachelor of Science degree in Naval Science from the US Naval Academy and a Masters in Aeronautical Engineering from Naval Post Graduate School (NPGS). His first tour was from 1964—1967 Pacific Missile Range Facility Hawaiian area and then on to the NPGS in Monterey, CA from 1967—1969. He was stationed next at HS-11 from 1970—1972. From 1972—1975 Hood served as a test pilot at Patuxent River. A tour at NAVAIR as LAMPS MK III test director from 1975—1979 and then on to the Naval Air Rework Facility at Pensacola, FL in 1979—1983. Most recently he was stationed with COMNAVAIRPAC as aircraft programs and engineering officer.

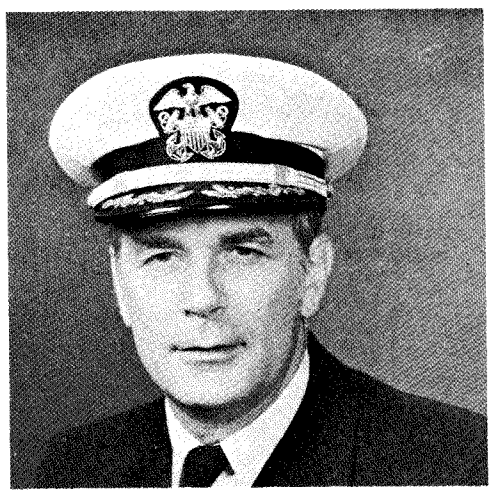
Hood has no immediate plans to make any changes to the DCP organization. "For now I want to continue to implement our policies and support the fleet as best we can.

"My last tour at AIRPAC gave me an appreciation for dealing directly with the Fleet. I want to emphasize to my people to think of themselves on the receiving end of what we're shipping out. After all, some of us might be out in the fleet in the next year or two."

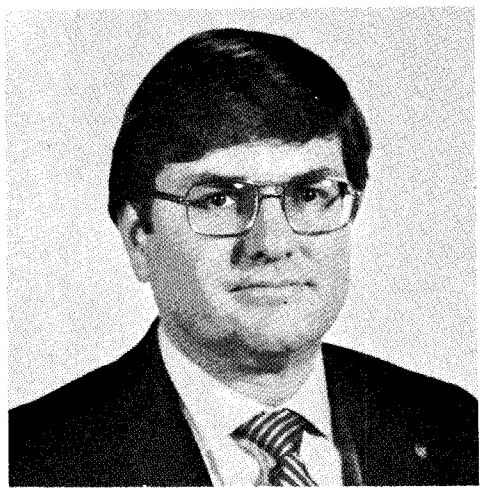
The rapid military turnover to be expected in Command Projects is also of concern to Hood. "I hope to replace my military with equally talented officers when the time comes," he said.

Hood, and his wife, Ginger have made their home in Chalfont, PA. Their 18 year old son, John, is attending the University of Florida while their 12 year old son, Tom, accompanied them. (MAB)

Command Corner



CAPT Edward J. Sturm
Center Commander



Robert S. Buffum
Technical Director

We, as a Center, wish to join the entire Navy in acknowledging the week of September 15th through 21st as National Hispanic Heritage Week. This year's theme is "a salute to youth." NADC currently employs thirty Hispanic employees—nineteen men and eleven women.

Although the Center's Human Resources Awareness Week highlighted the accomplishments of Hispanics as well as many other ethnic groups, we still would like to make special mention at this time of our pride in their work and in their heritage.

EDWARD J. STURM
Captain, USN
Commander

ROBERT S. BUFFUM
Technical Director

Air ASW Systems Review

RADM Wolkensdorfer at NADC

Photo by Regina Gasuk

RADM Daniel J. Wolkensdorfer (at the podium), Director of Anti-Submarine Warfare for CNO, visited NADC on August 7th and 8th to participate in an ASW Systems Review. Topics included ASW acoustic sensor development, signal processors and status of air ASW fixed and rotary wing platforms. The review was hosted by the Sensors and Avionics Technology Directorate.

DuHaime vividly recalls POW experience

by Paul Scelsi

It's hard enough trying to remember the name of a familiar face from the past you happen to come across on the street. Try recalling what happened to you 43 years ago! You're excused if you weren't born yet. If you can't remember, don't worry; few people can recollect things from decades past. Art DuHaime, a scientific and technical photographer for the Center's television studio, remembers 1942 like yesterday, because he was a prisoner of war.

DuHaime's memory and story are amazing. The events leading up to his captivity in the Japanese prison camps are on the tip of his tongue. Dates, times, and the number of American servicemen killed are readily and tragically recalled. It is a story unthinkable and unbearable for most; but it is not a story for DuHaime. It is his past.

It is February 4th, 1942, on board the USS HOUSTON, a heavy cruiser, 1,021 fellow Americans and DuHaime witness the elimination of four dozen of his fighting partners at the hands of the Japanese. Despite damage to the ship's artillery, the Admiral's orders are to stay at sea and prepare for future confrontations.

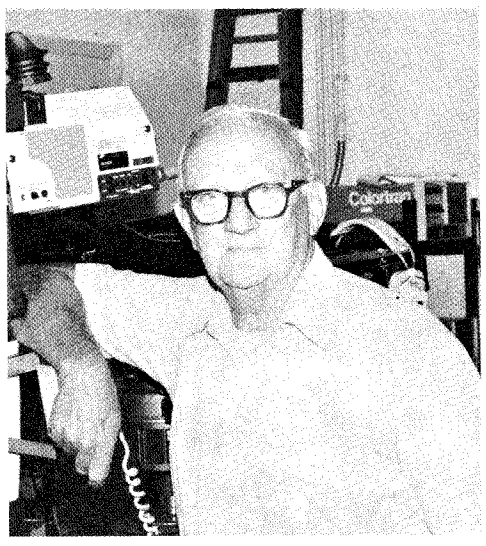


Photo by Regina Gasuk

Arthur DuHaime

Uncertainty and terror are DuHaime's constant companions each day throughout the month of February as are famous Japanese air raids.

The Dutch and British join forces with the USS HOUSTON on the 27th of February only to fall to the brutal Japanese.

At 11:30 the next night, the USS HOUSTON withstands several torpedo blows. DuHaime is on board watching fellow shipmates die.

At 25 minutes past midnight, the cruiser takes its fourth torpedo hit. The ship began sinking after the first and second strikes because those torpedos punch giant holes. Coupled with the torpedos, numerous shell bombings take their toll on the USS HOUSTON. It's a sad situation.

Finally, the Captain gives orders to abandon ship. He no sooner gives the orders than he is killed on the bridge where he spoke.

Of the original 1,070 crew members, only 360 are accounted for after that dreadful encounter with Japanese forces. They could all be found in Japanese prison camps, including DuHaime who will spend three and one-half years there.

At 6 a.m. each day, DuHaime reports to the iron mine or the steel mill and works for 12 to 14 hours. If he isn't cracking ore and stone, he's doing structural work to bridge frames.

Then one day an American B-29 aircraft comes down at a very low altitude just above the Japanese camp and drops barrels of food! DuHaime knows what is going on by now. A B-29 would never come down that low dropping food . . . it would be dropping something else. It marks the beginning of the end. There is food, laughter, but most of all, the feeling of freedom.

Eight days later the U.S. Army seizes the camp and DuHaime leaves with more life than ever before.

Back to the future . . . It is 1985 in the Center television studio and DuHaime talks about some of the events from 1942. It is over, but not completely.

"We always thought it was just a matter of time before we would be set free," DuHaime said. But the days became weeks and weeks became months. Medicine was nonexistent, comfort was impossible; yet DuHaime and his buddies carried on for close to four years.

Nothing was as pleasing to DuHaime as food from heaven or from a B-29 aircraft because prisoners of war received little food. "That was one of the biggest problems as a POW, the lack of food," DuHaime said recalling the days in camp when he weighed 96 pounds. But that all changed with the arrival of the B-29 aircraft. "We started routing through the food and eating so fast . . . we got sick. There was more food than we knew what to do with," he said.

"I was just so happy to be alive that I put aside my feelings of dislike for the Japanese," DuHaime said. "There were some Japanese soldiers I really wanted to finish off, because they were pretty bad. But once the war was over, that was the end."

There are horrors looming in DuHaime's mind that he desperately tries to block out. No one can understand except those who have been through it. That is why each year the remaining POW's who were once aboard the USS HOUSTON get together to share the common bond that was sewn in 1942.

DuHaime came to NADC in 1970 after 30 years of service in the U.S. Navy.

We can read this story and shake our heads and feel for him, but few really know what it was like on board the USS HOUSTON in 1942. We can't completely understand watching fellow Americans fall dead by the dozens. We weren't in the Japanese prison camps for 1,117 days. Life goes on in 1985 for DuHaime. For us the story ends here, for DuHaime some "indescribable" events linger in that sharp memory.

Editor's Note: The Reflector *thanks Art DuHaime for sharing his experiences as a POW. With this story Paul Scelsi completes his summer position in the Public Affairs Office. He returns to Temple University where he begins his senior year as a radio, television & film major.*

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Public Affairs Officer ..... **James S. Kingston**
Editor ..... **Regina Ann Gasuk**
Assistant Editor ..... **Mary Ann Brett**

Meritorious Civilian Service Awards

Photos by Regina Gasuk

Top Row (l. to r.):
Dr. Lloyd Bobb
Stuart Simon
John Cunningham
Thomas Polaneczky

Bottom Row (l. to r.):
Stinson Swyers
Otto Kessler
Edward Cotilla

Dr. Lloyd Bobb

Dr. Lloyd C. Bobb, a senior technical specialist within the Sensors and Avionics Technology Directorate, was one of seven recipients of the Navy Meritorious Civilian Service award for the distinctive technical research he performs in remote magnetic sensing and fiber optic sensor technology. Dr. Bobb manages and performs exploratory research and development in the high risk payoff areas.

Bobb has been the key technical researcher of the Remote Magnetic Sensor (REMAS) program since 1980. He developed the program from an unfunded obscure concept to the highest priority/well-funded status it now enjoys. Since 1980 and parallel to the REMAS program, Bobb has performed extensive research and development in the area of optical fiber sensors and, in particular, optical fiber magnetic field sensors.

Attending Penn State University where Bobb received a Bachelor of Science in Physics in 1961. The following year he got his Master's in Physics from the University of Pennsylvania. He received his Ph.D. in Physics from Temple University.

Stuart Simon

Stuart Simon is the Deputy Director of the Planning, Assessment and Resources Directorate and has also been awarded for Meritorious Civilian Service for his outstanding contributions as an executive staff advisor in program analysis, coordination and assessment. Simon has been responsible for the timely and effective responses to the Center's efforts in the Commercial Activities program, Naval Research Advisory Committee, Naval Material Command and Director of Navy Labs plans and evaluations. His relations with the Office of the Secretary of Defense, Office of the Secretary of the Navy and congressional staff members, have contributed to improving the Center's image and performance.

Simon received his Bachelor's degree in electrical engineering from City College of New York in 1964 and his Master's in electrical engineering from New York University in 1970.

John Cunningham

John Cunningham, head of the Microwave Techniques Branch in the Sensors and Avionics Technology Directorate was honored for his outstanding efforts in the integration of electronic warfare (EW) systems and his technical contributions to other Navy and Department of Defense research and development activities.

Cunningham's Navy career spans 14 years during which he consistently made innovative contributions to the development of Navy EW systems. His reputation in the EW community is well known for his technical contributions to EW systems integration, the memory loader/verifier, the F/A-18(R) reconnaissance version of the F-18 aircraft, and the technology of antennas and EW in general. Cunningham is currently tasked with reviewing technical problems in development of a new AN/ALQ-165 jamming system and suggesting possible solutions.

Cunningham received his Bachelor's and Master's in electrical engineering from the University of Detroit.

Thomas Polaneczky

For more than 18 years, Tom Polaneczky has made outstanding contributions to the improvement of the Navy's Airborne Anti-Submarine Warfare Capability. Currently technical specialist and team leader in the Acoustics Development Division within the Sensors and Avionics Technology Directorate, his contributions to the AN/AQS-13F sonar development and testing, the DAQS/AQS-18, the Advanced Inner Zone Helicopter Sonar Concept Definition, the CV Helicopter program and Airborne Sonar technology in general are highly recognized and respected.

He recently completed, under extremely tight time constraints, the detailed technical evaluation of industry proposals for an Advanced Inner Zone Helicopter Sonar, and is currently leading an investigation into solar pulses characteristics to provide a means of reducing reverberation masking at low speed target dopplers.

Polaneczky is a graduate of LaSalle College with a degree in Physics. He has also completed graduate work in acoustics and sonar engineering at Pennsylvania State University.

Stinson Swyers

Stinson R. Swyers has more than 18 years of outstanding contributions to the development of naval airborne magnetic sensor systems and microwave radar technology. As a senior technical specialist in the Sensors and Avionics Technology Directorate, Swyers fills a key position in the research and development within the Laser/Magnetics Systems Branch business base. In the magnetics area, Swyers was responsible for the design, flight, testing and marketing of the next generation Magnetic Anomoly Detection (MAD) system.

Swyers received his Bachelor of Science, Electronics from the University of Scranton in 1966 and his Master of Engineering, Engineering Science from Pennsylvania State University in 1972.

Otto Kessler

Otto Kessler received the Meritorious Civilian Service award for contributions he made to the development of Navy search radar and other avionic systems during his 21-year Navy career. He is recognized as an expert radar technologist because of his technical contributions to ASW radar system development, the Multiple Avionics Sensors Synergism (MASS) program, and work in polarimetric radar and radar clutter experimentation. Kessler is an electrical engineer assigned as manager of the MASS program within the Sensors and Avionics Technology Directorate.

Kessler attended Lafayette College where he received a Bachelor of Science in electrical engineering in 1964. Two years later, he completed his Master's at the University of Michigan.

Edward Cotilla

Edward Cotilla received the Meritorious Civilian Service Award for more than 20 years of outstanding contributions to the development of naval airborne acoustic sensor systems and sonobuoy technology.

Cotilla, as a senior program manager within the Sensors and Avionics Technology Directorate, manages and performs exploratory research and development in the areas of acoustic sensor systems and sonobuoy technology. He is currently Program Manager of a high-priority Anti-Submarine Warfare (ASW) system development program and the Low-Cost Sonobuoy System (LCSS) that is intended for P-3C and S-3B ASW aircraft.

Cotilla received his Bachelor of Science in Mechanical Engineering from Drexel University in 1959.

Quality control is aviation safety watch dog

by JO2 Fred Dias

"We have an outstanding safety record," said Senior Chief Richard R. Barton, Ground Safety Officer at the Naval Air Development Center.

Barton said that in the last 10 years, the Center has logged more than 11,000 major accident-free hours in the various aircraft that operate out of here.

Throughout the Navy safety is a big factor, and that's especially true in aviation, where an accident can be a killer.

According to AT1 Tom Mathey, the Center's Aviation Maintenance Control Department is where safety begins through Quality Control . . . the Navy's built in safety system. NADC's Quality Control is a small, highly specialized group of inspectors experienced in various fields from electrical equipment to engine components.

Mathey, a CH-53 helicopter inspector, explained that what he and his co-workers do is make certain that the work performed by maintenance and repair people is done according to safety standards.

Strictly an inspection team, Mathey and his crew determine that the completed work is done in accordance with maintenance regulations. The procedures he inspects range from replacing a light bulb to changing the main rotor head in the big CH-53 Sea Stallion.

Quality Control is the maintenance safety watch dog. "If it involves safety of flight, we are there while the work is being done and we also inspect the work after it's completed," Mathey said.

Safety does not stop after Quality Control inspects the aircraft. Both pilot and crew must go through a preflight inspection before taking the aircraft up. A close relationship must exist between pilot and crew to insure the inflight mission is safe.

Says Lieutenant Tom Bily, a P-3 pilot, "There's a great deal of necessary redundancy in a preflight for the P-3. You have your flight engineer who is your systems expert on the aircraft. He knows that airplane inside and out."

Photo by JO2 Fred Dias

AD1 Rafael Medina checks for cracks on the P-3 propeller.

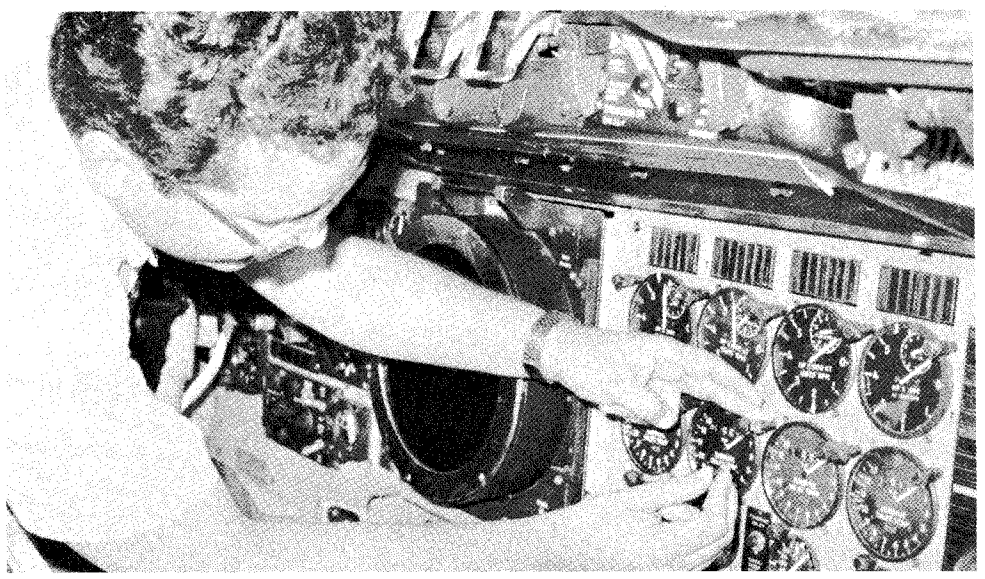


Photo by JO2 Fred Dias

AD1 Rafael Medina makes lighting adjustments to the P-3 instrument panel.

The flight engineer is normally the first crew member to go out to the aircraft, checking every system. The pilot is next to check the aircraft. Both pilot and flight engineer checks include: radios, navigation aids and all electronic equipment, (making sure that equipment is secured). They also check for possible fluid leaks.

There are two types of aircraft maintenance and repair: daily and after flight problems. Except for emergency problems, when a pilot and crew experience a breakdown or equipment failure, a report is submitted to Maintenance Control, which, in turn, assigns the job to the particular shop specializing in repairing the problem.

According to AE2 Steven Cudworth of the Electrical Shop, "Usually when a flight comes in, a person from each shop listens to the pilot and the flight engineer to see what problems they have."

Any problems are then noted and submitted to each shop. "We then see if we can duplicate the problem," Cudworth said. "Once we duplicate the problem, we can start trouble shooting." After the problem is repaired, a collateral duty inspector (CDI) checks it to see if it was done correctly. The CDI is also on hand

Continued on page 6

VIEWPOINT

Photos by Regina Gasuk

This month's question is: What do you like best about the Center?

"Flexi-time. I don't know how I could go back to regular hours. I flex to the fullest."
Gerry Pirrung, 3021

"The daily interaction with a large number of dedicated, bright, well educated people. We work in a rare environment — somewhat like dealing with only the top 10% of the class. All your answers better be correct."
Tom Shopple, 02

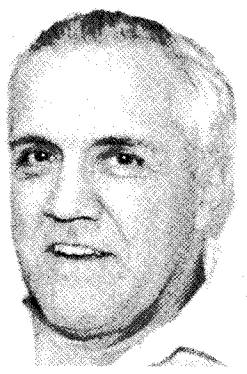
"It just happens to be close to my home and centrally located amidst a number of golf courses."
Denny Stiles, 0342

"VS Program parties."
Sharon Shaffer, ISS

"Leave, liberty, and the TGIFOT parties. Oh, and the good people I get to work with."
Bill Myers, 7032

"What I like best about NADC is the people; I have met and gained lasting friendships with some of the nicest and most talented people around."
Kathy Montrey, 5001

"There are two good reasons why I like the Center. First, NADC is in my home state, which I've been away from for a number of years. Second, and more important, I enjoy working with the many fine people here. They have contributed greatly to the freedom we enjoy today."
AFCM Dale Cain
Command Master Chief



NADC Military Softball

Team finishes in top half of competition

by JO2 Fred Dias

The town of Earl is nestled in the eastern part of New Jersey, 50 miles southeast of New York City. It's perhaps in some of the prettiest countryside New Jersey can offer.

Earl is also home to the Naval Weapons Station (NWS), a quiet small base most of the year.

But once every year a part of that beautiful countryside becomes the battleground for sports gladiators from around the Northeast. For the fourth consecutive year, Earl was host for the Navy's Mid-Atlantic Regional Softball Tournament, August 23—25, (rain date - August 27th). Navy, Marine and Coast Guard stations from 18 major bases from New Jersey, Delaware, Pennsylvania and New York sent their best teams to compete for the top honor in double elimination competition.

The Naval Air Development Center sent their softball gladiators to do battle on some of the best softball diamonds in the Navy. Led by AD1 Joe Bretton and assistant manager LT Dave Gleisner, the NADC team entered 12 members in this year's tournament.

The managers drew numbers to see who they would play and on what field, at what time. NADC drew a bye to play the winner of the aircraft carrier Independence and the ammunition ship Suribachi. The "Indy" buried the Suribachi, setting up their second battle with NADC at 2:30 p.m.

The afternoon shadows were shrinking away from homeplate as NADC took the field. The aluminum totting gladiators pounded out two and a half scoreless innings. In the bottom of the second, NADC pushed across one run. At the end of three innings it was 3-2 NADC and at the end of four, it was 4-3 "Indy." The lead changed three more times with the "Indy" winning 8-6.

Saturday found NADC in the loser's bracket, but that changed fast. They pounded New York's Naval Support Activity team 14-3, then eliminated the Suribachi from the tourney with a 14-6 win.

That set up a possibility of playing in the final round, as NADC prepared to square off against the NWS Earl Rockets.

With the afternoon sun dancing between clouds, the two teams took the field at 1630 Saturday. Both teams came out hitting, kicking up a tremendous cloud of infield dust. First one team, then the other would "smoke it," scoring runs. When the dust settled, the Rockets won with an 11-7 decision.

NADC finished fifth among 12 teams. The final day of competition was held on Tuesday, August 27th at Naval Air Station Willow Grove. The three finalists were NAS Willow Grove, the aircraft carrier Independence and the Coast Guard from Governor's Island. Willow Grove is this year's Mid-Atlantic champs.

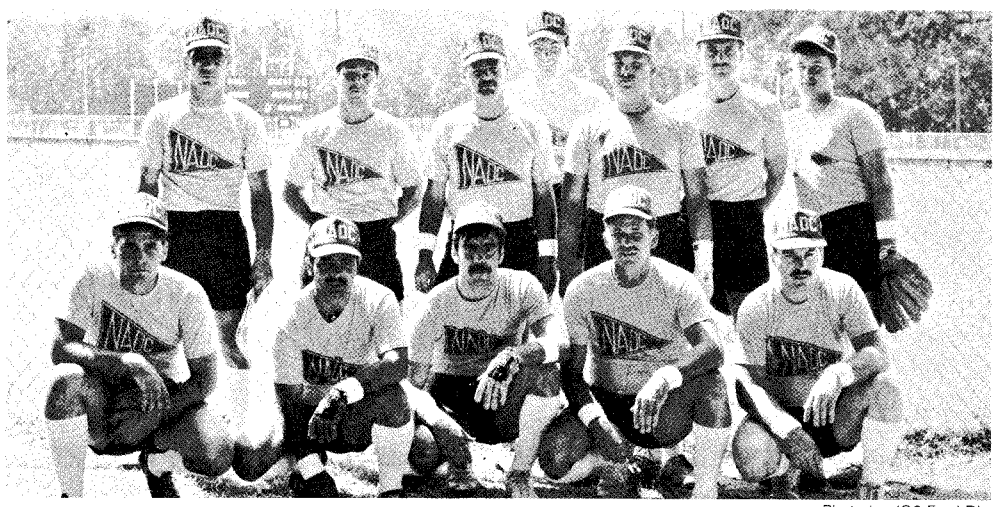


Photo by JO2 Fred Dias

The NADC Softball Team is: (from l to r) ADAN Craig Hoffman; AT1 Joe Barrera; HN Brian Ellison; AD1 Joe Bretton, AMH2 Kirt Lakin. (Back row, l to r) AMS1 Paul Walski; AT2 Santos Perez; AO2 Tony Leiggi; AO1 Barry Evitts; AD2 Rick Willers; LT Dave Gleisner and AD2 Rick Payne. Not pictured, AMH2 Charles Wade and LT Tom Klepper.

For NADC: on to more competition. The team members are: AD1 Joe Bretton, manager and first base; Lt. Dave Gleisner, assistant manager and right-center field; AMS1 Paul Walski, catcher; AD2 Rich Willers, third base; AT2 Santos Perez, second base; ADAN Craig Hoffman, first base/right-center field; AD3 Rick Payne, right field; AMH2 Kirk Lakin, catcher; AO2 Barry Evitts, left field; AO2 Tony Lieggi, pitcher; HMSN Brian Ellison, shortstop; AT1 Joe Barrera; catcher; AMH2 Charles Wade, pitcher and Lt. Tom Klepper, left-center field.

Photo by JO2 Fred Dias

AO1 Barry Evitts at first

Misfits become men's softball league champions

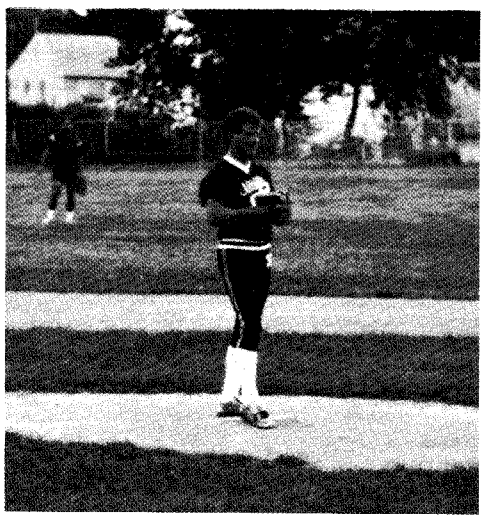


Photo by Cindy Detwieler

Misfits' pitcher Greg Heydet

by Charlie Destra

The Misfits, favored to win it all at the start of the season, are the 1985 Men's Softball League champions. They accomplished the feat in impressive style by sweeping the playoff competition in seven straight games and knocking off their toughest rival, the Guzzlers, in the final series.

The Misfits averaged 9.5 runs in the playoffs and were led once again by star player Greg Heydet, whose pitching was the key to their success. But the balanced Misfits got a lot of contributions from various players throughout the playoffs.

Heydet and company got off to a good start in their first series against the erratic Nightriders, winning easily, 19-5 and 17-0. Heydet was a one-man wrecking crew, smoking three home runs and driving in 14 men in the two games.

The dangerous Druids were next in line and the Misfits figured to be tested. Heydet tossed his second playoff shutout in the first game (4-0), and it looked as though the Misfits were ready to roll again.

But the Druids came up with one of their best games of the season in the next contest, only to lose in the 13th inning on a five-run Misfit explosion, 8-3.

The game was highlighted by several outstanding defensive players, particularly by Misfit player Chuck Lagrossa and Joel Wexler. Lagrossa made three diving stops at second base and Wexler made two great catches in the outfield. "Best defensive game I've ever seen," said Misfit manager Jim Kearney. Garry Morlock went five for seven in the series to lead the team offensively. And it was off to the finals once again for the Misfits—This time against the 13-3 Guzzlers.

The Guzzlers, considered by some to be the Misfits' equal, looked ready for the challenge. They beat two strong teams on their road to the final series—the Bearcats (3-7, 2-0, 4-1) and the Granfalloon (5-3, 4-1). Pitcher Ron Lang had been punching out opposing hitters and a tight, tense series was anticipated.

In the first game of the best-of-five series, the Misfits one-two punch of Mickey Rudock and Heydet socked homers to power the team to victory, 5-3. The latter was a three-run blast in the sixth inning that broke the backs of the Guzzlers and set the tone for the rest of the series.

The Guzzlers played aggressively in the second game but were foiled again, 8-4. Matt Brown stroked a bases-loaded triple in the third inning that sealed the win. Brown, who played with a severe muscle pull, led the Misfits offensively in the series, prompting manager Kearney to remark, "If I had to pick a series MVP, it would be him."

In the final game, the Misfits again played stellar defense to win, 5-4. Joe Tither's two-run double was the big blow.

Though the scores of the series were relatively close, it never appeared that the champions were in serious trouble. And when it was all said and done, Heydet fared slightly better on the mound than his counterpart, Lang.

Congratulations to the Misfits, whose march through post-season play was so convincing that little doubt was left as to which team is the best in the league.

Photo by Cindy Detwieler

Fred Kuster, manager of last year's champs, The 8th Inning, hands over the league championship trophy to Jim Kearney, manager of this year's winning team, the Misfits.

Worth Repeating

"A man never discloses his own character so clearly as when he describes another's."

—Jean Paul Richter (1763-1825), German writer

NADC Fall Football Preliminary Talent Review

by Craig Volker

Hi sports fans!

It's time for NADC fall football to begin, and here's a quick look at this year's teams:

Granfalloon:
Behind the strong arm of quarterback, Tom 'Elwood' Weiss, the Granfalloon, last year's regular season champs, look truly formidable. Matt Brown is one of the best receivers and defensive backs in the league. Their title hopes may hinge on whether or not Garth Torok can remember what day the games are played.

Blue:
The granddaddies of the league, the Blue, seem to just get better with age. Last year, they finished a close second behind the Granfalloon during the regular season, then beat them in a thriller in the championship game to win the league title. With a host of stand-out stars including Bobby Larr, Terry Houghton, Fred Kuster, Ron Kapusta, and John Santini, the Blue will be tough to beat.

Gang Green:
Gang Green, who tied for fourth last year, could be the surprise team of the league with the massive revamping it has undergone under the general managing genius of Jim Michell. The team now has six stand-outs from the Avenging Aardvarks (champions of the now defunct WFL (Wednesday Football League). These include, Jim Michell himself, one of the game's premier pass rushers, sure-handed Jerry O'Hara and Craig Elicker, the mild-mannered Joel Wexler, the dashing, debonnaire Craig Volker, and perhaps, most importantly, Dave 'Billy Kilmer' Dummeldinger. In addition, this team has one of the most promising rookie crops in years, headed by Norbert Reis, Jim Buggy, and Dave Jenkins.

Nads (Barking Spiders):
The Nads, who tied the Blue for second last year, will again be tough behind their quarterback, star defensive back, and coach Ken Koper. There are rumors of a name change within the organization. The BSers (short for Barking Spiders) may replace the noble Nads name at the beginning of the season.

Dragons:
Play-making mastermind, Bob Geyer, turned the Dragons into real contenders last season, and they should be even tougher this year. The team has been practicing hard in the pre-season and could surprise a lot of people.

Druids:
Veteran coach and newly-wed Dave Williams promises to have an exciting season, but I don't think he's talking about football. The lowly Druids, who were 1-6 last year, should improve this year, but after their dramatic 13 inning game vs. the Misfits in softball, they may be too tired to win the title, even with the talented, fleet feet of Frank Hollenbach, Dave Kammler, and Gary Chase on the squad. The additions of ex-Avenging Aardvark star Dean Mondelblatt and rookie Dave Whitenack should help the club considerably.

Renegades:
The Renegades who were best known for their beer-guzzling ability should do better than their 0-7 record of last year, despite the large, large gap left by Steve Bazow who promises to be on travel most of the season. Their tenacious defense, led by Kevin Birney, should keep them within striking distance during most of their games.

Lasers:
The newly-formed Lasers have a host of rookies. In an attempt to add some experience to the team, they have acquired aging veteran Mike Deshield whose most notable accomplishment last season was biting the author's head on an attempted block.

At press time, free-agent stars Joseph Wesley Cameron III and Quintin James still have not signed with any team. The team that wins the title may be the one which can land these stand-outs.

With a brand new team, five teams with the talent to win it all, and the other two who definitely won't be pushovers, this season promises to be one of the most exciting in years!

Let's play ball!!!

POP - UPS

Guzzlers — D. Gleisner, .558; J. Bowes and D. Tauras, .500; J. Bretton, .488 .
Renegades — S. Myrick, .500; J. Andujar and J. Toner, .423 .....
Pacer — D. Speidel, .500; T. Risbon, .490; R. Brodeen, .489 .....
Nightriders — J. DeValle, .473; M. Wagner, .465; N. Torres and C. Destra, .447 .....
Misfits — G. Heydet, .568 (tops in league); J. Wexler, .475; M. Rudocke, .444 .....
Granfalloon — M. James, .549; S. Torok, .484; G. Torok, .471 .....
.....
M. Rudock's (Misfits) 32 RBIs led league .....
The Nightrider's J. Cerkan had the most roundtrippers, 10 .....
And would it be blasphemy to suggest that anyone other than the Misfits' Greg Heydet was the league's most valuable player? .....
.....

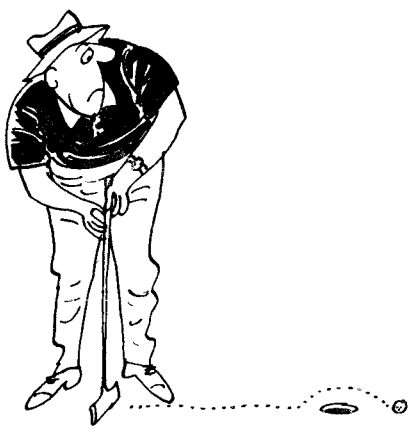
And finally, the final season's standings:

	Regular Season	Including Playoffs
Misfits	14-2	21-2
Guzzlers	13-3	17-7
8th Inning	13-3	13-5
Devils	12-4	13-6
Granfalloon	12-4	14-7
Druids	11-5	13-7
Bearcats	9-7	10-9
Nightriders	8-8	8-10
Pacer	8-8	-
Renegades	5-11	-
Phantoms	3-13	-
Rebels	2-14	-
Agent Orange	2-14	-
Ballbusters	0-16	-

Last year's champs, the 8th Inning, disappointed in this year's playoffs by losing in the first round to the Druids. One of the reasons, however, was the loss of star pitcher, Bob Larr, during the series due to an injury .....
.....
The Nightriders and the 8th Inning were the only two playoff teams not to win a game .....
.....
The Pacer, the newest addition to the league, had a respectable first year and just missed the playoffs. They started out 2-6, then came on strong to finish 8-8 .....
.....
The end of the season is a time for statistics, so here goes: the Misfits had the league's best pitching staff, giving up only 3.81 runs per game. The Devils were next at 4.19, followed by the Guzzlers' 4.75 .....
.....
The Guzzlers scored the most runs during the season (12.6), followed by the Misfits (11.6) and Granfalloon (11.1). The Guzzlers were the only team to score over 200 runs (203) ...
.....
The most even team in the league was the Nightriders, scoring 8.4 runs per game and giving up 8.9 .....
.....
Agent Orange gave up the most runs (15.8) and scored the fewest (3.8) but they posted two wins .....
.....
The Ballbusters were the only team to go winless .....
.....

Many of the top hitter's regular season batting averages are listed:
Druids — D. Dummeldinger, .437; G. Groshner, .409; M. Kiernan, .385 ...
Agent Orange — J. Mitchell, .551; S. Kee, .522; J. O'Hara, .520 .....
Bearcats — C. Krausss, .471; J. Sniscak, .432; S. VanSant, .430 .....
Rebels — C. Volker, .400; M. Dawn, .378; D. Popeck, .373 .....

NADC Golf Champs



by Bill Achuff

A golf team representing NADC in the Northampton Industrial Golf League, consisting of 12 companies from the surrounding area, has won the Championship on Sun. 25 Aug. by winning over Drever Corp.

NADC team consists of: Capt. Bill Achuff, John Beckum, Walt Blizard, Dick James, Cliff Tierney and retirees Larry Dempsey, Ed DePalentino, Roy Fay, Walt Kenefic and John Vincent.

Congrats to NADC Team.

Sailor of the Quarter

AE2 Stephen F. Cudworth

by JO2 Fred Dias

Aviation Electrician's Mate Second Class Stephen F. Cudworth is Naval Air Development Center's Sailor of the Quarter for the second quarter (April to June 1985).

Cudworth works in the Electrical Shop of the Aircraft Maintenance Department. During the past quarter, as the only electrician trained on the MC-2 Compass Calibration Test Set, Cudworth continuously kept the calibration of two of the Center's and two project P-3 Orion aircraft in proper working order.

"You often worked double shifts of up to 15 and 18 hours without complaint. The impact of your outstanding efforts will help enhance worldwide fleet antisubmarine warfare capabilities for years to come," stated his citation, signed by the Center Commander, Captain Edward J. Sturm.

Cudworth was selected Sailor of the Quarter by the Chief Petty Officers of the Center.

Quality control — aviation safety

Continued from page 4

during the repair work to resolve any safety procedure questions.

AMS1 Dan Marchese of Quality Control, says the inspectors are in Quality Control because they have the experience and knowledge to detect anything that doesn't look right. This applies even if a plane is already scheduled to fly. They make recommendations to Maintenance Control when flight is not advisable. Maintenance Control is responsible for the final decision.

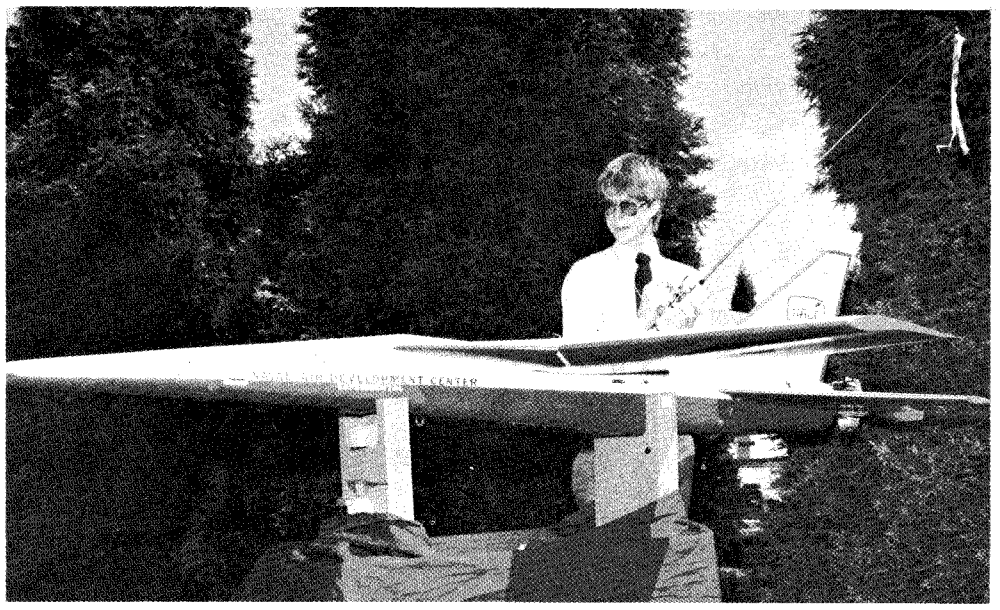
Safety is designed to save lives and equipment. A close relationship between pilot and the Maintenance Department guarantees that safety. As Senior Chief Barton sees it, "Supervision by our middle managers and the way Quality Control performs its duty, is the major reason for our outstanding safety record."

NADC devises expendable Remotely Piloted Vehicle

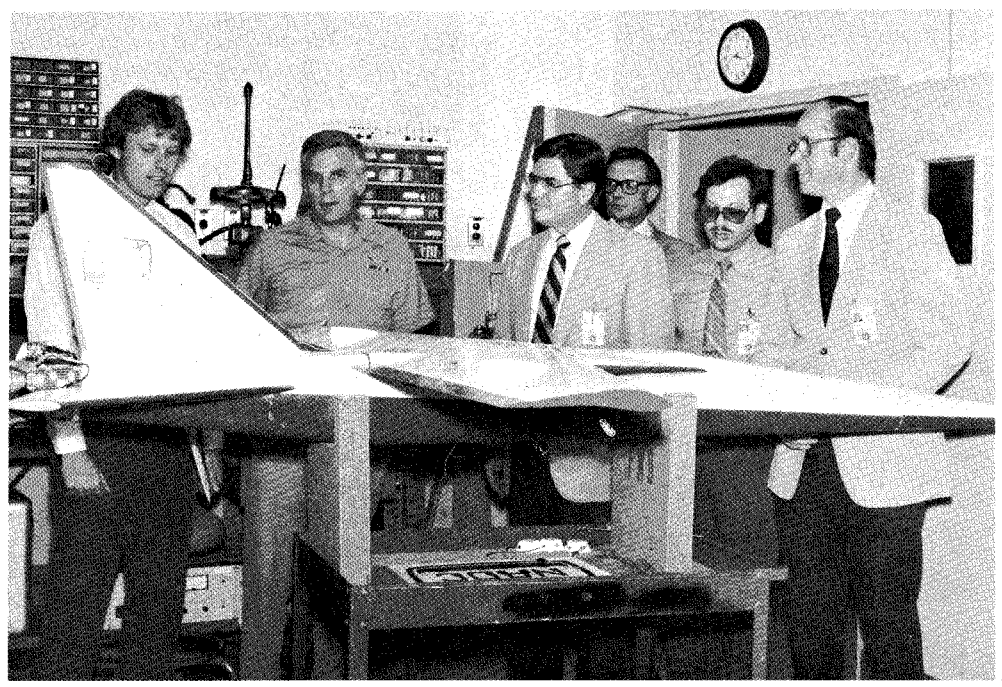
If this looks like one of those model airplanes you've seen flying around, you are almost right. This is an airplane of another kind because it has reconnaissance and real-time-video data link transmission capabilities. It is a special Remotely Piloted Vehicle (RPV), but unlike the larger, more expensive, high-flying platforms, this one, based on an NADC-devised concept, is expendable. With a four foot wing span and eight foot length, this craft, complete with fuel weighs a mere 40 pounds. When all the testing is completed and production of RPV's begins, the unit cost; complete with sensors, receivers and transmitter; will be much less than current RPV's.

located in the belly of the aircraft (10''x5''x2'') consists of the camera, antenna and transmitter. In the forward section is a camera and rechargeable battery pack. Center engineers are planning to increase flight duration with a four-cycle engine which will provide more power per volume of gas and longer range. Also an Artificial Intelligence (AI) pallet will be included to monitor and relay such information as airspeed, altitude, and fuel consumption as well as provide pre-programmed flight thus eliminating the need for radio control.

This RPV is easier to launch than other types that are larger and made of heavier materials such as aluminum.



Bob Bruce contemplates use of remote radio control transmitter when RPV is dismounted.



Left to right: Ken Koper, Center Commander Edward Sturm, Technical Director Robert Buffum, Paul Moser, Mike Mocenter, and Joe Kaszupski get a close look at NADC's low observable observation platform RPV.

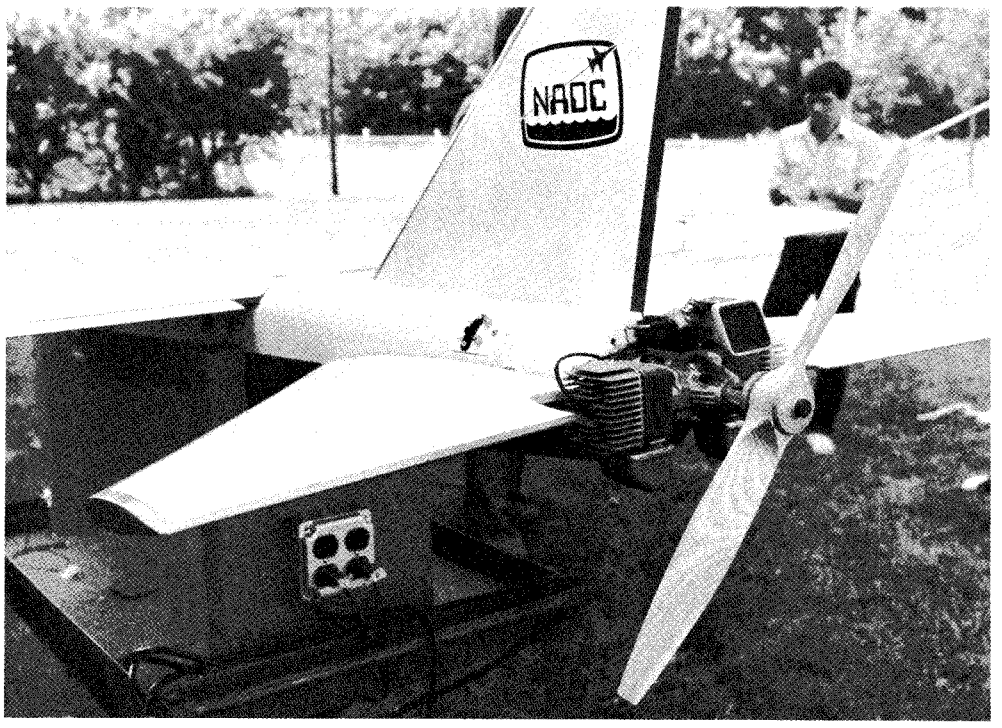
The aircraft was manufactured by Wing Manufacturing, a company that has a patent on cutting and pressure fitting styrofoam into aircraft molds. Wing Manufacturing modified their design for the Center's use. The RPV carries a maximum payload of 10 pounds and is powered by a two-cylinder, 4-1/2 HP, two-cycle engine fueled with a methane and oil mix. Its one gallon fuel capacity provides 1-1/2 hours of flight time. The fuel is stored in two fuselage and two wing tanks. The craft presently has two TV-type imaging sensors, but there are plans for multiple sensor capacity. The aircraft has one forward-looking video camera located in the nose and a vertical looking video camera in its belly. From the ground, the remote control operator is able to switch from one camera to the other. The data link is a half watt transmitter. The snap-in payload, NADC's expendable RPV can be launched from the top of a truck, a small dolly, or a specially designed 28 foot catapult. Its "stealth" qualities give it an extremely low radar trace.

The FCC has allowed the Center to use one watt transmission on the radio control frequency of 72.4 MHZ providing a maximum distance of 2-1/2 miles. The FAA has approved flights within the perimeter of the airfield up to an altitude of 3,000 feet, but flights so far have only been 500 feet altitudes.

While it is obviously not a new technology, RPV's have been around since 1917, systems including sensors and airframes are decreasing in cost and weight, and becoming more stabilized. If an F-14 goes down, two pilots and a very expensive aircraft are lost. RPV's can do part of the reconnaissance job with no risk to human life. They can be sent Over-the-Horizon to perform battle-field assessment. NADC's RPV will perform reconnaissance work inexpensively. It can be repaired, but if not, it's expendable.

NADC's RPV is a multi-directorate endeavor. Sensors and Avionics Technology Directorate personnel are responsible for the sensors while Computer Systems Technology Directorate do the AI development. Aircraft and Crew Systems Technology Directorate personnel are in charge of the airframe and Systems Directorate is performing some of the systems engineering. Communication and Navigation Technology Directorate is developing the data link, receiver and transmitter section.

After testing is completed at the Center, additional flight tests will be done at the Naval Air Engineering Center in Lakehurst, and Warren Grove. Further testing is expected to take place at the Naval Air Test Center, Patuxent River and possibly the Marine Air Station in El Torro, CA on the X-band system that will work in conjunction with the Marines' All Source Image Processor (ASIP).



RPV's 4.5 HP, 2-cylinder model A/C engine.

Yannuzzi and Brennan

Continued from page 1

Center's goals. My focus will be to ensure that this is held to a minimum."

Brennan is glad to be back at NADC. He noted that his view of the Center and the Navy as an industrial counterpart introduced refreshing new insights into our mission, operations and decision-making process. "In particular, the current on-going initiative aimed at planning our strategic future is not unlike similar efforts in industry aimed at firming relative priorities and directions for resource allocations, bid/no-bid, risk vs. investment decisions and other business parameters. Surely, we are at an exciting juncture in the history of NADC — the importance of the strategic planning process in formulating that history deserves our foremost attention and I look forward to the challenge of the planning and implementation. Likewise, I'm sure that the personnel in the directorate and across the Center will enjoy that participation."

Brennan received his Bachelor of Science degree in Aeronautical Engineering from Penn State University and a Master's degree from Princeton University. In addition, he has been the recipient of numerous professional, honorary and career awards throughout his 19 year tenure at the Center.

Do You Know?

Amount of Pasta consumed in the U.S. in 1979:
1.8 billion pounds
—enough spaghetti, macaroni and noodles to reach the moon and back 32 times

Percentage of all new cars bought in the United States which are purchased by women:
40

Percent of U.S. fresh fruit and produce that is discarded before it reaches the consumer:
20

Number of milligrams of caffeine in the average cup of coffee:
155

Commander Salutes

James Hardy, Daniel McCauley (Code 60): For time and effort devoted to a presentation at the Doyle Elementary School's Young Author Conference.

James Dunn, Gerald Ferguson, Theodore Trilling, Nelson Hall, David Schuck, Stephan Bozow, Michael Rankin (Code 30), **Jacob Eyth, Nancy Topping, LCDR L. David Mills, HM1 Walter Krasa** (Code 60), **Dennis Kiefer, Paul Edwards** (Code 81): For contributing time, support and expertise in the development and execution of the Bucks County High School Science Seminar.

Dr. John DeLuccia, Dr. Jeffrey Waldman, Charles New, Edward Deesing, Thomas Donnellan, Ronald Trabocco, Steven Thoman, Robert Mahorter, William Weist, Dr. Richard Paciy, Lee Biggs, Richard Lee, Vincent Novielli, Jacob Eyth, Nancy Topping (Code 60), **Patricia Wenclawiak** (Code 83): For significant contribution to the success of the American Society for Metals visit.

AD3 N. Watson, AD3 K. Brown, AE3 D. Nelson, AE3 P. Dunham, ADAN E. Holcroff (Code 82): For professionalism while representing the Navy during the American Legion's Memorial Day Parade.

AFCM Thomas Mazzone, AD1 Rafael Medina, AD2 Michele Williams, AD2 Daniel Fasci, AD3 Norman Watson, AD3 Jaime Jaromay, AD3 Kent Brown: For significant contribution to the readiness of VPU-2's aircraft is commendable.

LCDR William Mugg (Code 10): For dynamic leadership and outstanding performance while CV-ASWM Program Director.

LCDR Michael Dougherty (Code 10): For valuable assistance in the development of the CV-ASWM 4.1 Navy Training Plan.

Joseph Spodaryk (Code 02): For outstanding support to PMTRADE'S computer systems.

Albert Cavalieri, Edward Kenkelen (Code 60): For significant contribution to the Supersonic Low Altitude Target Program.

John Reeves, Donald Johnson, Renae Davis, Quintin James (Code 20), **Mark Gindele** (Code 10): For significant contribution to the CF/ASW Inner Zone Weapon System Source Selection Effort.

Steven Dunham (Code 40): For outstanding support provided to *NAVOCEANO* during recent sea trials.

Paul Benner (Code 60): For outstanding support leading to the success of the Independent Research and Development Review at Teledyne Ryan.

Robert Buffum (Code 01): For commendable efforts in assisting the Naval Surface Weapons Center as a panel member for the selection of two SES members.

Norman Ostroff, James Rachiele (Code 50): For informative briefing on the Enhanced Modular Signal Processor presented to the NAVSEA program office.

Joseph Spiecker (Code 20), **Donald Morway** (Code 40), **Aris Pasles** (Code 70), **Dottie Kirkpatrick** (Code 03), **Robert Clegg, Alexis DeLeon, Frank Drummond** (Code 80): For commendable service as a member of the NADC Food Services Board.

NADC gets waffled!

The Anchorage served waffles to NADC employees as a special treat on August 21st. These were no ordinary waffles. Besides being oversized, they could be piled high with a choice of flavored butters, strawberry, blueberry, cherry and maple syrups, mounds of fresh fruit, assorted nuts, coconut and whipped cream. Eleven hundred Center employees got waffled.

Photo by Regina Gasuk

Promotions

Mary C. Benhayon, Robert C. Birrane, Alan H. Blumenthal, Julieta E. Booz, Mark R. Breidenthall, Mary Ann Brett, Carlton B. Brown, Peter H. Cho, Jamie Clavell, Stephen P. Cloak, Michelle M. Costello, Eileen M. Craig, Vince J. Crusco, Stanley J. Czarnuszewicz, Richard H. Dalrymple, Theresa S. Dedominicis, Anthony T. Eng, Michael F. Faherty, Gary C. Feuer, Regina A. Gasuk, Mary Ellen Grady, Janettarose L. Greene, Dorothy P. Harner, Mary B. Hellings, Russell L. Johnson, Michael P. Jusczak, Robert F. Kennedy, Judith L. Koper, Kenneth T. Koper, Beverly E. Lazarus, Jeffrey L. Lytle, Linda B. Malloy, Lindsay G. Markus, Edward P. Monaghan, Jr., Kathleen T. Montrey, Carmel J. Owens, Kevin J. Parson, Billy Patterson, Jr., Scott D. Perry, Tina M. Polichetti, Diane Reiter, Betty A. Schultz, Andrew S. Schwartz, Howard D. Shectman, Sandra K. Sittig, Arthur P. Stevens, John J. Toner, Nancy J. Topping, Garth S. Torok, Andrew G. Valko, Maryann Vernot, Michelle M. Willis, Ying Wong.

Technical Highlights

DYNAMIC FLIGHT SIMULATOR

The conversion of the Center's Dynamic Flight Simulator (DFS) from the F-14A configuration to the F-14A+ with the F110-CE-400 engine is well underway. Installed engine data has been obtained from NAVAIR and dynamic characteristics from General Electric. Grumman Aircraft has furnished data on the installation and preliminary flight test results. The new configuration DFS is targeted to be on-line in the spring of 1986 prior to the official Navy flight test.

RLGN DEVELOPMENT MODEL

As part of the Ship and Submarine Navigation Block 6.2 Program at-sea test and evaluation of a Honeywell development model RLGN was completed aboard the USNS VANGUARD. The test results demonstrated the capability of a strapdown ring laser gyro navigation system to meet the new operational requirement for surface combatants. This program is currently scheduled for transition to the engineering development phase in FY86.

AUTOMATIC TRACK KEEPING SYSTEM

As a result of the highly successful evaluation of the HP1000 Navigation Computer based Automatic Track Keeping System aboard the USNS WYMAN in June 1985, NAVOCEANO requested an immediate implementation of this system on the AN/UYK-20 Navigation Computer aboard the USNS HESS. The Automatic Track Keeping System enables the ship to automatically steer a specified survey track in lieu of the previous capability of being able to only steer a specified heading. Within a 3-week period, NADC developed the required software, developed a dynamic ship's maneuver simulator and conducted the system capability designed to improve survey capabilities. In addition, new Secondary Sonar System Digitizer firmware and software designed to improve operations in high slope areas and at greater survey speeds were also delivered to the USNS HESS.

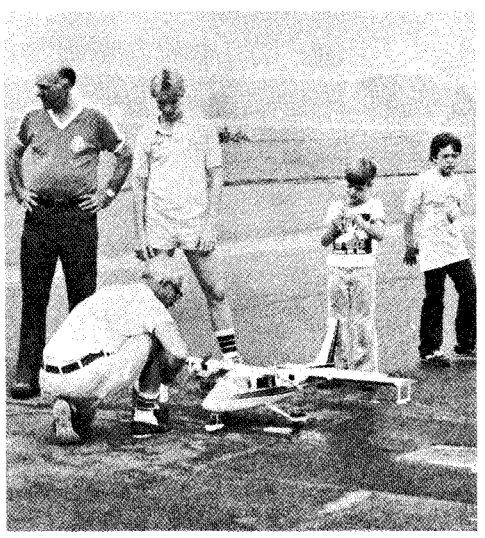
P-3C SYSTEM TEST PROGRAM

The latest improvement to the P-3C System Test Program, S4.4, produced by the NADC VP Fleet Software Support project successfully completed Navy Technical Evaluation at the NAVAIRTESTCEN. The System Test Program software is used on all versions of the P-3C aircraft to insure proper systems operation and continuity prior to flight.

ATA STUDIES

Engine - aircraft - mission - performance studies have been completed for an ATA powered by a F110-GE-400 engine.

Eastern States Championship held at NADC



Photos by Regina Gasuk

The Naval Air Development Center hosted the 38th Annual Eastern States Championship on August 25th. (Left) LT Reggie Prestwood presented the Centers award for Best U.S. Naval Aircraft. (Right) A control line contestant prepares his craft for competition as spectators watch.

J. BARTON 3021

HAMS provide relief

Health and welfare traffic

NADC's Amateur Radio Club did some Mexican earthquake rescue mission work of their own. They call it Health & Welfare traffic. Bob Greenwood a known HAM on Center received a call from Jim Macaulay who has close family friends living in Mexico City. Macaulay's had been trying to get through to their friends for four days without any success and had no idea whether they had survived the quake.

Greenwood was able to make contact with an amateur radio operator in Mexico City, which was incredible because there are a limited number of HAMS and frequencies in Mexico City. The catastrophe created heavy traffic on the already limited number of frequencies. The phone system within Mexico City was working, so the Mexican amateur radio operator called Macaulay's friends, found out everyone was alright, and relayed this information back to Greenwood within five minutes. He immediately called the Macaulay residence. Greenwood spoke to Macaulay's mother, who cried at the news of their friends' safety.

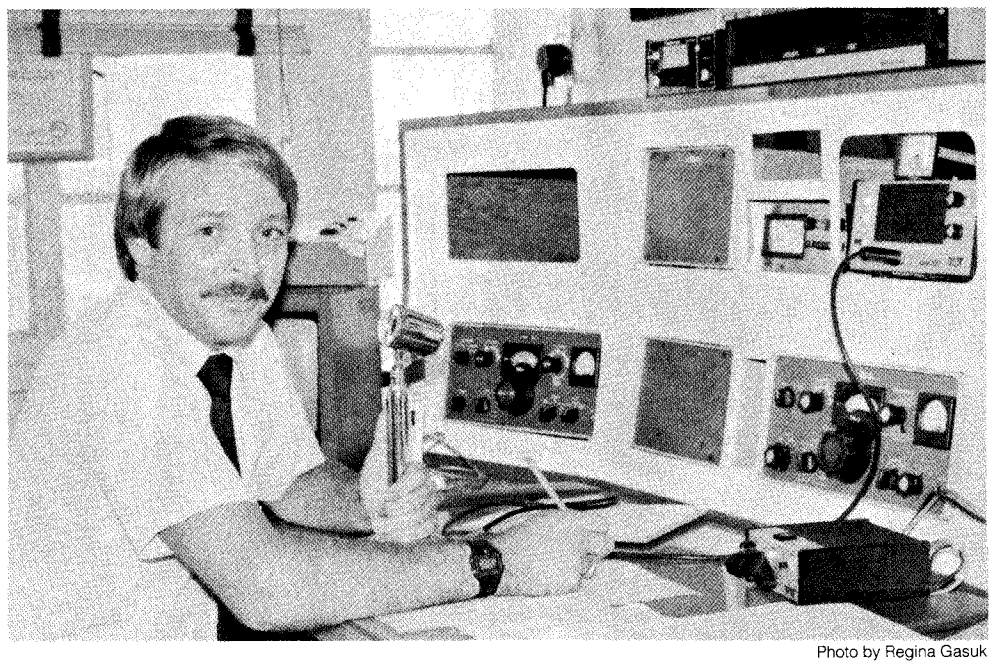


Photo by Regina Gasuk

NADC Reflector

Volume 30 Number 10 NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA. October 1985

In this issue:

Office automation supplies Centerwide support

In case you haven't noticed, within the last three months, nearly 250 office automation workstations were distributed to clerical and administrative personnel across the Center. In October, the Computer Department (CD) will distribute another 150, the remainder of the first 400 unit procurement. A second 400 unit procurement will hopefully be awarded in January 1986. That may sound like a lot of computers . . . and it is. But, consider this: in '82 and '83 there were 108 individual requests for computers Centerwide of virtually every manufacturer on the market. Something had to be done or the Center would soon have interfacing nightmares. There was a definite need to standardize.

Through 1983, there were only small pockets of office automation around the Center. "Nevertheless," said Computer Department's Deputy Robert Finkelman, "we saw an increasing need for the sharing and consistency of info across the Center, for electronic mail, for automating travel orders and reducing documentation and report producing time." Center Commander, CAPT Sturm also saw the value of office automation and the need to control it. He issued guidelines promoting standardization and prohibiting "bandit" systems.

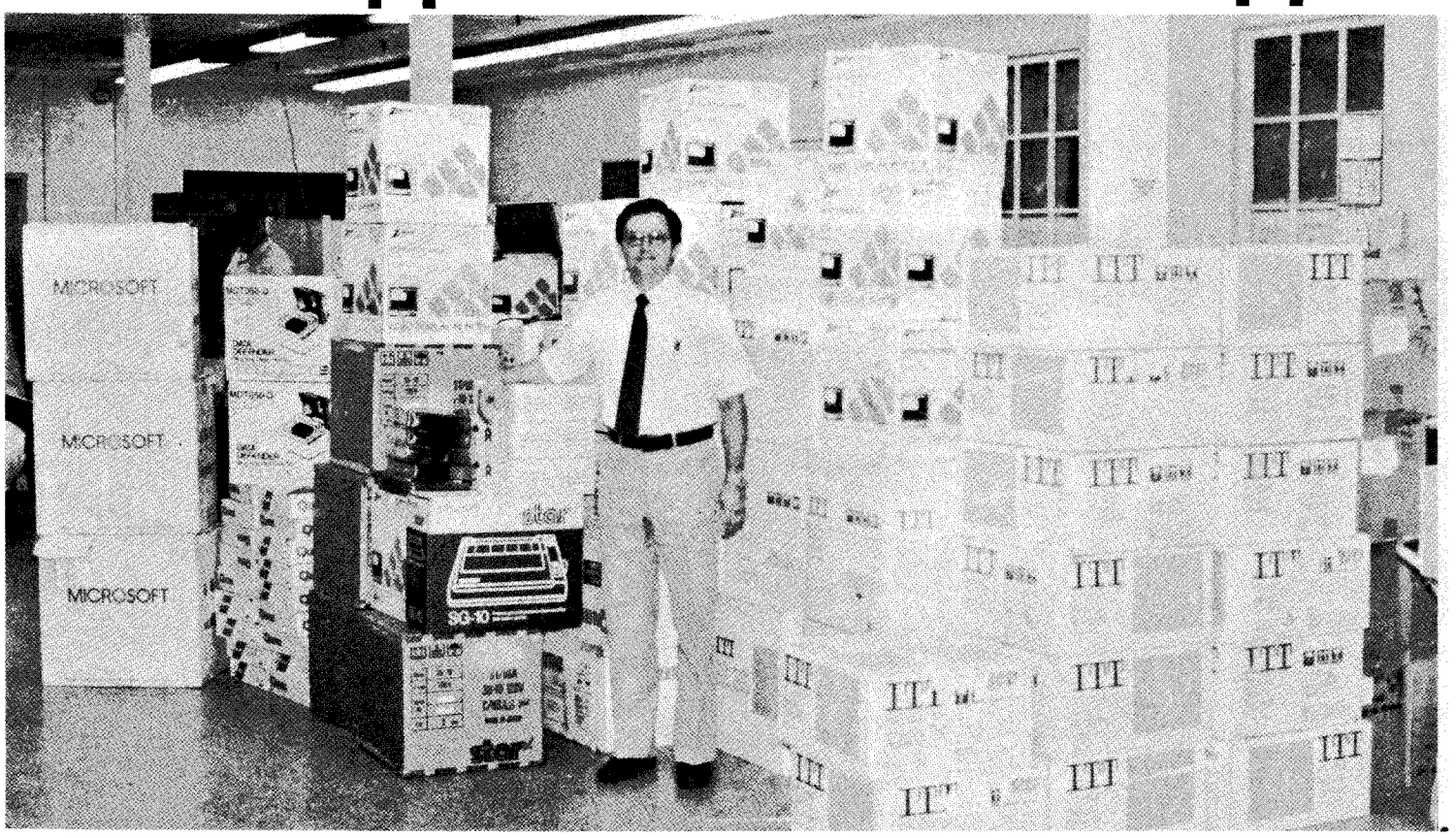
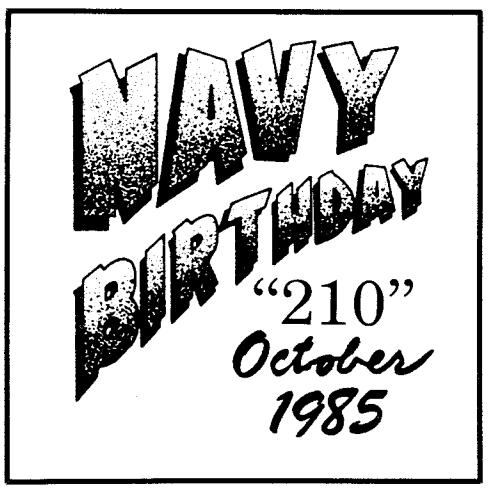


Photo by Regina Gasuk

The tip of the iceberg — surrounds Dan Tarrant, new office automation manager. These and many, many more office automation components were tested and installed around the Center.



-HARDEST PART YET TO COME-

The hardest part was yet to come — setting priorities — who needs it and for what. Finally, it was decided the most pressing need was for word processing capability. Work stations would go to secretaries first.

"We did a lot of research into IBM-compatible products" said Finkelman, "because of the enormous software capability and ease of competition. The fully competitive procurement was finally awarded to Federal Technologies Corporation, distributor of ITT equipment." There are two basic systems: the clerical/administrative system which has a monochrome display with capabilities including word processing, electronic mail and automated travel orders and the managerial system which has a color display with graphics including data base capabilities, exchange of data, central computer tie in and business graphics.

-TRAINING DOESN'T MAKE EXPERTS-

With the help of Dick Chern and the Employee Development Division, 120 clerical personnel received the two and one-half day word processing course. "We emphasized to managers this training won't make anyone an expert," said Finkelman, "Much like an engineer who goes to learn a new programming language, it still takes time to get comfortable with the system."

Training will be ongoing. There will be refreshers, electronic mail and automated travel order instructions as well as Center Information System and new system introductions.

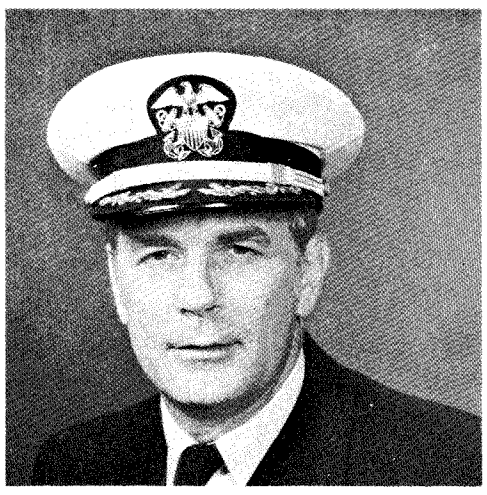
-SAVED FROM FRUSTRATION-

A large part of this total effort was making sure the systems worked before installation. Each unit was inspected and run for about four hours processing several diagnostic programs. This saved already wary people from the added frustration of non-functioning equipment.

Finkelman said, "With the help of personnel on loan to the CD, we increased the estimated distribution of 50 units per month to 60 units per week. Now we're reaching the managers who originally didn't think they needed one; science and engineering systems come next". He added, "Everyone who ***needs*** one (computer) will have one, eventually."

Continued on page 4

Command Corner



CAPT Edward J. Sturm
Center Commander

Robert S. Buffum
Technical Director

FY86 starts a renewed energy conservation program both Navy-wide and here at NADC. It is time for all personnel to renew their commitment to control excess energy usage and eliminate wasteful practices. We have had an on-going program of facility repair and improvement projects as well as equipment replacement and modernization most of which resulted in more efficient energy use. These programs will continue into the forseeable future and will have our complete support.

We have to increase our awareness of energy usage and costs. Our energy costs affect our overhead rate and energy cost savings can result in making NADC more attractive to our sponsors for future work.

The FY86 Navy-wide Energy Awareness Week extends from 21-27 October 1985 and has as its theme: "Energy-Mission Critical". It takes energy to achieve our mission; it is one of the critical pieces of the whole equation. This concept is not hard to grasp but we must continue to remember it throughout the year, not just during Energy Awareness Week. Our Energy Awareness Program will continue throughout the coming months and I task each one of you to become more aware of our energy picture at NADC and take all appropriate steps to use it wisely.

EDWARD J. STURM
Captain, USN
Commander

ROBERT S. BUFFUM
Technical Director

Editorial Comment

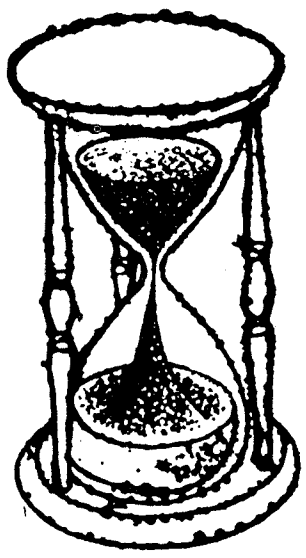
Flexi-time provides Center employees with an ability to come in between the hours of 0630 and 0830 and to return home after completion of eight hours work.

It has come to my attention (through personal experience) that flexi-time is responsible for a breakdown in our value system evidenced by a severe case of procrastination when it comes to getting up in the morning. Yesterday, I pressed my clock's snooz-alarm button a record 8 times before I finally got up. It is this author's opinion that flexi-time aided and abetted by state-of-the-art hardware (such as snooz alarms) is a curse and is contributing to the threatened extinction of some endangered positive character traits — such as punctuality, responsibility and a high energy level (the latter resulting from positioning my alarm clock across the room so that I am exhausted after getting up and going back to bed 8 times). These traits are being replaced by such character defects as tardiness, apathy, laziness and a high level of stress (from rushing around in the morning trying to get ready).

Years ago, before snooz alarms and flexi-time — when the alarm went off, you got up, for two reasons: first, you were afraid if you fell back to sleep you wouldn't wake up until noon and second, you'd be late for work. It's almost impossible to be late for work, nowadays.

Maybe if we were rated on our arrival time, it would produce the needed incentive. We could set goals and objectives of getting to work promptly at, let's say, 0700. We're outstanding if we make it by 0630; Highly Satisfactory between 0700-0730; Satisfactory if we come in at 0800; and Marginally Satisfactory if we arrive at 0830.

On second thought, this probably is not the solution. However, I see the need for some remedy to the problem, because if I push the snooz-alarm one more time I'm going to move right in to the marginally satisfactory zone. Besides, ... I'm sleeping my life away.



Combined Federal Campaign Kicks off FY-86 Drive

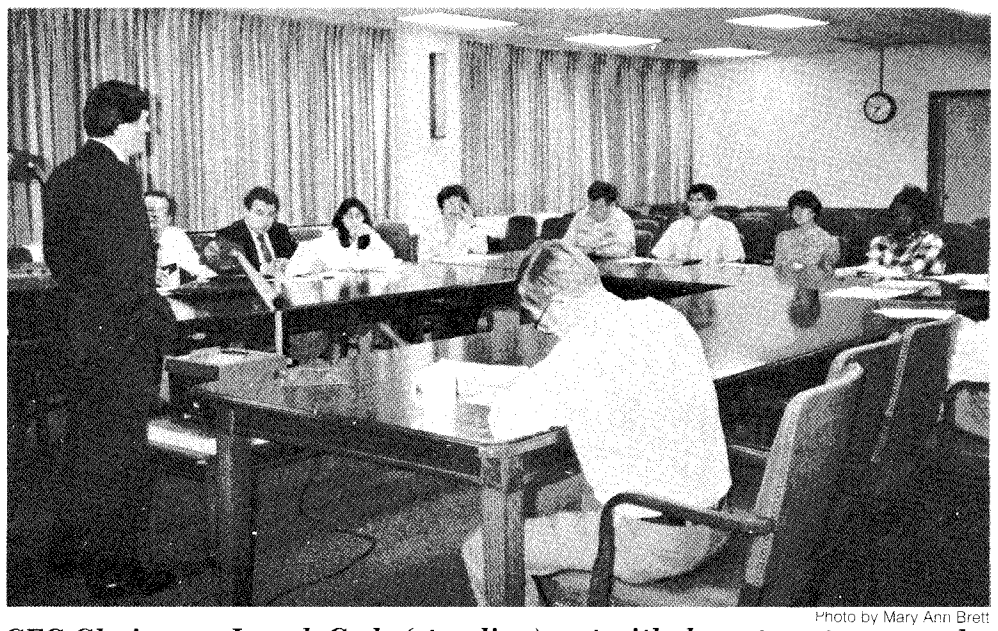


Photo by Mary Ann Brett

CFC Chairman Joseph Cody (standing) met with department reps on the administration of the campaign and the importance of 100% participation.

by JO2 Fred Dias

It's two o'clock in the morning in the town where you live. Suddenly an explosion disrupts the quiet of your neighborhood. Soon your whole block is engulfed in flames.

Your home is ruined: burned out. Now what? Immediate emergency assistance is available, partly because of your donation to the Combined Federal Campaign.

That's why the CFC holds an annual drive. The monies donated help organizations like the American Red Cross set up quickly to provide shelter and relief to victims of disasters.

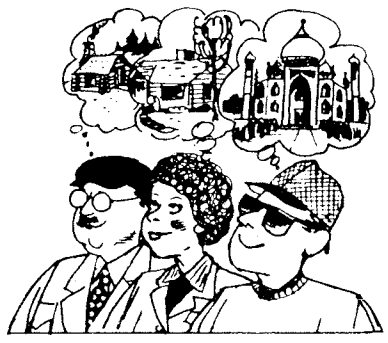
This year's NADC Combined Federal Campaign is scheduled to begin October 21st and continue until November 30th. The Center hopes to obtain a $95,000 goal.

Joseph Cody, this year's chairman, said, "The published list of charitable organizations this year is expanded to include all write-in agencies specified by NADC employees in last year's campaign." Contributors are permitted to write in the name of any human, health and welfare charitable agency recognized as tax exempt by the IRS, whether or not it appears on the list. "Again this year, new eligible write-in agencies will be accepted," Cody said, "simply write in the agency's name and address and campaign headquarters will follow through by checking their qualifications."

The campaign chairman explained that, "The campaign this year will encourage contributors to designate their gift to a specific recipient of their choice instead of making a general contribution."

The overall NADC participation last year was 80.1 percent. The Center hopes this year to increase that percentage substantially and meet its new goal.

Welfare and recreation



Christmas is coming . . . . Get in the Holiday Spirit . . . . Visit Winterthur and Longwood Gardens . . . . They'll be all decked out in holiday greenery. Leave NADC 10:15 a.m.; Arrive back 8:30 p.m. On Saturday, 14 December; Cost $34.00 (includes transportation, admissions, late lunch at Longwood Inn.)

Do you have ideas on trips we can take — call Margaret, x3067.

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NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA

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Commander, NADC ..... **CAPT Edward J. Sturm**
Technical Director ..... **Robert S. Buffum**
Public Affairs Officer ..... **James S. Kingston**
Editor ..... **Regina Ann Gasuk**
Assistant Editor ..... **Mary Ann Brett**

Barton honored Young Marine of the Year

by JO2 Fred Dias

"We the Board of Supervisors of Warminster Township, do hereby proclaim the week of September 15, 1985, as Scott Barton Week in Warminster Township," read Jane S. Lynch, chairperson, Warminster Board of Supervisors, on Saturday, September 14th, at the Naval Air Development Center.

The proclamation was a complete surprise to Scott P. Barton, 13, son of Senior Chief Aviation Machinist's Mate Richard and Donna Barton. Scott was selected as the nation's top Young Marine of the Year for 1985, and the first selected from Pennsylvania. Scott is the senior enlisted for the Bucks County Young Marines at the Center.

Along with Lynch, LeRoy Fetterman, manager of Warminster Township and Michael C. Harlem, supervisor of the Township, attended the ceremony. A congratulatory letter from U.S. Congressman Peter H. Kostmayer said, "It is a personal honor and privilege to represent the first National Young Marine of the Year from the Commonwealth of Pennsylvania."

The Young Marines is a non-profit youth organization similar to the Sea Cadets and Boy Scouts. It by no means intends to recruit anyone into the Armed Forces. Sponsored by the Marine Corps League, the Young Marines' purpose is to promote character and discipline in youngsters, as well as develop responsibility of good citizenship and morals.

The Young Marines is an organization for boys and girls 8 to 17 years old. Its national headquarters is in Ada, Michigan.

Senior Chief Barton is a Major in the Center's detachment and also their paymaster. Both he and his son joined the Young Marines three years ago. Scott advanced to the highest enlisted rank quickly.

The program takes its organization a step further than other youth groups, involving the youngster's school and parents.

"Young Marines advance in rank through promotions," Senior Chief Barton said. "These promotions are earned by demonstrating efficiency in the essential subjects." The Young Marine is then evaluated. This evaluation is prepared in a form of two report cards. One is taken home for the parents' signature and the other is sent to school. The school in turn, reports back on the progress of the Young Marine academically.

For young Barton, school is "where it's at!" "He's an honor student in school," explained Senior Chief Barton. "He gets straight A's, particularly in Math and Science." Scott has already planned out his future. A ninth grader at Boyertown Area Junior High School East, Gilbertsville, he plans on attending the Naval Academy upon graduation from high school. He is already implementing some of his plans towards his goal.

Photo by JO2 Fred Dias

NADC's Young Marine of the Year Scott Barton presented a bouquet of flowers to his mother, Donna in appreciation of her support, during ceremonies on September 14th.

"He wants to be a pilot," his proud father explained. "Right now he's taking lessons for his private pilot's license."

With the Young Marines, Scott has participated in parades, attended the dedication ceremonies of the Vietnam Memorial in Doylestown and helped clean up Kemper Park.

Youth organizations like the Young Marines give youths a chance to develop leadership skills. Young Scott Barton has definitely learned those skills well.

AIREVAC 889 to the rescue

by JO2 Fred Dias

On September 4, NADC aircraft 148889, a P-3, was asked to suspend their training flight and perform a medical emergency evacuation from NAS Brunswick, Maine. Realizing the urgent nature of the situation the NADC crew readily accepted the responsibility and landed to assist. Within minutes of touchdown a medical team arrived with a sailor who was experiencing severe decompression sickness, commonly referred to as the "bends".

NAS Brunswick operations personnel coordinated the elaborate procedures with Air Traffic Control to transform this routine pilot-training evolution into "AIREVAC-889", a callsign giving the aircraft the priority in takeoffs, landings and enroute clearances.

The NADC aircraft was soon airborne with its patient and medical team enroute to Groton, Connecticut, where the closest appropriate medical facilities were available. Within 20 minutes of landing there the sailor was receiving the medical care that was required.

The quick response, coordination and professional expertise of this aircrew directly contributed to preventing this sailor from experiencing severe injury or possibly death. The crew of AIREVAC-889 was LT Joe Romano, LT Rick Ryan, ADC Ed Krasnansky, AT1 Pete Collins, and AW1 Tim Singley.

Photo by JO2 Fred Dias

The crew of NADC P-3 148889 are (from l. to r.): ADC Krasnansky, AW1 Tim Singley, AT1 Pete Collins, LT Joe Romano and LT Rick Ryan.

Shuey reenlists

by JO2 Fred Dias

Aviation Storekeeper Second Class Carol Shuey reenlisted into the Navy. She is married to Aviation Storekeeper First Class Wayne Shuey.

The ceremony was held in the Supply Office on September 27th, with LT Richard Defilippo, Supply Officer, as the reenlistment officer.

The original reenlistment sight was to be on the USS Olympia at Penn's Landing, however, plans were changed because of Hurricane Gloria.

Shuey signed up for four more years and joint orders with her husband to Naval Station, Keflavik, Iceland. "I really like the Navy," said Shuey, who plans on making the Navy a career with her husband. The Shuey's met in Masawa, Japan and have served the Navy together ever since.

"I've seen the Pacific Ocean from the Asian side," Shuey explained about one of her most enjoyable Navy experiences. "Right now, my goal is to beat Wayne in making Chief," she said.

One word describes the Shuey's future after the Navy: farming. "Wayne brought me back from Japan to his parent's home," Shuey said. She compared Port Matilda with "Walton's Mountain", where her husband's family has lived and farmed on a mountain covering over 3,000 acres for generations.

Not a farm girl, Shuey is originally from Olympia, Washington. "The most I have done was ride a horse," she said. But now, "I'm just learning a whole new way of life," she explained. "It's just fantastic."

The Shuey's will depart for Keflavik, Iceland in February.

Photo by JO2 Fred Dias

LT Richard Defilippo (left) presided over AK2 Carol Shuey's reenlistment for four more years. She is joining her husband Wayne (AK1) (right) for their new assignment to Keflavik, Iceland.

Office automation supplies Centerwide support

Continued from page 1

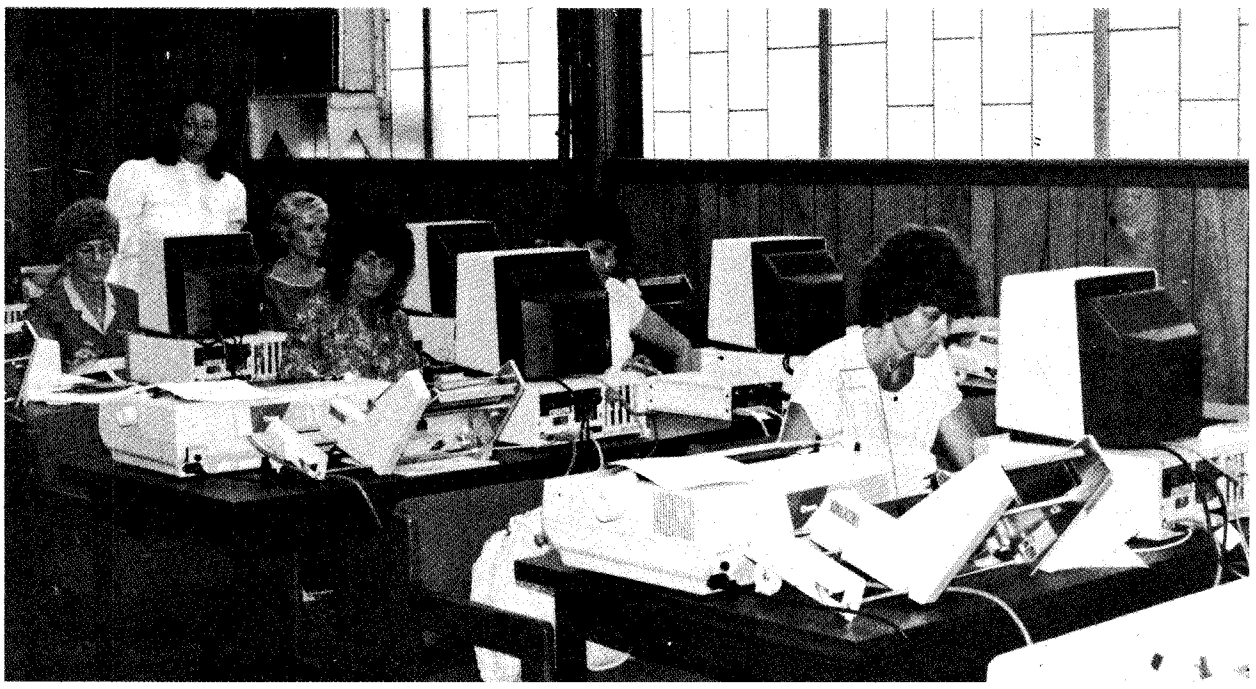
-WHAT'S THE POINT-

But what's the point? Is it to be the first on the block with a new toy or is it to double our production? "Payback is extremely hard to measure in terms of productivity," stated Finkleman. "Many studies have been made; all with conflicting results". There are requirements to transfer info across the Center, requirements to standardize paperwork, requirements to reduce the time taken for labor critical jobs, and reporting requirements galore. He said, "Paperwork is such an enormous burden that the payback may be to get it done at all!"

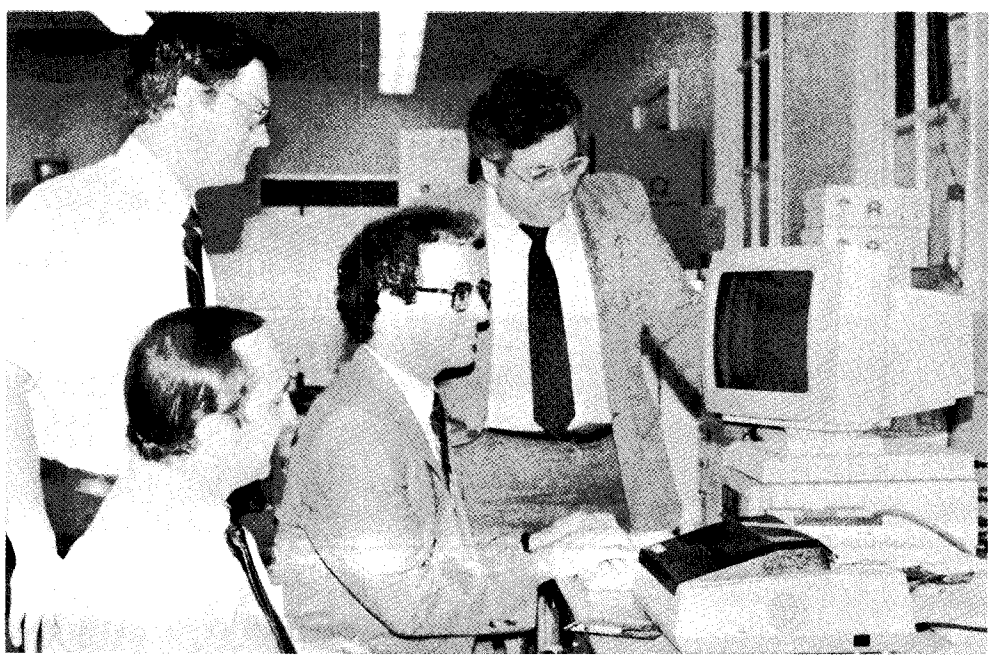
Incidentally, NADC *was* the first on the block, i.e. two years ahead of the other Navy labs with an operational, local area communications network. NADC was able to accomplish this because in the late 70's a 40-channel security cable system was installed. Several of those lines were available to use for data communications.

Finkelman is in the process of turning over management of this operation to Dan Tarrant. Tarrant was quick to thank the Supply Department for their assistance in this huge undertaking and to point out a cost savings of $400,000 on this one procurement alone not to mention the more subtle savings involved in processing one purchase request vs. 400 separate ones.

"In the planning" said Tarrant, "is a Computer Store. It will stock all the specialized items - ribbons, print wheels, paper, disks, etc. We're also working on a procurement for a large removable disk which would allow increased storage capacity at the workstation from 360,000 bytes to 10 million."

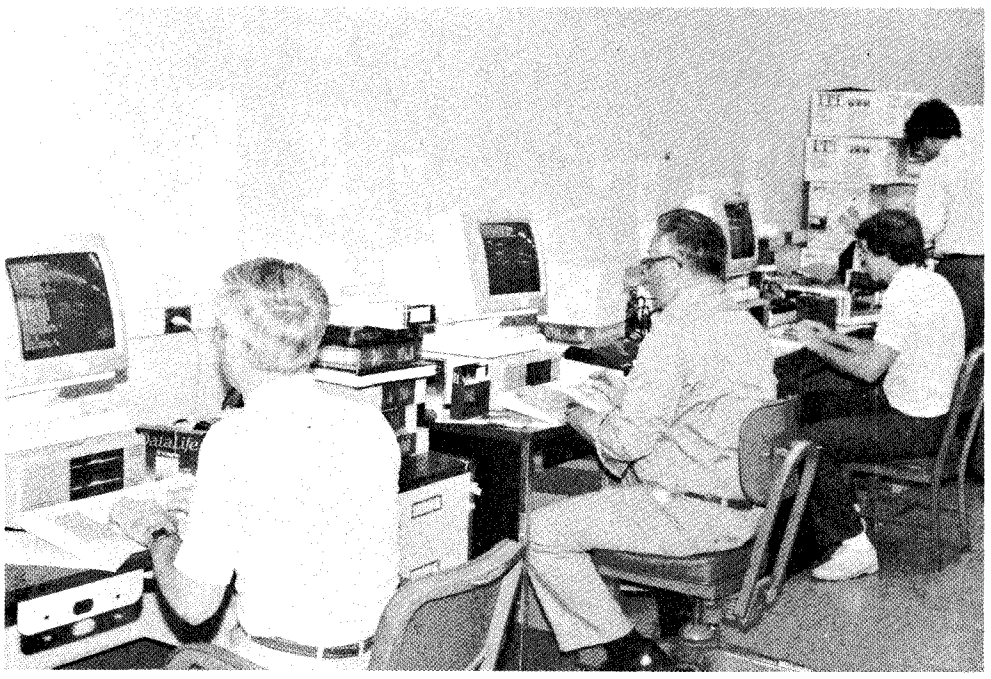


Clerical personnel are training hard and gaining a rapport with their new office automation centers.



Standing: l. to r. Dan Tarrant and Robert Finkelman of the Computer Department take a minute to observe Charlie Klatzkin (at the keyboard) and Armand Cirone (seated left) as they check each workstation's performance by running diagnostic programs through the new equipment.

Photos by Regina Gasuk



Personnel on loan from other directorates made the job of testing hundreds of workstations far less time consuming.

Finkelman explained, "If requirements warrant it, we'll upgrade, but we have a lot of computing power at each desk complemented by the Central Computer System." He concluded, "One of the most important things to keep in mind with these business applications is not to become a technology junkie." (MAB)

(The Computer Department extends a special thanks to Frank Drummond, Jim Cuorato and Carl Ruzicka of the Procurement Division for providing outstanding support on this procurement, to Armand Cirone of Computer Sciences Corporation for an outstanding job in coordinating the distribution of the workstations and to Charlie Klatzkin and Stan Yavoroski of the Digital Systems Group for providing outstanding technical support throughout this effort.)

CHIEF OF NAVAL OPERATIONS

NAVY BIRTHDAY 1985

This year, as we celebrate our Navy's 210th birthday, we commemorate more than two centuries of dedicated and spirited performance in defense of this great nation. And, as this is my last Navy Birthday as Chief of Naval Operations, it is a good time to reflect both upon our course made good and plot a course for the future.

When this nation was founded it was a bold experiment. Many learned scholars and leaders of the day did not believe we could survive. And, despite internal growing pains and external tests of war, we not only survived, but flourished. Our Navy's sterling heritage of performance, dating back to those early days, is in no small part responsible for our nation's successful defense of both peace and freedom. While we have grown and changed, progressing from a handful of ships of sail to a Navy of nuclear power and microchips, our "anchor to windward" always has been our superb people and their families.

Who can forget the stirring call to battle of Jones and Farragut, the heroic performance of Halsey and Perry, the dedicated leadership of King and Nimitz? In a single message I cannot list all the names of all the patriots who have so faithfully and bravely served in the United States Navy. If I could, that roster would include names of today's heros -- you who serve aboard ships and at shore stations scattered around the globe during this time of violent peace.

Your superb performance is legend. When I am called upon to tell our Navy's story, it is your story I proudly tell; your achievements transform nonbelievers into Navy supporters. From our distant past to present operations, from distant seas and shores to home waters, it is this Navy, at this time, that best exemplifies our nation's goal of peace through strength. And, as we chart our Navy's course for the future, the wisest counsel is "steady as she goes." Happy Birthday and God Bless you on the voyage ahead.

JAMES D. WATKINS
Admiral, U.S. Navy

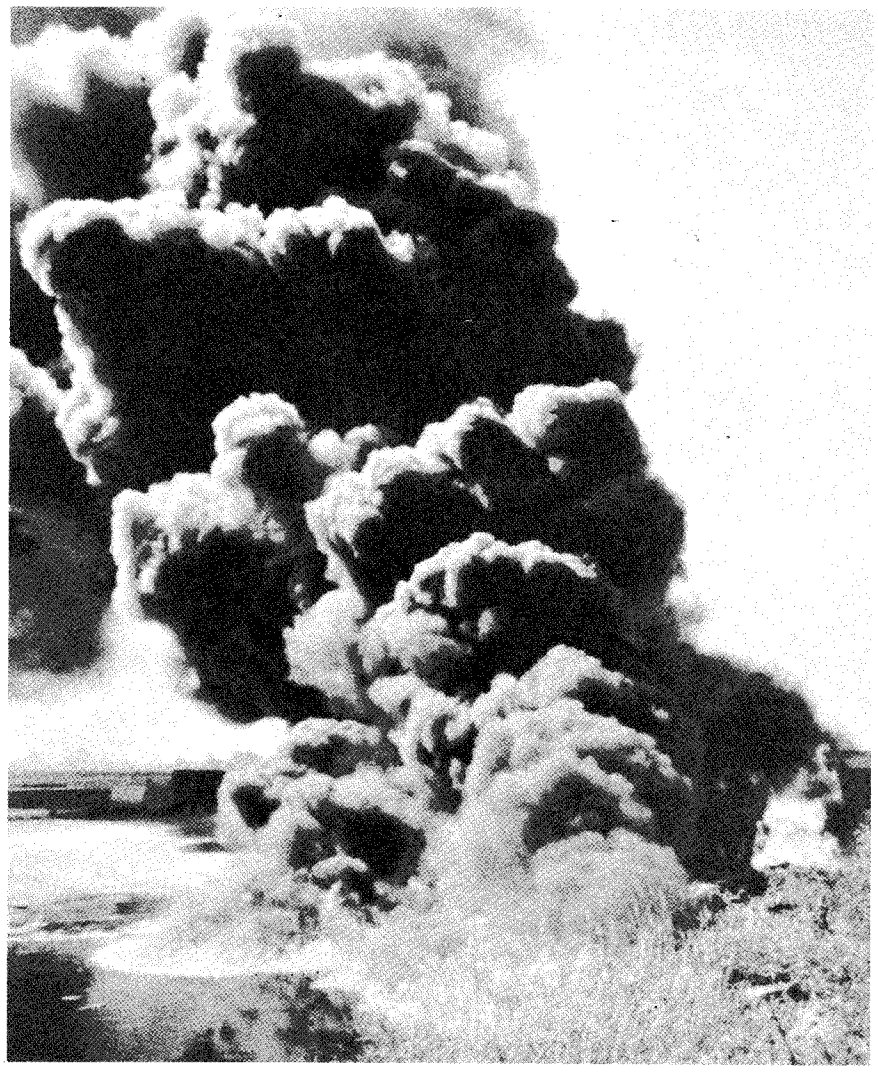
Realistic drill tests fire and medical readiness

Photos by Jim Kingston

Huge billowing clouds of black smoke poured into the skies over NADC on the morning of September 11th. Fire apparatus, para-medical and dispensary personnel roared to the scene, sirens wailing, lights flashing. What appeared to be major casualties were lying on the ground and inside an airplane fuselage.

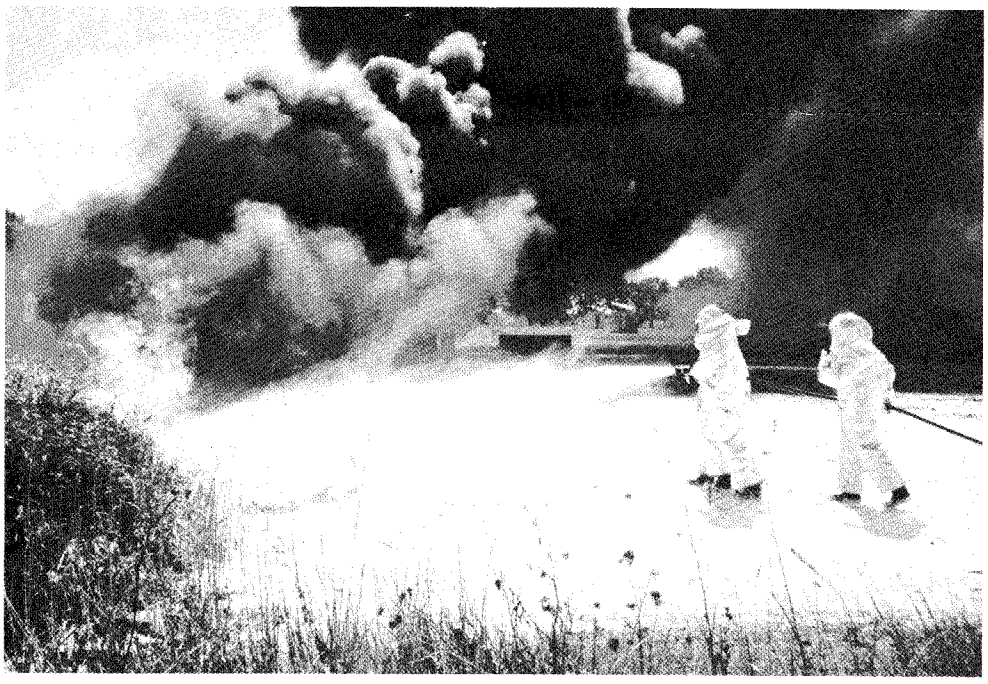
It was the nearest thing to an airplane disaster as one could imagine — but it was not for real. . . it was a mass casualty drill conducted by the Bio-Medical Support Team of the Sensors and Avionics Technology Directorate involving the base fire department and dispensary. The Bio-Medical team is responsible for setting up the casualties and monitoring the drill. This year the exercise involved a working fire allowing Fire Department personnel to actively participate. Jet engine fuel was ignited in the burn pit and crash crew personnel responded and extinguished the flames. Both paramedics and dispensary personnel reacted to "casualties." Five staged casualties (HM2s Ken Swanson, Charlie Spears, Jim Cisco, and HM3s Mark Butler and Michael Worth) were strewn around a simulated airplane accident. Mock injuries sustained included multiple fractures of the hands, arms, and legs, sucking chest wounds, and protruding intestines resulting from a foreign object being imbedded in the abdomen.

Dr. Aileen Tressler from the Naval Air Station, Willow Grove assigned to NADC's dispensary and Dr. Leyland Mills, NADC's flight surgeon observed. Dr. Steven Myrick participated in the drill. HM2s Mike Ryan, Ron Thompson, and Lisa Johnson critiqued the disaster drill. It was very successful with excellent cooperation among Bio-Medical support, fire department and dispensary personnel. All casualties were assessed, treated, and transported in a professional and timely manner.



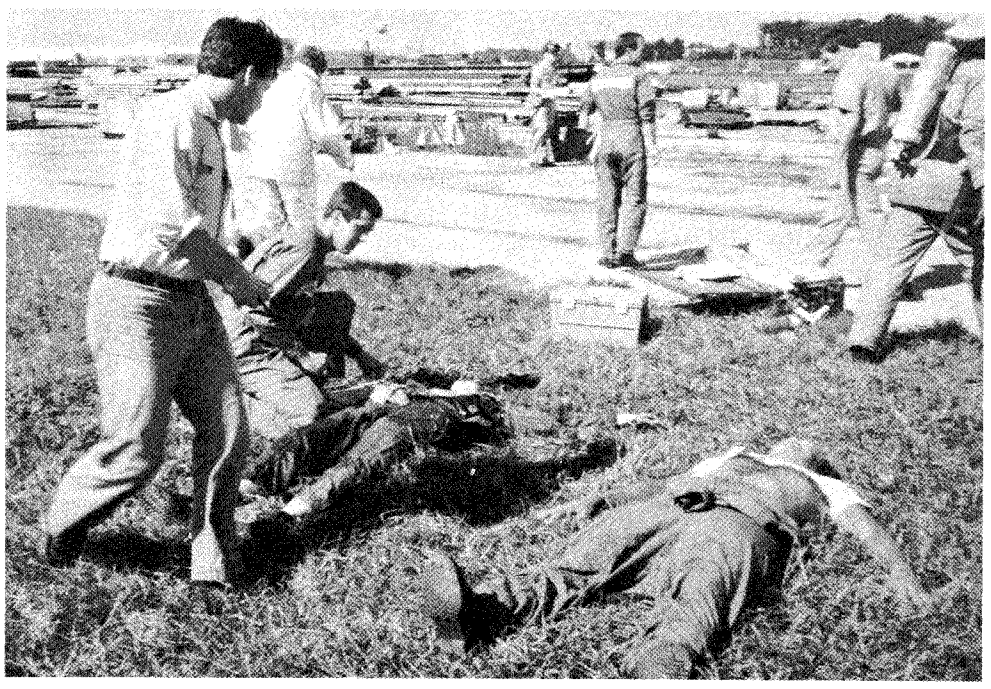
Jet engine fuel ignited in burn pit to stage fire for Mass Casualty Drill.

HM3 Mark Butler (casualty) is positioned remotely from crash site to test rescue teams' thoroughness in checking surrounding area.



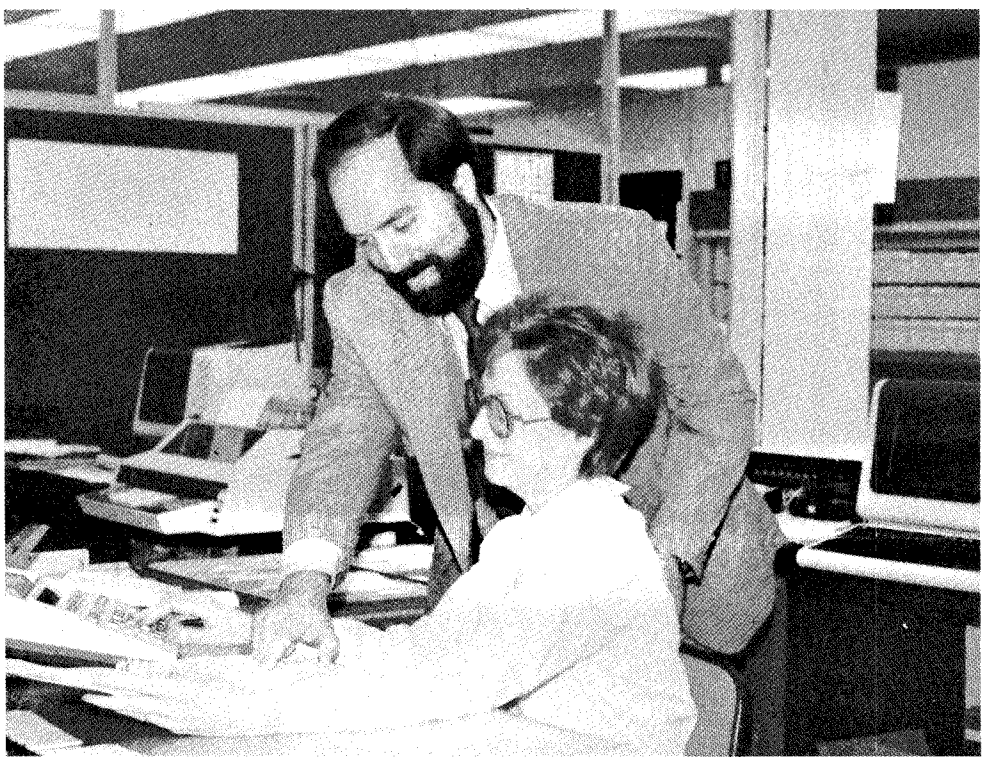
Fire Department personnel respond to call and extinguish fire.

HM2 Ken Swanson is staged as trapped victim in aircraft compartment.

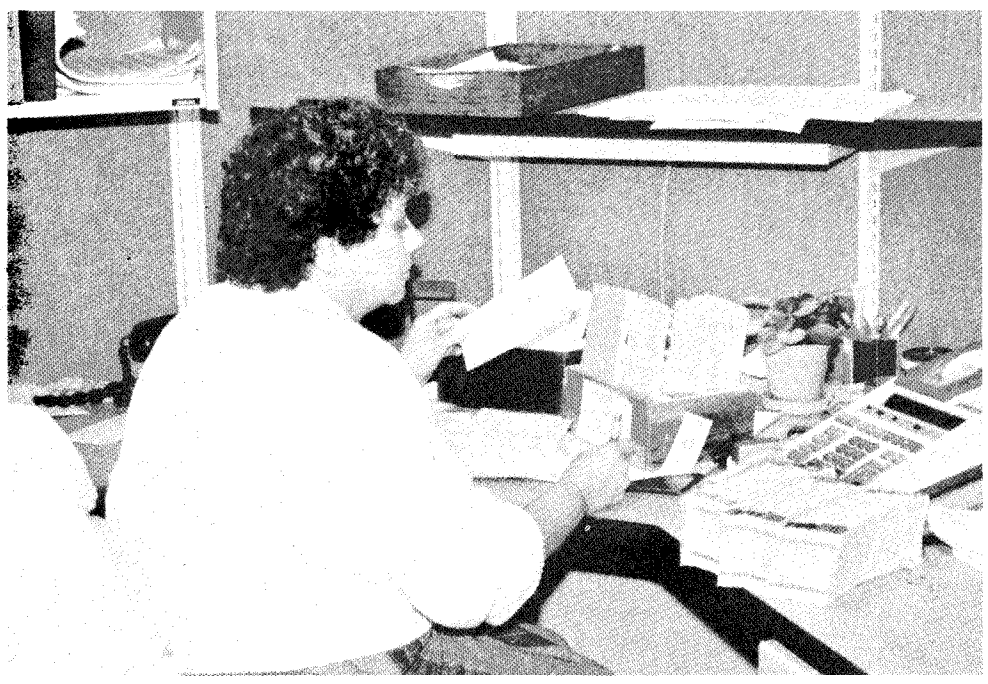


Dr. Steven Myrick (kneeling) and HM3 Stuart Beyer (standing) attend to HM2 Jim Cisco (left casualty) and HM2 Ken Swanson (right casualty).

Jim White, Deputy Comptroller (left), Blaine Price, Accounting Officer (center), and Tom Shopple, Comptroller (right) review comparison analysis of unbilled and unobligated balances for all Navy labs.



Mike Harding, Supervisory Cost Accountant assists Betsy Walsh, accounting technician with invoice certification payments to government contractors.



Ann Kelan, payroll clerk reconciles timecard submissions with overtime authorization records.

Photos by Regina Gasuk

New year comes early

Comptroller Department

New Year's Day may be the first day of 1986 for most of us, but for the 97 people in the Comptroller Department, 1986 starts on October lst. Of course, we're talking about the beginning of the Fiscal Year.

With an annual business base in FY85 of more than $400 million, including a payroll of $101 million, financial management of the Naval Air Development Center is a complex operation requiring the expertise of a highly competent staff and a tightly organized system of operation.

Tom Shopple, Director of the Comptroller Department and Jim White, Deputy Director are responsible for managing the operation and providing the Center Commander with the financial information he needs to effectively control Center operations. The directorate is divided into four divisions, a Center Information System (CIS) Project Office and the Internal Review staff.

The Accounting Division, headed by Blaine Price maintains all records of accounting including obligations against the Navy Industrial Fund and costs incurred against sponsor work orders. Financial statements are prepared here as well as accounting for plant property and payroll functions. In excess of $55 million in invoices are processed yearly earning prompt payment discounts of more than $200,000. How would you like to balance the Center's checkbook?

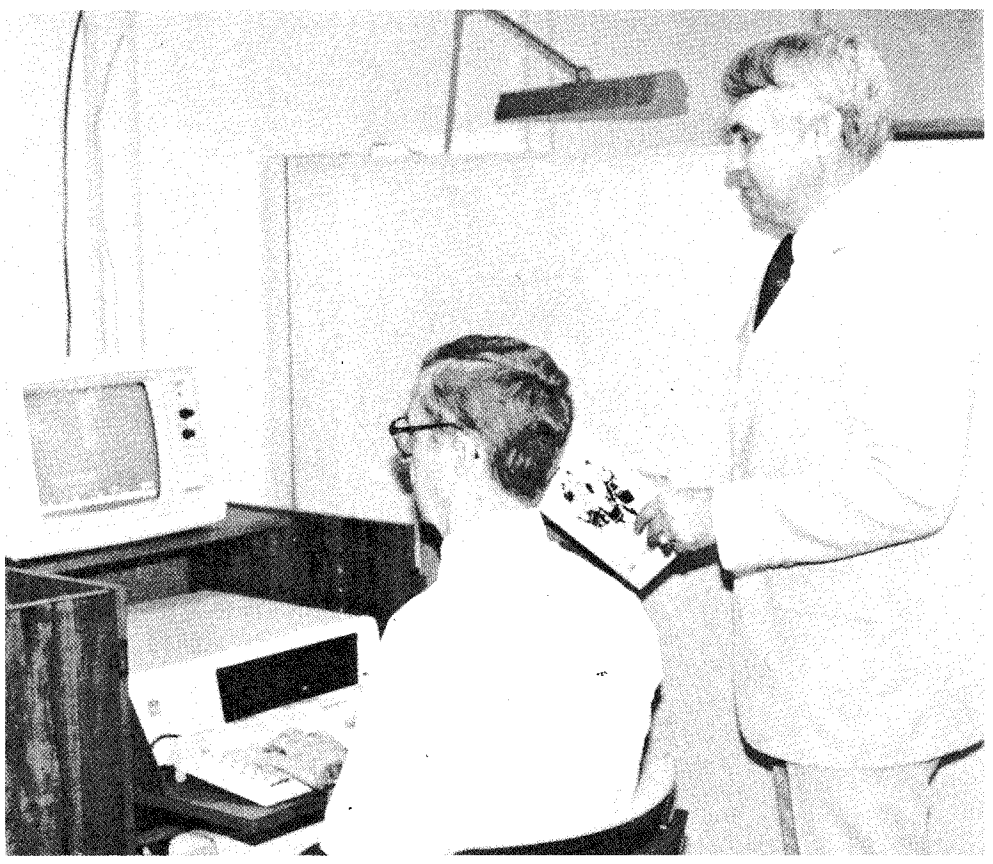
Budgets Prepared and Analyzed

Weekly household budgets are tough enough for most of us to manage, but in the Budget and Financial Analysis Division and Budgetary Services Division it is done successfully year after year. The first headed by Mike Wolfe, prepares the Center's operating budget and analyzes our actual performance compared to the budgeted amounts. Budgetary Services, headed by Frank Dolan, does just that — provides support out in the directorates with planning, developing and controlling all the aspects of the individual budgets within each directorate down to the working level.

Joe Caristo heads the Information Systems Division responsible for the operation of financial and management information systems. These systems, the most complex and comprehensive in the Navy laboratory community, provide all the data needed to control money, manpower, facilities and resources used to satisfy the Center's internal and external requirements.

The Center Information System (CIS) Project Manager is Joe Spodaryk. He provides a single point of contact for all CIS activities both internal and external dealing with its content, technical performance, schedule and funding. He also chairs the Configuration Control Board which decides on all changes that are needed to the system as new requirements arise.

Internal Review provides the 'checks and balances' necessary to manage Center operations. Headed by Ron Kabin, the group examines all aspects of the Center's activities and determines optimum utilization of resources and financial integrity. They



Joseph Spodaryk, CIS Program Manager (standing) and Joseph Dillon, CIS data base administrator review data to evaluate Executive Reporting Module report.

Prepares for FY-86

conduct special studies on behalf of the command and act as liaison during all external audits performed here.

FY85 Results

This fiscal year, the Center received $395 million of new orders, an increase of more than 50% since FY81 and double the FY79 business base. Shopple said, "The additional funding coupled with the large increase in Center personnel over the past two years have created the need for improvements in efficiency throughout the Comptroller Department since almost all personnel gains were scientists and engineers within the technical directorates."

The impact of these personnel gains are reflected in the overall Center "Productivity Ratio" a factor used by the Director of Navy Laboratories, to determine the percentage of Center personnel directly applied to the technical workload. "In FY85, our 63.8% is second highest among the seven laboratories," said Shopple, "2.4% above FY84 and over 10% above our 53.7% in FY77. This is a strong indication of the significant changes made over the past five years to improve both technical and business operations."

"The increased funding has also resulted in a greater volume of contracts being awarded by the Supply Department for hardware, software and services which have made the prompt payment of the Center's bills an ever increasing challenge within the Accounting Division," said Shopple.

Planning for the future

Budget personnel have worked closely with the Public Works Department to develop the budgets needed to support the many improvements to the Center whether recently completed, in progress, or planned for the future. A similar initiative with the Computer Department has been started with the goal of a unified office automation system for the Center.

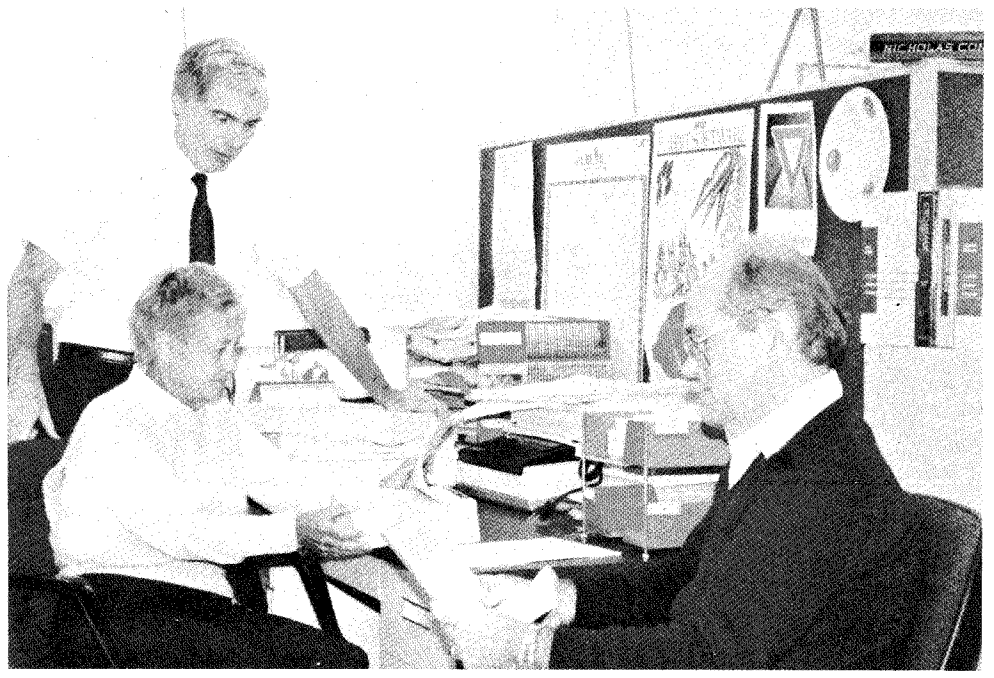
The Asset Capitalization Program (ACP), formerly called Capital Improvement Program (CIP) allows the Center to invest nearly $20 million yearly for hardware and facilities aimed at maintaining state-of-the-art capability. Responsibility for control of these assets rests within the Comptroller Department.

"The Comptroller Department has aggressively taken on its expanded diversified workload and has provided the Center with the financial tools, reports and controls needed to operate effectively in our increasingly complex technical and business environment," concluded Shopple.

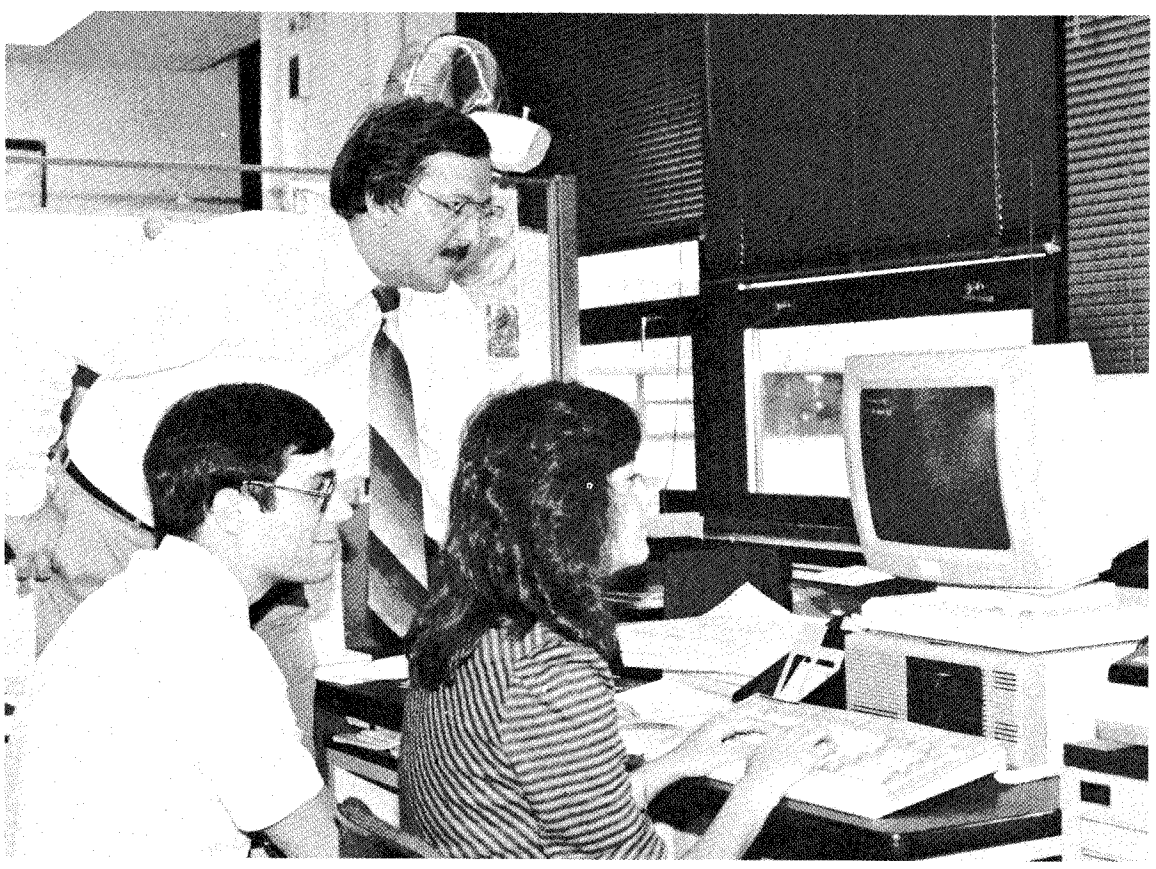
With FY85 already a memory of financial and program challenges successfully met, FY86 affords the Comptroller Department a whole new set. Shopple and his staff feel confident in their ability to meet FY86's financial goals. From everyone in the Comptroller Department, Happy New Year!

$ $ $ $ $ $ $ $ $ $ $ $ $

Frank Dolan, Budgetary Services manager, (standing) and Arlan Koch, Team 1 leader, study year end funding position with Sylvia Fuimara, senior budget analyst for DCP (left) and Marlene Warden, budget analyst for VP program office.



Ed Lucas, computer systems analyst, (standing), Ruth Zimmerman and Joe Cooke, computer technicians check end of the month billing runs for accuracy.



Mike Wolfe, Budget & Financial Analysis manager (standing), and Mike Vardaro, budget analyst (sitting) review data being recorded by Connie Walsh, budget clerk for new monies received for FY86 operations.

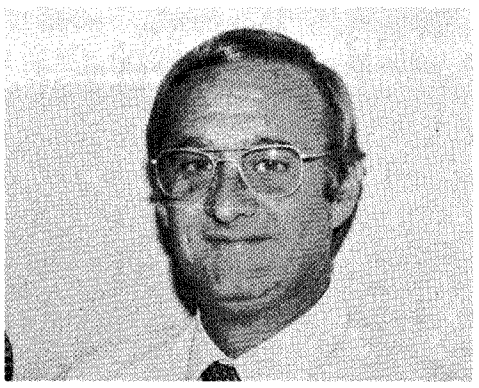
Harry Deal (left) and Ed Scholl (right), auditors on the Internal Review staff perform an on-site inspection of imprest purchases with Harry Davis (center), Maintenance & Utilities Division Head.

VIEWPOINT

This month's question is:

Do you trick or treat for Halloween?

Photos by Regina Gasuk



"I treat, but only if they're between the ages of 21 and 45."
Walt Latosh, Code 0922

"I thought I had stopped several years ago, but some people still give me candy and try to guess what I am."
Dave Herbine, Code 6022

"My mother always told me to treat everyone the same, but never to be without a few tricks up my sleeve."
Norma Strohmeier, Code 0334

"I have a few tricks that I like to use, for those people who like to abuse, but on Halloween I prefer to give treats, for I am also a great lover of sweets."
Sheila Lavin, Code 0101

"Of course, doesn't everybody."
Jean Bollard, Code 50AS

"I used to trick or treat but now I can't afford to eat the leftovers."
Phil Joiner, Code 8132

"Both . . . depending on the GHOUL!!"
Marti Malin, Code 80SS

Og breaks back-bending basic rules

by Mike Masington

Once upon a time, a long time ago in a strange and foreign land called Camden, Og, our curiously, creative cro-Magnon, was relaxing on the first weekend of autumn (actually, it was called Blintzpo back then meaning "the time when leaves fall from the trees for no good reason other than to mess up your lawn.") Og had invented weekends so that the male of the species could sit back, drink Rolling Rock, and watch rockball without interruption. Unfortunately, Lilting Lava, his spouse was equally imaginative, and had come up with a thing called chores specifically designed to circumvent the intended purpose of weekends.

In this particular case her plans included rearranging the furniture, getting the winter skins down from the attic, etc., etc. Now even though Lilting weighed in at 27 mammoth tusks (that's 263.72 pounds), and could body slam the average brontosaurus, their tribe had a thing called a stereotype, which said that men were required to lift anything over 11 pounds (that's 1.13 tusks) to reassert their masculinity. True to tradition the comparatively frail Og was quickly recruited to do the heavy moving and lifting. Now in today's world, moving Early American is bad enough, but rearranging Early Neolithic was really a problem considering it was built primarily of granite. Unperturbed by the prospect of portaging this ponderous paraphenalia, our persistent prehensile primitive proceeded to pull the prodigious platform rocker across the parlor. This action caused two immediate reactions. First he heard a snapping sound as strange things happened to his back and then Lilting loudly registered her displeasure at his dragging the furniture across the new wall-to-wall skin. In order to avoid further threats to life and limb, the cowed caveman attempted to lift the bulky chair. With a mighty jerk, he got it off the floor, but now the snaps in his back were a regular rice krispie symphony coupled with a searing pain.

In spite of a nagging backache, our proud protagonist completed the job and went on to the next task. Taking the winter skins down from the attic seemed easy enough, and Og quickly found the appropriate box on a shelf above his head. Unfortunately, the box also contained his son Nimrod's bug collection, and since the average insect in those days weighed 8 pounds, the carton was considerably heavier than he expected. The resulting damage this time was obviously more extensive as Og assummed the general configuration of a pretzel. The family physician, Dr. Rock Zock, was immediately summoned and he (for the last time ever in recorded history) made a housecall. After a careful exam, the mesolithic medic said, "Well Og, you were lucky this time. Just get some bed rest on a firm mattress, apply moist heat to the sore spots, avoid any lifting or bending for a week, and suck on a wet chicken foot four times a day. (Note: Chicken soup had not been invented at this time). But more important, is preventing it from happening again. Remember, these suggestions:

1. Always determine how much something weighs before you try to lift it. Be realistic not macho about what you can handle. Lifting large, bulky objects such as stegosauri, volcanoes, and your wife should be done by more than one person.

2. When you lift, get as close as possible to the object and grasp it firmly. Keep your back straight, and make maximum use of your legs to lift the load gradually. Try to clean and jerk on the furniture again, and you'll wind up looking like a gargoyle.

3. If you're moving something without lifting, push it rather than pull it. This creates much less strain on your back, and lessens your chances of reverting back into a quadraped.

4. Finally, never store anything above shoulder height, and if you must lift something at this level be especially careful about the weight of the object. Failure to do so could result in an instantaneous 50 percent decrease in your height.

His treatment and counseling completed, the dedicated doctor performed his last and most vital task — he gave Og his bill for 43 clams. Unfortunately, the bill was a three-part slate slab with two carbons (using real carbon) and weighed about 27 pounds. The amount and weight immediately sent the patient back into spasm, but luckily the good doctor was still on hand to render aid for only a slight additional fee.

Guzzler Golf Tournament goes Hawaiian

Photos by Bob Geyer

by Charlie Destra

The Guzzler "Hawaiian" Golf Open was won by Ron Lang, whose clutch putting down the stretch proved to be the difference. Lang carded an 86, one stroke ahead of a late-charging Bill Mulley. Tournament director John Markow, who shot an 88, was in contention, but faltered on the back nine.

It was "anybody's ballgame" with six players within five strokes of one another by the 16th hole. And, on the 180 yard, 17th hole, with Mulley dead even with the champion, and Markow and myself (89) only two strokes behind, Lang came up with his best effort.

He hooked a five iron 40 yards wide of the fairway and 30 yards short of being "pin high." Wielding an eight iron, he miraculously lofted his next shot over a tree and bunker and softly plopped the ball five feet from the pin. Lang calmly dropped the putt, pulled another stroke ahead of the pack, and the tournament was his.

Center employees competed in the tournament, held at scenic Horsham Valley Golf Course on August 29th. The golfers enjoyed ideal weather, and many were clad in leis and grass skirts, playing up to the Hawaiian theme.

The field of 20, was the largest yet and the course played relatively easy with eight golfers posting scores under 100.

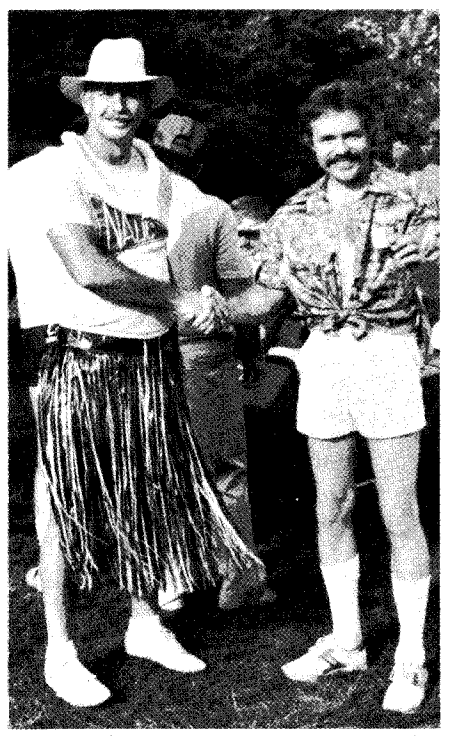
The tournament also featured a "Flying Hawaiian" contest, won by the foursome of Joe Bretton, Tom Weiss, Bob Geyer and Dave Gleisner. Each foursome was given a special "flying Hawaiian" golf ball and had to rotate that ball throughout the group. The team that posted the lowest score with the ball won the event. The event was won in a playoff over the foursome of Joe Spieker, Walt Latosh, Jim Eck and Bill Mulley. Bretton out-putted Spieker in the playoff to seal the honors.

Bretton also garnered the "Closest to the Pin" event, dropping a nine iron shot 20 feet from the cup on the 134 yard, 8th hole.

Last year's champ, Walt Latosh, never got untracked, finishing with a 100.

(from l. to r.) Joe Bretton, Tom Weiss and Dave Gleisner "Last time I saw it . . . . . ."

Last year's winner Walt Latosh shows a little more than putting prowess.



John Markow congratulates Joe Bretton on his "closest-to-the-pin" win.

Golfing Guzzlers (or is it guzzling golfers?) take time out to pose for this group photo.

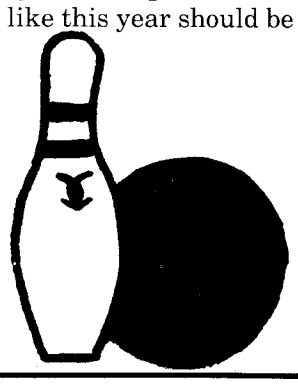
John Bowes exhibits his usual great form as he attempts to loft his ball onto the green.

Mixed league sees 200 game

By Tom Reiter

Guess who rolled the first 200 game in the Mixed League? Unconscious Tom started off the first game of the season with a 203 — it was downhill after that but his Red Winoes unkindly welcomed the Supply Department's new team, The Big Spenders, by going up 4-0. Other teams that opened with four wins were the Alley Oops, Jerry's Kids, and the 11th Frame.

It was a "Wear Your Shorts Night" — very distracting. Opening highlights included a Jack Horning 208, Jack Rush 201, Steve Fleischut 591 series and Miriam Lentz 491 series. Tudor Lanes has been taken over and renamed Thunderbird Lanes. The new manager has pledged to improve things and from here it looks like this year should be a great one.



Lift your spirits — Join the NADC Ski Club

By Jim Macaulay

Looking for some healthy Winter fun? Skiing may be just the ticket for you! Few activities can match the exhilaration of skimming down a snow covered slope on a crisp, clear day, whether you're a seasoned expert or a first-time beginner. It's great exercise, the fresh air is a tremendous spirit lifter and it's FUN!

Isn't it cold? NO! Because skiing is exercise, you tend to keep toasty warm inside your modern ski apparel.

Isn't it dangerous? No more so than your current everyday activities. Modern ski bindings are designed to release you from your skis should the forces of a spill be excessive. Injuries are rare.

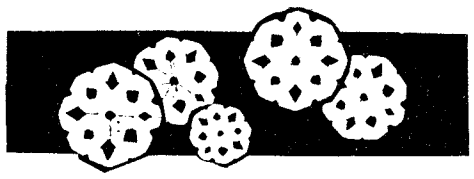
How does a beginner get started? The NADC Ski Club is a great way! We run bus trips to Pocono and New England resorts, plus a big trip out West where the best snow is. All of our trips offer downhill and cross country skiing for all abilities. Rental equipment is always available, and the trips feature good accomodations at low prices.

Membership in the club costs only $2.00 per year, enables you to sign up for trips, and provides you with the informative "Ski-Bee" newsletter, now in its tenth year of publication.

In short, the NADC Ski Club offers an easy way to get started, low prices, PLUS the comaraderie of a friendly, fun loving group of skiers.

But I'm already a good skier! All abilities are well represented in the club. You'll find lots of company on Margie's — we'd love to add you to our list of ski buddies!

Contact Gale Katz at 441-1554 (NADC Code 2031) to join.



TRIPS FOR 1986

KILLINGTON, Vermont: Jan 17-20, $145. Biggest in the East! 3-day, includes M. L. King birthday.

WHITE FACE MT./LAKE PLACID, New York: Feb. 7-9, $97. Great place for sight-seeing, too!

VAIL, Colorado: March 1-8, $790. One of the biggest and best in U.S.

SUGARBUSH, Vermont: March 14-16, $113. One of the most popular in the East.

Weekend trips include bus ride with refreshments, and lodging. Lift tickets (group discounted) are extra. The week trip includes scheduled air (Phila/Denver), transfers, lodging, and lift pass (good on any five of the six days).

DAY TRIPS: To Pennsylvania resorts on weekdays — to be announced.

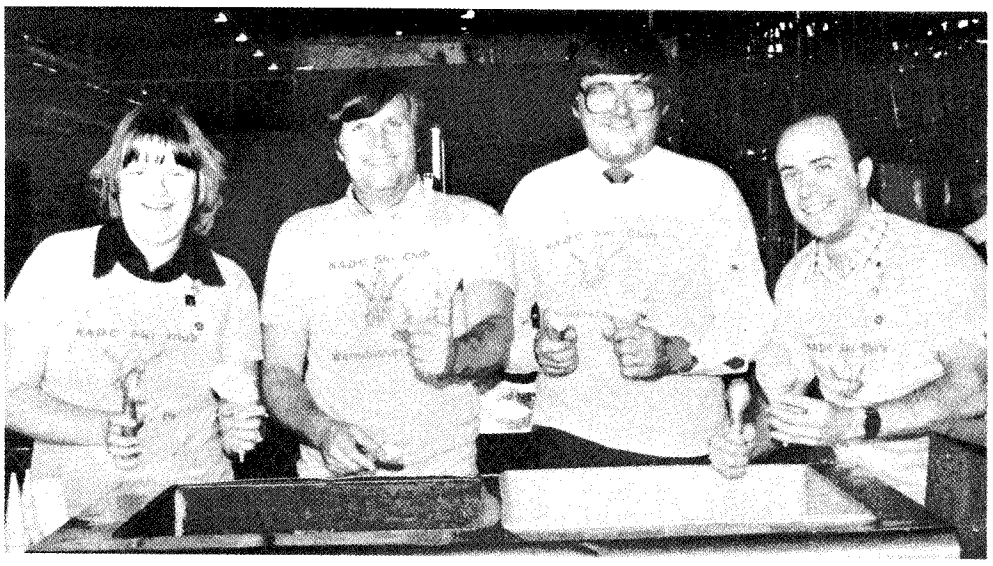


Photo by Regina Gasuk

Ski Club dips mini-moguls to raise money for Welfare and Recreation Association.

Help Your Heart

American Heart Association

Cholesterol and Your Heart

A study recently released by the National Institutes of Health reports, "It has been established beyond a reasonable doubt that lowering elevated blood cholesterol levels will reduce the risk of heart attack caused by coronary heart disease.

According to the American Heart Association (AHA), more than 50 percent of American adults have cholesterol levels above 200, a level at which the risk of heart disease begins to rise sharply.

Approximately 27 million adults have serum cholesterol levels higher than 260 milligrams per deciliter of blood.

Cholesterol is a soft, fat-like substance found among the fats in the bloodstream. These fats are called lipids, and a high level of lipids in the blood is called hyperlipidemia.

Hyperlipidemia can affect your heart in this way. Cholesterol and other lipids build up in the lining of blood vessels like rust in water pipes. Over time those vessels can close. When this narrowing of blood vessels, called atherosclerosis, occurs in the vessels that supply blood to the heart muscle the result can be severe chest pain and eventually heart attack.

The body gets cholesterol from two sources. Each day the liver produces about 1,000 milligrams of cholesterol, which is needed to produce certain hormones and to construct cells. The remaining cholesterol in the body comes from food sources. Dietary cholesterol is the cholesterol about which people should be concerned.

Through prudent eating habits people can usually reduce blood cholesterol in a safe, practical and effective manner. Reducing the intake of high-fat meats, whole-milk dairy products, egg yolks and other foods high in saturated fat and cholesterol is helpful, along with eating more poultry, fish, fresh fruits and vegetables, grains and cereal, and low-fat dairy products. If diet changes alone won't reduce a person's blood cholesterol, his or her doctor may prescribe one of the medications available to help keep it within a recommended range.

How do you find out what your cholesterol level is? Your doctor can measure the amount of cholesterol in your blood with a simple test. The AHA recommends that, ideally, everyone should have a cholesterol level test done by age 30 and repeated every five years thereafter.

Security Reminders

Declassifying Barlock Cabinets

—Remove all classified contents.
—Remove custodian label from inside of the cabinet.
—Remove security container number from the outside of cabinet.
—Affix a new label on outside of cabinet that reads "Contents are Unclassified."
—Neutralize combination padlock back to manufacturer's original combination, and deliver the padlock to department administrative office.
—Send a memo to department administrative office and to whoever else in the department that keeps security container records, notifying them of the declassification of the barlock cabinet.
—Send a copy to Security Division (Code 04414) to adjust their records.
—Remove security container from after hours checklist.
—If the declassified cabinet still needs to be locked, use a key padlock.

Badges.

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

How energy-wise are you?

Editor's Note: This Navy energy quiz can be used in support of Energy Awareness Week, Oct. 21-27, 1985. The theme for Energy Awareness Week is "Energy—Mission Critical." Contact your energy officer for local energy information.

Department of the Navy
Energy Awareness Week
Energy Quiz, 1985

1. What percentage of a shore station's budget is spent on energy?
   a. 11 percent
   b. 25 percent
   c. 33 percent
   d. 50 percent
2. What Navy activity gets all its heat from the Earth?
3. Solar energy provided _____ barrels of oil equivalent — BOE — for Navy activities in 1984.
   a. 9 BOE
   b. 4,600 BOE
   c. 11,000 BOE
   d. 17,000 BOE
4. What is the largest energy source in consumption and cost for the Navy shore establishment?
5. What organization is the largest fleet operator of electric vehicles in the United States?
6. Since 1975, ships reduced their fuel use per underway steaming hour by _____ percent.
7. What is the most fuel-efficient commissioned ship in the U.S. Navy?
8. How many barrels of oil are carried in the largest new supertankers?
   a. 200,000 barrels
   b. 1 million barrels
   c. 23 million barrels
   d. 13 million barrels
9. What percentage of the Navy's surface fleet is powered by oil?
10. On the average, what uses more fuel per operating hour, an F-4 aircraft or a CG 47-class ship?
11. Since 1975, naval aircraft reduced overall fuel use per flying hour by _____ percent.
    a. 1.5 percent
    b. 2.3 percent
    c. 3.7 percent
    d. 4.2 percent
12. The Navy and Marine Corps consumed the equivalent of 87 million barrels of oil in 1984. What percentage of this total was used by ships?
13. What percentage of the total Navy budget was spent on energy in 1973 and in 1984?
14. Which of the armed services consumes the most energy: Army, Navy or Air Force?
15. A 1 percent reduction in total Navy energy consumption is equal to $_____ per year.

ENERGY AWARENESS WEEK
21 — 27 OCTOBER 1985

Cocaine — dangerous and addictive

By Evelyn D. Harris
American Forces Information Service

Experts believe that 5,000 persons a day try cocaine for the first time and that at least one-fourth of them go on to become regular users.

How many of these users are in the military? According to Army Lt. Col. William Cline, "Drug abuse in the military echoes that of the civilian population, but the rates are not nearly as high because the career consequences are so serious. You can have an excellent record for 15 years, and then have one positive urine test for cocaine and you're out—there goes your retirement and everything."

Drug policy varies slightly from service to service. One spokesperson noted that the drug policy was basically written with marijuana in mind, and that personnel abusing a drug such as cocaine would normally be dealt with more harshly.

Generally, officers and senior enlisted personnel are separated after they are first identified as drug users (normally by urinalysis). Junior enlisted personnel, at the discretion of the first-line commander, can be given a second chance if there is potential for future service.

Those who do get a second chance may be sent to a treatment center such as the Naval Drug Rehabilitation Center, San Diego. The Marine Corps has a policy of helping its members with a drug problem get treatment, but Marines who have been separated get treatment through the Veterans Administration.

Jerry Synolde, executive director of the Naval Drug Rehabilitation Center, said that "Cocaine is the third drug of choice among our patients (following alcohol and marijuana.)" So far, his facility "has not done any research that indicates that our patients with a cocaine problem have any less potential for recovery than abusers of any other drug," he said. "We're concerned because of the strong compulsion to use cocaine—we've never seen anything like it."

Part of cocaine's mystique, says Navy Master Chief Petty Officer Palmer Black, after-care coordinator at the Naval Drug Rehabilitation Center is its "Hollywood image as a drug of the rich. Of course, that's a misnomer now that the price has come down."

In fact, a 1983 poll found that half as many blue collar workers as professionals had tried cocaine.

Although heroin has long had a deserved bad press, cocaine has had a reputation as a relatively harmless, nonaddictive drug. But, according to National Institute of Drug Abuse director Dr. William Pollin, "Recent discoveries concerning the common central nervous system target it shares with heroin. . .and its uniquely high level of reinforcement lead to the conclusion that it (cocaine) is powerfully addictive and extremely dangerous."

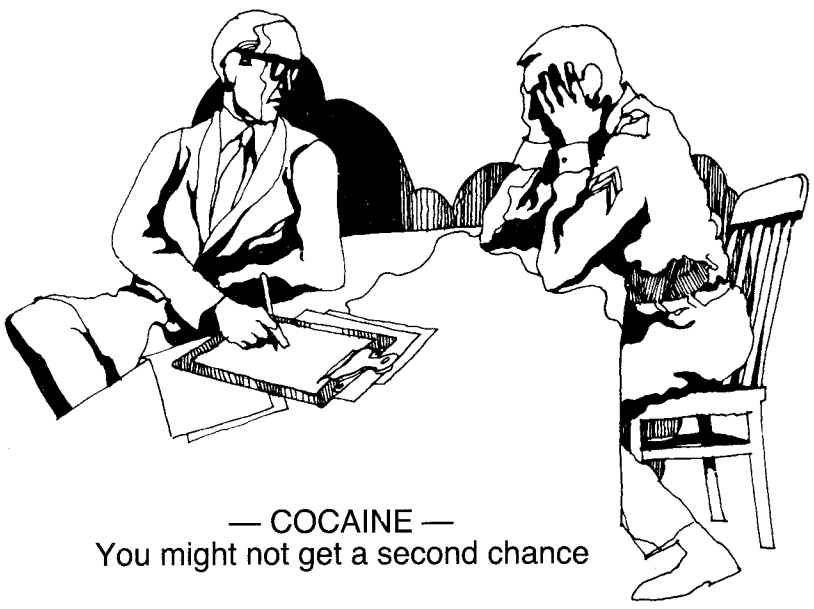
Researchers have found that monkeys will take cocaine instead of food and water until the point of death and have also discovered that rats with unlimited access to cocaine have almost three times the mortality rate as rats with limited access to heroin.

And humans aren't doing much better. According to National Institute of Drug Abuse Director Dr. William Pollin, cocaine-related deaths in the United States rose by 91 percent from 1980 through 1983.

Cocaine can be a problem, even for first time users. Illegal cocaine is always "cut" (adulterated) and some of the additives can cause harmful reactions of their own. If a person accidentally takes an overdose, acute cocaine toxicity can result—the user may experience extremely rapid heart rate, abdominal pain, convulsions and even death. When cocaine is "free-based"—mixed with flammable solvents to convert it to a purer form that is smoked—there is the danger of explosion and fire.

Cocaine reaches the brain quickly—three minutes if snorted, 30 seconds if injected, and even quicker if free-based. The brief—usually 30 minute—feeling of elation, increased strength, self-confidence and alertness is often followed by feelings of fatigue and sadness. Compulsive users take cocaine frequently to try to avoid the crash. Former professional football star Carl Eller said that for him, the "low" following a cocaine high was much lower than any he'd ever experienced before using cocaine.

Heavy cocaine users become irritable, restless and extremely suspicious. Some persons experience hallucinations—the feeling that their body is crawling with insects—"cocaine bugs." Heavy chronic use can lead to cocaine psychosis—extreme paranoia and detachment from reality.



— COCAINE —
You might not get a second chance

Do You Know?

Amount spent by Americans every year on back care:
$20 billion

Number of Americans who have had back pain:
80 million

Proportion of ex-smokers who gain weight after quitting smoking:
one-third

Proportion of ex-smokers who lose weight after quitting smoking:
one-third

Cudia returns to the Center for duty as Aircraft Department Head

CDR David (Tim) Cudia recently rejoined the ranks at NADC as Head of the Aircraft Department replacing LCDR Paul Freudenthal. Assigned here for the next three years, Cudia said, "I jumped at the opportunity to come back to NADC, especially as head of the department." He noted there were some big changes made but he was also quick to add, ". . . some things never change."

With a smile he added that NADC enjoyed an outstanding safety and maintenance reputation among the many duty stations he visited.

Cudia enlisted in June 1955 and advanced in rate to Master Chief Petty Officer. Appointed Warrant Officer in June 1968, he applied for the Limited Duty Officer Program and was promoted to Ensign in July 1970.

From 1970 to 1971 he was assigned Maintenance Control Officer (MCO) of Air Transport Squadron 24, Rota, Spain. In May 1971 until June 1973, he was reassigned to Naples, Italy. For the next three years he served as the Avionics Division Officer and the M/Material CO, Naval Air Facility, Washington, DC. There he maintained Executive Transport Aircraft for use by the Chief of Naval Operations and other high ranking officials.

In July 1976 Cudia joined Patrol Squadron 10, Brunswick, Maine. Then, in August 1979 he reported to NADC serving as the M/MCO and Head of the Aircraft Department. In July 82, he was stationed at Patrol Squadron 31; he was responsible for accepting, modifying and transferring eighteen aircraft in support of the Hawaii P-3C transition and initiating the fleet introduction of the P-3C Update III aircraft.

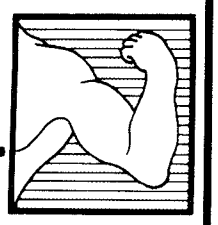
Cudia has received 21 ribbons and awards during his 30 year career.

He and his wife Linda have settled in Warrington while their two daughters Christina and Francesca remain in Maine.

Cudia concluded, "I took over an exceptionally well run department. My intention is to keep it running smoothly." (MAB)

Photo by Ken Smith
CDR David T. Cudia

FITNESS TIPS



YOUR MUSCLES

BUILD UP YOUR MUSCLES

As a general rule, gains in muscle strength are made by lifting heavy weights a limited number of repetitions. Gains in muscular endurance involve lifting lighter weights numerous repetitions.

STRONG YET FLEXIBLE

The idea that heavy muscular development inhibits movement is false. Studies show that strength training speeds up reaction time, and with stretching exercises, does not lessen flexibility.

FAT OR MUSCLE?

Exercise does not convert fat to muscle. The right combination of exercise reduces fat tissue while building muscle tissue. Since muscle is heavier than fat, you may reduce body measurements without reducing body weight.

FROM THE PRESIDENT'S COUNCIL ON PHYSICAL FITNESS AND SPORTS

☆ ☆ ☆ ☆ ☆ ☆

Do you have allergies?

WASHINGTON (NES) . . . If your body reacts abnormally to substances in the environment that do not bother other people, to particles in the air, food, prescription drugs, even physical things such as cold and heat, you are said to have an allergy.

Although allergies are seldom fatal, allergic reactions to drugs and venom from stinging insects can be dangerous and lead to life-threatening conditions.

An allergy shows itself in many ways. The most common symptoms are stuffy or runny nose, watery and itching eyes, itching skin or hives. Sometimes you may have trouble breathing (asthma), headaches or an upset stomach. Allergies aren't caused by emotional or nervous strain, but such strain can aggravate or set off an allergic reaction.

The cause of allergies is not clearly defined, but scientists are finding that "allergies run in families." Even if just one parent has allergies, it's probable some children in the family may also develop allergies. And allergies can develop at any age, even in infancy. In fact, children develop allergic symptoms more often than adults.

Because many allergies seem to be inherited, they are life-long. However, in most instances, proper care and treatment can control allergies, allowing allergy sufferers to live normal, symptom-free lives. Many medicines can help relieve or stop an allergic reaction, but true control is dependent on finding the cause.

It's important to consult a doctor familiar with allergies. Your family doctor or local medical society might be able to refer you to local allergists.

An allergist, by careful questioning of the patient and conducting laboratory and skin tests, can usually determine the cause of your allergy. In the case of a child, the parents, working with the doctor, may be able to determine what is causing the problem.

At present, allergies aren't preventable. Scientists are trying to improve the effectiveness of allergy shots or injection treatments to minimize or prevent allergic reactions to such substances as pollen and insect venom. Moving to a certain geographic area to escape the allergy problem may or may not help, and relief may be temporary depending on what is causing the allergy. For example, certain desert areas that once contained few allergy-causing plants now have grasses and weeds—by-products of irrigation and cultivation.

Common allergies

Hay fever: An allergy caused by pollen from trees, grasses or weeds, hay fever does not mean someone is allergic to just hay. It means a person reacts to pollens which are most abundant early in the spring (trees), in the early summer (grasses) or late summer, early fall (weeds). Symptoms of hay fever are spells of sneezing, itching, runny eyes and nose, and burning palate and throat. Individuals suffering from hay fever can be affected in most parts of the country.

Asthma: Characterized by coughing, wheezing and difficulty in breathing, asthma is a serious lung condition. The condition is worsened by exposure to air pollutants, cigarette smoke and chemical fumes.

Eczema: This non-contagious condition, also called atopic dermatitis, is an itching rash. It occurs most often on arms, legs or neck, but in some severe cases it can cover the entire body. Eczema is often brought on by allergies to food, drugs or inhalants.

Dermatitis: Contact dermatitis, a skin eruption, is brought on by direct skin contact with a chemical to which the individual reacts. The most common cause is poison ivy, but other causes include detergents, soaps, fabrics, metals, dyes and cosmetics.

Sinusitis: Often related to allergic reactions to inhaled dusts, molds or pollens, sinusitis develops when one or more of the four pairs of air-filled cavities in the skull become affected. This condition can be temporary or chronic.

Energy Quiz Answers

(Questions on page 10)

1. (c.) 33 percent. This is one of the reasons energy management in the shore establishment is so important.
2. Naval Station Keflavik, Iceland. Geothermal energy at Keflavik provides the Navy the equivalent of 90,000 barrels of oil each year.
3. (d.) 17,000 BOE, which would have cost $544,000.
4. Electricity accounts for more than 60 percent of Navy facility energy use and 60 percent of facility energy cost.
5. The Department of the Navy is the largest fleet user of electric vehicles. Currently, there are nearly 360 electric vehicles at naval activities.
6. (c.) Ship fuel use per underway steaming hour in 1984 was 7.8 percent lower than in 1975.
7. USS *Constitution*.
8. (c.) More than 23 million barrels of oil.
9. Nearly 97 percent. While virtually all Navy submarines are nuclear-powered, only nine cruisers and three carriers are nuclear-powered.
10. An F-4: The F-4 fighter aircraft consumes about 35.5 barrels per flying hour, and a CG 47 consumes about 30.0 barrels per underway steaming hour. By comparison, the F-14 consumes 27.5, and the new F/A-18A consumes just under 25.0 barrels per flying hour. Aircraft carriers consume more than 100 barrels per underway steaming hour.
11. (d.) Aircraft fuel use per flying hour in 1984 was 4.2 percent lower than in 1975.
12. Ships consumed 33 percent while aircraft consumed 28 percent. Facilities (including vehicles) consumed 39 percent.
13. In 1973, energy costs were less than 2 percent of the budget. They were 4.2 percent of the budget in 1984.
14. The Air Force consumes nearly 50 percent of energy used by the armed services. The Navy consumes 33 percent and the Army consumes 17 percent.
15. $34.3 million.

Technical highlights

INFRARED SEARCH AND TRACK (IRST) FLIGHT EVALUATION — NAVY SCENARIOS

During the first half of September, the airborne IRST equipments are being evaluated vis-a-vis Navy requirements. The flights, conducted at Eglin Air Force Base, FL involve two IRST advanced development models (ADMS) flown in separate F-15s against target aircraft at various speeds, altitudes, and aspects to simulate Air Force and Navy scenarios. 6 September 1985 marked the first of five Navy missions, which involve scenarios relative to the outer air battle (OAB). Target aircraft include a C-9 and F-14's to simulate enemy bombers at subsonic and supersonic speeds, respectively, and smaller aircraft to simulate fighters and missiles. Results will be used in selection of a contractor for full scale engineering development. NADC is responsible for designing Navy scenarios, and for interpreting results of tests, including digital signal analysis of recorded data.

V-22 PROGRAM

In support of an NADC effort, configuration and performance studies are being performed on the first two of three identified ASW variant options for the V-22. Option#1 consists of minimal airframe modifications to the basic MV-22 but incorporates the S-3B avionics and sensor suite. Mission performance consisting of radius-of-action versus time-on-station studies has been generated on this option. Configuration and weights for the Option #2 have been generated, to be followed by an examination of mission performance. Option #2 consists of substantial structural modifications to the fuselage including fuselage pressurization, removal of the crashworthy floor and incorporation of a bomb bay for internal carriage of the torpedoes. NADC will document efforts in a white paper to be incorporated into a report.

NAVAL AIRSHIP PROGRAM

Held detailed technical exchanges with Naval Airship system contractors on airship sizing and aircraft technologies. Developed technology white paper which identified technology areas critical to the development of a modern technology airship. Areas examined included aerodynamics, propulsion, electrical systems, hydraulics, materials, and structures. Evaluated fabrics technology to establish maximum size of non-rigid airships using current technology. Reviewed airship wind gust criteria and provided guidance to system contractors on this subject.

'FLEX' for fitness, 'FLEX' for fun

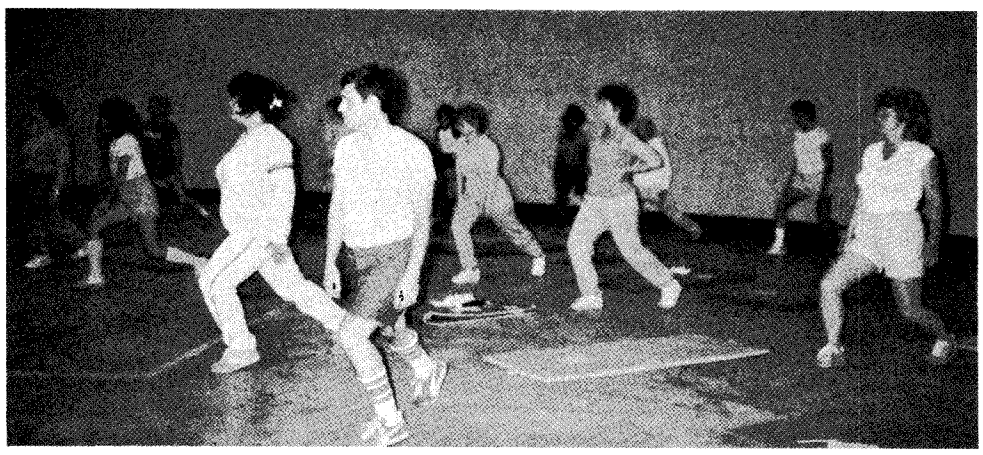


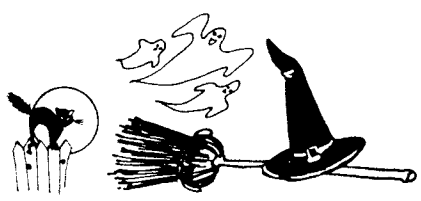
Photo by Jim Kingston

Twice a week NADC personnel shed their office attire and gather at the Centrifuge to FLEX for fun and fitness. FLEX is a personally-geared aerobic fitness plan sponsored by the Hatboro YMCA on Mondays and Wednesdays from 4:15 to 5:00 p.m.

Promotions

Sandra Alasevich, Hazel Andrews, John Auerbach, Stephan Bazow, Michael Bothwick, Joseph Bradley, Eileen Broderick, Pascal Canavo, Judith DeFranco, John DeValle, Moise DeVillier, Lynn Drelick, John Eney, David Farina, Robert Gale, Ramon Garcia, Charles Haney, Kathleen Hanling, Karen Heller, Campbell Henderson, Roger Jenkins, Brandon Johnson, Gloria Johnston, Ann Kaercher, Vladislav Kats, Barbara Kempf, James Klunkel.

Sheila Lavin, Chung Lee, Richard Lee, Lawrence Luterman, Christopher Miller, William Mueller, Corinne Newham, Sydney Oliver, Edward Peterson, Rosanne Petro, David Popeck, Paul Reimel, Thomas Ryan, Arthur Samouris, Richard Shelkin, Paul Sheridan, Daniel Tarrant, Steven Thoman, Joseph Thomas, Y. Trung Tran, Dennis Turner, Stephen Vajda, Michael Vardaro, Joanne Young.



HALLOWEEN

NADC celebrates Navy's 210th Birthday

The Navy is commemorating its 210th birthday this October and the Naval Air Development Center celebrated with cake and rope yarn liberty on October 18th.

All military personnel gathered on the quarterdeck for the ceremony. Captain Fred Wright, Chief Staff Officer addressed the group, followed by a cake cutting ceremony by CAPT Richard Fidlar who flew his last naval flight logging 3,761 hours of flight time.

The 18th was designated Navy Uniform Day and all Naval Reservists were invited to wear the uniform of the day and participate in the birthday celebration.

Official cake cutting ceremony (from l to r) CAPT Joe Clay, USNR, CAPT Fred Wright, Chief Staff Officer, CAPT Richard Fidlar, and Command Master Chief Dale Cain.

Photo by Drew Schmith

NADC Reflector

Volume 30 Number 11 NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA. November 1985

Navy Hornet Towed to Center

F-18 to be mounted for antenna range testing

Photo by Regina Gasuk

On October 24, 1985 an F-18 fighter aircraft stripped of its engine, avionics, and electronic warfare gear, was barged up the Delaware River from the Naval Air Test Center in Patuxent River, MD to U.S. Steel's Fairless works and then trucked to NADC. The plane, called a Hornet, was the fifth F-18 made. It will eventually be mounted on a pedestal at Bristol and Jacksonville Roads and used for full-scale antenna range testing.

colleges was another important issue for Beggs, partially because of her own recruitment experiences at Sweetbriar College.

"There is a lot of opportunity here at NADC. This command has made a

it after they went to bed.

Working in almost every phase of the R&D and Material Acquisition process, Beggs started as a researcher in optics and infrared, went to a project engineer in IRST and FLIR development and

Command, Control and Guidance at what is now The Office of The Undersecretary of Defense for Research & Engineering, and when AIR-03 was reorganized several years ago, she became responsible for all

invited and hosted Ms. Beggs during her two-day stay here. Besides addressing female S&E's in the auditorium, there were two working group sessions in The Center Conference room.

Command wishes a Happy Thanksgiving

Center's IR/IED award winners selected

Dr. Jine Tseng and Lee Gause are this year's recipients of the NADC Independent Research/Independent Exploratory Development (IR/IED) Awards.

The Center's Technical Director (TD) grants these awards annually to the scientists or engineers who under the NADC IR/IED program have made a significant contribution to the solution of a Navy or Marine Corps problem. This year's nominees were recommended to Robert Buffum, TD, by the NADC IR/IED Evaluation Panel who reached their conclusion after an on-site review conducted by the Office of Naval Research for the IR program and the Office of Naval Technology for the IED program.

Photo by Drew Schmith

(l to r): William Pohle (Code 5032), Dr. Jine Tseng, Technical Director Robert Buffum, Lee Gause, and Tom Hess (Code 6043)

TSENG - IR AWARD

Tseng, an electronic/software engineer in the Advanced Software Technology Division of the Software and Computer Directorate was awarded for outstanding work in Automated Code Generation.

"Software, in general," said Tseng, "is very expensive to develop; 'real time' software, even more so." She explained, "software is developed for specific computers and those computers are intolerant to error. Since human beings can, and often do, make mistakes, software development is not always as reliable as it might be and this adds to the expense."

What differentiates 'real time' software — IMMEDIACY. Regular software, like a payroll program, inputs data, runs the program, then generates a result, possibly in the form of a report. The faster the result is attained, the better, but time is not crucial. Real time software, on the other hand, is used for wartime missions where an immediate response is required. Data is input, processing occurs instantly and an immediate response is generated.

Tseng has researched use of the MODEL language in easing the development task and increasing the reliability. This language automatically interacts with the user in soliciting missing definitions or connections of inconsistency and then translates the specification into the best computer solution. This minimizes time, errors, and expense.

Tseng, a selectee for the Advanced Graduate Study Award Program for 1981-1982, recently received her Ph.D. in Systems Engineering from the University of Pennsylvania, after completion of a Master's degree there. She received her undergraduate degree from Cheng Kung University in Taiwan. She became a U.S. citizen in 1975 and joined NADC in 1978.

"I'm overwhelmed," she said at receiving the award since she considered herself relatively new to the Center. "I've worked long and hard," she concluded, "but, no project can be completed without the support and encouragement of many, to those people, I am very grateful."

GAUSE - IED AWARD

Gause, an aerospace engineer in the Aero Structures Division of the Aircraft and Crew Systems Technology Directorate, was awarded for his outstanding efforts in Braided Composite Structures.

Ordinarily concerned with basic research in structural mechanics, Gause became aware of some new braiding processes and did a characterization study on them. His winning IED investigation was a natural extension of this study. Gause' investigation addressed applying the multi-directional braided composites in damage-tolerant, stiffened skin aircraft structure. He is attempting to eliminate susceptibility to impact damage, weak short transverse strength, and a tendency to delaminate, which are the limitations of the conventional graphite epoxy laminated composites currently in use.

He fabricated complex composite structural shapes from net-section, braided preforms with a continuously intertwined fiber reinforcement network. The fiber structure improves impact resistance and damage tolerance. In addition, fabricating this fiber structure from a preform should result in lower costs since certain processes, subassemblies and fasteners could be reduced if not eliminated.

Eighteen years with the Navy, Gause holds both a Bachelor's and Master's Degree from Drexel University (1972 and 1974 respectively) in Mechanical Engineering.

The ONT review team described him as "a first rate experimentalist" and his work as ". . . relevant . . and of excellent quality."

Gause said, "I'm flattered over the award, of course, but outstanding technicians like Mike Bozak and fine fabrication facilities helped ensure the project's success." (MAB)

Universities connect with Navy Laboratories

By Hank Beyer

Who said "Good help is hard to find?" Here are some ways of getting it and at minimal cost. If you have a problem that needs solving or are looking for expertise that doesn't exist on Center, several programs sponsored by the Office of Naval Research (ONR) and the Office of Naval Technology (ONT) are available to solve your dilemma. Over the past several years, these offices have been rebuilding the interaction of the Navy Laboratories and Universities. The Viet Nam War saw a big disconnect between DoD and the academic community which severed many relationships. The following programs not only make those reconnections painless but also provide help for our technical community which otherwise might be unavailable.

SUMMER FACULTY PROGRAM — Sponsored by ONR and paid for by both ONR and the labs, this program has the highest level of participation by the Center. University faculty members spend ten weeks at a Navy lab doing research work. As a result of NADC's being involved in this fellowship program for the past five years, 33 professors from 21 institutions (i.e., between 10 and 15 Fellows per year) have been resident at NADC, with their costs being shared between ONR and the Center. These professors receive a stipend for their summer stay, but since they are not considered NADC employees, the paper work is negligible.

The American Society for Engineering Education (ASEE), who manage the program for ONR, will distribute applications soon. The appropriate NADC directorate will match the applicant and desired work and prioritize the selections. The deadline for faculty member applications is February 1. Since the ASEE makes its offers on March 1, time is a critical factor. A good idea is to personally contact known research experts in your particular area so that they apply to the ASEE with NADC as their first choice. Also make certain that your applicant ranks high on your directorate's priority list. Do not overlook those professors who apply with no prior contact, for some have excellent credentials.

Our SUMMER FACULTY PROGRAM has been so successful that next year we are going to limit a particular Fellow to one return. The price is right and the caliber of help is outstanding.

POSTDOCTORAL FELLOWSHIP PROGRAM — This program, sponsored by ONT and set up for recent doctoral recipients (within the past seven years), is for one full year of research work at a laboratory, renewable for a second year. The Directorates recently submitted updated research topics that could be included in the brochure for this program.

Currently, the Center has only one Postdoctoral Fellow, even though the program is in its third year. The ONT makes available about 40 positions a year throughout the Navy and funds eight of these. Project or Center funds are used for the remainder. The Fellows receive an annual salary and are managed through the ASEE. Because the Fellows are not employees, the paper work is kept to a minimum. Applications for these posts are processed four times a year in January, April, July and October. Personal contact is the best way to match candidates to the desired work. Prospective candidates should prepare a proposal as part of the application and submit it for the ONT's October or January review phase. If a candidate is not selected at that time, the money may revert back into a common fund for which all the labs would compete. Project or Center funds will have to pay for any others. Now's the time to get working on this one.

YOUNG INVESTIGATORS PROGRAM — Sponsored by ONR and similar to the POSTDOC program of ONT, this program has the advantage that the ONR matches lab funds on a two-to-one basis up to $80,000 a year (in addition to an annual salary paid to the Fellow). Specific tasks can be extended for up to three years. The applicant must be on a tenure track at their institution and have received their Doctorate within the past five years. The program starts at the beginning of the fiscal year when the money becomes available. The additional funds make this program attractive. Since the YOUNG INVESTIGATORS program is new this year, NADC has no track record, but it may not be too late to find a good candidate.

ONR FELLOWSHIP PROGRAM — Set up for recent graduates in the sciences, the ONR FELLOWSHIP PROGRAM sponsors approximately 45 fellows a year for advanced degree programs. Applications should be submitted to ONR by the end of January. The ONR encourages the participants to spend their summers at a Navy Laboratory, thus enticing them to seek employment at one of the labs after receiving their graduate degree. Each year the ONR distributes a list of the participants' names and addresses to the labs. Those who live within a 300 mile radius of the Center have been contacted for summer work. Since our success has been limited, perhaps you would like to contact some participants personally.

One final note — These programs offer a good opportunity to bring talented minority and female professionals into the Navy lab community. The ONR FELLOWSHIP PROGRAM is also an excellent vehicle to recruit high caliber students.

Call Hank Beyer (X1182) if you are interested in any of these programs.

Quarters for Muster

Navy Tradition carries on at NADC

If you've worked at NADC for any length of time, you've probably heard one of NADC's military personnel say something like, "Gotta' run — I'll be late for quarters; gotta' be on the quarterdeck by 1500." If you heard it, chances are you didn't understand what it meant.

Well, each Wednesday the Center's military meet or 'muster' at 3:00 PM at the 'quarterdeck' in Bldg. 4, Hangar Bay 1.

According to Navy law and tradition, a Commanding Officer (CO) should designate ". . . so much of the main deck (of a ship) as may be necessary for the proper conduct of official and ceremonial functions." Hence, NADC's Center Commander has designated Bldg. 4, Hangar Bay 1 as the quarterdeck.

Navy regulations also dictate the CO or a designated responsible senior hold periodic inspections to ensure the personnel under his/her command are neat, clean, and accounted for. Quarters, or a formal formation of the military (as pictured to the right) is a recognized way to accomplish inspections, musters (attendance counts), ceremonies, and the passing of instructions from the CO to his troops.

Quarters at NADC do just that. Routinely, and specifically at quarters on Ocober 18th, an inspection was conducted, awards were presented, and the Navy's 210th birthday was celebrated. (MAB)

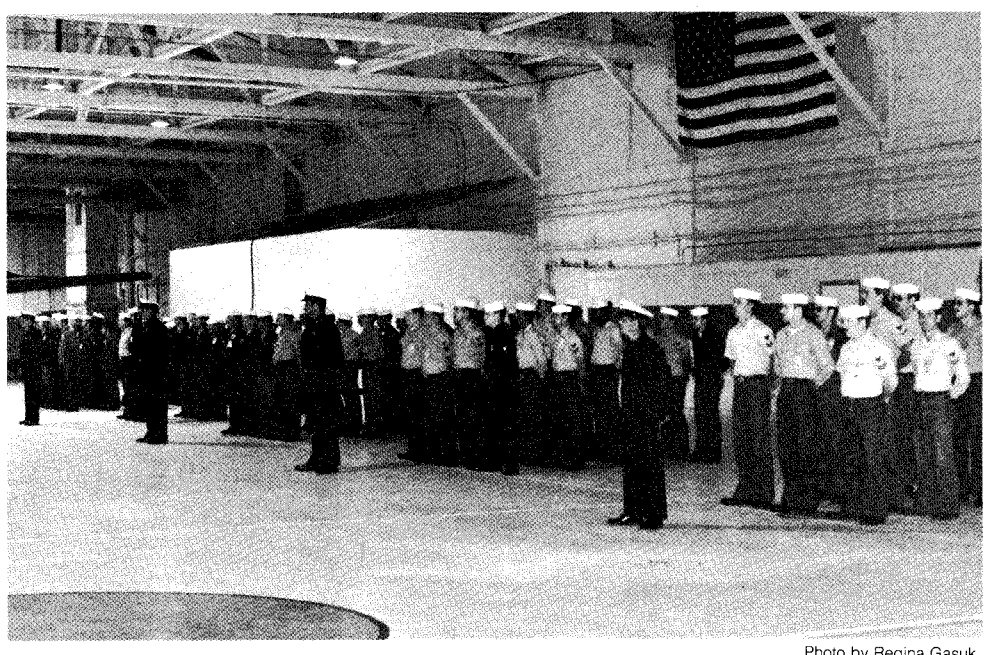


Photo by Regina Gasuk

NADC military in formation (at parade rest) during quarters.

Photo by Drew Schmith

CAPT Sturm (l) pins Good Conduct Medal on ASE2 Bruce Rickmers.

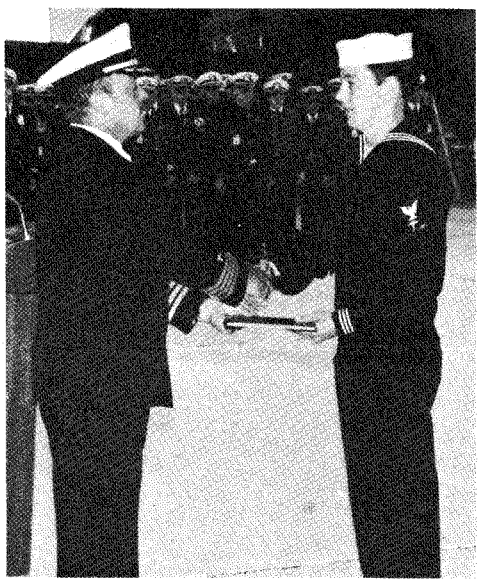


Photo by Regina Gasuk

CAPT Wright (l) presents HM3 Michael Grey with Sailor of the Quarter award.

Photo by Drew Schmith

CAPT Sturm (l) congratulates Navy Achievement Medal recipient AKC Alfred Mabini.

Photo by Drew Schmith

Command Master Chief Dale Cain is presented a commemorative plaque for his retirement by CAPT Sturm.

Photo by Regina Gasuk

LT Tommy Klepper with wife Abby, and sons Tommy, Jr., (standing) and Michael, all smiling after LT Klepper was awarded a Navy Achievement Medal.

Tobia assigned to CNTD

CDR John Tobia recently arrived at NADC and was assigned as Project Officer in the Communications Navigation Technology Directorate (CNTD) replacing CDR Kenneth App who has been transferred to the Directorate Command Projects.

Commissioned in 1966, Tobia was one of the last P-3 pilots to be qualified in the T-28 and S-2 aircraft. After attending various training schools, in 1968 he was assigned as Primary Flight Instructor at VT-1, Saufley Field, Pensacola, FL. From 1970-1973 he was stationed at VP-26 in Brunswick, ME. In 1973 and for the ensuing five years, Tobia opted for civilian life and the world of private industry.

He reentered the Navy in 1980 as the Advanced Flight Instructor at VT-28, where he was awarded the Navy Achievement Medal. Tobia spent the next two years as Communications Officer on the USS MIDWAY and received the Navy Commendation Medal. His next duty station until the present was VP-48, Moffett Field, CA as Training Officer. During his tour there he was selected as Officer in Charge of a four plane, four crewmember detachment to Adak, Alaska. This assignment was particularly interesting since Adak's main runway was closed for repairs. "Circling to land in such a hostile environment," said Tobia, "provided many interesting experiences."

As CNTD's only Navy interface with the Fleet, Tobia feels his experience as Communications Officer aboard the USS MIDWAY and his fleet and ASW experience were influential in his assignment to NADC.

"I requested NADC as my next duty station" said Tobia. "In recent years, I've heard of its fine reputation, especially in ASW research."

Ordered to NADC for three years, Tobia hopes to make his home in Buckingham, PA. (MAB)

CDR John Tobia

New logo for Brewster

The volunteer Brewster Buccaneer Restoration Group has adopted a new logo for its aircraft. The logo, featuring a pirate and parrot atop a bombshell, was designed by John Varallo, a member of the group and illustrated by Robin Dittinger of Airshield Corp. The pirate and parrot depict the Buccaneer's sea-going mission and the bomb relates to its bomber aircraft status. When the aircraft is restored, this logo will be painted on its airframe.

Feierabend named Deputy Director of SATD

Photo by Regina Gasuk

CDR Richard Feierabend at his new desk.

CDR Richard (Dick) Feierabend (pronounced: Fire-ah-bend) has joined the NADC family as the Deputy Director of the Sensors and Avionics Technology Directorate. Although never stationed here, he has visited the Center and worked with NADC personnel when stationed at the Naval Air Test Center, Patuxent River, MD (1978-1982) as the Electronics Systems Branch Head, and again as the Project Manager for Advanced Surveillance Concepts at NAVAIR (AIR-03) from 1982 through 1985.

Just before coming to the Center, Feierabend spent two months in training at VP-30, Naval Air Station, Jacksonville, FL. "My first choice when I was looking for orders was NADC. I wanted to go someplace where I could continue some of the efforts I started at NAVAIR, and this seemed like the best place. There is a lot of excellent work going on, and excellent people doing it; I am really impressed!"

Feierabend would like to see NADC continue or better its already excellent reputation in the future. "I'd like to see us enhance our technical reputation by getting more involved with high risk, high payoff tasks and continuing to be responsive to the Navy's needs."

Originally from Ohio, Feierabend received his Bachelor of Science degree in Mechanical Engineering from Cleveland State University in 1969. His Master's degree in Aeronautical Engineering (Avionics) in 1976 is from the Naval Postgraduate School, in Monterey, CA.

Since 1969 he has been stationed in Pensacola, FL and Corpus Christi, Texas doing basic and advanced flight training; in Brunswick, ME working in ASW while assigned to Patrol Squadron Eight (VP-8); and aboard the USS FORRESTAL (CV-59) as part of the ship's company. Feierabend resides in Warrington with his wife Pat, daughter Krista (age 10) and son Rick (age 9). Welcome aboard.

Fidlar retires traditionally

The Naval Air Development Center said goodbye to Captain Richard Fidlar after 28 years of dedicated military service, seven of which were spent here at the Center. In 1969 Fidlar was assigned to NADC. His first assignment was with the Remote Sensors Program and then as Project Officer for the Carrier Based Tactical Support Center (CV-TSC). In 1979 Fidlar returned to the Center as Director of the Command Projects Directorate and concluded his career here in that position.

On October 30th, at quarters, a retirement ceremony was conducted with Fidlar's family, friends and co-workers — both civilian and military. It was a momentous occasion in which Fidlar thanked all present and made a special tribute to his wife Shirley for her support throughout the years. Fidlar said if one thing could sum up his experiences and explain what he learned throughout his career it would be this quote from an article written by George F. Will concerning the U.S. Navy: "It may seem paradoxical, but it is the plainest truth: The more complex the military organization and the more sophisticated the technology, the more the success of the system depends on morale. Success depends on the concentration and zest and sweat of the most complicated and variable of military variables, the men and women who put their hands on the metal."

Photo by Regina Gasuk

CAPT and Mrs. Richard Fidlar are 'piped over' during his retirement ceremony on 31 October.

Graduate Study Award Program produces Ph.D.

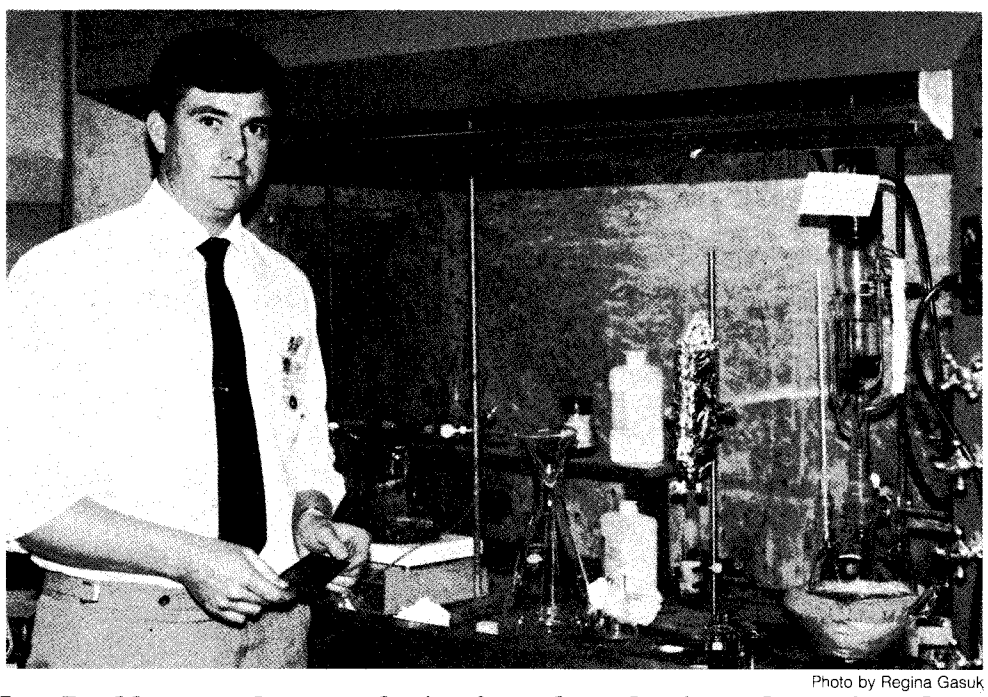


Photo by Regina Gasuk

Len Buckley completes synthesis of novel conductive polymer in polymer laboratory.

Len Buckley is an authority on two things: polymers and the Center's Graduate Study Award Program. Armed with a Master's degree in Polymerics from MIT, Buckley enrolled in MIT's Ph.D. program and—as if vying for a placard in the Guiness Book—completed it in one year! What's more, he did it with a grade point average (GPA) of 4.9 out of a possible 5.0. Buckley is in the Structural Materials Branch, Aero Materials Division of the Aircraft and Crew Systems Technology Directorate.

"I didn't have the problems and additional duties that are usually associated with being a research assistant or teaching assistant," said Buckley, "I could devote all my time to working on my thesis and completing my course work." Dr. Jeff Waldman, Buckley's Branch Head said, "Len's experience at MIT represents a successful application of the Graduate Study Award Program."

Ron Trabocco, Team Leader of the Composites and Polymers Section said, "Very few people are able to carry out such a credible thesis and maintain the high grades that Len did. He is in a much better position to pursue the kind of research that has to be done to really make significant breakthroughs in Naval applications of composites and polymers.

Carrying a full course load, Buckley put in from 50 to 60 laboratory hours a week. Most of the emphasis was on his thesis—"Conductive Polymers." A polymer is a plastic that is usually non-conductive. "I worked on a plastic material that was electrically conductive and was stable in the atmosphere which is something that has not been available until recently," said Buckley. Buckley's laboratory work consisted of synthesizing novel materials and studying their physical and mechanical behavior. The result is a material Buckley thinks will have significant uses in the Navy. Dr. Waldman said, "Len investigated the relationship between the strength and composition of the materials with the manner in which they were produced."

Trabocco said, "Existing conducting polymers lose their conductivity when placed in the air. The only place they're able to be used is in an application where they are sealed, such as a battery. What Len has done is pioneering work that has produced a group of plastic materials that maintain their conductivity in the air for a reasonably long length of time, even when exposed to elevated temperatures (300°F) and also can be formed to shape, with heat and pressure, without affecting their conductivity. Its potential utility in aircraft application is significant."

Polymers in addition to being lightweight and corrosion resistant are amenable to low cost forming and manufacturing. They can be used as a coating in many applications. Not only are these polymers electrically conductive, but this particular material's chemistry can be manipulated, changing its conductivity over several orders of magnitude. Buckley stated that conductive polymers may also be used as electrode materials for use in batteries.

Here at NADC, as an extension of his work at MIT, Buckley is working on conductive polymers, conductive composites for Electromagnetic Interference (EMI) shielding, and structural composites—new resin systems such as the Bismaleimides.

For example, F-18 repairs are made with graphite reinforced epoxy which has a temperature limitation. Bismaleimide composites offer advanced aircraft improved temperature performance.

Buckley will be the principal investigator on a proposed Matching Funds Program conducted jointly between the Center and the Office of Naval Research (ONR). "Only a few programs are chosen for Matching Funds," said Dr. Waldman. "ONR matches NADC dollar for dollar on advanced scientific work with the potential for application. Also based on the results of his thesis, an Independent Research program has been approved for FY-86."

"I think Len has set a good example of how the graduate study award program can work in the most optimum manner. Len went to MIT for one year and came back with a doctorate. Len's work is bringing us recognition. The results of his work will lead to significant advances in conductive polymers," Waldman concluded.

Navy's oldest P-3 resides at NADC

She's the grandmother of all P-3 Orions in the Navy and she is stationed at Naval Air Development Center.

P-3A 148883 was purchased by the Navy on March 31, 1961, at Burbank, California through the Bureau of Weapons, now called the Naval Procurement Office. She was transferred to Naval Air Facility (now NADC), Warminster on June 5, 1971.

Most of 883's life has been like the little known baseball player. You know, the one who gets the steady base hits instead of the glamorous home runs.

Like that steady player, 883 kicked off her career as a refresher plane for VP-30, Detachment A, an Atlantic Fleet readiness command at Patuxent River, Maryland. Pilots refamiliarized themselves with P-3As by flying 883.

On Dec. 4, 1962, she returned to Burbank as a test plane for the Weapons Bureau (something that would eventually become the norm) returning to "Pax River" on Feb. 28, 1963. Upon her return, 883 headed south to Jacksonville, Florida, where she spent six months in sun, fun and training. She returned the following year to Maryland on Feb. 2, 1964. By Aug. 31, 1964, 883 had flown 1,601 hours. She remained with VP-30, refreshing pilots in P-3A flying until Feb. 2, 1965, logging 1,820 hours since her purchase from Lockheed. On June 25, 1965, she joined the Weapons Test System at Patuxent River and launched a new career as a test plane. By June 30, 1966, 883 had flown 2,216 hours and completed 344 tours.

883 stayed at "Pax River" undergoing various tests until 1971. By this time she had completed 867 tours and logged, 4,414 hours in the air. On June 5 of that year, 883 traded river life for country living in Pennsylvania. More importantly, she entered a new phase in her career. Now, the gallant bird would help the Navy in future developments critical to anti-submarine warfare, helping her fleet sisters improve hunting skills in finding "bad boy" subs.

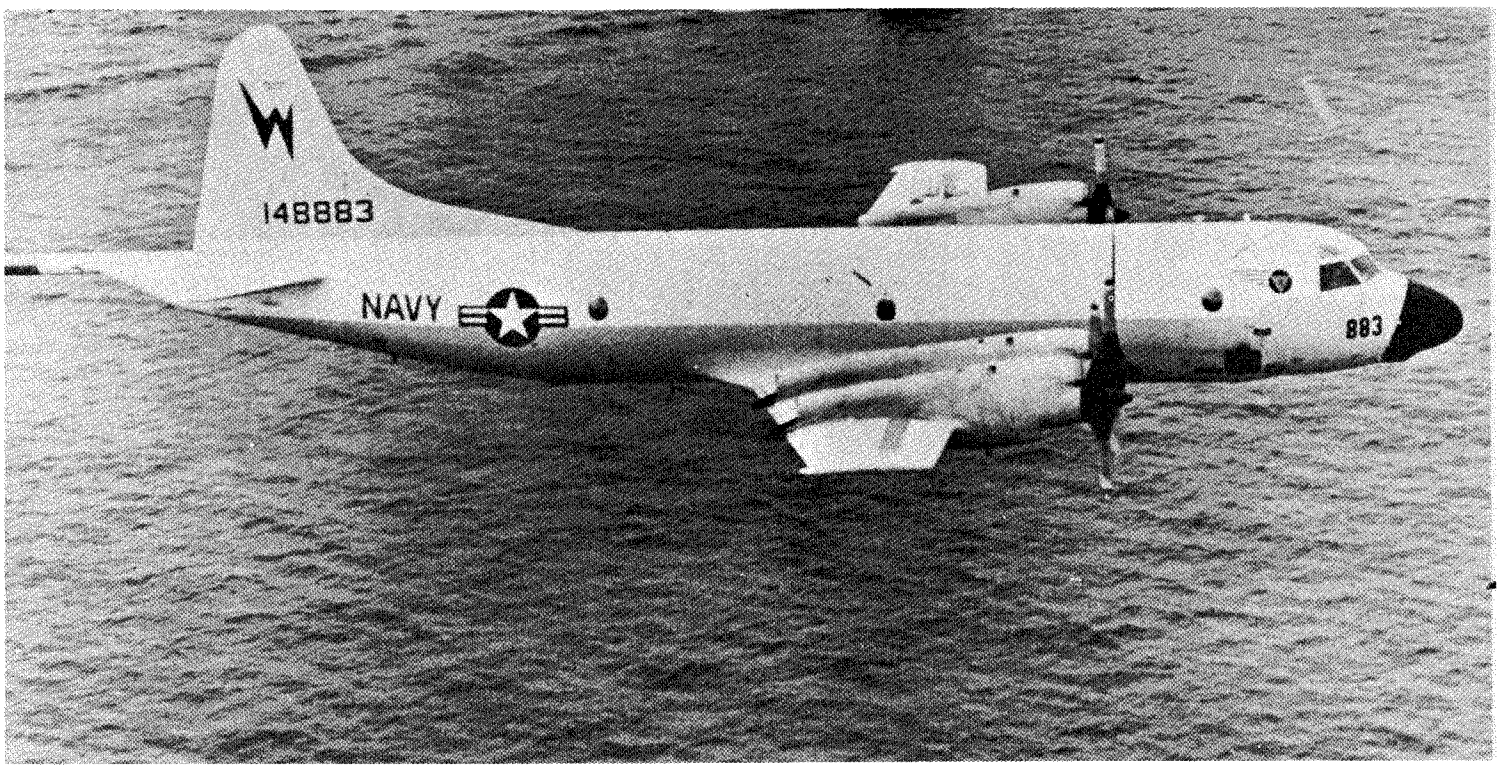
In Aug. 1984, she had flown 8,614 hours since she became Navy. The 1980's also brought her two new designations. On July 8, 1982, she was designated an NP-3A, and on Aug. 22, 1984, she was redesignated a UP-3A.

"She's been a work horse for us," said Bill Myers, Project Coordinator at the Center. "883 has flown most of our low-cost sonobuoy test flights," Myers explained.

By now the P-3 program had been improved and updated. Computers and electronics had come of age, and P-3 **B**ravos and **C**harlies had arrived, replacing most of the old **A**lfas.

But "old 883" continues to live. She has flown missions for the Systems, Sensors & Avionics, and Aircraft & Crew Systems Technologies Directorates, continuing to help in sonobuoy development without computers. Her monitoring system has been updated to keep pace with new developments. She has visited places like Bermuda, St. Croix, and the Virgin Islands, as well as Lakehurst, New Jersey, Key West, Florida, and Brunswick, Maine.

More importantly, 883 continues to help her new fleet P-3 sisters hold the line of defense as a test plane. No real glamor, just steady run producing hits. (FAD)



Grandmother P-3A patrol aircraft No. 14883 in its prime.

NADC touch football season standings

By Craig Volker

By the time this paper hits the streets, the NADC Friday Touch Football League will have crowned its 1985 champion.

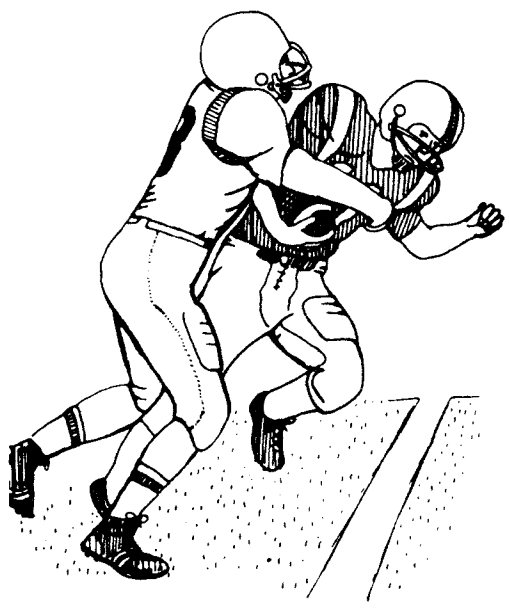
Since the league's inception in 1980, Blue has won the title three times and the Granfalloon has won it twice, and this year one of these clubs will win it again. Will it be Blue or the Granfalloon? By the time you read this, you will know, but at this point, the excitement is nearly unnerving, as the whole center is breathlessly awaiting their epic match-up. Blue earned the right to play in the championship game by narrowly nipping the courageous and good-looking Gang Green squad, 34-0, while the Granfalloon was mopping up the Dragons, 20-6. This reporter wishes the best of luck to both of these fine teams.

This year's NADC touch football season was one of the finest in memory, but my senility may have something to do with that. Every team except the Nads (who became the Barking Spiders this year) won at least as many games as they did last year, so that's got to mean there were a lot of happy football players out there.

The final regular season standings were:

Granfalloon	6-1
Blue	6-1
Gang Green	5-2
Dragons	4-3
Barking Spiders	2-5
Druids	2-5
Lasers	2-5
Renegades	1-6

Of course, all of the veterans were just as awesome as this reporter predicted in his last article, but there were several surprising rookies this year, too. Two of these outstanding novices were Gang Green's Gary "All-State" Groshner (he's got those "Good Hands") and the Druid's Jim "Joe Willie" Kunkel. The retiring veteran Mike Deshield deserves a special note for his great sports career here at NADC. Fittingly, in his last game, before an innumerable crowd of supporters and well-wishers, he spurred the Lasers on to a dramatic victory over Gang Green.



Congratulations to all of the teams, and this reporter wishes everyone a joyous and safe off-season!!!

NADC out 'putts' the Grove in Navy intramurals

The Naval Air Development Center's Navy Intramural Golf Team won the Willow Grove/NADC Golf Tournament held at the Warrington Country Club on October 14th.

Team captain AOC Ron Jerasa of the Ordnance Shop, guided his team to victory despite flight commitments during league play. "We were in first place from the begining, all the way into August," Jerasa said. Then, team members began going on detachment flights in performance of their duties.

The team ended the season in third place (league play began in May) four points out of first and just a half a percentage point behind second place. The league supported nine teams including the one team from NADC.

The tournament kicked off the next day with preliminary rounds pitting the first place NAS Willow Grove Admin/Training team against the fourth place Marine Air Group 49 (MAG-49) detachment team. NADC squared off against the second place Reserve Air Training Center (RATCEN) team. "Our placement in the standing was strategy," Jerasa said. "We have beaten RATCEN all year." At the end of 18 holes at Warrington, Willow Grove Admin/Training and NADC were the top finishers. AD1 Dave Hewlett, AW1 Robin East, AD1 Joe Bretton and AE2 Chip Baker were the NADC team players.

On October 14th, the final rounds of the tournament were set. Admin/Training and NADC would battle it out for first and second place, while MAG-49 and RATCEN would vie for the third place trophy.

Jerasa, East, Hewlett and Bretton found stiff competition on the first nine holes. Fierce determination allowed them to finally put it away on the 17th, one hole shy of the finish.

"My tee shots were my best, while Robin's (East) putting was just superb," Jerasa said. "Last year, I coached softball with a 15-15 record. This year, I decided on golf. We have a pretty competitive team," Jerasa explained.

East and Hewlett had the best league ending handicaps on the NADC team. East supported a seven handicap, while Hewlett carried a nine. The rest of the team and their handicaps were: Jerasa, 22; AZ1 Ed King, 14; Bretton, 17; MS3 Bill Barron, 30; Baker, 23 and AT2 Kent Felker, 20. (FAD)

Mixed bowling standings

LUCKY STRIKES	
Bob Gindhart	185
Mary Feeley	175
ALLEY OOPS	
Rick Yeager	225
Mary Williamson	175
JERRY'S KIDS	
Jerry Miller	201
Lorraine Kittner	170
NEINERS	
John Vincent	208
Jean Canton	174
THE STRANGE BREW	
Jerry O'Hara	197
Barb DiLemmo	205
DYNAMIC DUOS	
Mike Stauffer	210
Sue Stauffer	152
WHITE WINOES	
Jerry Guarini	199
Mary Lentz	199
RAIDERS	
Cliff Tierney	199
Jan DeLarso	185
WARVEY HALLBANGERS	
Glenn McKee	217
Fran McKee	153
SCREWBALLS	
John Ryan	210
Pat Tease	141
RENEGADES	
Jack Rush	201
Miriam Rush	137
GOOFERS	
Don Abrams	233
Lorraine Reidinger	189
SUBS	
Joe Leonard	247
Claire Bayer	164
MAGIC MARKERS	
Larry Sicher	213
Andrea Sicher	176
BULLSHOOTERS	
Tom Leahy	241
Audrey Dinkins	148
LANE BRAINS	
Hank Lystad	201
Roy Lystad	183
WHO CARES	
Mike Bubb	227
Pat Schoppe	160
RED WINOES	
Tom Reiter	203
Miriam Lentz	200
THE BIG SPENDERS	
Mack Cox	196
Kathy Drager	151
ELEVENTH FRAME	
Al Goldstein	225
Jean Bollard	190
FALCONS	
Steve Jerdan	233
June Olson	187
BLIPS	
Mike Daulerio	225
Deana Hudson	153
RATED X	
Stu Simon	205
Lorrie Dunn	186
ALLEY CATS	
Gene Toner	228
Marge Hoefling	204
LES CHAMPIGNONS	
Ed White	213
Carol Hartman	169

Airomatics claim title as Volleyball champions

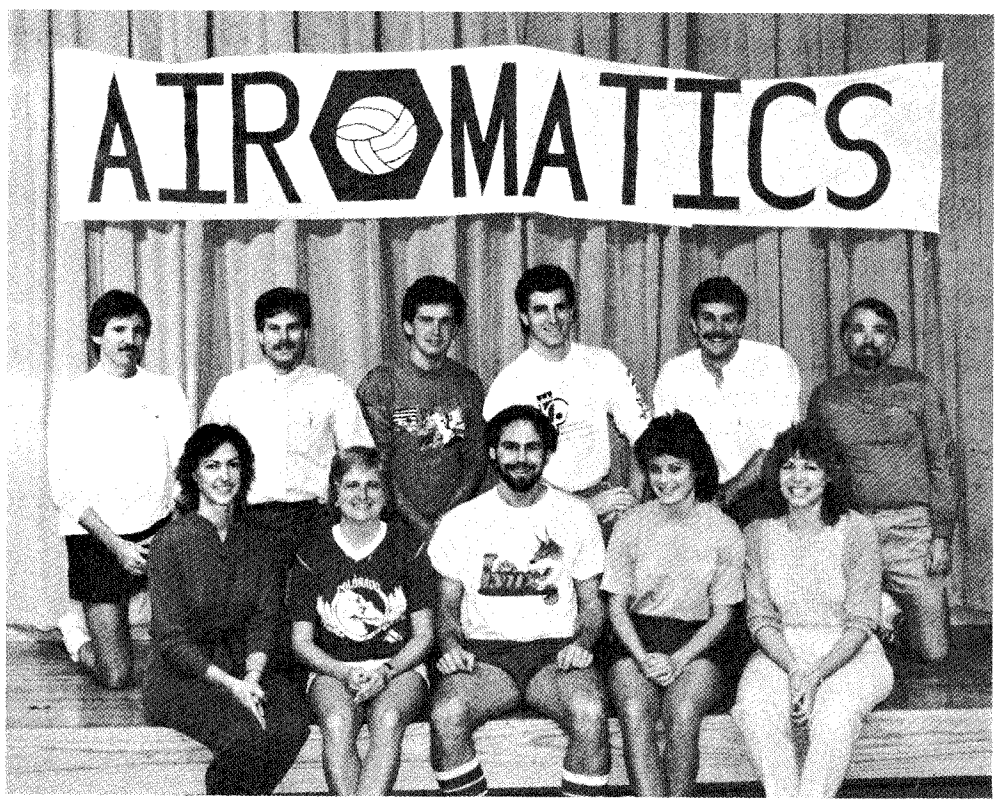


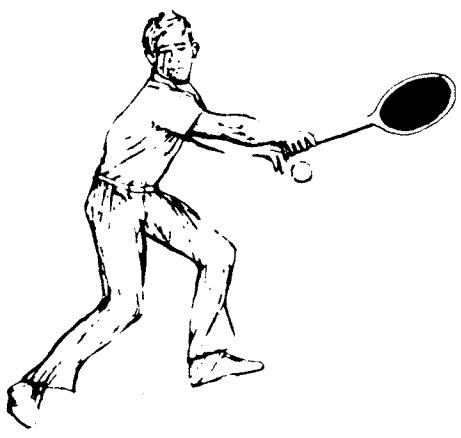
Photo by Regina G. suk

The Airomatics, winners of NADC's Fall Volleyball League, took the last three games of a five-game playoff from the Marauders. The Airomatics (a combination of the summer league's* Air *patrol and Spas*matics*) eeked out the last game at 15-13. Team members sitting (l to r): Mary Lentz (SEMCOR), Barbara Turner, Co-captain Jack Reilly, Eileen Beans, Dorie Reilly; kneeling (l to r): Bill Bermingham, Bob Skalamara, Bob Mullins, Co-captain John Whalon, Jim Campana, Dennis Turner (and Mike DeShield not in photo).

Tourney tournouts

NADC's annual tennis tournament results are in. Chris Thompson defeated Adam Koszowski 6-1, 6-2 in the singles tournament. Twenty-five tennis players competed in this single elimination tournament. Thompson is champion for the third year in a row. The doubles tournament was taken by the unbeatable team of Ed Nichlas and Ron Block with two 6-2 wins. Nine doubles teams competed.

A consolation singles tournament was held to give everyone who didn't win the first time around, a second chance at a title. After much strenuous competition Dave Pulley defeated Skip Patterson 6-4, 6-2. Players decide where and when they will play but usually it is at a local outside court at least once a week. The tennis club is open to all employees and their families and contractors who work on Center. For information about how to join, call Chris Thompson on Extension 1082.



Penn State graduate school comes to NADC

By Charlie Destra

The on-Center graduate level training program taught by Pennsylvania State University is now entering its sixth academic year and has yielded 20 graduates thus far. Three more students should achieve that status by the end of this (Fall) semester. The program offers students a Master of Engineering/Engineering Science Degree (with an emphasis in computer design).

The program started in August, 1980 with a modest two courses per term. It has steadily grown since then, due primarily to NAVAIRDEVCEN's large increase of new scientists and engineers over the past few years. Today, more than 150 employees participate in the program and an average of 12 courses are conducted each semester (six per session).

The Center arranged for this program in order to meet vital, expanding needs in the computer field. It was designed so that engineers could develop their technical design and application abilities in both hardware and software considerations. Included in the program are 23 mathematics, computer science, electrical engineering, and industrial engineering courses.

The program's first graduates include Barbara Turner, Code 50, (Spring '82), Robert Skalamera, Code 20, (Spring '83), Robert Taggert, Code 50, (Summer '84), Steve Fleischut, Code 40 (Spring '84), and Anthony Marino, Code 40 and John Porter, Code 20 (Fall '84). Of the 20 graduates, 11 went through the program without transferring over any credits from other institutions. These include Taggert, Marino and Porter.

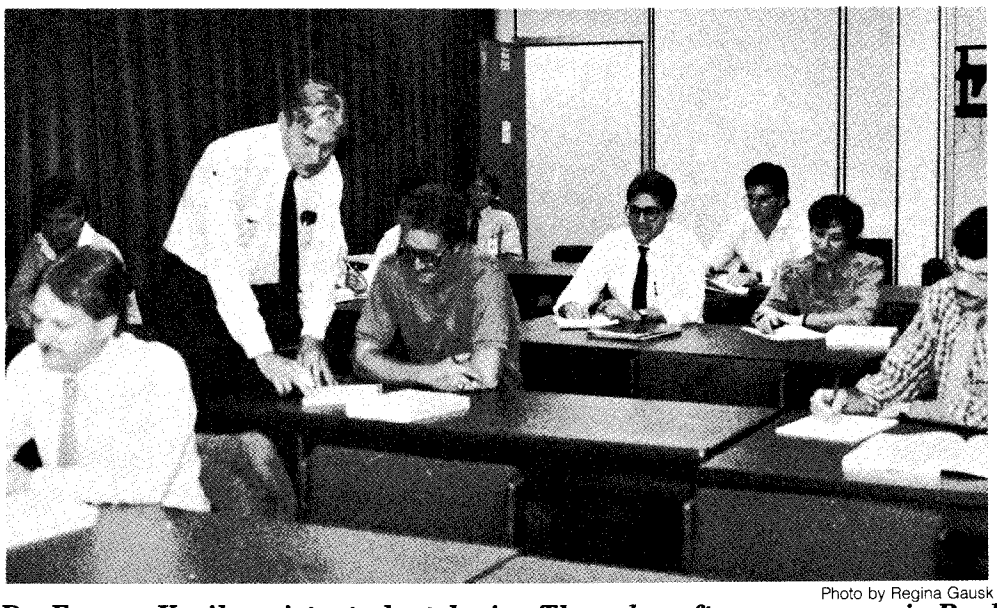


Photo by Regina Gausk

Dr. Eugene Kozik assists student during Thursday afternoon course in Real Time Design of Computer-Based Systems (IE-597A).

Barbara Turner of the Software and Computer Directorate, graduated in only two years having transferred over only three credits from Villanova.

"The program makes it very convenient to take graduate level courses," she said. "I consider it a worthwhile program for those who want to pursue a Masters Degree in engineering."

Bob Taggert of the same Directorate was the first to complete all 10 courses on Center. Taggert also emphazised the convenience of the program. "It was a big asset to me, time wise—I was able to get home at a reasonable hour," he said, adding that he felt the quality of education "was exceptional, especially the industrial and electrical engineering courses."

The program has taken on an added emphasis this semester. Each half semester, Penn State will be offering either a mechanical, mechanics, or aerospace course in order to give the aerospace or mechanical engineer the opportunity to also obtain a Master of Engineering Science Degree in the program.

The Aircraft and Crew Systems Technology Directorate saw a need for these courses for their engineers and asked the Employee Development Division, through Dr. Richard Llorens, a program advisor and instructor, to request that Penn State include them in the program.

"The courses help the program accommodate and reach out to a wider audience," Dr. Llorens explained. Nineteen of these types of courses have been identified and included in the program.

The program is made up of three semesters per year: fall, spring, and summer. The fall and spring semesters each have two half-semesters, each seven weeks in length. The summer semester is one seven week session. Classes meet twice per week (Mondays/Wednesdays or Tuesdays/Thursdays) from 4:00 to 6:45 P.M. in NAVAIRDEVCEN's training rooms (and other nearby locations, when necessary). Ten courses are required for a degree.

If you have any interest in the program, contact the Employee Development Division, Code 032, for further information.

Happy Thanksgiving

VIEWPOINT

Photos by Regina Gasuk

This month's question is:

"If you were a turkey, how would you like to be stuffed?"

"I would like to be stuffed with a color TV so I would't miss any of the football games."

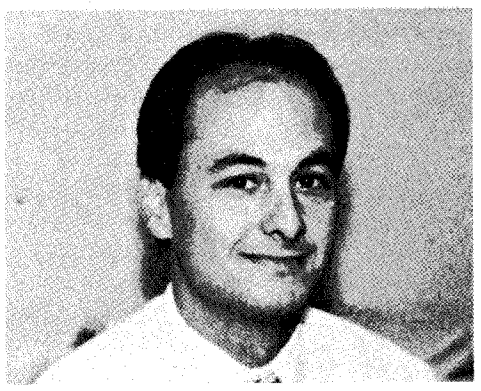
Tom Ames (Code 83A)

"I would be stuffed in a room full of beautiful women."

Tom Sanders (Code 10A)

"I would be stuffed with bread stuffing because I'm a traditionalist, and maybe a small present for the holidays."

Tom Merkel (Code 7021)



"Since Mrs. Turkey cooks to satisfy the picky appetites of the little turkeys at home, I don't get nearly enough Italian cooking. So, please stuff me with ravioli, tortellini, pesto, and scampi sauce. Then, add some Maalox tablets!"

Tom Zenobi (Code 6032)

"I would be stuffed with enough oysters to have the pearls of wisdom not to be found on Thanksgiving."

Tom Willey (Code 70C)

"I would like to be stuffed with all the things a Thanksgiving turkey never gets to enjoy: cranberries, sweet potatoes, mashed potatoes, gravy, and pumpkin pie. Then, I'd like to sit down and watch football while the cook gets wrapped in aluminum foil and refrigerated."

Tom Weiss (Code 3042)

"I would be stuffed with four of Thom Gallagher's toupees."

Tom Brennan (Code 30)

Promotions

James Abel, Lee Allen, Robert Balitski, James Barber, Claire Bayer, Diane Blum, Mark Breidenthall, Mark Cahill, Catherine Cain, Vincent Contarino, Scott Cote.

Maria Di Pasquantonio, Harland Dodge, Michael Doyle, Lusi Dunbar, Barbara Dutkiewicz, Mark Episcapo, Jacques Etkowicz, Albert Ferkel, Clare Fisher, Timothy Fitzpatrick.

Lynn Fratrik, Connell Gallagher, Steve Ganap, Anthony Geneva, George Gillespie, Richard Gleich, Diane Gould, Teri Hackett, Thomas Haug, Gordon Heal, Jack Hirsh, Helen Hummel.

John Kaercher, Lynne Kaiser, Scott Kee, Steven Kinsley, Catherine Kitchenman, Dennis Klinger, Michael Lavin, Jane Libbos, Michael Lizbinski, Jose Llanos, Anthony Marino.

Thomas Matthews, Arlene O'Donnell, Julian Olyansky, John Passfeld, George Pfeiffer, John Phanos, Ruth Pickering, John Reeves, Joan Reimel, David Rhoads, Theodore Risko.

Charles Rosso, Richard Runyen, Harry Schmidt, Jay Schneider, William Shope, Albert Simkins, Robert Skalamera, Pascual Spensieri, Patricia Steinbach, Marshall Thomas, John Tralies, Natalie Wolaniuk, Sharon Wright.

Technical Highlights

SOVIET SUBMARINE NAVIGATION STUDY

NAVAIRDEVCEN has been tasked by the Naval Intelligence Support Center (NISC) to conduct studies and analyses and assess Soviet submarine navigation capability.

DNL SOFTWARE ENGINEERING ENVIRONMENT (SEE)

A management plan was completed for the Director of Navy Labs (DNL) for the implementation of Phase I of a Software Engineering (SEE). The objective of Phase I of the DNL SEE is to competitively procure a common software tool set for the DNL Centers to support the development, test and maintenance of software for Tactical Embedded Computer Resources (TECR). The approach will not only provide for software transportability but will enable the competitive procurement of both the software tools and computer hardware systems.

V-22 PROGRAM

In house testing and evaluation of the following was performed for validation of materials and hardware applications to the V-22:

—Low energy impact testing of fuselage-type structure

—Fatigue testing of IM6/3501 composite specimens

—Composite manufacturing techniques; quantify physical properties

—5,000 psi CRES/Kevlar hoses, fittings; impulse/flexure properties

—Field evaluation of crash energy attenuating cargo tiedowns

—Night Vision Goggles compatibility of cockpit lighting components.

H-46 HELICOPTER EMERGENCY FLOTATION SYSTEM (HEFS)

Two HEFS full system tests were conducted at NAVAIRTESTCEN Patuxent River, MD on H-46 BUNO 153344 completing the fifteen test TECHEVAL series. These tests were actual water landings which demonstrated both the automatic and manual actuation of the HEFS. These two tests were conducted on 25 Sep and 1 Oct 85 and complimented the thirteen full system tests conducted on H-46 hulk at NAVAIRDEVCEN detachment at NAS, Key West.

Aircraft flying qualities evaluation were also completed. Preliminary evaluation showed negligible effects on flying performance as compared to the baseline aircraft. In-water evaluations showed significant improvement in aircraft stability and handling characteristics.

Aircraft is presently being prepared for OPEVAL to be conducted by HMX-1, Quantico, VA during the First Quarter of FY-86.

CARRIER AIRCRAFT LANDING SURVEY

Completed a day/night photographic survey aboard the USS ENTERPRISE of carrier aircraft landings using a series of infrared flashers synchronously controlled by a 70mm camera system that covertly illuminated the landing area. This survey was the most successful to date, producing film records of 3300 carrier landings. The data resulting from analysis of the records will be used to refine design requirements and to substantially increase understanding of night carrier landing loads and safety factors.

CONDUCTIVE POLYMERS

Advances have been made in the synthesis of new conductive polymers, but their lack of stability, poor mechanical integrity, and lack of processibility have hindered their use. Recent work at NADC resulted in the synthetic studies of a conductive polymer with excellent stability, good mechanical behavior, and potential processing characteristics. This work on oxidized conductive polypyrrole/anion materials has indicated that the mechanical behavior is strongly dependent on the synthesis conditions of a potential and current density.

A one decade loss in conductivity upon a three-year ambient exposure was found which makes this material the most stable conductive polymer investigated to date. X-ray results indicate a non-homogeneous microstructure which was also dependent on synthesis conditions. In addition, recent efforts have indicated the possibility of processing the polymer through heat setting or thermoforming. These material advancements have significant implications regarding electromagnetic attenuation applications now being sought in the emerging naval materials task of the Aircraft Materials Block Program.

Whether it's a game of backyard football or a day of rigorous spectating, a round of nourishing sandwiches is in order. These pita inventions aren't your ordinary sandwiches, but they are hot and robust.

Beef-Lamb Pitas

- 8 Ounces Lean Ground Beef
- 4 Ounces Lean Ground Lamb
- 1 Tablespoon Fresh Parsley, Minced
- 1 Teaspoon Fresh Garlic, Minced
- Dash of Freshly Ground Black Pepper
- Dash of Oregano
- 2 Teaspoons of Oil
- ½ Cup Onion, Sliced
- 1 Medium Red Bell Pepper, Cut into Strips and Roasted (Broil Until Charred on All Sides)
- 1 Medium Tomato, Peeled, Seeded and Chopped
- 3 Pita Breads, 1 Ounce Each, Heated
- Prepared Mustard to Taste

In a bowl combine beef, lamb, parsley, garlic, black pepper and oregano. Moisten hands with warm water and roll mixture into 2-inch long pieces. Place on rack in broiler pan and broil on all sides until evenly browned. Keep warm.

Heat oil in skillet, saute onion until soft. Add pepper strips and tomato; saute 1 minute longer. Cut each pita to form a pocket. Stuff each pocket with ⅓ of the meat and top with ⅓ of the vegetable mixture. Serve with mustard or yogurt dip.

Yield: 3 Servings
Approx. Cal Serv.: 265

Recipe Tip: When choosing hamburger, look for the medium-to-deep color that signifies a low-fat content (a light pink color is a warning that excess fat has been ground in with the meat). Ground beef should contain no more than 10 to 15 percent fat.

THE RIGHT BEAT
Exercise intensity for aerobic conditioning is measured by heart rate. A good activity level is 70% of your maximum heart rate, which is determined by subtracting your age from 220. Thus, the recommended exercise heart rate for a 40-year-old person is 126 (220 minus 40 times 70%).

THE LOWER THE BETTER
People who are physically fit generally have lower resting heart rates than those who are not, which means that their hearts don't have to work as hard to pump blood. A reduction of 10 beats per minute in a person's resting heart rate can save over 3 weeks of work for the heart over the course of a year.

WARMING UP, COOLING DOWN
To avoid excess strain on the heart, and injury to your muscles, warm up for about 5 minutes before working out, and cool down after exercises. Never abruptly stop exercising. The sudden stop in motion may cause lightheadedness or muscle cramping.

FROM THE PRESIDENT'S COUNCIL ON PHYSICAL FITNESS AND SPORTS

W&R holiday news

"You better watch out, better not cry, better be good, I'm telling you why — Santa Claus is coming to . . . NADC."

On Thursday, December 12th from 2 to 3:30 PM the Welfare and Recreation Association will present a Christmas show to all Center employees and contractors who work on Center. Then, on Friday evening, December 13th beginning at 8 PM, a very special candle-light Christmas show with festive holiday decorations will be presented to NADC employees, their families and friends.

"An Old Fashioned Christmas" is the theme of this year's 1½ hour presentation which will include a variety of entertainment for the very young and the very young at heart. The program will include a barbershop quartet, a rendition of holiday favorites by NADC's choral group, a solo performance by Luci Dunbar, magician (George Gillespie), juggling and clown acts, a Girl Scout skit, and a visit from Santa with treats for the children. What better way to end the evening than with coffee, juice and sweets compliments of W&R, in the company of friends and family in a wonderful atmosphere of holiday spirit.

Don't miss this evening of fun and merriment. A $1 donation per person on Friday evening will be used for the Orphan's Christmas party. Look for more information in the Log and the Plan of the Day.

Beneficial Suggestions

DENNIS BRANT, E-6/ET1, Code ACSTD, "Multi-Patient Medical Monitor," $1,030.

RICHARD CHILDERS, PW, "Heating Ventilating Air Conditioning Systems Markers for Ducts, Sensors," $234.

WILLIAM HOGARTH, PW, "Accustat," $2,140.

OTTO ENGDAHL, PW, "Numbering of Street Signs," $25.

STEPHEN PFEIFFER, TSD, "Table Jig Saw Flywheel Safety Modification," $250.

ROBERT STAUFFER, ACSTD, "Replacement of the Elec. Connector on Multiple Ejector Rack and Triple Ejector," $500.

J. BARTON 3021

Happy Holidays

"As we prepare to close the door on 1985 and open a New Year, Nancy and I extend our very best wishes for a happy holiday season to each of you."

Ronald Reagan

Ronald Reagan
Commander in Chief

"On behalf of the Center, we would like to personally thank our employees, civilian and military, and the contractors who work with us, for another successful year. Each day you should take great pride in knowing the energy, talent, and dedication you give the jobs you perform protect and preserve our country and the freedom to celebrate this holiday in your own personal way.

"Our best and most sincere wishes for a healthy and happy Christmas or Hannakuh and an even better New Year."

Edward J. Sturm

CAPT Edward J. Sturm
Center Commander

Robert S. Buffum

Robert S. Buffum
Technical Director

"To all of you, active and reserve who serve our country so well at home, abroad, and at sea, and to the civilians and foreign nationals who support our Defense establishment and to all of your families, I hope all will have a very happy and safe holiday season and a prosperous, peaceful New Year."

Caspar W. Weinberger

Caspar W. Weinberger
Secretary of Defense

NADC Reflector

Volume 30 Number 12 NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA. December 1985

In This Issue:

Santa Claus arrives early to surprise orphans

Photo by Jim Kingston

Santa Claus (Shh! Center employee Otto Engdahl) listens intently to children's holiday wishes during the Welfare and Recreation sponsored Orphans Christmas party. Ho, ho, ho! Santa didn't just listen, he thrilled each and every child with a gift.

Commander Salutes

Code 30; William Benner, Lawrence Edwards, Paul Krebs, Frank Plonski: For superb workmanship in performing radio frequency sweeps in support of the VP special projects installation from April through September 1985; **Code 60; Reynolds Brooks, John Burns, Michael Doyle, Bernard Dupee, Armando Gaetano, Michael Lavin, Kenneth Mergenel, Charles Miller, Jay Schneider, Samuel Sizgorich, Adelaide Thompson;, Randall Weidemoyer, Richard Williams, Modee Young:** For superb workmanship in the areas of mechanical and electrical design, stress analysis, data compilation, reduction, analysis and retrieval in support of VP special projects: **Code 80; Dennis Bellevan, Svend Bernstein, Richard Butkus, Linda Calderwood, Jaime Clávell, Andrew Daymon, William Finkbeiner, Thomas Gould, Phillip Haber, John Koroncai, Darrell Kutz, Anthony Martinelli, David Moore, Vincent Morelli, John Newton, Beverly Pettis, Stephen Pfeiffer, Mark Polo, Ervin Rothemel, Martin Ruzansky, Andrew Schwartz, Andrew Shaw, John Springer, Leonard Toder:** For professional attitude and workmanship in machine shop, mechanical and electrical fabrication shops, and the engraving shop support to the VP special project installation. This total team effort was praised by the Chief of Naval Operations, the Naval Air Systems Command, the Space and the Naval Warfare Systems Command for ensuring that three aircraft modifications were conducted ahead of schedule.

Specter & Kostmayer address Center employees

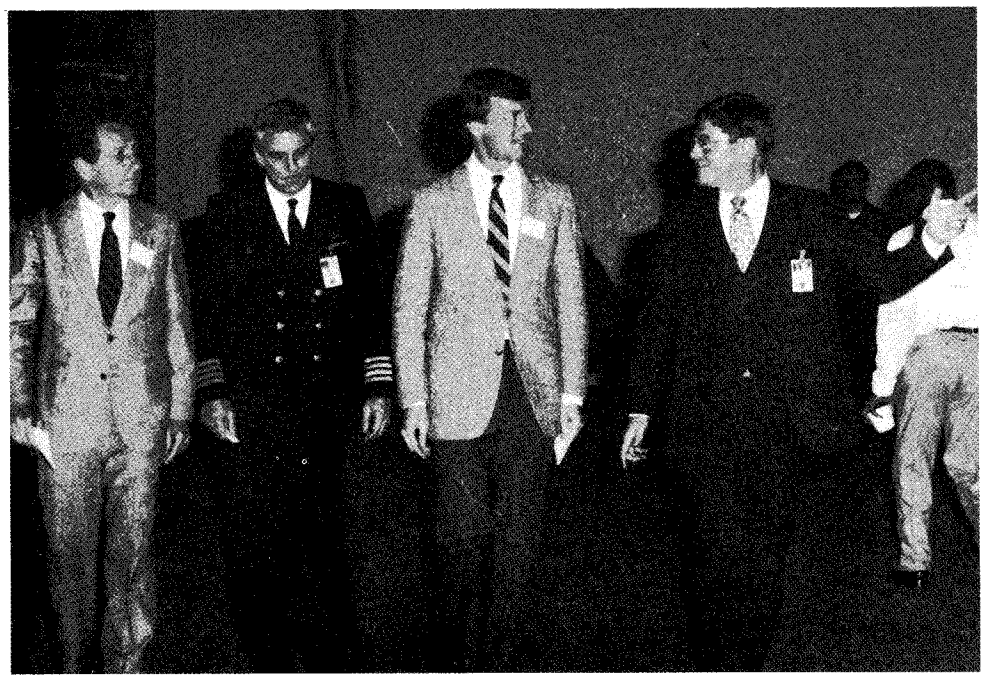


Photo by Drew Schmith

Senator Arlen Specter and Congressman Peter Kostmayer addressed Center employees on November 25th in the Center auditorium. The probable reinstatement of the $4.2 million military construction funding for the proposed GPS/Tacamo lab lends an optimistic outlook for the Center's future.

Post Office medical team to the rescue

When medical help is needed, often, the United States Navy is around to lend a hand. So it was for drivers at the U.S. Post Office in Warminster, Pennsylvania.

Because of a new postal regulation, postal drivers now must have a medical screening by medically trained personnel for their government driver's licenses. Jay R. Stout, the branch Postmaster, decided to invite a Navy medical team from the Center to conduct the screening.

"I wrote a letter to Captain Sturm asking if he would be willing to save us money by providing a medical team," Stout explained. He went on to say that his employees would otherwise, have to travel to Philadelphia to see the Postal Service's regional doctor, losing man hours, or hire a doctor locally to conduct the screening.

Chief Hospital Corpsman Mike Ryan, of the Aircraft and Crew Systems Technology Directorate, contacted Cliff Gledhill, a supervisor at the Warminster Post Office, to set up dates for the screening.

"We had a hard time determining when we were going to do this," Chief Ryan said. "We started in September, but work loads at the Post Office delayed us," he said. "What was to take a week, we did in two days," Ryan pointed out. In the two days of screening, the NADC medical team screened 80 postal employees. This goal was realized partially because the screening was conducted at the Post Office.

The team checked the eyes and blood pressure, while Dr. Dave Mills, Biomedical Support Team, evaluated test results. Two eye exams were conducted. One used the Armed Forces Visual Tester (AFVT) and the other, a color tester. The AFVT tested distant vision, near vision, depth preception and phoras eye ability. Phoras checks the eye to see how much a diversion to left and right and up and down the eye may have. The color test insures that drivers can distinguish between red, green and yellow, the colors on traffic signals.

"This new medical screening will help us stop accidents we can prevent in the first place," Stout said. His branch office serves 50,000 residents of Warminster township, Ivyland Borough and parts of Warwick and Northampton.

The medical team was: LCDR Dave Mills, Chief Ryan, HM3 Mark Butler, HM3 Mike Grey, HM3 Mike Korth, HM2 Ken Swanson, HM2 Alex Gonzales, HM2 Ron Thompson, HM2 Lisa Butler-Johnson and PR1 Mike Patterson. (FAD)

Editorial Comment

Flex for fun and fitness

If you drop less than a dollar, do you say forget it rather than bend over and pick it up? YOU NEED FLEX! Do you need an oxygen tent after climbing a flight of stairs? YOU NEED FLEX! Does your body feel stiff after any more physical activity than stirring spaghetti sauce? YOU NEED FLEX! Is tying your shoes a new experience in pain or do you only buy loafers? FLEX IS FOR YOU!

"Flex for fun and fitness" is a Shipshape program that let's you work out at your own pace to improve your cardiovascular stamina and flexibility. Sponsored by the Hatboro Area YMCA, FLEX meets twice weekly in building 70 (Centrifuge) from 4:15 to 5 PM. Exercises are performed to lively music under the guidance of a qualified instructor trained to give individual attention and gear exercises to each person's capability.

I would like to stress that exercises are performed at your own pace. I go to FLEX every week. I don't think my fellow flexers will be offended if I say that there are no star athletes nor are we attired in avant-garde active playwear.

So, join us. With the holidays here, you can't afford to put this off. The eating, drinking and being merry associated with the holidays may be fun, but they're disastrous on your body. Do something good for yourself. You are worth it. The next session begins January 6th. Call Neil Abramson on extension 1120 for details and sign up.

The Editor

Dear Editor:

I may be the only one of the few who read the article on the energy contest (November, page 3) and picked up a typographical error which changes the meaning — my slogan was:

If you conserve it,
it can serve you.

To say "it will serve you" takes away from the play on words and any merit as a slogan.

Rockne Anderson

Dear Rockne,

I apologize for the error. Thank you for your interest in The Reflector.

The Editor

NADC Reflector
NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA

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Dec 1985

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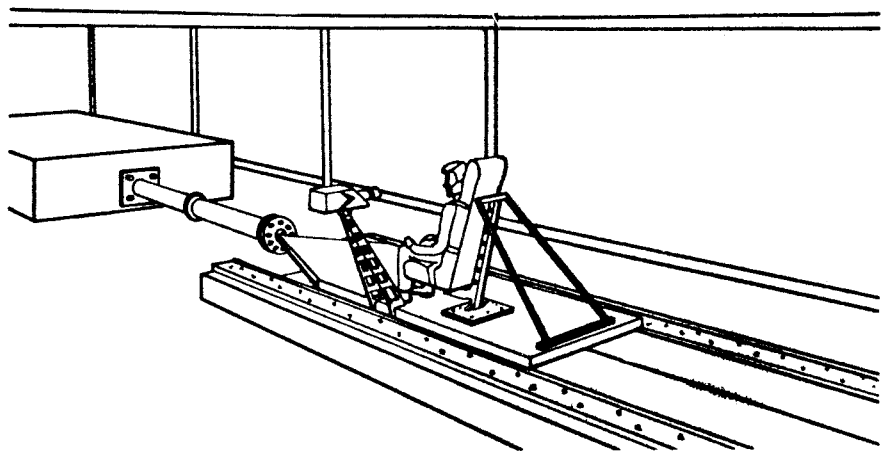
Public Affairs Officer ..... **James S. Kingston**
Editor ..... **Regina Ann Gasuk**
Assistant Editor ..... **Mary Ann Brett**
Military Journalist ..... **JO2 Fred Dias**

HAF configured for seat qualifications

The term "dynamic simulator" applies to more than the Centrifuge at NADC. The Center's Horizontal Accelerator Facility (HAF) is a dynamic simulator producing accurate acceleration measurements needed to investigate and solve impact problems.

The HAF, previously used primarily for research and development, was reconfigured recently to perform its first seat qualification tests.

The CH-53A/D crashworthy armored crewseat program is the first to undergo dynamic simulation of both horizontal and vertical impact testing. These crewseats will be retrofitted into approximately 200 CH-53 and RH-53 Helicopters.



To accomplish this, the HAF was configured with a triangular mounting, manufactured here at the Center. This allowed the seat to be mounted with a 30° forward pitch and a 10° roll. The HAF makes it possible to precisely, economically, and repeatedly test the effects of abrupt acceleration; it simulates the same effect as a crash.

Jim McElhenney, project engineer in the Life Support Engineering Division of the Aircraft and Crew Systems Technology Directorate says, "Ability to collect data is far superior using the HAF as opposed to a drop tower or other similar test site because of its data collection instrumentation and high speed photography capabilities." He continued, "time and expense previously involved in set up and break down of equipment from the HAF for horizontal measurements and then to the drop tower for vertical measurements can be saved."

The facility is physically composed of three main assemblies, an energy producing mechanism, a 12 foot test sled and a 100 foot guide rail. A maximum gross thrust force of 225,000 lbs. can be generated by the compressed air used for firing pressure.

Electronic singals from transducers onboard the sled are transmitted by an electronic cable to a data acquisition system located in the control room. Cameras operating at speeds up to 1,000 frames per second are used to slow the action to permit detailed kinematic analyses of the events. (MAB)

An ounce of prevention . . . .

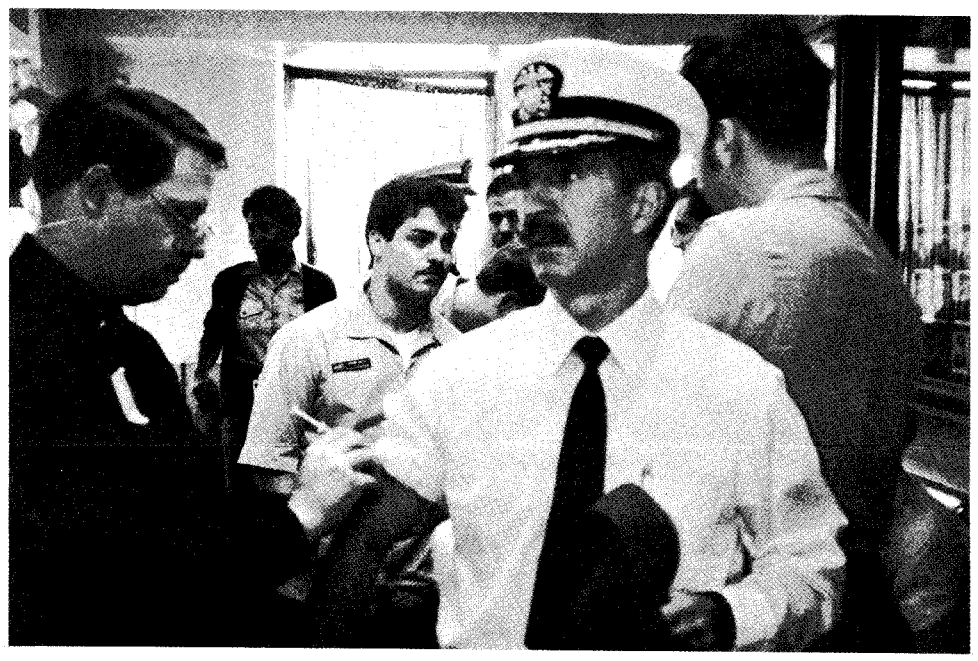


Photo by Jim Kingston

CDR Fred Ameel grins and bears it as he receives his annual flu shot from Dispensary personnel. Injections were required for all active duty personnel.

Mixed Bowling News

by Tom Reiter

With four nights remaining in the first half, Bob Geyer's Alley Cats are clinging to a one point lead in the B Division. Less than six points separate all twelve teams. In the A Division, Bernie Weber's Warveyhallbangers maintain an eight point lead with five contenders bunched for second. Gift certificates in this year's Turkey Shoot were won by John Durfee for his two game, handicapped score of 448 and by Carla Mackey for her smashing 443. Happy Holidays To All!!

Season high scores to date include:

A DIVISION

Hi Average		Hi Single		Hi Three	
Al Knobloch	179	Al Knobloch	249	Al Knobloch	606
Mary Lentz	150	Rick Yeager	225	Glenn McKee	600
		Mary Lentz	200	Mary Lentz	528
		Janice Delarso	194	Lorraine Reidinger	503

B DIVISION

Hi Average		Hi Single		Hi Three	
Gene Toner	174	Tom Leahy	241	Steve Fleischut	591
Ro Lystad	143	Marge Hoefling	204	Marge Hoefling	545
				Lorrie Dunn	510

Military Recreational Services sets new goals

As a newly established organization, the Military Recreational Services Division (MRSD code 045) finds itself in a changing environment. Under the new leadership of Ron Brewer, Miltary Recreation Services Officer, MRSD is taking a look at the current level of programming services provided, and charting a new course to best accommodate the future needs of military personnel, their dependents, and NADC employees. "The current level of programming services offered, has shown innovation and leadership by our management and staff. Our goal is to incorporate the available resources of Naval Air Station, Willow Grove's Morale Welfare and Recreation Department, the Center's civilian W&R organization, and the talents of our own personnel, to provide recreation and club services second to none," said Brewer.

Brewer has ideas intended to benefit military personnel and encourage more participation in military recreational programs. Brewer is taking a number of positive steps to improve operations at the Crews Rest Consolidated Mess (Open). A major effort to deglamorize alcohol consumption and encourage the responsible use of alcohol is underway. Social activities are being planned to encourage patronage by active duty military under the age of 21. Brewer wants to maintain and improve quality hospitality services through enhancement of personal service, cleanliness, and food and entertainment quality.

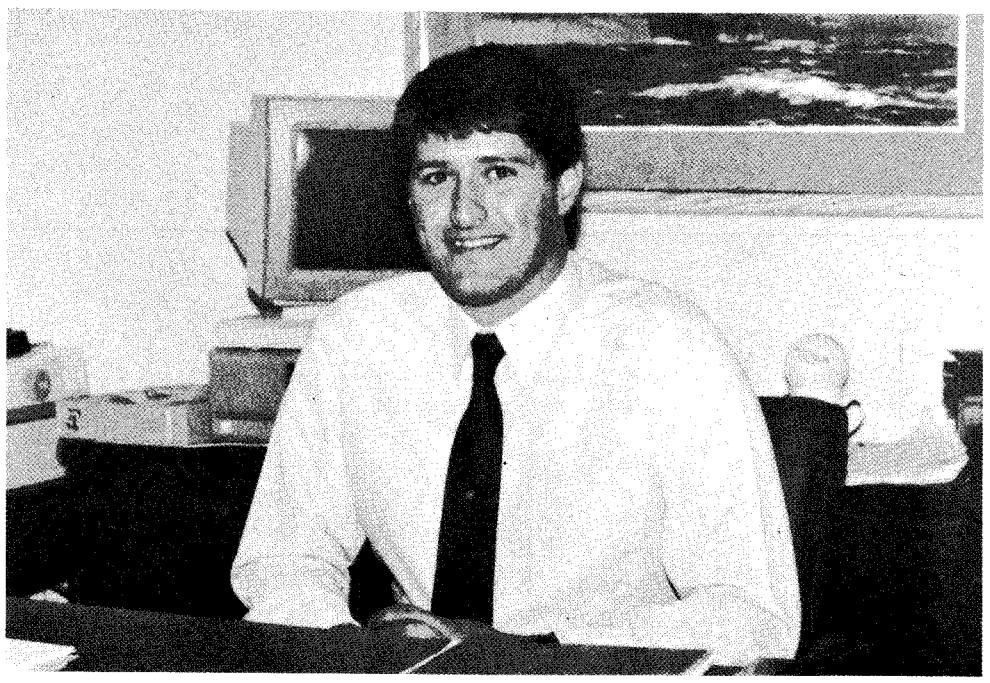


Photo by Regina Gasuk

Ron Brewer

Expansion of recreational programs and services is planned for the future. Minor construction renovations to the Fitness Facility (bldg. #99) will increase the size of the men's lockerroom and create a much needed women's lockerroom. A greater variety of sports and physical fitness services will be offered.

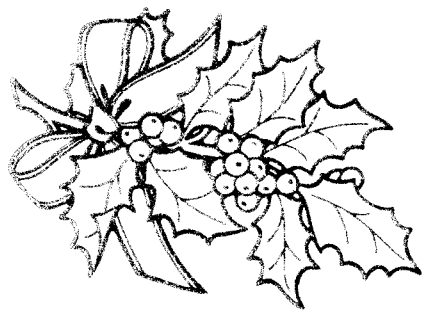
The new Youth Center in Shenandoah Woods military housing area is scheduled to open in November 1986. "Current plans are to hire a Youth Activities Coordinator in May of 1986 to initiate programs for the dependents of military personnel," concluded Brewer.

Brewer comes to the Center after serving as Recreational Services Department Director, at Naval Security Group Activity (NSGA), Winter Harbor, Maine since 1982. From 1979 until 1982 he was Recreational Division Manager at the Naval Submarine Base in Kings Bay, Georgia, and prior to that beginning in 1975 he was Assistant Athletic Director at the Naval Air Station in Patuxent River, Maryland.

A Salute to Nearly 6

40 YEARS

Edward A. O'Brien
James A. Roach
Frank B. Uphoff
Benjamin F. Williams



45 YEAR

Arthur R
Bernard

20 YEARS

Theresa Andrews
Joseph Armstrong
Andrew Atkinson
Charles Banionis
Elizabeth Bednarzik
William Bogdan
Stanley Brown
Remo Buono
Michael Caddy
Theodore Calkins
Thomas Canniere
Henry Cornell
Jeffrey Davidson
Anthony DeLaurentis
Stanley Dunn
Joan Fallon
Wilda Flynn
David Furlong
Joseph Gentile
John Gledhill
Leslie Greenbaum
Carl Hammond
James Hammond
David Keyser
Albert Knobloch
Neil Kreshover
Ronald Kushnier
Charles Lampart
Walter Latosh
Larry Lehman
Stephen Levin
Walter Lipski
Richard MacIntyre
Nancy MacMeekin
Michael Mele
James McElhenney
Ellen McGrody
Joseph Miller
Charles More
Joseph Perrine
Gabriel Pilla
Bernard Pollack
John Pye
Estelle Redner
Edward Reidinger
Elliott Ressler
Joseph Sabatine
Jeannette Schenk
Herbert Schoenfeld
William Seeman
Richard Shelkin
Joseph Skasko
James Smith
Bruce Steinberg
Nicholas Tavani
Margaret Tomlinson
Borys Umyn
Lucille Walker
Walter Werner
George Werts
Richard Williams
Michael Wolfe
James Wolfgang

30 YEARS

Robert Angiolillo
Nancy Ballew
Robert Becker
Eugene Bock
Lenwood Broomer
Burton Byler
Paul Cahill
Pascal Canavo
Ralph Carson
Dolores Castro
George Costantino
Edward Deesing
Denis Delaney
Catherine Dempsey
Joseph Dever
Bernard Finkle
Valentine Freitag
William Garwood
Clelland Green
Jerry Guarini
Robert Haase
Roland Hall
Henry Hansen
Gerald Heston
William Hunter
Alexander Jarmusik
William Mawhinney
Frances McHale
Bernard McHugh
Russell McWilliams
Mary Moran
Paul Moser
Anthony Panaro
Ronald Pepka
Donald Pisechko
Joan Pokoy
Roy Preston
Albert Querin
Anthony Ruggiero
Edward Seidel
Ronald Swartz
Marshall Thomas
Steve Torok
John Wrigley
Edward Yannuzzi

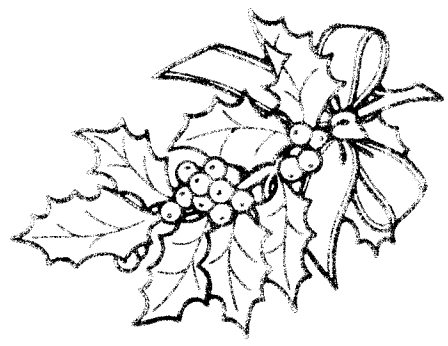
10 Y

Sheila Anderson
Gregory Askew
Diane Baker
Dennis Bellevou
Georgia Bernard
Christine Biscardi
Mary Calci
Charles Campbell
Lorraine Caven
Robert Chin
Lawrence Coar
Donna Conway
Kathleen Cornell
Colleen Craggs
Anne Dilley
Robert Dillingham
Evelyn Doll
Joan Farrow
Kathleen Felts
William Finkbeiner
William Ganter
Frank Garofola
James Gary
Richard Gergar
Kris Gigliotti
Michael Gindele
Martha Harazim
Charles Harless
Christof Heithecker
Julie Hopson
Tommy Hunter
Allan Johnson

000 Years of Service

S

Duhaime
inkle



35 YEARS

Abraham M. Silver
Bernard Watties

25 YEARS

Allen Anderson
Robert Andrews
Nicholas Antonini
Everett Arnold
Sidney Barber
William Becker
Louis Berman
Ben Birchfield
David Birnbaum
William Bristol
Gloria Chisum
Joseph Colombo
Richard D'Africo
David Davis
Paul Devlin
Neil Douglas
Charles Dugan
Richard Fenn
Carl Frey
Raymond Ginkiewicz
Eugene Haley
Joseph Halgas
David Harrison
John Heap
Rudolph Hluchan
Robert Jones
Joseph Kuklinski
Melvyn Levrant
Lewis Lippel
Nicholas Loggia
Joseph Madden
Albert McCarty
Eugene McCray
Robert Moore
Thomas Murray
Stanley Olenick
David Panetta
Casper Pepe
Alphonso Pittman
Michael Raditz
Paul Rehal
Raymond Satterfield
Jay Schneider
George Shamlian
Dorothy Sherman
Peter Vanschuyler
William Walto
Joseph Weiss
Ernest Wykes

15 YEARS

Aslam Abbasi
Dickson Alley
Peter Ayoub
Ross Barcklow
Carol Beckett
Doris Bessler
John Bowes
William Bradley
Elmer Bradshaw
Carl Calianno
William Capps
Samual Cheney
Edna Cisarik
William Colket
Ralph Collins
Douglas Crompton
Cathleen Dudek
Betty Eisold
Clare Fisher
Alvin Gutt
Andrew Hall
David Hammond
Earl Hancock
William Heil
Dennis Herbert
Nicholas Hodorovich
Helen Jaconski
Thomas Karr
Geraldine Keenan
Thomas Knott
Phyllis Kuhn
Darrell Kutz
Eileen Legates
Evelyn Leiter
Edward Lucas
James McEachern
John McGee
Margaret McLaughlin
Dolores Mitchell
Colin Monro
Stephen Montney
Albert Ortiz
Michael Rankin
Robert Reed
Joanne Rossbach
Wayne Sandford
Harry Schmidt
Ronald Schwartz
William Scott
Joyce Shields
Vincent Sieracki
Christine Stewart
Dennis Stiles
Richard Tenety
Leonard Toder
John Tyburski
Elizabeth Vanhorn
Margaret Walter
Rosemary Watts
Randall Weidemoyer
Crest Wontorsky

RS

Michael Junod
Alan Kaniss
Ann Kehan
Catherine Kitchenman
Noreen Lapira
Linda MacDonald
Elizabeth Malloy
Marijane Maloney
Nicholas Mangino
Anthony Marino
Kathleen Montrey
Daniel McCauley
James McPartland
Joan Miller
Lynn Peaslee
Margaret Pembroke
Joseph Ponden
Frances Prettyman
Lynne Prugh
Emil Rongione
Faye Roseman
Lois Savage
Paul Scherer
Susan Schopfel
Kathleen Smith
R. Strunk
David Torr
Sandra Weathers
Roseanne Wehrs
William Wiggs
Barbara Wiley
David Woodcock
Cynthia Yanoff

A to Z Maintenance keeps us sparkling

Photos by Regina Gasuk

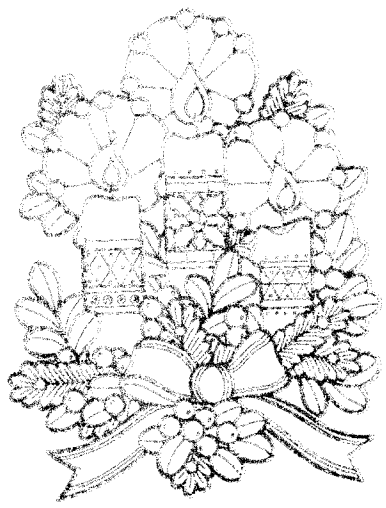
(l to r) Edith Williams, Tunlo Pham, Dot Petrun, Son Nguyen, Marty Clark, Chut Nguyen, Auh Thi Tu, Eleanor Richardson, Duoug Trau.

1st row (l to r): William Thompson, Norman Perkins, Derek Holmes; 2nd row: Frank Bishop, Stanley Okoro, Joe (Doc) Gaskin; 3rd row: Larry Johnson, Joe Tarvin, Al Brown.

(l to r) Ricardo Richardson, Joe Moses, George Johnson, John Suggs and John DeBoer.

Phoung Tran

Odessa Morris



Marine Reserves sponsor Toys for Tots program

Photo by Mary Ann Brett

NADC's Marine Corps Liaison Officer Major Daniel Swindell (left) accepts this year's first Toys for Tots contribution from CAPT Edward Sturm, Center Commander. The Marine Corps Reserve has administered this successful campaign for 38 years.

Theresa Fisher (left) and Chut Nguyen (right).

Decorating defects dampen December delight

by Mike Masington

With the end of December fast approaching, Og and Lilting Lava were busy getting ready for the celebration of Loualbano. Loualbano at the time had no religious significance, in fact it had no significance whatever except to mark the end of a six-month period of gaudy decorations and sales in department stores. Traditionally, Furnfrud, the god of bread mold, rode Scotchgard, the firebreathing fur ball, to the homes of bad boys and girls and after telling them to be good, ate them. (Look folks, I didn't say it was a nice tradition, but history is history). To ward off Furnfrud, people gave each other bad looking ties, awful perfume, and a particularly virulent form of poison known as fruitcake. (These customs of course have continued to this day).

Og erected the Loualbano tree in a picturesque spot next to the cave fire. When he'd bought it five weeks ago it was an ugly deep green, but now after being stored in the warm kitchen it was turning a lovely golden brown. The ostentatious ornament-oriented Og then began stringing the Loualbano lights (he had invented electricity the year before specifically for this purpose, since the pine torches he had used previously had scorched his cave paintings.) Of course as in every modern home the tree was three feet too far away from the nearest outlet, so Og employed another new invention, the extension cord, to overcome this problem.

All went well until Loualbano morning when his son Nimrod unwrapped his new toy, Destructo-Saur, the remote-controlled, totally self-powered, fully operational, half-scale model of a tyrannosaurus rex. ($49.95 batteries not included). Now Nimrod was only five years old, and although the label on the box did note that only adults between 30 and 45 with advanced degrees in both electrical engineering and quantum physics along with a medical certification and a sincere death wish should purchase the toy, Og knew that *his* precocious offspring could handle it. As the proud paleolithic pop watched, Nimrod finally figured out how to open the box and push the control button marked "Terminal Vengenance." Og became a bit nervous at this point as Destructo ate the couch, but his nervousness soon elevated to minor concern as the behemoth stomped uncontrollably across the living room until it tripped over the extension cord. Minor concern now became definite worry when the yank in the cord caused a defective light string to short out and ignite the tree. He then realized that panic was in order as the unsecured tree fell into the nearby fire and flared like Vesuvius. Aside from the tree however, Destructo was now in a real snit, and continued to rampage and snack on the furnishings until it munched on one of the fruitcakes and promptly died.

The neighbors notified the local fire department who quickly responded and extinguished the blaze with their 1000 G.P.M. mastadon pumper. Smokie Blaze, the fire chief, came in to survey the wreckage and pulled Og aside for a little chat. "Og," he began, "there are several things you need to remember to have a safe Loualbano."

"First, make sure your tree is fresh and green when you set it up. Buy it as late as you can and store it outside if possible until the last minute. Once you've put it up, keep the trunk in water to replace the moisture it loses. This will limit your chances of having the thrill of a forest fire right in your home."

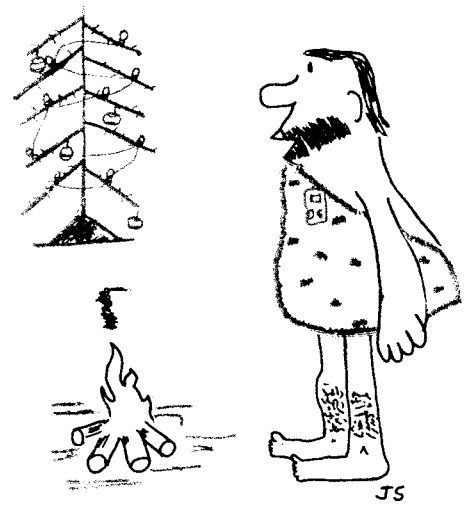
"Second, set your tree up on a sturdy stand, and if necessary secure it by tying the trunk to something stable. Also, never locate it near an open flame or other source of heat. This will save wear and tear on your tree, not to mention your living room."

"Third, before you put them on, check your light strings to make sure they are in good condition, and when you hang new ones see that they have a U.L. approval label on them. Otherwise, you may start a new tradition by having fireworks as part of the holiday season."

"Fourth, avoid using an extension cord, but if you must make sure it too is in good condition, and run it along the floor and out of the way. Having your relatives launched across the living room is not considered in keeping with the spirit of the holiday."

"Finally, only buy toys that realistically match the age and ability of your child. Anything beyond that could have disastrous results as you may have noticed."

Og was grateful for the rescue and words of wisdom, and felt he had to reciprocate. "Blaze I really appreciate everything you've done," he said. "Here how about a fruitcake to take home." "Ah, no ah, thanks anyway," responded the reluctant Smokie. My mother-in-law already gave me one."



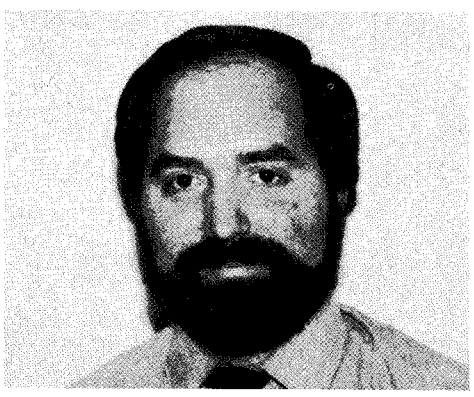
VIEWPOINT

Photos by Regina Gasuk

This month's question is:
What holiday traditions do you observe?

"I do my part to observe all kinds of 'holiday cheer' — parties, cookies, egg nog . . . Happy Holidays!"

Bernadette Weber (Code 01A1)

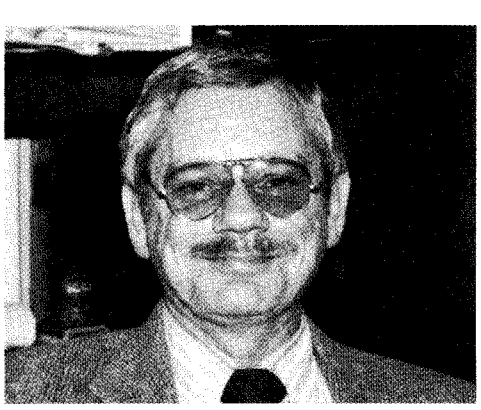


"The holiday tradition of giving — I still believe in Santa Claus. Everyone at this time of year seems to be a little happier because they are filled with the yuletide spirit. This lasts until the new year when all the charges are due."

Mike Harding (Code 0211)

"My favorite holiday tradition is having all eleven of my nieces and nephews together to sing Happy Birthday to Baby Jesus and blow out the candles on His birthday cake."

Annmarie Burke (Code IFE)



"Traditionally Christmas day means covering the most miles to visit the most relatives in the worst vehicle in the worst weather — the kids love it, but I'm a wreck!"

Jackie Benner (Code 0342)

"Every Christmas I return gifts for the same reason. I'm another size larger."

Dennis Bing, (Code 092)

"Soon we will celebrate Chinese New Year. It is an occasion for family reunion, good food and fun. We stress respect for our elders and for our young."

Dora Huang (Code 8131)

"My favorite is spreading holiday cheer to the owners of Bamberger's, Bloomingdale's, Strawbridge's, A&S, Wanamaker's, Toys R Us, Best, K-Mart . . ."

Sherry Kabin (Code 034)

Technical Highlights

CONDUCTIVE POLYMERS

Advances have been made in the synthesis of new conductive polymers, but their lack of stability, poor mechanical integrity, and lack of processibility have hindered their use. Recent work at NADC resulted in the synthetic studies of a conductive polymer with excellent stability, good mechanical behavior, and potential processing characteristics. This work on oxidized conductive polypyrrole/anion materials has indicated that the mechanical behavior is strongly dependent on the synthesis conditions of potential and current density.

A one decade loss in conductivity upon a three-year ambient exposure was found which makes this material the most stable conductive polymer investigated to date. X-ray results indicate a non-homogeneous microstructure which was also dependent on synthesis conditions. In addition, recent efforts have indicated the possibility of processing the polymer through heat setting or thermoforming. These material advancements have significant implications regarding electromagnetic attenuation applications now being sought in the emerging naval materials task of the Aircraft Materials Block Program.

SOVIET SUBMARINE NAVIGATION STUDY

NADC has been tasked by the Naval Intelligence Support Center (NISC) to conduct studies and analysis and assess Soviet submarine navigation capability.

DNL SOFTWARE ENGINEERING ENVIRONMENT (SEE)

A management plan was completed for the Director of Navy Labs (DNL) for the implementation of Phase I of a Software Engineering (SEE). The objective of Phase I of the DNL SEE is to competitively procure a common software tool set for the DNL Centers to support the development, test and maintenance of software for Tactical Embedded Computer Resources (TECR). The approach is unique in that it is predicated on a common tool set running under the UNIX Operating System; this approach will not only provide for software transportability but will enable the competitive procurement of both the software tools and computer hardware systems.

V-22 PROGRAM

In house testing and evaluation of the following was performed for validation of materials and hardware applications to the V-22:

— Low energy impact testing of fuselage-type structure

— Fatigue testing of IM6/3501 composite specimens

— Composite manufacturing techniques; quantify physical properties

— 5,000 psi CRES/Kevlar hoses, fittings; impulse/flexure properties

— Field evaluation of crash energy attenuating cargo tiedowns

— Night Vision Goggles compatibility of cockpit lighting components.

H-46 HELICOPTER EMERGENCY FLOTATION SYSTEM (HEFS)

Two HEFS full system tests were conducted at NAVAIRTESTCEN Patuxent River, MD on H-46 BUNO 153344 completing the fifteen test TECHEVAL series. These tests were actual water landings which demonstrated both the automatic and manual actuation of the HEFS. These two tests were conducted on 25 Sept and 1 Oct 85 and complimented the thirteen full system tests conducted on an H-46 hulk at NADC detachment at NAS, Key West.

Aircraft flying qualities evaluation were also completed. Preliminary evaluation showed negligible effects on flying performance as compared to the baseline aircraft. In-water evaluations showed significant improvement in aircraft stability and handling characteristics.

Aircraft is presently being prepared for OPEVAL to be conducted by HMX-1, Quantico, VA during the First Quarter of FY-86.

CARRIER AIRCRAFT LANDING SURVEY

Completed a day/night photographic survey aboard the USS ENTERPRISE of carrier aircraft landings using a series of infrared flashers synchronously controlled by a 70mm camera system that covertly illuminated the landing area. This survey was the most successful to date, producing film records of 3300 carrier landings. The data resulting from analysis of the records will be used to refine design requirements and to substantially increase understanding of night carrier landing loads and safety factors.

Blood donors give from the heart

The following personnel have donated blood during the Fall Red Cross Bloodmobile visit:

01A Staff Jean Dowds, Jerry Guarini, Theresa Spencer; **02 Comptroller** Rhea Koncz, Margaret Rudolph, Edwin Scholl, James White; **03 Civilian Personnel Office** Neil Abramson, Geraldine Keenan, Robert Pomrink, Lois Savage, Bernard Skillens; **04 Command Administration** Ada Fisher, John Pessano; **05 Computer Department** Karen Churnetski, James Oliver, Alan Reines, Robert Smith; **10 Directorate Command Projects** Judith Anderson, Debra Earney, Lorraine Kittner, William Kohler, Lynn Peaslee, Janet Short, Keven White; **20 Systems Directorate** Dennie Baker, John Bowes, Frances Davis, Carlos Falcon, Miriam Lentz, Carla Mackey, Jeffrey Mansfield, Thomas Michalski, Richard Mitchell, Kristina New, Robert Oakley, Anthony Opiatowski, Alvin Spector, Pascual Spensieri, Stephen Sterchak, Joyce Sweeney, Deborah Sztubinski, Steve Torak; **30 Sensors & Avionics Technology Directorate** David Allocca, Patricia Aspinall, Walter Reamer, Roland Bender, Kevin Birney, Charles Campbell, Edwardo Danganan, Theresa Dedominicis, Mary Feeley, Robert Gallis, John Harris, Roger Hontz, Joseph Kaszupski, Dawn Keiser, Lorraine March, Milan Matura, James Marshall, Edward Mebus, Robert Melby, Paul Moser, Scott Natter, Joseph Oriti, Stephen Potchak, Louis Rakszawski, Michael Rankin, Harry Ricca, Frederick Rineer, Leonard Roach, David Schuck, John Sniscak, John Tepper, Chris Thompson, John Toner, John Wilks, John Williamson, Akira Yoshida; **40 Communication and Navigation Technology Directorate** Edward Beals, James Buggy, Frank Corredine, Craig Elicker, Steven Fleischut, Anthony Geneva, Dorothy Gramlich, George Lowenstein, Marvin May, John McFadden, Thomas Murphy, David Mutschler, Gerald O'Hara, Philip Sanborn, Donald Sawyer, Walter Schoppe, Peter Shaw, William Zane; **50 Software and Computer Directorate** Edward Beach, Carol Blakey, Barbara Cavender, George Delisi, Ralph Fink, Karl Geist, Jeffrey Irvin, Helen Keller-Surman, Edward Monaghan, Robert Piras, Jeremy Robinson, Sharon Robinson, Carl Schmiedekamp, Frederick Stowell, John Supp, Dennis Sutton, Robert Zwissler, James Ward; **60 Aircraft & Crew System, Technology Directorate** Julieta Booz, Reynolds Brooks, James Cisco, Lisa Cowles, Edward Deesing, Michael Doyle, Ronald Emery, Anthony Eng, John Felix, Paul Gasuk, Thomas Haug, Eileen Healy, Charles Hegedus, James Henderson, Marshall Hynes, David Keyser, Fred Kuster, Richard Lee, Mark Lilly, Marijane Maloney, Robert McConnell, Charles Miller, Wayne Mondelblatt, John Ohlson, Richard Paciej, John Parker, John Quartuccio, John Reilly, Glenn Rhodeside, Irving Shaffer, Timothy Springer, Sandra Steiner, Nancy Tepping, Marshall Thomas, Daniel Wells, Keith Wills, Craig Wood, James Wright, Thomas Zenobi; **70 Planning Assessment Resources** Donald Furmanski, William Myers, John Scott, Alan Victor; **80 Engineering Support Group** Joseph Clay; **81 Technical Services Department** Joseph Armstrong, Melvin Berg, Jeffrey Biscardi, Michael Blankenship, George Boyle, Catherine Burian, Eugene Byers, Joseph Dwornik, Richard Guinan, Robert Hall, Vincent Loiseau, Michael Rogalski, George Rossi, Ervin Rothermel, Martin Ruzansky, John Towarnicki, Edmond Turmelle, Malio Ventresca, William Wiggs, Larry Williams; **83 Public Works Department** Lenwood Broomer, Roy Deese, John Kelly, Robert McFetridge, William McKenna, Thomas McLaughlin, Marlene Picard, Clifford Tierney, Lewis Trautz; **84 Supply Department** Clare Ashley, Loretta Dunn, Norman Mitchell, Selina Ridpath, Christopher Veith, Milton Weaver; **90 Navy Publication & Printing Office** Ross Hendricks; **91 Customer Service Office** Kenneth Bouy; **95 Naval Regional Medical Center Branch** Stuart Beyer, Brian Ellison, Susan Nugent; **Others** Kay Bishop-Oldenburg, Deborah Bridges, Anthony Cerino, Ruth Daly, Glenn Degutis, Mark Dungan, John Finegan, James Kearney, Rachel Murray, Joyce Smith, Charles Spears, Jack Starrantino.

Photo by Jim Kingston

Lockhead supports CFC-85

Ann Cicippio (center), Lockheed Corp. representative presents a $248 check to Combined Federal Campaign Chairman Joe Cody (left) and Center Commander CAPT Edward Sturm (right). The money was donated by local Lockheed employees.

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