



- Non-smoker fuming
- Technology Base Office
- 'Twas the season
- King remembered
- Science Advisors needed
- Photo Contest

## \$13.7M approved for new aircraft technologies laboratory

By Mary Ann Brett



Site of planned Aircraft Technologies Laboratory at NADC

The Center's proposed Aircraft Technologies Laboratory is nearing reality with the recent approval of \$13.7 million for its construction in 1991.

According to the Air Vehicle and Crew Systems Technology Department the planned 65,000 sq. foot building will house extensive new facilities for continuing and expanding research and development in areas critical for the success of Naval aviation in future warfare scenarios.

These areas include composite materials for use in lightweight highly maneuverable aircraft; Rapid Solidification Technology powder metallurgy for low cost complex shapes and exotic alloys; high temperature jet engine turbine blade materials, coatings and composites; materials for corrosion protection of aircraft structures and avionics; lightweight hydraulic power systems; and, new adhesives, sealants, and lubricants for Naval aircraft.

"NADC leads the way in materials and structures technologies for aircraft," said Dr. John DeLuccia, head of the Aerospace Materials Division, "the new laboratory will be the keystone in maintaining our technological edge as we enter the 21st century."

## Base closure commission excludes NADC

By Jim Kingston

For weeks prior to the public release of the base closure list, hardly a day went by without a call to our "Grapevine" hotline asking, "Is NADC on the list?" "When is the Center closing?" Well, the NADC hotline phone doesn't ring much any more . . . now that the big question has been answered — finally. The answer is: "None of the above!"

On Thursday, 29 December, live on C-SPAN and CNN, the Defense Secretary's Commission on Base Realignment and Closure made its report public. The report's findings and recommendations affect 145 DoD installations — but *not* the Naval Air Development Center.

After a collective sigh of relief, we can now march on safe in the knowledge that at least the politically motivated base closure lists on which we appeared are gone. However, on the cautionary side, a couple of final

## Aluminum alloys symposium makes industry allies

By Mary Ann Brett

The goals of the first Navy-sponsored aluminum-alloy symposium held by NADC recently were optimizing the uses and properties of aluminum alloys while potentially saving the government hundreds of thousands of dollars. The symposium, held at the Sheraton Valley Forge attracted nearly 100 key researchers from industry, academia and the military services.

Dr. William Frazier, a materials engineer in the Advanced Metallics and Ceramics Branch of the Air Vehicle and Crew Systems Technology Department, along with co-workers Mary Donnellan, Dr. Evi Lee and Dr. Jeff Waldman, orchestrated the three session meeting which addressed high temperature aluminum alloys, aluminum lithium alloys and metal matrix composites.

Frazier explained the advantages that could result from optimum use of these alloys. He said, "Aluminum lithium has the potential to increase stiffness by 10% in presently used alloys while also reducing weight by

10%. High temperature alloys, some developed here at the Center, could increase usable temperatures by 150° Centigrade. High mach vehicles able to use aluminum (which has a density of 2.7) instead of titanium (density 4.5) could realize significant weight savings."

Many favorable comments were exchanged in both directions, agreed the symposium coordinators. Said one,

"we learned what capabilities are available off-Center and they are now aware of what we do and what we need."

"For the first time," said Frazier, "attendees were able to hold in-depth discussions on specific critical issues and hear the Naval aircraft community's needs, concerns, desires and goals in this new and emerging technology area."

## Small business goals exceeded

By Jim Kingston

NADC has exceeded its small business contracting goals by a significant margin for the fiscal year ended September 30th.

According to John D. Scott, Deputy for Small Business, against a total direct purchasing authorization of \$186 million, the Center directed 44% or \$82 million to small businesses. Our overall small business goal was 39%.

In a further breakdown of these

goals, Disadvantaged/Minority businesses were budgeted for 7.7% and received 9.7% or \$18 million. Women-owned businesses were targeted to receive \$1.5 million and ended up with nearly \$2 million.

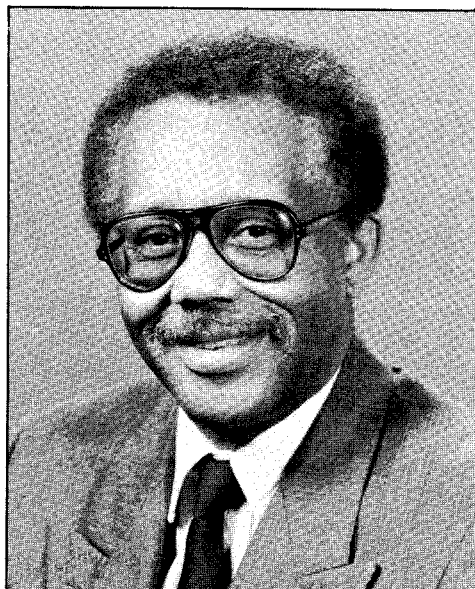
This is the third time NADC has exceeded its small business goals. Earlier this year, the Center received the Secretary of the Navy "Omnibus Award" for Small and Disadvantaged Business Utilization in recognition of its 1987 achievements.

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# Command Corner



**Captain Curtis J. Winters**  
Center Commander



**Guy C. Dilworth, Jr.**  
Technical Director

## To all hands:

### POLICY ON PREVENTION OF SEXUAL HARASSMENT

We are committed to ensuring that all employees, (particularly managers, supervisors and team leaders), know and understand their responsibilities in recognizing and preventing sexual harassment in the work environment. The Department of the Navy (DON) defines sexual harassment as a form of sex discrimination involving unwelcomed sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature when: (a) submission to or rejection of such conduct is made either explicitly or implicitly a term or condition of a person's job, pay, or career; or (b) submission to or rejection of such conduct by a person is used as a basis for career or employment decisions affecting that person; or (c) such conduct interferes with an individual's performance or creates an intimidating, hostile, or offensive environment.

Sexual harassment in any form will not be tolerated at the Naval Air Development Center or in any of its work-related environments, such as temporary duty stations. Specifically, no person shall threaten or insinuate, either explicitly or implicitly, any behavior as defined above. Other sexually harassing conduct in the workplace by supervisors or nonsupervisors is also prohibited, e.g.,

offensive sexual flirtations, advances, propositions; continual or repeated verbal abuse of a sexual nature; graphic or verbal commentaries about an individual's body; sexually degrading words to describe an individual; and displaying sexually suggestive objects or pictures in the workplace.

An equitable work environment for all is necessary to maintain morale and ensure teamwork and professionalism. The responsibility to create a productive working atmosphere free from sexual harassment and to protect the rights of DON employees, both civilian and military, is a top priority issue. Conduct violating this policy will result in disciplinary action up to and including removal.

It is the responsibility of every supervisor and manager to inform their employees, and those dealing with Center employees, of this policy and to ensure that any instance of sexual harassment is dealt with in a prompt, remedial manner. Employees subjected to acts of sexual harassment should inform their supervisor or contact the Equal Employment Opportunity (EEO) Office, on extension 3061. The EEO Office is available for further guidance and training.

## To all hands:

### HIGH VISIBILITY, LONG-TERM, OFF-CENTER MANAGEMENT/EXECUTIVE DEVELOPMENT PROGRAMS

The continued development and growth of our technical and support personnel are human resources goals consistent with both employee and organizational objectives.

With this in mind and to assist in career development planning, below are listed those key off-Center, long-term (4 months or longer) career enhancement and development opportunities we believe should be undertaken by future leaders of this Center. The list is not all inclusive and we realize that individual aspirations and/or organizational necessities may suggest additional developmental opportunities.

We are committed to improving our

long-term development and reentry program. Both the Civilian Personnel Department and the Warfare Systems Analysis Department are currently developing initiatives which will enhance the opportunities available.

Individuals interested in taking advantage of the numerous career development opportunities available are encouraged to discuss their career development plans with their management chain. Detailed information regarding the specifics of each of the opportunities may be obtained from John Markow of the Employee Development Division who can be reached on extension 1026.

PROGRAM	NOMINATION DEADLINE	START/END DATES
Naval Scientist Training & Exchange Program (NSTEP)	Varies	Varies
National War College	5 Jan	Aug - Jun
Industrial College of the Armed Forces	5 Jan	Aug - Jun
Naval Postgraduate School	15 Jan	Oct - Sep
Graduate Study Award Program	15 Jan	Sep - Jun
Naval Science Assistance Program (NSAP)	Feb	Aug - Feb (18 mos)
Naval War College	1 Feb	Aug - Jun
Defense Systems Mgt College	15 Mar 15 Sept 15 Dec	Jul - Dec Jan - May Apr - Sep
Princeton Mid-Career Fellows Program	1 Apr	Sep - Jun
Fleet Assistants	Apr	Apr - Mar
Harvard Business School	15 Jul 15 Oct	Sep - Dec Jan - Apr
PhD Fellowship Program	1 Dec	Sep - Varies
Sloan Fellows Program — MIT	1 Dec	Jun - May

GUY C. DILWORTH  
Technical Director

C. J. WINTERS  
Commander

## Letter to the Editor

### DESIGNATED SMOKING AREAS


"Since the announcement of designated smoking areas, I have noticed an increased discomfort due to smoking. This discomfort is largely due to the fact that smoking is limited to corridors and therefore has become more concentrated in public areas.

"The location where my complaint is the largest is outside the auditorium. I was under the impression that smoking areas would be limited to back corridors, not main hallways. Since I suffer an allergy to tobacco, I truly resent the fact that an area I must pass through to get from my office on the

second floor of building 2 to anywhere else on base is designated as a smoking area.

"Another problem that has occurred since this new policy has been in effect is there is no enforcement of the designated areas. Some smokers have assumed the right to smoke in any corridor, whether it has been designated as a smoking location or not. More of these smokers also insist on walking with a lit cigarette, and on crushing the butt of the cigarette onto

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Commander, NADC	CAPT Curtis J. Winters
Technical Director	Guy C. Dilworth, Jr.
Public Affairs Officer	James S. Kingston
Editor	Mary Ann Brett



**Technology:**

# Base of the future; future of the base

By Mary Ann Brett

More than a year ago, the Technology Base Office (TBO), Code 01B, was established at NADC. Let's take a look at how this office fits into the fabric of the Center.

The TBO consists of the Technology Base Manager (TBM), Dr. Arno K. Witt, and a staff of four. Witt, a former Manager of the Electro Optical Development Division, has been at the Center since 1963 and has received a B.A. and Masters degree in Physics from the University of Pennsylvania and a Ph.D. in Physics from Drexel University.

Our Technical Director (TD) Guy Dilworth, describes the TBM as "my V.P. for technology matters." Witt describes himself as responsible for liaison with the Office of the Chief of Naval Research and the Systems Commands (SYSCOMS) technology managers as well as a member of the consortium of Navy laboratory technology base managers. Witt considers his Center role a rather delicate one. Although responsible for 6.1, 6.2 and 6.3A programs from the Center's perspective, he has little direct control or management of individual projects.

**"... we must support innovative ideas ..."**

"My primary goal," says Witt, "is to strengthen our technology base as related to our mission areas and Center thrusts. To do this in today's economic environment we must support innovative ideas, leverage our own and industry's technology efforts, and ensure successful transitions within our technology base. This office must create a balance of our technology base resources to meet those Center thrusts."

Witt has more direct control over several programs which can support the technology base. The largest of these is the Center's IR/IED Program. Approximately \$4M dollars are received annually by NADC from

OCNR to be used at the discretion of the TD for Independent Research and Independent Exploratory Development projects.

The Industry IR&D Program, through the Department of Defense, is provided billions of dollars to perform research and development projects of their own choosing. The TBM is employing new techniques which will make it easier for the Center to participate in this program.

Center monies are made available for up to 15 Summer Faculty Fellows to visit the Center and perform research for 10 weeks during their summer break. Close attention will be paid to match these efforts to needs.

Dr. Asha Varma, as Witt's assistant, is involved in all aspects of the Office. She plays a major part in the management of the IR/IED Program. A prolific author with several reference books to her credit, Varma came to NADC in 1983 and was the Team Group Leader for Research in the Materials Production Branch of Code 606. She received her undergraduate and Masters degrees from Bareilly College, and her Doctorate from Banaras Hindu University, Varanasi, India.

Jerry Polin, in managing the IR&D Program is a principal interface with our industrial technology base counterparts. Before becoming part of the TBO, Polin's principal effort at NADC evolved around his human factors expertise in Code 60. He has undergraduate degrees in Aero Engineering and Psychology from Princeton and New York Universities respectively, and a Masters in Educational Psychology and an M.B.A. from Temple University.

Michael C. Kreuter has a Bachelors degree in Electronic-Physics from LaSalle University and has varied experience at NADC since coming from General Electric, Reentry Systems Department in 1967. Kreuter is responsible for interfacing the Block Programs (which encompass the majority of development work accomplished at the Center) with the other technological efforts of the Center. According to Witt, Kreuter brings a wealth of systems knowledge to this position. His knowledge of the Block Programs is an important input



Photo by Clarence Watson

The Technology Base Office personnel, Code 01B, gather for a staff meeting. L to R: Dr. Asha Varma, Jerry Polin, Rita Breitenbach, Dr. Arno Witt, Michael Kreuter and Carol Van Wyk.

**"... applied technical expertise ... gives our products the value added."**

for the TBM.

Carol Van Wyk has been at NADC for three years, originally part of the Planning Assessment Resources organization. Her undergraduate degree from Hope College, Michigan, is in Biology with a Chemistry minor. She has a Masters degree in Teaching from Temple University and her last position outside was that of the Chairperson of the Science Department at the Hatboro-Horsham school. Carol is responsible for all the Center's programs involving academia.

Witt feels "This Center's make-up has always been application oriented. It is this applied technical expertise at all levels of the technological hierarchy (research through production) which gives our products the 'value added' and distinguishes us from the SYSCOMS' role. I don't believe our applications thrust should change," he said. "We have that proper mix of pure research and application engineering and the imbedding of our research within our application engineering

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## Technical Highlights

### Automated Weather Observing System

During December, an engineering site survey of the Naval Station, Guantanamo Bay Cuba was conducted. This was the last of 65 site surveys conducted by this Center over the last 15 months for the purpose of defining the requirements for an Automated Weather Observing System (AOS). AOS will modernize and automate surface weather observations at Navy and Marine Corp air stations to improve the safety of flight operations.

### High PRF Adaptive Interference Cancellation

Navy airborne early warning (AEW) radar systems traditionally have operated at low pulse repetition frequency (PRF); however, future systems will operate at high PRF. Implementing a sidelobe canceller in high PRF radars is complicated by the increased clutter return at all ranges compared to low PRF radars. A technique to cancel jamming interference in the sidelobes of high PRF radar systems is being tested in the high PRF adaptive interference cancellation project. A demonstration system is being built for the HARPSS high PRF AEW radar system. In

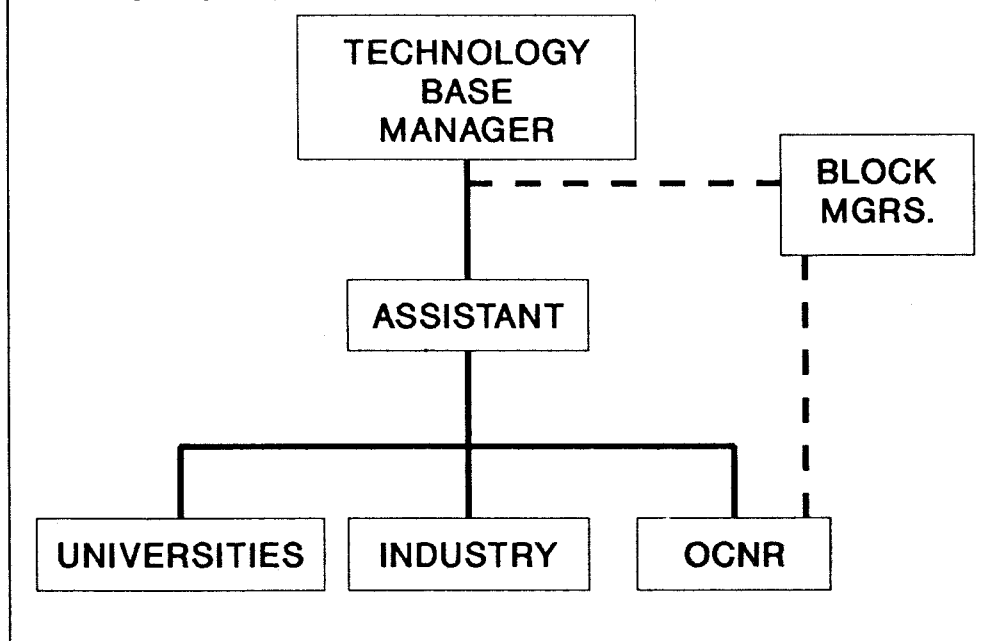
December 1988, NADC implemented a digital synchronous demodulation system (I and Q detector) in hardware. This system provides state of the art performance (.1 degrees of quadrature match) which is required in order to cancel the jamming energy.

### Centrifuge Modifications Proposed

The Aero Structures Division has developed a finite element model of the Center's centrifuge arm structure using the Graphical Interaction Finite Element Total System (GIFTS) to ensure continued safe operation (i.e., the arm structure has a long history of weld cracks) and to evaluate contractor proposed structural modifications which are intended to eliminate undesirable dynamic motions experienced during centrifuge simulations. Initial static and dynamic analyses were completed and results verified by conventional National Aeronautics and Space Administration Structural Analysis (NASTRAN) analyses. A longer term goal is to have an accurate model of the centrifuge such that structural deflections can be accounted for in the development of the simulations.

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### TECHNOLOGY BASE OFFICE ORGANIZATION CHART



# 'Twas the season at NADC



Photo by Margaret Vigelis

**Above: Anxiously waiting children finally get to greet Santa as he arrives at NADC to distribute gifts.**

**Right: The NADC Choral Group conducted by Helen Keller-Surman provided musical entertainment.**



Photo by Margaret Vigelis

### By Margaret Vigelis

The Naval Air Development Center's civilian Welfare and Recreation Association (W&R) hosted its annual Orphans Christmas Party on Saturday, 17 December, 10:00 am to noon in the Center's cafeteria. This event has been a tradition here at NADC for the past 35 years.

More than 100 children, toddlers to teens, from Bethanna and Christ Home located in Southhampton and Warminster, respectively, enjoyed pizza, soda, ice cream, and entertainment highlighted by a visit from Santa who arrived on an NADC fire truck.

To start the festivities, a play was presented by ten students from Council Rock High School Drama Club Director's Class followed by carols sung by NADC's own Choral Group, then the Center's Commander and his wife, CAPT and Mrs. Curtis J. Winters, introduced the main attraction, Santa Claus, who presented a gift to each child.

W&R contacts Bethanna and Christ Home in early November, providing them with Sears Wish Books (Sears Catalogs) to give to the children to pick out a toy or clothing they would like for Christmas — up to \$20. Then Santa's W&R elves buy the gifts selected, wrap and tag each one, and make sure each child gets what he or she wished for.

From \$2500 to \$3000 is donated by the Welfare and Recreation Association, from funds contributed by employees through our membership drive, film sales, ice cream sales, etc., to cover the cost of this worthwhile event.



Photo by Jim Kingston

**The traditional Toys for Tots campaign, sponsored by the U.S. Marine Corps once again produced barrels full of toys for needy children in the area. Here, NADC's Marine Liaison Officer Major Barry Hansen (left) and CAPT Steve Taylor, USMC, Toys for Tots coordinator for Montgomery and Bucks Counties are among the first to place a toy in this year's barrel.**



Photo by Jim Kingston

**Other holiday activities included the NADC Officers' Wives Club annual Christmas Bake sale. The homemade cakes, cookies and confections didn't last long but proceeds will long benefit the various charities to which the OWC contributes.**



## EEO is for everyone

# "PEOPLE" is the aim

### American Forces Information Services

Some 122 representatives from 37 states, the Virgin Islands and the military services gathered in Atlanta last July to plan for the fourth national holiday honoring Martin Luther King Jr.'s birthday. His widow, Coretta Scott King, challenged them to use the holiday to bring more "meaning and substance to the elimination of poverty, racism and violence worldwide."

King's birthday anniversary is celebrated on the third Monday of January each year. This year's DoD worldwide observance ran from Jan. 6 through Jan. 16, to coincide with the dates of the national tribute.

This year's theme is: "Living the Dream: Let Freedom Ring! (for universal peace with justice, human rights, social and economic progress for all peoples through Kingian non-violence.)"

The 'Living the Dream' theme will be emphasized in the secretary of defense's letter to the services worldwide. "The service secretaries are encouraged to participate in such a way that it will translate down to the installations."

Holiday observances around the world included such activities as a fashion show, golf tournament, dance and luncheon in Japan; a prayer breakfast, fashion show and disco dance in Korea; a tree planting, plays, skits, gospel choir concerts, youth activities, Department of Defense Dependent Schools activities and a marathon in Europe; and a prayer breakfast, fashion show, essay contest and youth activities. Here at the Center, a videotape entitled "An Amazing Grace" was shown in the auditorium for Center employees.

The holiday commission asked that

celebrations be aimed at "people to work with people to help people." Some social problems they intend to focus on include substance abuse, teen-age pregnancy, school dropouts and pushouts, homelessness, hunger and illiteracy.

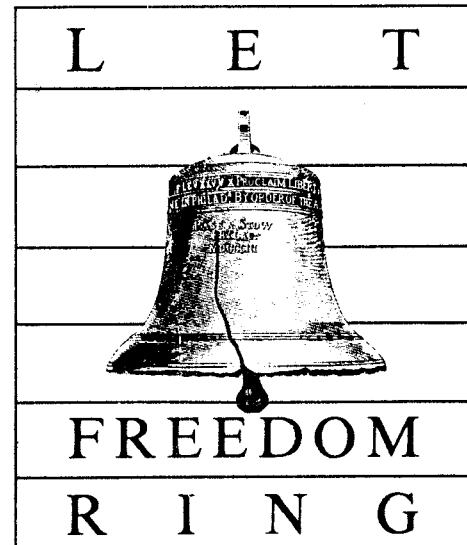
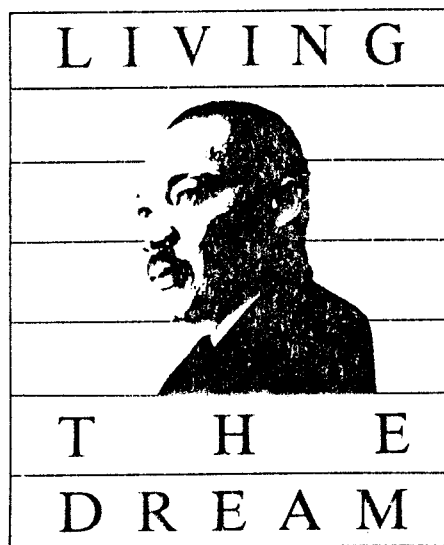
Activities should "touch the lives of those in need, including children at risk, senior citizens, the handicapped, persons suffering from injustice, victims of discrimination and the disenfranchised," according to the Martin Luther King Jr. Heritage Action Projects.

Atlanta, King's birthplace and the site of the Martin Luther King Jr. Center for Nonviolent Social Change Inc., is the centerpiece of the annual observance. Special activities are focused on the nation's capital.

San Francisco is being considered as the site of the American segment of the international observance. San Antonio has been recommended to become the regional center for the annual Southwest observance.

Philadelphia was the centerpiece for the bell-ringing ceremony. When the Liberty Bell tolled there at 12:30 EST on Monday, Jan. 16, 1989, it signaled the pealing of replica Liberty Bells throughout the nation and around the world. The bells called for the holiday to be a day of universal peace without acts of violence or war.

In Washington, the national holiday events took place on Monday, Jan. 9, 1989. The observance included a presidential proclamation ceremony at the White House, a peace and justice service in the Rotunda at the U.S. Capitol in cooperation with national peace organizations and the Vietnam Veterans Association, a diplomatic reception at the State Department and a musical tribute to King, at the Kennedy Center Concert Hall.



Meet the challenge:

## New EEO counselors needed

From the DEEO Office

Are you an objective employee who likes challenging assignments and who is personally committed to the promotion of equal employment opportunity?

The EEO Officer is now recruiting for EEO Counselors. All full-time permanent employees are eligible who have their supervisor's approval (takes about 5% of your work time).

The major duties of EEO Counselors are to gather the facts of a complaint and to prepare a report based on this information. A complaint may be filed when any employee or applicant for employment perceives that they have been discriminated against based on their race, religion, color, national origin, age, sex (including sexual harassment), handicap (mental or physical), or reprisal for prior EEO complaint involvement.

Counselor's will be selected based on skills in: analyzing and interpreting facts, identifying problems, reporting findings, writing and speaking

effectively, and meeting important deadlines.

One EEO Counselor, Jeff Davidson, Code 101, Electronics Engineer, Ext. 1201, spoke about Counseling, "I have found that being an EEO Counselor is a very interesting and stimulating job. It's a change from the technical engineering world. Typically, a person feels they have been discriminated against on their job, usually by a supervisor, and it's my job to try to bridge the gap between these two people and hopefully resolve the problem issues. It's a challenging job trying to solve problems between people."

Other EEO Counselors include Hazel Andrews, X2373, Code 8423; Ira Bellew, X1175, Code 5051; Carla Crist, X3921, Code 0214; Thomas Herbert, X1460, Code 1042; Chris Kirk, X1092, Code 02B; and Robert Moore, X1859, Code 8122.

Closing date is January 31, 1989. Call the EEO Office, X3061/2 or any Counselor (pictured on bulletin boards across the Center) for more information.

## Fear: not a good reason

By Mary Ann Brett

The American Red Cross Society will once again pay its quarterly visit to NADC on March 1 and 2, 1989.

In the past, hundreds of Center employees and contractors have donated during each visit.

Each donor has his/her own reason(s) for giving blood, and there are many valid reasons for not donating. But, if your reason for not donating is fear of the unknown, perhaps this information will make the process a little more familiar.

According to the American Forces Information Service, before you can give blood, you will be medically screened and must pass a comprehensive evaluation. Not everyone who wants to give blood can, and there's always a need for donors to fill the annual demand of more than 12 million units of blood.

There are four types of blood: Group O is the universal blood type and is always needed. Group A is the next most common. Group B is somewhat rare, followed by Group AB — a

valuable blood type for obtaining plasma.

If you pass the test, your local medical people will be glad to take a pint.

Donor selection criteria have been created to protect the donor, the blood supply and the blood recipient.

Who can donate? Most adults (aged 17 to 65) in good health. Donors should weigh at least 110 pounds; smaller people can, however, give a proportionately smaller quantity.

How often can you donate? Bi-monthly—you should normally wait at least eight weeks between donations.

If you qualify this far, the next step is a simple medical exam:

- **Blood sample**—taken from your finger or earlobe to determine the red blood cell volume.

- **Pulse**—should be between 50 and 100 beats per minute; less is acceptable for athletes and people who are physically fit.

- **Blood pressure**—should be no higher than 180 over 100.

- **Temperature**—should not be

higher than 99.5 degrees Fahrenheit (37.5 degrees Celsius).

If those four areas are in good shape, the next step is to provide a detailed medical history and current state of health.

Have you ever:

- coughed up or vomited blood?
- had tuberculosis, kidney or liver disease, heart trouble, Rheumatic heart disease or asthma, lung or stomach disease, cancer, diabetes, ulcers, lymph gland disease, leukemia or infectious mononucleosis?

- experienced chest pain or shortness of breath?

- had convulsions or fainting spells or previous blood donor reactions?

- had hepatitis, yellow jaundice or a positive laboratory test for hepatitis?

- injected any type of drug into your veins or skin?

- been treated for syphilis or had another sexually transmitted disease?

- been rejected as a blood donor?

- been notified that a patient who received your donated blood had hepatitis?

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## Pay days to change this summer

By Mary Ann Brett

According to a recent Navy message, Navy civilian paydays will be standardized this summer.

Currently, paydays for Navy civilians vary from the first Thursday to second Thursday following the pay period. Under the civilian pay policy change detailed in ALNAV 176/88, paydays for Navy civilians will be held eleven days, or the second Wednesday.

This policy change is effective July 12, 1989 and applies to Navy civilians, except military sealift command civilian mariners, who are paid semi-monthly. This policy change does not apply to non-appropriated fund employees. For more information, see your local pay clerk.

We will publicize the method of implementing this change as it becomes available.

# Fleet science advisors needed

By Robert Zaleski

The Navy Science Assistance Program (NSAP) will begin to recruit for FY-90 Science Advisor (SCIAD) vacancies in February.

The NSAP is a fleet-support organization established to provide assistance to numbered fleets; type commands; fleet commanders-in-chief; and the fleet Marine forces, U.S. Marine Corps. Designed primarily to solve immediate operational problems, NSAP draws its SCIAD's from the Navy laboratories and RDT&E centers.

Aimed primarily at GM-14 scientists and engineers, the successful candidate receives a temporary GM-15 and a one-year tour of duty to an operational site.

The positions have an optional one-year extension. Tentative operational sites for the FY-90 field team include COMSECONDFLT, Norfolk, VA; COMTHIRDFLT, Ford Island, HI; COMSEVENTHFLT, Yokosuka, Japan; and COMNAVSURFLANT, Norfolk, VA. Deployment will be in August 1989.

At this time, it is anticipated that the positions will be recruited as Permanent Change of Station moves. The NSAP Director is currently requesting a waiver from the limitation of TDY travel (which is 12 months).

The NSAP Coordinator for NADC is Robert Zaleski of the Fleet Interface Office (Code 30D), extension 3104.

## Letters to the Editor

Continued from page 2

the floors. This has increased the hazard to our health, not decreased it.

"At other government installations and major airframe companies, smoking is restricted to the outdoors. If this is too extreme for the smokers, then I propose that *ONE* area in each building be designated for smoking. This area should be enclosed so non-smokers do not have to suffer from the smoke. I feel that this is an arrangement that would satisfy all parties.

"At the very least, please change the policy immediately so smoking in the

hallway and bathrooms is prohibited, and leave it to each office to decide on their own policy. I respect a persons right to smoke, as long as that right does not infringe on my right to breathe fresh air and to be allergy free."

Janet L. Wild

## Commander Salutes

**Robert Berry, Harry Deal, Maxwell Zelikoff** (Code 00), **Edward Peterson** (Code 04), **Robert Finkelman** (Code 05): For volunteer participation in the Introduction to Navy Internal Review training program.

**Timothy Springer** (Code 60): For support to the Habitability and Ancillary Systems Section at the Naval Air Systems Command.

**LT Richard Erickson, Suzanne Reeps** (Code 60): For exceptional knowledge and professionalism resulting in the nomination for the 1987 Outstanding Naval Aerospace Physiologist and the 1987 Special Award in Aviation Physiology, respectively.

**Richard Chern, John Markow** (Code 03): For valuable assistance to the 79th U.S. Army Reserve Command during a recent training session at NADC.

**James Henderson, Harvey Clarke** (Code 60): For participation in this year's National Disaster Medical System exercise.

**Steven McComas** (Code 10): For valuable support to the Naval Air Systems Command on the 3-3 aircraft weapon system.

Continued on page 7

## NADC eludes base closing list

Continued from page 1

comments in the Commission's report do affect us: one that "Military laboratories should be more carefully scrutinized . . ." and a recommendation that a task force should ". . . review ongoing activities and the relationship between in-house versus contract work."

Congressman Les Aspin, Chairman of the House Armed Services Committee, held a press conference following the release of the report. He

commented that if any criticism could be made of the recommendations it would be that the Committee's actions were too modest. Aspin also noted that some of the lesser activities on the list were "givens" that really did not require committee action for closure. He pointed out that of all the services, the Air Force took the greatest hits with five major air bases slated for closure. The Congressman also noted that, in effect, this list will give a reprieve of 10 years to many DoD installations. Responding to a

question, Aspin agreed that bases could continue to be recommended for closure by the Secretary of Defense, but that such recommendations must accompany the annual Defense budget when it is submitted for approval.

Defense Secretary Carlucci has already given his stamp of approval to the report which now goes to Congress for its yea or nay. However, it is strongly expected that Congress, too, will approve it.

## Home humidification help heat, health

By Dr. Michael Blank

According to Webster's Dictionary "Relative humidity is the ratio of the amount of water vapor actually present in the air to the greatest amount possible at the same temperature." When you heat your home, a variety of problems can be caused by a low relative humidity.

You'll feel warmer at lower temperatures, so you can dial down your thermostat and *save energy* without sacrificing comfort. In addition

doctors have pinpointed excessive dryness as the cause for nose, throat and other physical aggravations. In cases where dryness is diagnosed as the cause of these aggravations, doctors prescribe whole-house humidifications.

Please note that condensation of water on the inside windows in the form of fogging or frost is usually an indication of too-high relative humidities. Be sure to keep the fireplace dampers closed when not in use. They provide an excellent escape route for heat, as well as humidity.

## Security Reminder

**GOVERNMENT PROPERTY**— Personnel who have signed for custody of Government Property are responsible for the maintenance, safekeeping, and accountability of the property. When property is discovered missing, lost, or stolen, the custodian

will attempt to locate the property through adjacent areas and inquiry among co-workers. If items cannot be located within one (1) hour, the IMPR (Internal Missing Property Report) Coordinator must be notified. NAVAIRDEVENINST 5500.4A applies.

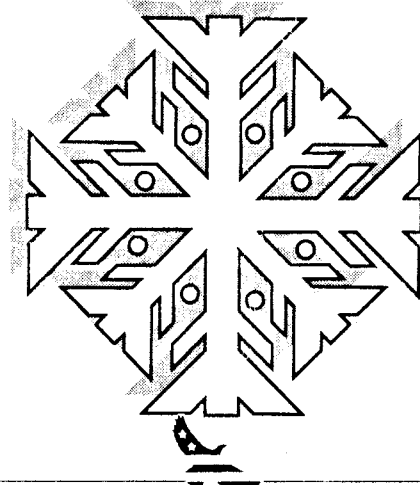


**A breath of springtime** — *This site might be unfamiliar to you but, believe it or not, it is a new addition to the Center at the Crews' Rest Club. Thanks to volunteers participating in a self-help project for the Recreational Services Division, more than 100 people can be accommodated on this spacious deck that extends across the rear of the Club and faces the pool. Think spring!*

**OOPS** — In Frank Drummonds' Letter to the Editor printed in the December 1988 REFLECTOR, both references to Indefinite "Quality" Contracts should have read "Quantity".

### HOW DO U.S. SAVINGS BONDS RESEMBLE SNOWFLAKES?

Answer: When purchased regularly, through your payroll savings plan at work, they just keep piling up. Save something each payday and before you realize it you will have a significant fund put away for a child's education, retirement, or a very special vacation. Bonds pay competitive interest rates, have tax advantages, and are safe. Ask about them where you work. Start yourself a blizzard.



**U.S. SAVINGS BONDS**



# Technology: base of the future

Continued from page 3

gives focus toward satisfying Navy needs. If we must augment our research we can do it through academia and other means available to us."

Although in a management position, Witt considers himself a "hands on" scientist who is definitely on the side of the scientist and engineer and tries to interact with them personally. "If we are to strengthen our technology base, which I feel is the corner stone of the Center," says Witt, "then we have to apply common sense in spite of all the bureaucratic regulations and other hindrances to getting the job done. We must minimize the micromanagement of our scientists and engineers and allow them as much freedom as possible to be innovative even if mistakes are made."

Witt recognizes that technology is of no value unless it finds its way into the fleet. "The transition of technology is the end goal of this office," he

**"... transition of technology is (our) end goal ..."**

emphasized. "I am not only concerned with smoother transitions within the tech base but also in the final application.

"Another goal of mine is to improve the interaction of the Center principals. Our mission is supported by a tripod made up of the ASW and TACAIR Departments along with our Technology Base. The Warfare Systems and Analysis Department provides stability to that tripod and insures the proper perspective between technology push and technology pull. The relatively new instruction (NAVAIRDEVCEININST 5200.14 of 9 March 1988) subject should go a long

way to improving the interactions of these four groups."

Also, concluded Witt, we must make sponsors more aware of our capabilities and our best scientists and engineers should be known to them on a first name basis. This Office can help publicize, but it can't make those personal visits which do the most communicating in our abilities and accomplishments."

Witt feels these goals are important not only to him but to the entire Center. He pointed out, "While Technology is the base of the future, it could also be the future of the base."

## Commander Salutes

Continued from page 6

**Henry Lystad** (Code 60): For outstanding support to Source Selection Evaluation Board as a member of the Long Range Air ASW Capability Aircraft Technical team.

**Russell Rud** (Code 50): For completion of the Sea Star Development Program Options Paper (DOP).

**Micaela DiPasquo** (Code 10): For outstanding support of the Naval Air Systems Command TACAMO E-6A Program.

**Kenneth Petri** (Code 50): For briefing members of the Swedish Defense Research Establishment.

**Juliette Booz and Marshall Hynes** (Code 60): For assisting the Naval Air Systems Command in evaluating the Long Range Air ASW Capable Aircraft competitive proposals.

**Daniel Probert** (Code 90): For superb support to the Alternate Site Study Committee for Underwater Explosion Testing.

**John Johns** (Code 60): For assistance to the Marine Corps in planning, organizing and implementing an ambitious tactical research project.

**Joseph Zanine** (Code 60): For assistance to the Naval Technical Intelligence Center on an engineering software package to assess propulsion system installation effects.

**Kathleen Stempeck** (Code 20): For initiative in suggesting the Federal Women's Program have the League of Women Voters register Center employees for the Presidential election.

**Thomas Karr** (Code 80): For significant contribution as a Procurement Management Review

team member at the Naval Training Systems Center in Orlando.

**Carla Mackey** (Code 30): For support to a Naval Postgraduate School student on his thesis, "Hypersonic Vehicles in the Outer Air Battle".

**Dr. Gloria Chisum, LCDR Ron Smith, LT Rick Erickson, Phyllis Morway, Dr. James Sheehy** (Code 60): For outstanding efforts in establishing the "Lasers in Military Operations: Technical Data Indoctrination Package" for the Naval Air Systems Command.

## Psychologist to speak on families

By Mary Ann Brett

Dr. Matti Gershenfeld, nationally known Psychologist, will address NADC employees in the Center auditorium on Thursday, February 16th. At 11:00 a.m. she will speak on "Living with a Teenager: It isn't easy" and at noon, on "Building Family Strength."

Gershenfeld, author of eleven books in her field, was invited to NADC by the Center Career Readiness (CORE) group which has recently been expanded to include management, administrative and clerical series.

Gershenfeld received her Doctorate from Temple University and did post doctoral work at the University of Pennsylvania Medical School, in Psychiatry in the Division of Family Study. She is an Adjunct Professor at Temple U. and Graduate Faculty member at Pennsylvania State University - Ogonz.

**Michael Hess and Harvey Sokoloff** (Code 50): For technical support in establishing the Non-Acquisition Program Definition Document for Surveillance Infrared Search and Track Advanced Technology Demonstration.

**AW1 Kenneth Carrigan** (Code 10): For dedication in supporting the Naval Air Technical Services Facility's automatic distribution of the P-3C Update III Channel Expansion Software Reference Manual and In-Flight Handbooks to the Fleet.

## Don't fret; give blood

Continued from page 5

Have you had:

- a blood or plasma transfusion in the past six months?
- a tooth pulled or other dental surgery in the past three days?
- rabies inoculations in the past year?
- Hepatitis Immune Globulin serum in the past nine months?
- a small pox vaccination or other major disease immunizations in the past two weeks?
- German measles vaccination in the past two months?
- Malaria or taken antimalarial drugs in the past three years?
- surgery or a serious illness in the past six months?
- a tattoo, ears pierced or acupuncture treatments in the past six months?
- a recent unexplained weight loss of 10 pounds or more?

Have you:

- been immunized to human cell/red blood cell antigens Rh factor?

- donated plasma in the past 48 hours?
  - been exposed to hepatitis in the past six months?
  - taken any habit-forming or hallucinogenic drug within the past 48 hours?
  - taken aspirin compounds within the past five days?
  - been institutionalized during the past six months?
- Do you have:
- a cold, flu, sore throat or any type of illness now?
  - skin infections? Frequent boils?
  - abnormal bleeding tendencies?
- Are you:
- under a doctor's care now?
  - pregnant or have been in the past six weeks?
  - in a high risk group for AIDS?

If you passed this medical evaluation, congratulations. You can now become one of the 12 million Americans who participate in the largest form of voluntarism.

## If the SOC fits

By Robert Janes

The penalties for violations of the Navy's Standards of Conduct (SOC) can be severe, as witness a recent decision by the U.S. Court of Appeals for the Federal Circuit. That decision affirmed the removal of a government employee from his job because of his acceptance of a gratuity from a defense contractor.

The employee involved, who served as a COTR on a Navy contract, accepted a \$200 gift from the company whose contract he was monitoring. The employee contended that he had solicited the money from another company, which he had not realized was associated with the contractor involved. He also maintained that he would not derive any personal benefit from the gift, which was intended to be used as a contribution to a little league baseball team.

The court was unpersuaded by these arguments and affirmed the Navy's firing of the man, finding that the employee's conduct had cast doubt on his ability to exercise impartial judgement in the performance of his duties. The court explained that "since the government has a compelling duty to avoid conflicts of interest and to maintain the integrity of the federal service", the removal was proper.

### Rate Information

Current rate information on U.S. Savings Bonds is available by calling the U.S. Savings Bonds Division toll-free line,

**1-800-US BONDS.**

### Winter Fitness

Shopping malls can double as excellent winter exercise rinks for avid walkers. But be sure to wear comfortable shoes.

## Technical Highlights

Continued from page 3

### First NADC S-3B Software Released for TECHEVAL

The Fixed Wing Carrier-Based Program completed a test, analysis, fix and IV&V period for S-3B 4.2.1 software on-schedule and released this package to the Naval Air Test Center for TECHEVAL start. The B4.2.1 software is a merger of Tactical Mission Program (Lockheed product) and System Test Program (NADC product) and is the first Navy S-3B software with NADC as the system software support activity. This S-3B software provides increased operational capability in the areas of communications and acoustics and greatly increased program stability.

### VP ASWOC FTAS Upgrade Completes OPEVAL

The Fast Time Analyzer System (FTAS) — VP version — completed OT-IID OPEVAL in the ASW Operational Center (ASWOC) at Brunswick, ME. The former OPEVAL report is due out in late February 1989. This follows successful development (DT-IID) testing in September 1988. The FTAS Upgrade expands Vernier capability, increases the number of available channels, improves display capability and provides better supportability (via commonality with CV-ASWM) and improved reliability (by use of MIL-STD components).

### ERAPS

Acoustic tests of the ERAPS projector were conducted at the Center's Open Water Facility. These tests were conducted to compare the projector performance with the

specification and to validate measurements made by the contractor. Pressure tests of various ceramic hydrophone materials were also conducted to evaluate several candidates for the receiving array. Testing procedures were established for safety certification of the high power lithium battery design.

### Airborne Low Frequency Sonar

Baseline performance testing of the third Airborne Low-Frequency Sonar (ALFS) advance development model (ADM) candidate produced by HUGHES and THOMSON-SINTRA was conducted at Lakes Castillon and Chaudanne in France. The ALFS is a dipping sonar scheduled as a pre-planned improvement to the SH-60F helicopter. Mechanical tests at Lake Catillon included: raise and lower speeds, auxiliary raise modes, bottom sensor actuation, automatic slowdown, emergency stop and array folding. The following sonar acoustic properties were exercised at Lake Chaudanne: source level, pulse shape, beampatterns, vertical rejection, stave sensitivity, transmitter endurance and underwater communications.

### AEGIS NCTR Experiment

The destruction of a commercial airliner by a U.S. ship in July 1988 facilitated the Naval Sea Systems Command to establish a rapid response program to address the need for Non-Cooperative Target Recognition (NCTR) capability for the AEGIS class combatants. A national search took place to identify a technology and system capable of meeting the AEGIS NCTR requirements. The Advanced

Radar Target Identification System (ARTIS), developed by the NADC, was selected as the only viable candidate. In early December NADC engineers successfully completed phase 1 of the rapid response program, by demonstrating NCTR on the USS San Jacinto. Controlled test aircraft and

targets of opportunity were successfully identified non-cooperatively using radar signal modulation analysis for the first time on an AEGIS radar system. NADC will be responsible for the Phase 2 rapid procurement effort to provide NCTR on 10 AEGIS ships at an estimated \$35,000,000.



## Mixed League Bowling News

By Tom Reiter

Our First Half ended on January 4th. The following leaders are to be congratulated:

### FIRST HALF CHAMPIONS

A Division - Red Winos  
Tom Reiter (c)  
Ernie Wykes  
Mike Dent  
Bob Andrews  
Miriam Lentz  
Elaine Granieri  
Claire Bayer

B Division - Gutter Dusters  
Wes Gleason (c)  
Bill Flannery  
Aaron Davidson  
Jack Kinsky  
Dom Zaccaria  
Bruce Vaughn  
Mary Vaughn  
Pam Kinsky  
Kathi Call  
Chris Zaccaria

### HIGH AVERAGE

Mike Dent 184  
Linda Stickney 164

### HIGH SERIES

Mike Dent 645  
Linda Stickney 587

### HIGH SERIES WITH HANDICAP

Dave Oliver 710  
Linda Stickney 677

### HIGH SINGLE

Mike Dent 247  
Linda Stickney 226

### HIGH SINGLE WITH HANDICAP

Jim Campana 283  
Vicky Schwartz 266

### HIGH AVERAGE

Wes Gleason 183  
Denise Beck 152

### HIGH SERIES

Wes Gleason 671  
Mary Feely 559

### HIGH SERIES WITH HANDICAP

Aaron Burstein 726  
Mary Feely 709

### HIGH SINGLE

Wes Gleason 262  
Mary Vaughn 225

### HIGH SINGLE WITH HANDICAP

Aaron Burstein 291  
Mary Feely 266

## — Contest —

### Cash for Naval aviation photos

The Association of Naval Aviation and its magazine, *Wings of Gold*, in conjunction with *Naval Aviation News* magazine, is sponsoring an annual photo contest, beginning in January 1989. There will be six bimonthly winners and end-of-the-year first, second and third place winners. The contest is intended to capture on film the exciting world of Naval Aviation, its airplanes, ships and people in the Navy, Marine Corps and Coast Guard. Winners will be announced with their photos in *Naval Aviation News* and *Wings of Gold*. Everyone is eligible except the staffs of the Association of Naval Aviation and *Naval Aviation News*. The ONLY requirement is that the subject matter must pertain to Naval Aviation. Submissions can be in black and white, or color, slides or prints of any dimension. Cash awards consist of: bimonthly, \$100.00; annual: first place, \$500.00; second, \$350.00; third, \$250.00

Deadlines for submissions for the bimonthly awards are set to coincide with publication dates of *Naval*

*Aviation News* and are the 1st of February, April, June, August, October and December. The deadline for the annual awards is December 1. Please be sure to include a complete name and address with each entry.

Bimonthly winners will be selected by the staffs of *Wings of Gold* and *Naval Aviation News*. All photos submitted throughout the contest period, whether or not they were bimonthly winners, will be considered for the annual awards by an expanded panel of judges which will include recognized out-of-house experts in the photography field. This will insure that EVERY ENTRY will get a fresh look. All submissions become the property of the Association of Naval Aviation. Mail properly released photographs to:

Association of Naval Aviation  
Photo Contest  
5205 Leesburg Pike, Suite 200  
Falls Church, VA 22041

For additional information contact the Public Affairs Office, extension 3067.



**NADC takes the trophy** — The NADC football team took first place in the Naval Air Station Willow Grove Intramural Football League. Standing with first place trophy is CAPT J.R. Shapard, Commanding Officer, NAS Willow Grove and some of NADC's football players: AW1 Richard Hooper, ATC Paul Butler and Command Master Chief Nelson Williams.





# Reflector

Volume 34 Number 2

NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA.

February 1989

**In This Issue:**

- Productivity produces rewards
- \$ awarded for suggestions
- Financial expert to speak
- A black point of view
- Fitness center to open
- Horizontal accelerator testing done

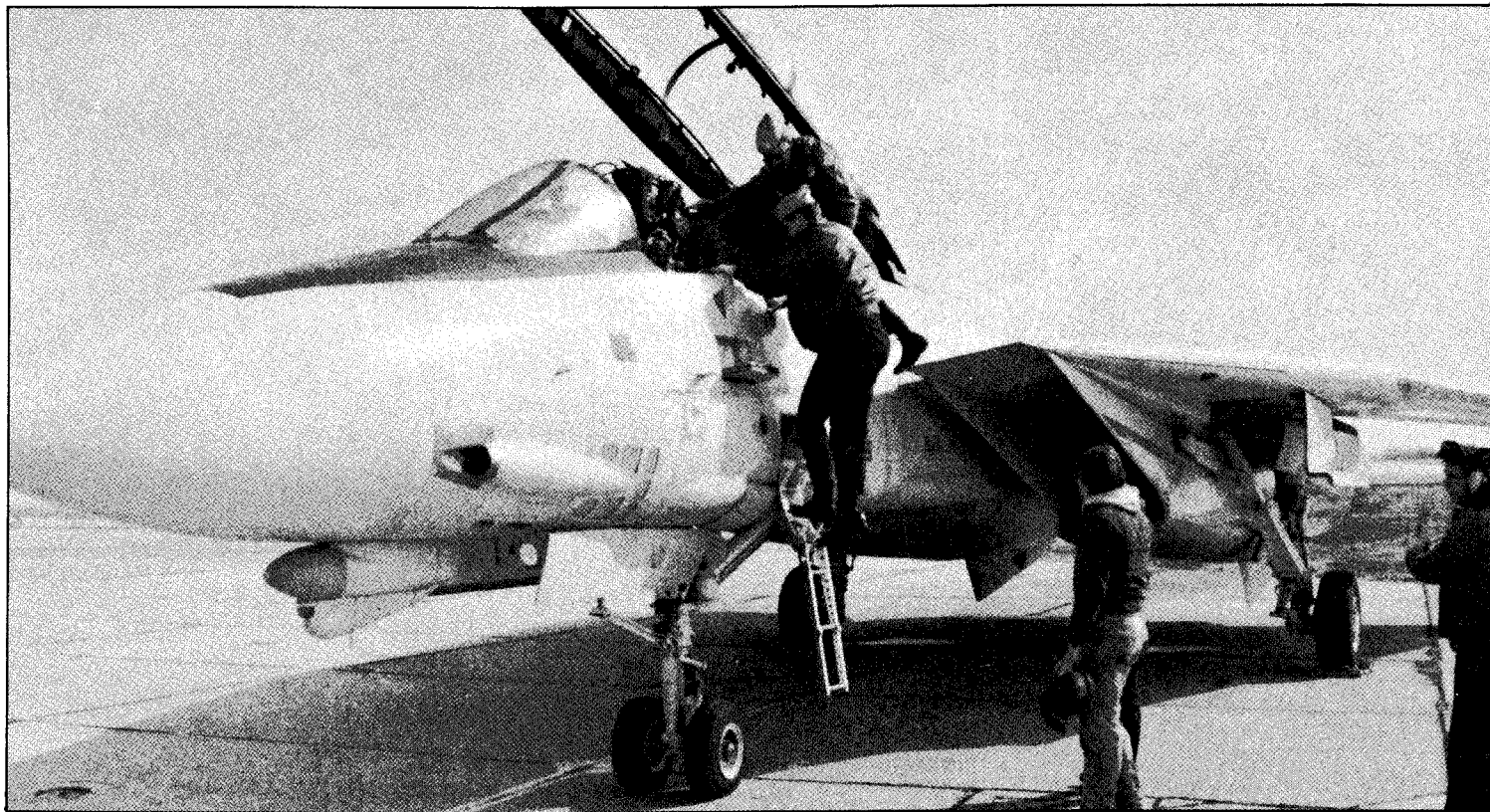
## “Top Gun” sets sights for NADC

By Mary Ann Brett

One of the Navy's “Top Gun” aircraft, the world-renowned F-14 “Tomcat”, recently arrived at the Center for an 18-month stay. Thanks to nearly a year of dedicated efforts by Tactical Air (TACAIR) Systems Department personnel, the F-14 will be used as a testbed for NADC-developed equipment and systems and as a hands-on resource to design enhancements for fighter and attack aircraft.

The first of these enhancements will be to install a night vision goggle (NVG) capability which will allow the pilot to fly low-level at night using daytime flight techniques. “For these goggles to work,” explained TACAIR's Joyce H. Iavecchia, “NADC must redesign the cockpit crewstation lighting system.” The current red lighting design floods the NVGs, blocking the pilot from seeing anything outside the airplane. Iavecchia is the

Continued on Page 7



F-14 “Tomcat” arrives at NADC for 18-month stay and use as a testbed for NADC-developed equipment and systems.

## Conductive composites fly successfully

By Mary Ann Brett

Jack Reilly, Chemical Engineer in the Aerospace Materials Division, has developed three conductive composite materials to replace aluminum in electrical power monitor boxes. All three prototypes have successfully passed a battery of tests including salt spray, electromagnetic interference (EMI), mechanical shock, vibration and fifty flight hours aboard F/A-18 aircraft. In addition to planned testing aboard A-7 aircraft here at the Center,

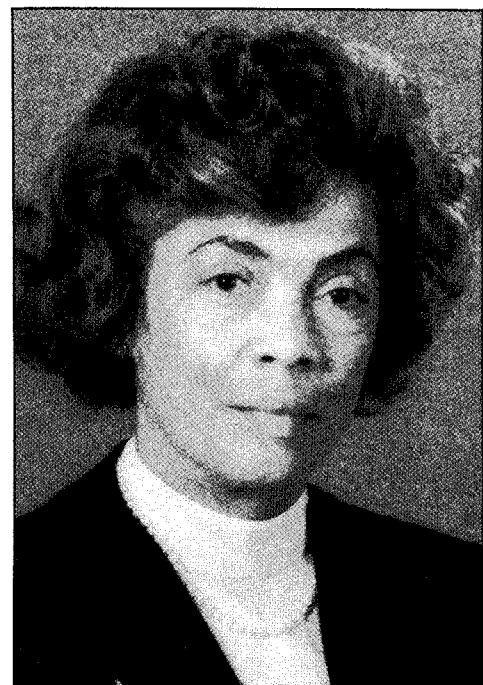
an entire squadron of F/A-18s will soon be fitted with these boxes for fleet testing.

According to Reilly, the composite boxes consist of chopped fiber reinforced polyphenylene sulfide (PPS) materials. They are 20% lighter than aluminum while retaining EMI performance, lower corrosion maintenance costs, and increased system reliability and readiness. “In fact,” said Reilly, “there are approximately 500 different avionics

Continued on Page 3



Vice Admiral Richard M. Dunleavy (in flight gear), Commander, Naval Air Force, Atlantic Fleet, makes comments on “G” Training Improvement Program (G-TIP) conducted by Dr. James E. Whinnery, NADC's Chief Aeromedical Scientist.



Dr. Gloria Chisum

## Chisum: Black engineer of the year

By Lynn Edwards

Dr. Gloria Chisum, Engineering Research Psychologist in the Air Vehicle and Crew Systems Technology Department was recently selected by the Black Engineer of the Year Selection Committee to receive a 1989 Black Engineer of the Year Award in the category of Outstanding Achievement in Government.

The Black Engineer of the Year Awards sponsored by the *U.S. Black Engineering Magazine*, honor Black

Continued on Page 7

## Atlantic Naval Air commander visits

Vice Admiral Richard M. Dunleavy, Commander, Naval Air Force, U.S. Atlantic Fleet, visited NADC to see first-hand the Center's G-Tolerance Improvement Program (G-TIP) in which several hundred of his Top Gun pilots recently took part.

Admiral Dunleavy said that feedback from the pilots who have already been through the G-TIP training here has been very positive. He said they feel better prepared to face combat situations and win because they will be able to control the G-effects. “My problem”, said the admiral, “is holding them down — they want to come back here.”

The G-TIP training teaches pilots of the F-14 “Tomcat” and the F/A-18

“Hornet” how to withstand the sudden increases in G forces of tactical maneuvers in these high-performance aircraft. A “G” is the normal force of gravity. In tight high-speed turns, pilots can experience as much as 9G's or nine times the force of gravity.

Planned as a Navy-wide program, G-TIP's curriculum is being developed by NADC. The technical personnel who will staff future training facilities are also being trained here.

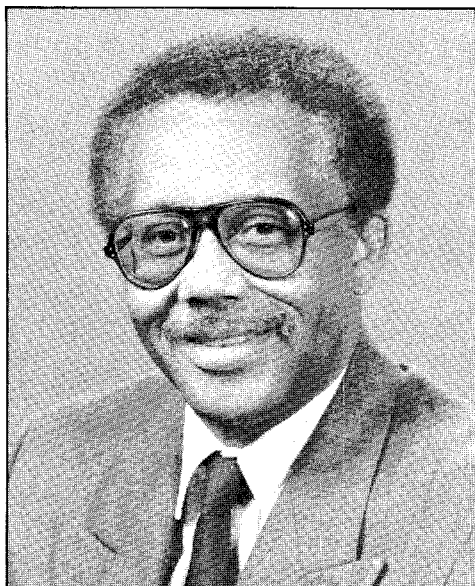
After being briefed on the program and seeing the facilities, Dunleavy remarked that everything was “Very professional!” He added, “I'm tickled to death with all the talent you have here. We never had any doubt you could do this here.”

# Command Corner

# Commander Salutes



**Captain Curtis J. Winters**  
Center Commander



**Guy C. Dilworth, Jr.**  
Technical Director

## To all hands:

### EEO is for everyone

*"... affirmative action is a journey..."*

This month, Americans are celebrating the 64th annual Black history observance. As we recognize the many contributions Black Americans have made to the growth and development of America and its defense, let's remember that affirmative action is a journey, not a goal — we need to keep working at it.

The Naval Air Development Center has realized many achievements in EEO and our current Adopt-a-College efforts with historically Black colleges should result in productive contracts and new coops.

Programs are successful long-term programs, but supervisors and managers need to take an active role in ensuring that Blacks are included in selection pools for full time permanent positions and that career counseling is conducted with their current Black employees. Now that the Center is in a hiring mode, we need to work together to increase our black representation.

*"... take an active role..."*

We need to work a bit more on recruitment and retention of black employees. Although a Black Interest Group has been formed to address this objective, it does not take the accountability from the supervisors and managers. The Worker Trainee and Federal Junior Fellowship

*Guy C. Dilworth, Jr.*  
**GUY C. DILWORTH**  
Technical Director

*C. J. Winters*  
**C. J. WINTERS**  
Commander

## Letter to the Editor

The following is in response to Janet Wild's letter to the Editor which appeared in the January 1989 REFLECTOR.

Dear J. Wild:

In reply to your concerns, we have asked Public Works to reduce the size of the smoking area in the auditorium corridor by approximately 50%. Where it previously extended from Col 2G29 to 2P29, it will now encompass only Col 2L29 to 2P29. This will essentially limit it to the immediate vicinity of the auditorium and will, we hope, alleviate the discomfort you are experiencing.

As you noted, the enforcement of the smoking policy in some areas is a problem. While we believe that the majority of our smokers do abide by the rules, there are still some who disregard these regulations and the rights of others. Unfortunately, the

smoking restrictions depend to a large extent on self regulation, and there really is no effective means of policing them. We hope that with continued awareness and education, everyone will finally understand their responsibilities.

A suggestion to set up smoking areas in each building was considered at length before the Center's smoking regulations were issued. Unfortunately, a number of factors such as; availability of suitable spaces, amount of ventilation, location in relation to work areas, etc. had to be taken into account. Subsequently, the use of certain corridors as smoking areas proved to be the only viable alternative. As in any compromise, it does not fully satisfy anyone, but at least it generally provides adequate conditions for everyone.

M. J. Masington  
Safety Officer

**AT1 Kevin Landis (Code 90):** For outstanding support in meeting commitments for the Ocean Water LIDAR System program and the Navigation and Communication update of the ASW Laser Research aircraft.

**Robert McAvoy (Code 60):** For assistance as an evaluator on the System Engineering Subteam for the Long Range Air ASW Capability Aircraft.

**James Kingston (Code 04) and Jon Jones (Code 80):** For assistance and professionalism during the Philadelphia Area Staffing Society (PASS) 1988 Awards Ceremony.

**AMH2 Gary Poulin, PR2 Mark Spencer, AO1 Kurtis Sawyer, AD2 William Rogan, AD2 Joseph Zarzaca, AT2 John Twiest, AOCs William Swilley, AT2 Bradley Levault, AME2 Jeffrey Tonn, AOC Julian Boddie, AME2 David Blood, AT1 James Nuyen, AD2 Howard Kritzberger, AE1 James Mutchler, AO2 Ernest Hasz, AO1 Paul Fries, AE1 Elizabeth Deiss, AMS1 Barry Case, VN3 Anthony Fletcher:** For outstanding and professional performance during the Wings of Freedom "88" Airshow at NAS Willow Grove.

**MSC Blas Ibasco, MS3 Shawn Sebring, M52 Morris Ward, MS2 David Pauly, MS2 Nicholas Wandishin, MS2 Arthur Mason, MS1 Randy Collins (Code 80):** For time and effort resulting in spectacular meals for both the Navy Birthday and Thanksgiving.

**Catherine Schoenherr, Robert Reichert, Cynthia Yanoff (Code 80):** For academic achievement during the "Management of Defense Acquisition Contracts Advanced" course at the Aviation Supply Office.

**John Walker (Code 70) and Brian Brady (Code 20):** For exceptional performances in supporting the AQM-127A target program and the Naval Air Systems Command.

**Ferdinand Reetz (Code 20):** For invaluable assistance regarding the development, construction and implementation of the USMC Night Imaging and Threat Evaluation (NITE) Lab.

**Dr. Philip Whitley, Dr. James Whinnery and Dr. Barry Shender (Code 60):** For assistance provided to Northrop in the testing of their Advanced Fighter Crew Protection System.

**Blair Nicodemus, Joseph Laska (Code 50):** For technical support to the AN/ALE-47 Countermeasures Dispenser Systems Source Selection.

**Karl Geist, Squadron Leader John Coote, RAF (Code 10):** For dedication and outstanding support to the Naval Air Systems Command Avionics and Computer Resources Division.

**AC3 Douglas Champagne, AC1 Daniel O'Neil (Code 90):** For providing essential assistance to the NAS Willow Grove control tower and radar operational facility during an emergency.


**Mary Baron (Code 84):** For academic excellence during the Management of Defense Acquisition Contracts Course (Advanced).

**Maureen Marron, Bettie Simpson, Dorthy Kirkpatrick, Betty Beans, Joan Miller, Neil Abramson (Code 03), Raymond Satterfield, Andrew Schmith, Kenneth Smith, Gregory Gans, Ross Barcklow, Richard Michi, Harry Schmidt, Robert Goodyear, William Rondfuss, Linda Calderwood (Code 80):** For outstanding contributions ensuring the success of the Eleventh Annual Commander/Technical Director Awards Ceremony and the Center's First (to be annual) Fellow Awards Dinner.

**David Hammond (Code 10); Charles Pizzichello (Code 50); Thomas Karr, Mark Drager (Code 80):** For thoroughness and professionalism during the ERAPS procurement effort.

**Harvey Jaffe (Code 80):** For significant contribution as a member of the team conducting the Procurement Management Review at the Naval Underwater Systems Center.

**James Zoog (Code 10):** For substantial contributions to the P-3 Update IV Program with the production of the P-3 Update IV Computer Resources Life Cycle Management Plan and the development of the Software Quality Effectiveness Program.



**Reflector**

NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA

Volume 34  
Number 2  
February 1989

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<b>Commander, NADC</b> .....	<b>CAPT Curtis J. Winters</b>
<b>Technical Director</b> .....	<b>Guy C. Dilworth, Jr.</b>
<b>Public Affairs Officer</b> .....	<b>James S. Kingston</b>
<b>Editor</b> .....	<b>Mary Ann Brett</b>



# Productivity can produce rewards

By **Stuart B. Simon**

The Center has instituted a Productivity Program to focus all productivity improvement efforts, and simplify methods of submitting recommendations for change. All ideas that are entered into the system will be evaluated for merit and feasibility of implementation. A reward system has been approved allowing up to \$3000 payment for submissions that will improve the productivity of the Center and the Navy.

The primary means for submitting new ideas will be by Email on the Center's Central Computer System (CCS). The Productivity Enhancement Program (PEP) mailbox will be available to all employees who have a CCS computer user account number. Once a user has connected to the CCS, the PEP may be accessed directly from the CCS menu under "Administrative Services". The input is via a fill in the blanks type screen that asks for:

- Your name, code, and telephone extension
- The problem you are addressing
- The need for change
- The method to accomplish the change, and
- The expected benefits (\$, work years, time, other)

Employees who do not have access to the CCS can submit their ideas in writing by filling out a copy of the computer screen that is enclosed in NADCNOTE 5200 of Jan 1989.

Productivity improvement consists of saving money, time or manpower to produce a given product or producing more products given a fixed set of resources. Productivity improvement in the Navy is the job of every employee from the Secretary of the Navy to all DoN employees. Remember, productivity improvement is everyone's job and the rewards can be significant both in job excellence and satisfaction as well as monetary gain.

## Thousands \$ awarded for bene suggs

Beneficial suggestions benefit the suggestor, too! Just ask Steve Garber of the Communications Systems Design Branch. He received \$3800 for his suggestion on "Enhanced Stand-Alone RF Scanner for Low Cost Sonobuoys (LCS)."

His idea offered a very good alternative to the current method of testing LCS. Using a dedicated microprocessor controlled receiver versus the full-up ASCL receiver reduces the testing costs. Using a microprocessor to control the test set versus the USQ-78 computer on the P-3 aircraft will further reduce testing and software development costs. Using a stand-alone unit will enable the buoys to be tested at depot in the future.

Continued on Page 6

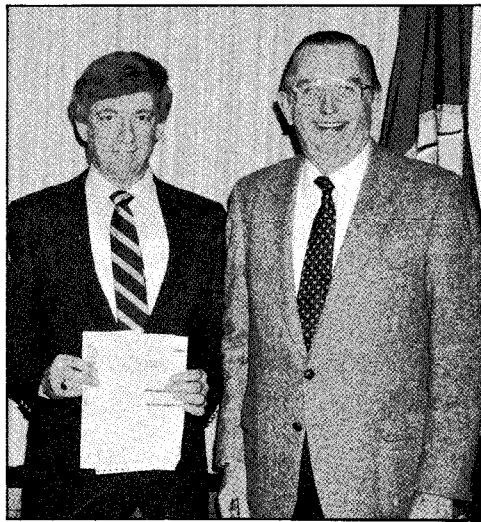


Photo by NADC Photo Lab  
**Steve Garber displays his suggestion award in the presence of Peter Krailo, Manager of the Communication Technology Division.**



Photo by NADC Photo Lab  
**COUNSELING AWARD FOR AGNEW — Dennis Agnew (center), Section Head of the Materials Application Branch receives congratulations from Maureen Marron, Head of Employee/Labor Relations and Dr. John De Luccia, Manager of the Aerospace Material Division. Agnew received an award based on his nearly 15-year successful association with the Employee Assistance Program and later with the Bucks County Employee Assistance Consortium. During this time, Agnew has been confronted with a number of social problems. He feels these programs have been successful in identifying problems, recommending referrals and getting people back on track.**

### PRODUCTIVITY IMPROVEMENT GUIDING PRINCIPLES

In these serious and changing times, we must all improve the Department of the Navy's productivity and reach the two basic Department of Defense productivity goals. They are:  
To contribute directly and indirectly in creating and keeping Armed Forces of such quality and excellence as will guarantee the fulfillment of basic national security objectives of the United States.

To ensure that the Department of Defense always attains the highest possible level of defense capability, and readiness, through the most efficient use of the funds provided by the American taxpayer.

Therefore, our team of Navy and Marine Corps personnel — military, civilian, and contractor — will follow these guiding principles:

We will maintain a level of readiness which ensures viable deterrence and supports the nation's defense.

We will emphasize the customer approach to working with others both internal and external to our organization.

We will work efficiently, effectively, and with maximum productivity within constrained resources.

We will improve the quality of what we do because better quality improves mission performance, increases productivity, and reduces cost.

Since people are our greatest asset, we will maintain an atmosphere of trust which fosters innovation, motivates superior accomplishments, and assures individual dignity and self-respect.

We will commit to excellence, to a relentless pursuit of continuous improvement, and to removing barriers to increased performance, productivity, and timeliness in all that we do.

We will use these principles daily to build on the excellence that has earned the Department of the Navy the public's trust and pride.

*James H. Webb, Jr.*  
JAMES H. WEBB, JR.  
Secretary of the Navy

*A.M. Gray*  
A.M. GRAY  
Commandant of the Marine Corps

*C.A.H. Trost*  
C.A.H. TROST  
Chief of Naval Operations

## Conductive composites fly

Continued from Page 1

boxes on a P-3B aircraft. If each box was replaced with one of our conductive composite boxes, a 63-pound weight savings would occur."

Reilly explained that while existing aluminum boxes provide the metallic properties necessary for EMI protection, they are highly susceptible to corrosion, especially in a salt-water environment. On the other hand, polymeric materials or plastics are not electrically conductive which makes them vulnerable to EMI. So, his approach was to combine polymers with conductive reinforcements to obtain both characteristics. The three PPS composites he developed for this project are composed of 30% nickel-plated graphite (NiGr) fibers with 10% stainless steel fibers, 30% NiGr fibers with 20% nickel flakes, and 20% NiGr fiber mat.

Two fabrication processes were used: injection molding and stamp molding. Either process could be employed depending on the shape of the box required. Stamp molding has lower tooling costs and lends itself to simpler shapes, while injection molding, i.e. injecting a molten composite into a cooler molding tool, is better for intricate pieces.

"This is a good example of a product taken from 6.2 exploratory development to actual fleet use," said Reilly who developed the composites, then coordinated the fabrication, testing, and installation of the boxes with funding from the Electromagnetic Environmental Effects Branch. "This technology is also applicable to commercial aircraft," he added. "While it can be used in any vehicle which requires EMI protection, its light weight makes it especially attractive for aircraft."

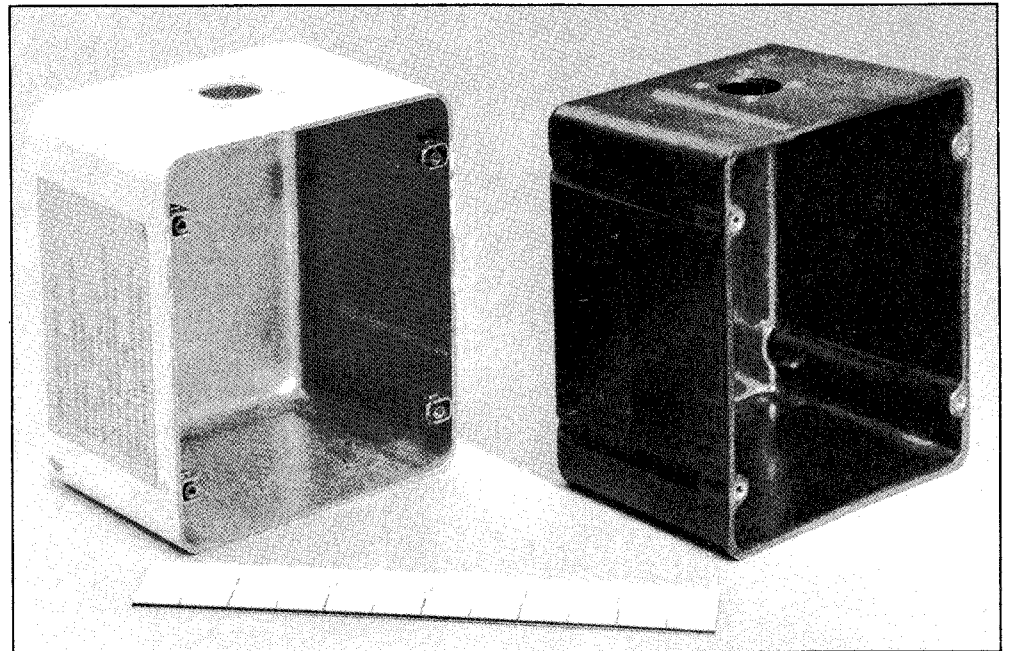


Photo by NADC Photo Lab  
**Standard aluminum avionics box left and new conductive composite box (before painting) at right.**

## AIDS

# Center committed to provide information

By Neil Abramson

Through the following discussion of the Public Health Service' Centers for Disease Control (CDC) guidelines on the nature and transmission of Acquired Immune Deficiency Syndrome (AIDS), note the terms "AIDS" and Human Immunodeficiency Virus or "HIV". The term "AIDS" refers either to the general AIDS phenomenon or to clinically diagnosed AIDS as a medical condition. The term "HIV" refers to an infection which may develop into a variety of medical conditions

ranging from immunological and/or neurological impairment in early stages of HIV infection to clinically diagnosed AIDS.

Since the CDC guidelines on AIDS in the workplace state that the kind of nonsexual person-to-person contact occurring among workers does not pose a risk, it is the Center's policy that HIV-infected employees will be allowed to continue working as long as they are able to maintain acceptable performance and do not pose a safety or health threat to themselves or others in the workplace.

In cases where HIV infection does result in medical conditions impairing an employee's health and ability to perform safely and effectively, the Center will treat these employees in the same manner as those who suffer from other serious illnesses. These employees may be granted sick leave, annual leave, or leave without pay when they are incapable of performing their duties or they have medical appointments.

Center management is committed to providing employees with the latest available information on AIDS

including having medical experts visit the Center to speak on the subject. The Deputy Equal Employment Opportunity Office (Code 03E), designated as the point of contact for information and counseling, will provide referrals to employees with AIDS or to employees who have apprehensions on the communicability of AIDS or other related concerns. BEACON, a confidential counselling and referral service available to employees and their families, and the Center's Dispensary are also prepared to assist Center employees seeking information and counseling.

## Energy savings and security

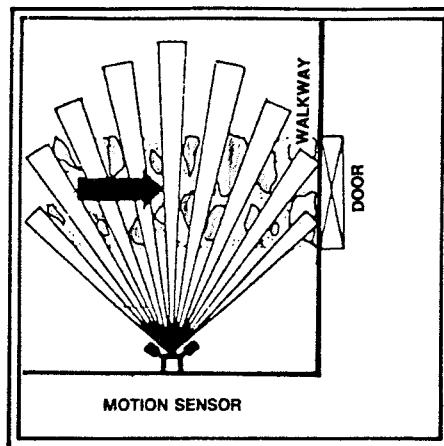
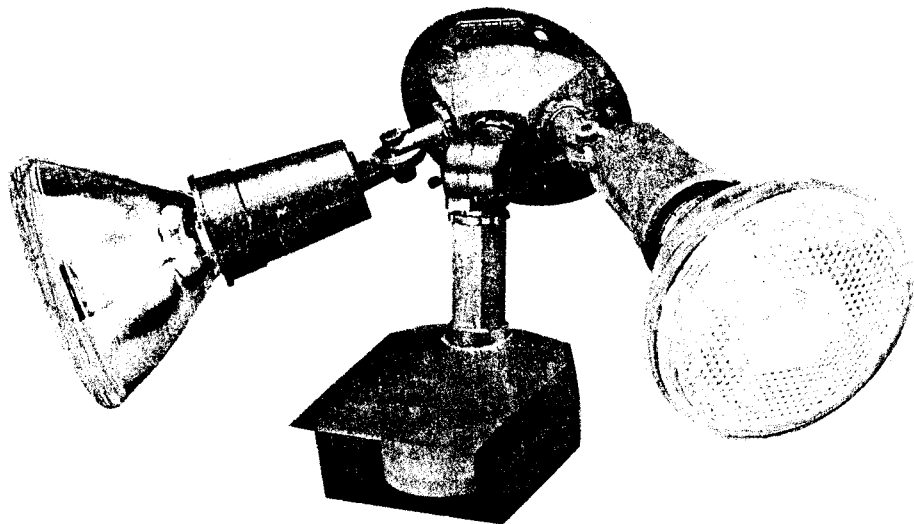
By Michael Blank, P.E.

In the market today you can find various energy saving and sophisticated infrared security systems for residential or business use. These systems can be very useful by illuminating the garage and entrance to your house so you can find your keys, informing you of the presence of intruders by activating alarms, or turning lights on at multiple locations within your home surroundings. The infrared motion sensor can detect motion in an approximately 2,000

square feet range. Usually, motion sensors have range adjustments, sensitivity controls, timing adjustments, and a daylight sensor, as well as the latest in built-in electronics to make operation simple, durable and reliable. The motion sensor emits no harmful radiation, is fully automatic and easy to install. It is usually designed to control one or more lights simultaneously to a maximum of 500 watts incandescent light.

The sensors can be mounted at the height and angle you desire. A practical height is 8 feet. Below illustrations show two of the many locations for mounting a motion sensor. The arrows indicate the most frequently traveled pathway to your garage or doorway.

A few tips: A motion sensor can not be mounted over air conditioning vents or heater flues. If a motion sensor is aimed toward a street, the angle of the beam has to be adjusted so that passing cars don't activate it. A motion sensor is prevented from turning the lights on unnecessarily during the day with photoelectric cells or daylight sensors which automatically sense daylight and disable the system.



Above: A typical infrared motion sensor  
Left: One suggested mounting position

## Personal finances expert to speak

Financial expert Sally Bieber-Ward will speak on "Investments for the Beginner" at 1130 in the Center Auditorium on Thursday, March 9, 1989.

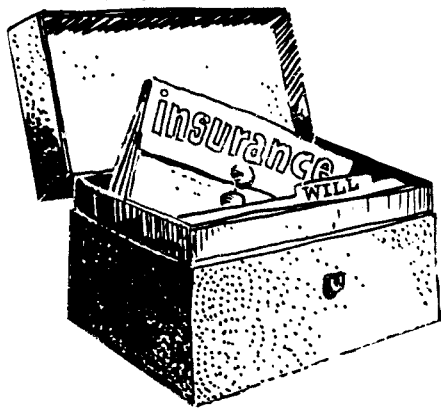
The first woman to have been president of the Phila. Association of Life Underwriters, Ward has sold at least \$1 million worth of insurance policies for each of the past eleven years.

An agent for Aetna Life and Casualty in Philadelphia, she is also a member of the Million Dollar Round Table (only 2% of all insurance agents qualify for membership).

Ward was invited to NADC by the Center's Career Readiness (CORE) group which includes management, administrative and clerical series.

### Financial Planning

Financial planning means more than buying stocks, bonds and real estate. It also means investing in your family's future with a will. Even if property is jointly owned, a will ensures that everything you own will be disbursed per your instructions.

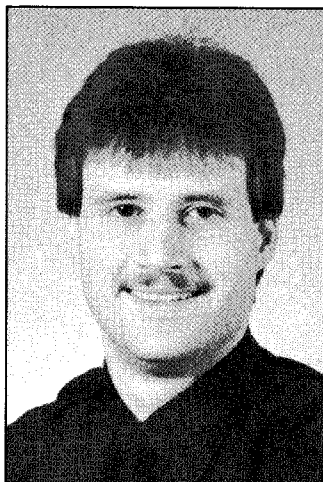


## Firefighters recognized for outstanding service

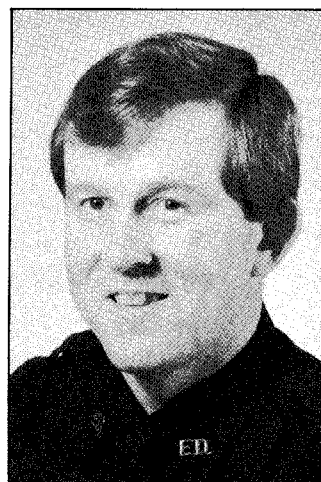
Since the beginning of fiscal year 1989, each month the Center's Fire Department, headed by Chief Don Meadows, has selected one exemplary firefighter for distinction. Those selected for a job well done during December 1988, January and February 1989 are Steve Mobley, Kurt Braeunle, and Rick Gerhard, respectively.



Steve Mobley



Kurt Braeunle



Rick Gerhard

## And the nominees are...

There are nearly one hundred honorary awards available throughout each year for which NADC's outstanding employees might qualify. However, unless deserving individuals are nominated, these awards will surely elude us. The nominations themselves are a way to recognize dedicated and diligent employees. Those awards accepting nominations through April 1, 1989 are:

- Outstanding Handicapped DON Employee of the Year Award
- Outstanding Handicapped Federal Employees of the Year Award
- William T. Pecora Award
- Warner W. Stockberger Achievement Award
- International Personnel Managers Association Award for Excellence
- International Personnel Managers Association Honorary Life Membership Award

For specific information about these or any awards, contact Bettie Simpson, Code 031, extension 3079.



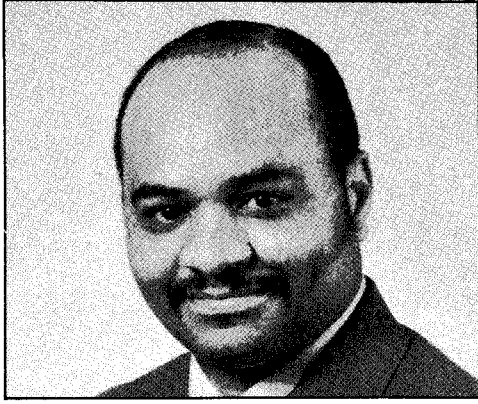
# VIEWPOINT

Prepared by Shirley Jones

Photos by NADC Photo Lab

## A black point of view . . .

Question: What advice would you give to blacks trying to reach their full potential?



Reynolds Brooks



Dorothy Case



Dr. Gloria Chisum



Audrey Dinkens



Jonathan Harding



Elaine Johnson



Robert Jones



Jeanie McCain



Richard Mitchell



CDR Winston Scott



Alexander Stevenson



Charles Williams

## Responses:

**Reynolds Brooks**  
Electrical Engineering Technician

"Look to improve your skills throughout your career, through schooling and learning all you can on the job."

**Dorothy M. Case**  
Computer Assistant

"Young people striving to reach their potential, should have a positive attitude toward achieving a qualified education."

**Dr. Gloria Chisum**  
Engineering Research Psychologist

"Approach every task with sincere resolve to perform to the best of your ability — independent of the assessment of others, deserved rewards will eventually come to you. You must satisfy yourself that you have done your best. In choosing a career, select on the basis of your interests and realistic assessment of your abilities. You will spend most of your life, 30 or so years, in pursuit of that career. Get involved in some volunteer activity. The more you prosper, the more you owe to others. Pay your dues."

**Audrey Dinkens**  
Budget Analyst

"First of all, you aren't going to reach your full potential by working for anyone but yourself. You should complete and further your education. Realizing your potential, start your own business and work hard to make it successful, so you won't have to rely on anyone else."

**Jonathan Harding**  
Superintendent of Life Support Engineering Division

"Seize every opportunity to increase your information or your body of knowledge. Devote all the time you can afford to match the proper person with each task. Treat every person the way you would like or expect to be treated under similar circumstances."

**Elaine Johnson**  
Logistics Management Specialist

"My advice is to keep your sense of perspective: success can change your values if you concentrate only on 'getting to the top' without remembering where you started. Surround yourself with positive role models in all aspects of your life. Their influence on you and their advice to

you will be beneficial in shaping your goals and the way you achieve them. I stress the word 'positive' because there are a lot of negative influences in today's world that will, at best, slow you down, or at worst, rob you of purpose. It's a conscious decision on your part how these influences will affect you.

"Be prepared to work hard — not only will you sleep better at night, but you'll also have the satisfaction of knowing you have done your best. Be able to accept constructive criticism: it's a good indication of how others see you, and what they see in you that you sometimes are not aware of. If friends of coworkers feel it's something worth mentioning, it may be a good indication that it's an area needing work.

"And, last but not least, a good sense of humor helps! At the end of a long, trying day, I go home and pull out my Gary Larson 'Gallery' book — it usually reduces me to eye-watering hysteria in about 3 minutes. Then I feel my normal optimism springing back into shape, and I'm off and running again."

**Robert Jones**  
Manager, Software Technologies Application Division

"Strive to become a professional employee. My definition of a

'professional' is one who is *competent*, masters the skills of his/her job; has *integrity*, if it is not the right thing to do, doesn't do it; and is *dedicated*, gives the job a full eight hours of effort for a day's pay."

**Jeanie H. McCain**  
Supervisory Operations Research Analyst and Center Specialist for Reliability and Maintainability Engineering and Integrated Logistics Support Analysis

"In trying to reach one's full potential, I would encourage Blacks to set high goals, make long-range plans toward their achievement and not be intimidated by those who would endeavor to hold you back by not displaying confidence in your ability to succeed. You must believe in yourself and pursue higher education or develop whatever skills are necessary to make you competitive in your chosen field. Along with the above, you must work, hard, be a team player, and learn the rules of whatever game you find yourself in. I've never met a successful person who worked only 40 hours a week, who didn't need some type of

Continued on page 6

# VIEWPOINT

## A Black Point of View

Continued from page 5

support, and who didn't know the boundaries (i.e., rules) of his operating environment. Most of all, don't be afraid to take risks. As the expression goes a turtle progresses only when his neck is out."

**Richard O. Mitchell**  
Head, Systems and Software Technology Dept.

"Acquire good skills; take on challenging opportunities and then depend very heavily on your own skills for success. Be prepared for hard work, disappointments and sometimes delayed gratification."

**CDR Winston Scott**  
Deputy Director, Tactical Air Systems Dept.

"Prepare oneself to the maximum extent possible through education and training. Never give up. There is no substitute for perseverance in achieving goals."

**Alexander Stevenson**  
Communications Equipment Operator

"I would tell them at any level, it is very important to give all your effort and energy. Go straight to the well, and go all the way down every time, not half way. Also, be honest and things will go right."

**Charles J. Williams**  
Equipment Specialist

"To all minorities I say there are three major qualities needed to reach your fullest potential. The qualities are perseverance, insight and receptiveness.

"In perseverance, one must analyze himself, learn to be tolerant within his surroundings and dedicated to all responsibilities bestowed upon him. "Insight is needed because you learn through life's experiences. Experience is obtained through prior and present employments and through your peers. One must keep in mind there is no eraser large enough to remove knowledge from one's mind.

"Receptiveness is needed because at times, we need constructive criticism in order to better the man and his work. It is easy to criticize others but it is highly unacceptable to receive criticism when it is due.

"These three qualities helped me. As an employee and then as a manager, I was able to understand myself and to reach my fullest potential."

### Phobias and Panic

Some people have panic attacks. Others are terrified of crowds, planes or elevators. Whatever the cause of these phobias, many are treatable, according to the National Institute of Mental Health.

It's all explained in the institute's new book entitled *Useful Information on Phobias and Panic*. For a free copy write to:  
**Consumer Information Center**  
Department 593T  
Pueblo, CO 81009

# Black History Cryptogram

By Joseph Cameron

CRYPTOGRAM CLUES

to get rid of

A X C O M J A

thing

V Z T S O D

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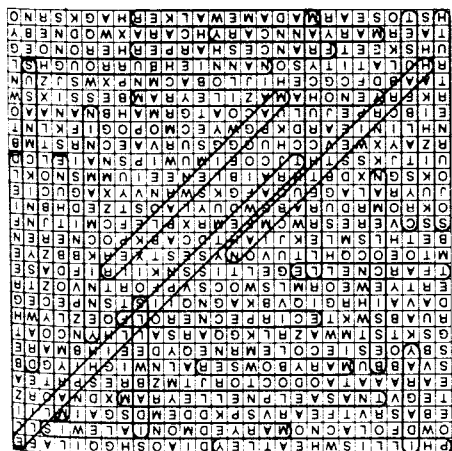
R V A Q M J D X G B H D W S J

Y X G R

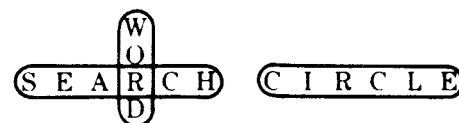
— Solution —

— MARTIN LUTHER KING —  
BECAUSE HE IS A CHILD OF GOD  
EVERY MAN IS SOMEBODY

— Solution —

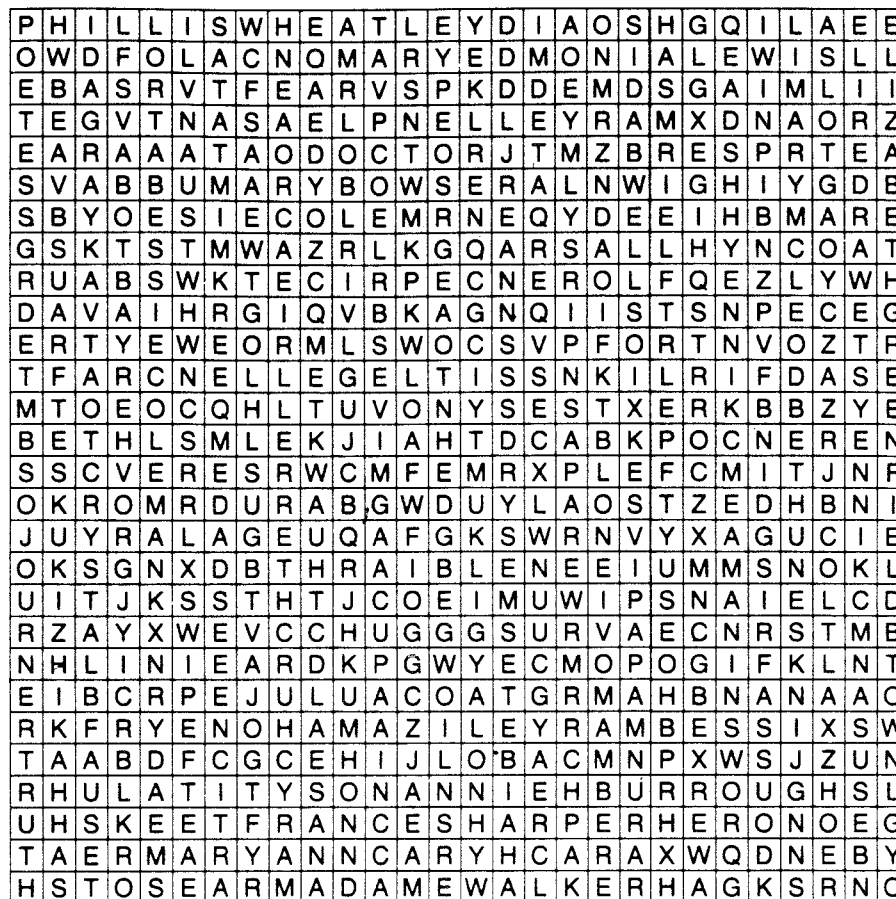


# Black History Word Search



- |                        |                            |                           |
|------------------------|----------------------------|---------------------------|
| 1. Mary McLeod Bethune | 9. Elizabeth Greenfield    | 17. Ella Phillips Stewart |
| 2. Mary Bowser         | 10. Frances Harper         | 18. Mary Church Terrell   |
| 3. Nannie H. Burroughs | 11. Mary Edmonia Lewis     | 19. Sojourner Truth       |
| 4. Mary Ann Cary       | 12. Mary Eliza Mahoney     | 20. Harriet Tubman        |
| 5. Bessie Coleman      | 13. Nina Mae McKinney      | 21. Madame Walker         |
| 6. Ellen Craft         | 14. Mary Ellen Pleasant    | 22. Maggie Walker         |
| 7. Crystal B. Fauset   | 15. Florence Price         | 23. Ida B. Wells          |
| 8. Ida Gray            | 16. Susan McKinney Stewart | 24. Phillis Wheatley      |

The names of our twenty-four HISTORIC BLACK WOMEN are contained in the diagram below. Look in the diagram of letters for the names given in the list. Find the names by reading FORWARD, BACKWARDS, UP, DOWN, and DIAGONALLY in a straight line of letters. Each time you find a name in the diagram, circle it in the diagram and cross it off on the list of names. Words often overlap, and letters may be used more than once.



# Thousands \$ awarded for suggestions

Continued from Page 3

28 Beneficial Suggestions received a cash reward during 1988. They are:

Sydney Oliver for "Cost Reduction for Laboratory Coats" — \$1030

Thomas E. Gould for "Aircraft Liner Repair Interior" — \$50

Gwynn K. McConnell and Sydney G. Oliver for "Improved Fairing/Filler Materials for Composite Aircraft Parts" — \$300 each

Michael Hess & Robert Chestnut for Top Gun Publicity "Pipe Schemes" — \$25 each

Suzanne M. Baier for "Direct Data Input by 0213 Personnel Into Mainframe" — \$1870

Stephen Garber for Enhanced Stand-Alone RF Scanner for LCS (Low Cost Sonobuoy)" — \$3800

Roy H. Deese and William Gill for "Install Permanent Lighting Above AC Control Panel in B-138" — \$50 each

Frank T. Tarlecki for "Time Clock & Emergency Power in Bldg." — \$50

Gwynn K. McConnell for "Navy Assist to the FAA Review Manufacturers" — \$250

Francis W. Chamberlan and Norwood J. Metcalf for "Intergovernmental Maintainability of KA50 E0 Camera Systems" — \$2600 each

Film/Videos for the Hearing Impaired" — \$25 each

Ronald A. Nicol for "Guard for Elevator" — \$75

Eugene R. Locuniak for "Matris Automated Info System" — \$250

Michael M. Blank — Preventing & Eliminating Accident Hazards and Breakage — \$50

Philip Joiner for "Cleaning of Computer Screens" — \$100

William Roadfuss for "Spray Booth for Illustrators" — \$50

Gwynn McConnell for "Emergency Assistance for DoD Travelers" — \$50

James N. McLeod Jr. and David E. Stasen — Fabrication and Installation of Chipguard on "Onsrod" Router — \$50 each

Charles Winslow for "Modification to Fire House Garage Door Lifting Units" — \$250

William Adams, Richard Valesky and Thomas Young for "Roof Turret Pin (P19) Crash Fire Rescue Vehicle" — \$25 each

Edward A. Swiski for "Identify/Correct Safety Hazards on Roofs" — \$50

Cron P. Eckman for "Security Awareness Reminders" — \$100

Robert Smiler, Kris Gigliotti, and Margaret Callahan for "Captioned

Dickson D. Alley — Short Beam Shear Probe — \$250

Russell J. Donahue and Richard K. Cline for "Modification of Wheel Puller to Bearing Remover & Bearing Press" — \$125 each

Richard E. Adams for "Lever-Type Door Handles for Improved Safety" — \$75

Betty J. Beans for "Receptacles for Waste" — \$25

Elizabeth Bednarzik for "POD VIA EMS Bulletin Board" — \$25

## When Do Bonds Mature?

Savings Bonds purchased today will earn interest for 12 years. Bonds held for five years or longer will receive a guaranteed minimum rate of 6 percent or a market-based average, whichever is higher. At the guaranteed minimum rate bonds will reach face value in 12 years. If the market-based average is higher, the bonds will reach face value earlier, but will continue to pay interest for at least 12 years.

Bonds purchased between November 1982 and October 31, 1986, have a guaranteed minimum rate of 7.5 percent. They will earn interest for 10 years but may reach face value sooner.



# Morale, Welfare and Recreation for all

— New fitness center to open —



Photo by Mary Ann Brett

**THE WINNER OF TWO TICKETS ANYWHERE IN THE U.S. IS . . . Sheila Dorsey of the Systems and Software Technology Department. She won two tickets to anywhere in the U.S. as the result of a SATO (Scheduled Airline Traffic Offices) and USAIR promotion. Syd West, USAIR sales representative and Dorothy Mutter, SATO representative were present when Center Commander CAPT Curtis Winters drew Dorsey's name from the 520 contestants who visited NADC's SATO office to fill out a ticket.**

## Legal Drugs Can Be Risky, Too

Just because a medication is prescribed by your doctor or can be bought over the counter doesn't mean it can't impair your driving.

Medication for pain relief, allergies and colds, as well as illegal drugs and controlled substances such as barbiturates and narcotics, can act on the same areas as

alcohol. And the impairing effects of many drugs combined with alcohol can multiply.

Ask your doctor or pharmacist if it is safe to drive after taking a particular prescribed or over-the-counter drug.

Also ask your doctor if it's safe to drink while using a prescribed medication—and follow the advice.

## "Topgun" aims at NADC

Continued from page 1

lead engineer for F-14 night vision efforts and coordinator for this testbed aircraft. Supported by technical experts John Parker from the Air Vehicle and Crew Systems Technology Department (AVCSTD), Laurie Bryner from the Mission Avionics Technology Department, and Maintenance Officer CDR Tim Cudia, the Center will design and install a prototype NVG compatible lighting system. Since NADC is both physical and reporting custodian of the aircraft, significant reporting responsibilities rest on Cudia as well to ensure proper upkeep and quality control.

Aerial target integration work is also scheduled for the testbed aircraft.

William Seemans, Aerial Targets Program Manager, is leading the development of a Phoenix launcher adapter to supersonically launch the ACM-37 from the F-14. Integration tests are planned for this summer.

Other potential projects include heads-up display situational awareness improvements, integrated armament system design, new expendables design, life support equipment, demonstration and composite avionics enclosure development.

According to Thomas J. Brennan, TACAIR Department Head, NADC is in the forefront of the tactical air warfare arena, continually improving aircraft such as this F-14.

## Chisum honored

Continued from page 1

Americans whose contributions best exemplify hard work, innovation, and achievement in the areas of science, engineering, and technology.

Dr. Chisum has been with NADC since 1960 and is currently the head of the Vision Research Laboratory. She is an internationally recognized expert in the area of visual performance enhancement and protection. A graduate of Howard University (B.S. and M.S. in Psychology), Chisum

earned her Ph.D. from the University of Pennsylvania and has received Distinguished Alumni Awards from both universities. She has also been awarded three Honorary Doctorates and has been designated as a Fellow of three professional organizations.

On February 25, 1989 Chisum and the other award winners will be honored at the Third Annual Black Engineer of the Year Awards Banquet at the Baltimore Convention Center.

By Joy James

The Morale, Welfare and Recreation (MWR) Division will celebrate the Grand Opening of its new Fitness Center on April 3, 1989. NADC civilian employees can use the center by purchasing a membership.

The fitness center is equipped with a 12-station nautilus circuit, 3 Tredex treadmills, 3 computerized lifecycles and 3 video monitor liferowers. These machines are designed to strengthen every major muscle group and provide a cardiovascular workout. With a slight additional membership charge you can enjoy the racquetball court and relax in the sauna.

Whether you are an avid exerciser or just beginning a workout program, our fitness center is designed to meet your needs. We can also help you customize

a workout to best suit you.

MWR is offering memberships for all its various programs beginning this April. A basic membership entitles you to take advantage of our discounted tickets, trips, and special events, as well as the option to purchase a special membership for facilities like the fitness center, racquetball court, swimming pool, sauna and youth center.

For example, a membership for the fitness center costs \$25 per month; \$55 per quarter or \$180 per year.

Some medical benefits packages, such as HMO will pick up half the cost of a membership. Check with recreational services personnel about this subsidy. It may be economically beneficial as well as physically beneficial to join.

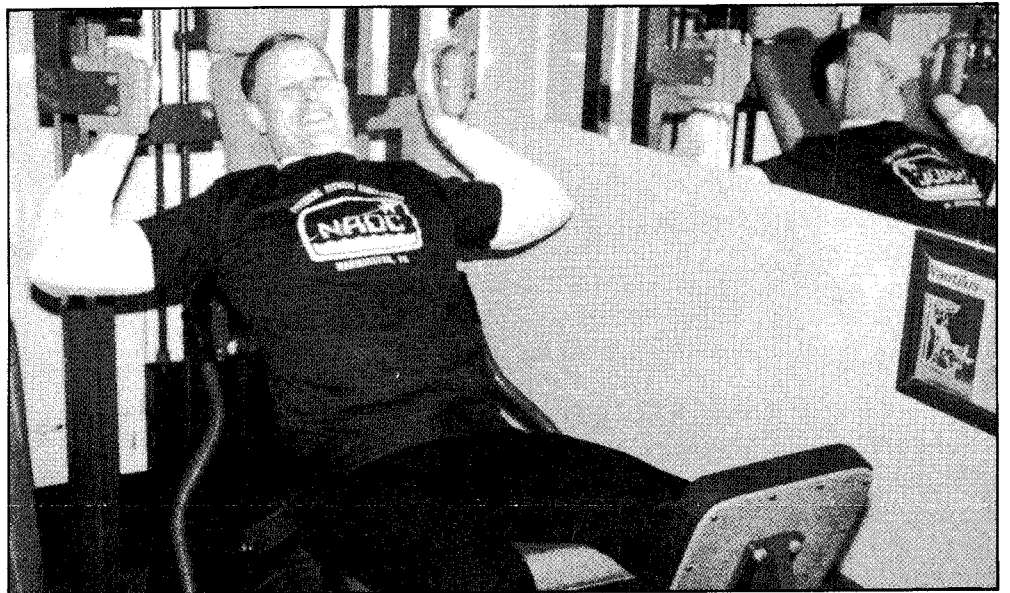


Photo by NADC Photo Lab

Center Commander Curtis Winters works out on nautilus equipment.

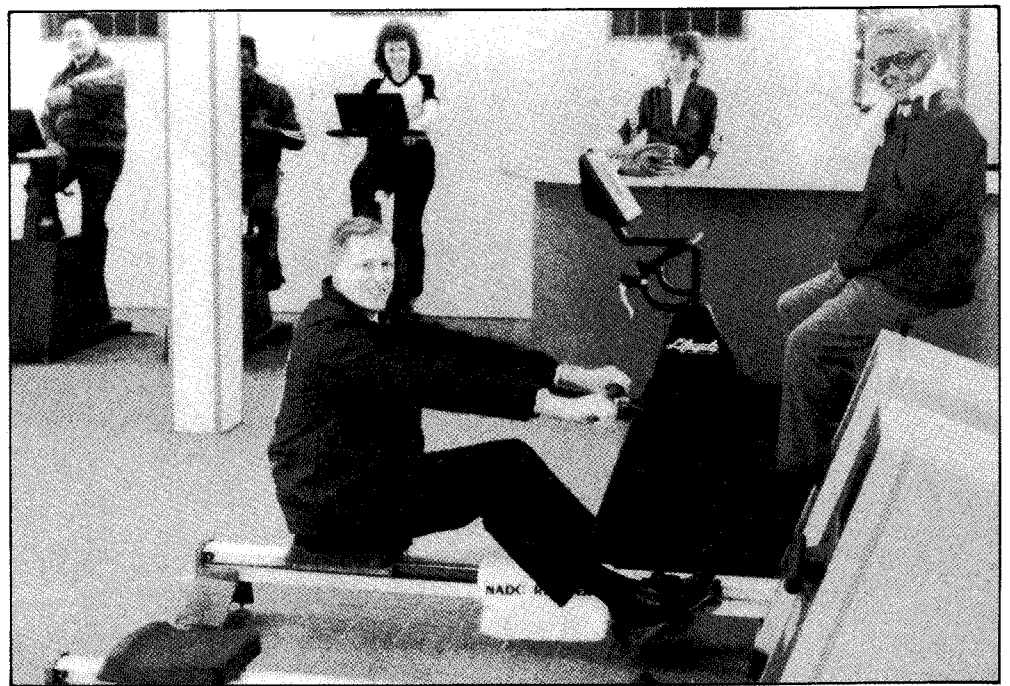


Photo by NADC Photo Lab

CAPT Curtis Winters tries out new video liferower while TD Guy Dilworth is at the computerized lifecycle at the new fitness center trailer near the Crew's Rest Club.

## Security Reminder

**CLASSIFIED MATERIAL** — Classified material must be handed to an individual personally, and the individual must be made aware that they are receiving classified material. NEVER leave classified material on an

unattended desk. New employees with a clearance and a need to know must be indoctrinated in the proper handling and safeguarding of classified material.

## Planned your vacation yet?

To help with all of your personal travel arrangements, call SATO Travel, ext. 2729, Mon. thru Fri., 8 AM to 4 PM.

## Technical Highlights

As a result of intensive NADC support, NAVAIR awarded a contract for the Full Scale Engineering Development of a Long Range Air ASW Capability Aircraft (LRAACA) to Lockheed Corp. The Center provided extensive planning, evaluation and requirements development which facilitated the final selection. The result will be an extended mission duration, higher capability ASW platform which will work in unison with current P-3 forces to provide worldwide ASW coverage.

The VP program concluded extensive technical support to NAVAIR in the generation of requirements and procurement documentation for the CP-901 tactical computer. This effort facilitated the NAVAIR approval of an ECP and award of a contract to Unisys for design of an upgraded CP-901 computer for the P-3 aircraft.

The BQM-126 has completed Contractor Technical Evaluation during January 1989. The program has been put on hold pending the availability of production funding and the outcome of the mid-range Remotely Piloted Vehicle target program. We will conduct a limited Navy Technical Evaluation, document the deficiencies and wait for a production decision. The remaining target assets will be used for weapon system presentations with one complete system to be sent to this Center for laboratory use.

The Center submitted a copy of the NADC proposal for using SASS Phase IV for shallow Water Bathymetry on OSP ships to Admiral Pittenger, Oceanographer of the Navy (OP-096).

NADC was informed that the DoD Program Office will provide funding in the amount of \$2.5 million for development of a VHSIC chip to perform polyphase filtering functions. The effort will feature the design and fabrication of a 1/2 micron VHSIC device that will provide the multiple band filtering required for the Advanced ASW Receiver program. NADC will provide technical management with contractual efforts handled via the Army VHSIC program office at Fort Monmouth as a task in the basic IBM Phase II VHSIC contract.

The NACES ejection seat developed at NADC successfully completed in-flight testing. The NACES was ejected from the aft cockpit of a YF-4J flying at 9,000 ft. mean sea level and at a speed of 500 KEAS.

NADC has successfully demonstrated the non-autoclave/staging process for repairing new classes of composite materials being planned for use on emerging composite structure. The process will allow ambient storage of high quality composite patches for use by field repair activities.

## Ejection seat tested on horizontal accelerator



Photo by NADC Photo Lab

Gary King, Mechanical Engineer (ME), John Quartuccio (ME), and Peter Yost, Aerospace Engineer in the Life Support Engineering Division set up the man/seat release mechanism on the OV-10 aircraft ejection seat. Three tests at the Center's Horizontal Accelerator were conducted using the actual seat ballistic activation system, and 3 tests were conducted using an NADC-designed pneumatic system that accurately simulated the ballistic system. Yost is taking the inertia reel strap measurement.

## NADC

in the

## NEWS

The big news is...

"I read the newspaper every day...and I never see anything about NADC! This comment says two things: either the reader is not really reading every day or is not reading the right publications.

News items about NADC do appear frequently in the Intelligencer, Bucks County Courier Time, Today's Spirit, Montgomery County Record and the regional edition of the Philadelphia Inquirer. However, more often news items about the Center are regularly found in trade publications such as Aviation Week and Space Technology, Naval Aviation News, Defense News, Aerospace Daily and the like.

As a means of assuring that NADC is, indeed, in the news, we will be listing here the kinds of news we have released and some of those publications where stories appeared.

Recent news released includes NADC items of interest and accomplishments on Small Business achievements, the Modified P-3 Laser Testbed Aircraft, NADC's role in the Navy Advanced Tactical Fighter, Laser Disk Symposium and Technology at NADC, Vice Admiral Dunleavy's visit, the Technical Review Committee (NADC and community environmental cooperation), Aviation Safety Record (14 years of accident free flying), G-tip training at the Dynamic Flight Simulator, and the arrival of the F-14 aircraft.

The most recent news clippings include:

- Aerospace Daily, Feb 2, 1989, "NADC modifies fourth P-3 for testbed work"
- Aerospace Daily, Jan 25, 1989, "Navy seeks G-suit proposals"
- Aerospace Daily, Jan 19, 1989, "NADC wants ADAR definition"
- Aviation Week and Space Technology, Jan 16, 1989, "Airframe Alloys"
- Navy News Wire Service, Feb 4, 1989, "Topguns get G-force training"
- Navy News This Week video news, Jan 7, 1989, "Navy pilots in a spin"
- Today's Spirit, Feb 8, 1989, "Technical Review Committee established"



## SPORTS WORLD

By Tom Reiter

New Year's Resolutions that were already broken:

**Who Cares** — "We're going to stop losing". **Rolling Thunder** — Jim Palmer will learn to relax. **11'th Frame** — Al will listen to Helene Goldstein and stop lofting the ball. **Red Winos** — Mike Dent will try harder to win the Sportsmanship Award. **Nine Pins** — Rick Stickney will outscore his wife Linda. **Spare Us** — Donna Morgan will convince Bob Bollard to bowl more often. **Les Champignon** — Will schedule five people to come out on the same night. **Destroyers** — Aggie Harris will stop picking on John Lommack. **Alley Cats** — Kevin Ryan will keep Gene Toner healthy. **Goofers** — Leo Markushewski won't needle Al Knobloch. **From The Gutter** — Lois Savage will give Rick Yeager advice on shooting spares. **Warveyhallbangers** — Mike Kreuter will stay away from Granny Tierney's buttered popcorn. **Magic**

## SPORTS WORLD

**Markers** — Jeff Irvin will hold Diana & Ed Beach's baby while they bowl. **Pinheads** — Lisa Johnson will stop listening to Scott Boozer's advice. **White Winos** — Rick Eppright says it will be no problem scheduling everybody. **Bullshooters** — Carla Mackey will get Harry Ukele's name spelled right on the bowling roster. **Dynamic Duos** — Nick Doto will not pay his team's \$32.50 will all loose change. **Lucky Strikes** — Art Duhaime will try to bowl without wearing a hat. **Screwballs** — Pat Tease and Jack Horning will concentrate on bowling and finish the same time as the rest of us. **Neiners** — Won't miss John Vincent and Terry Clauss will not break one of her nails. **Falcons** — Will try to have at least two government employees on their team. **Big Spenders** — Will decide who their captain is this week. **Blue Light Special** — Won't let Scott Kee play any softball this season. **Gutter Duster's** — Resolved to sweep both halves but somebody will steal their broom.





# Reflector

Volume 34 Number 3

NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA.

March 1989

**In This Issue:**

- Becker merits award
- Atkinson goes to MIT
- Sherrod rescues hunter
- Fordham: Sailor of the Year
- Two for executive training

## VIPs welcomed by NADC

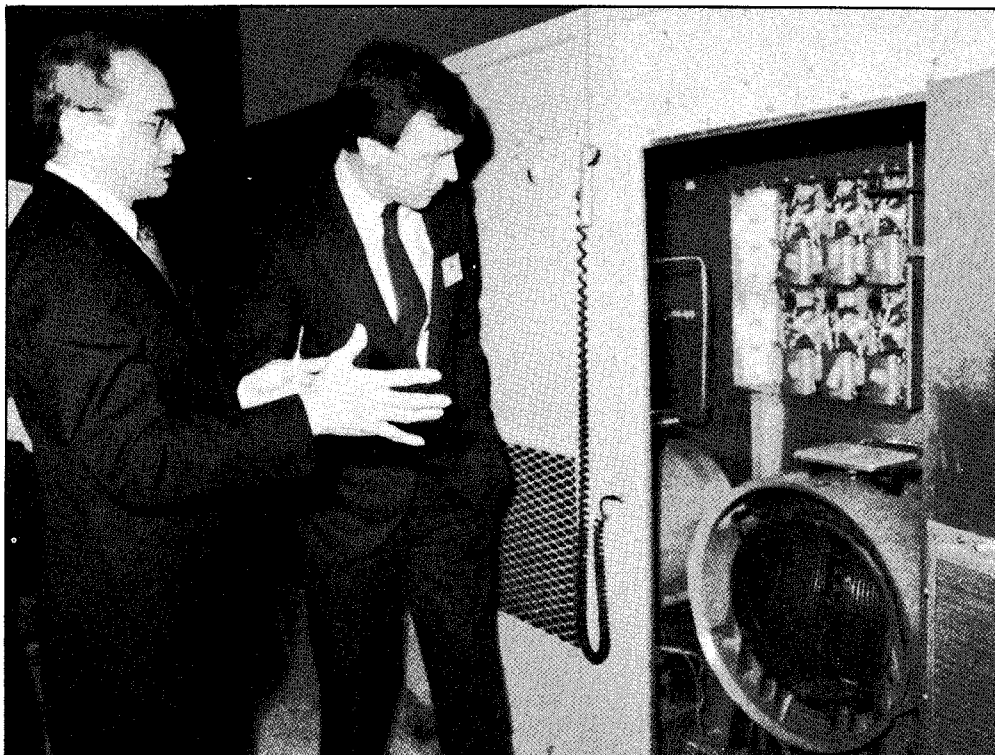


Photo by NADC Photo Lab

**Congressman revisits** — Congressman Peter Kostmayer mixes technical with constituent interests while visiting the Center on February 14. Here, the Congressman is briefed by the Communication Navigation Technology Department's Franz Bohn (left) at the TACAMO high power transmit system which enables an aircraft to communicate with submerged submarines. (see add'l photo page 7)

Seldom does a month go by without one or two VIP's visiting the Center. They run the gamut from civilian and military to federal, municipal and private sector authorities. During the past month at least four such dignitaries graced the halls of NADC and left very few technical stones

unturned. Among these visitors were: Congressman Peter Kostmayer, Vice Commander of the Naval Air Systems Command Rear Admiral Richard Gentz and the Director and Deputy of Navy Laboratories Dr. Edward Tunstall and Howard Law. All are pictured below.



Photo by NADC Photo Lab

**Director of Navy Laboratories (DNL) gets acquainted with NADC** — DNL Dr. Edward Tunstall recently spent two days becoming acquainted with the Center. Among his many tour stops was the Crew Station Evaluation Facility or CREST lab where he is sitting in the cockpit mock-up with joystick in hand flying the Command Flight Path display, and flanked by Technical Director Guy Dilworth and Center Commander CAPT Curtis Winters. (see add'l photos page 7)



Photo by NADC Photo Lab

**NAVAIR Vice Commander makes stop at Brewster aircraft restoration** — Early in March, Rear Admiral Richard Gentz the Vice Commander of the Naval Air Systems Command visited the Center to review industrial and aviation safety procedures. The Admiral found time in his busy schedule to visit with volunteers restoring a vintage 1940 Brewster aircraft in one of the NADC hangers. Nick D'Apuzzo, restoration coordinator (center) briefs the Admiral and Center Commander Captain Curtis Winters on the Brewster's progress.

**MARCH IS:**

- NATIONAL POISON PREVENTION MONTH
- NATIONAL/NAVY NUTRITION MONTH

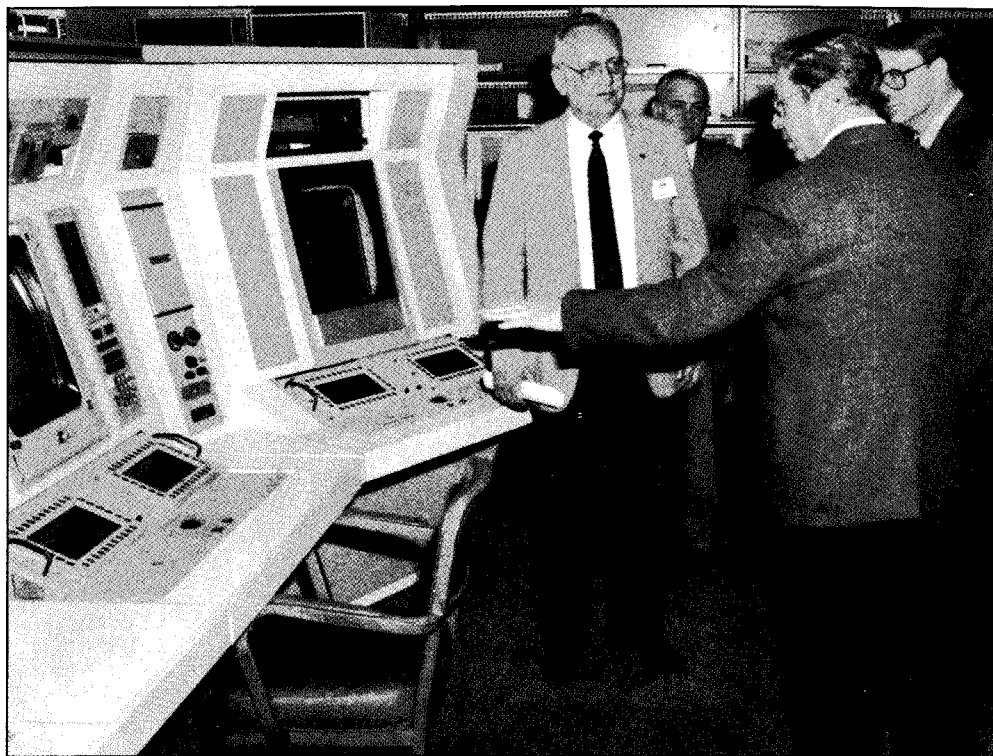


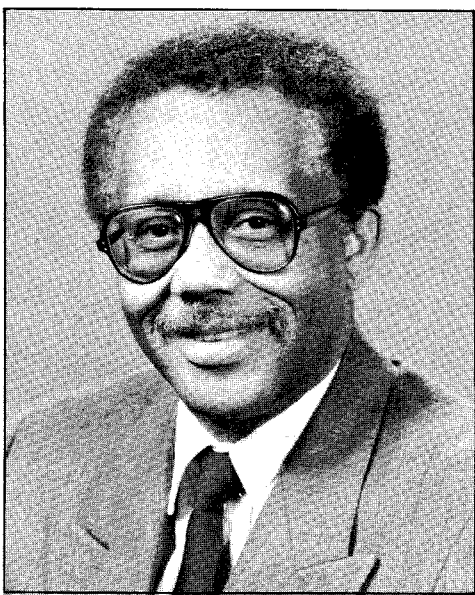
Photo by NADC Photo Lab

**Deputy DNL gets NADC update** — Long time Deputy Director of Navy Laboratories Howard Law (left) and Mike Marshall from the Naval Surface Warfare Center spent 2 days visiting with scientists and engineers as well as support personnel at the Center. Here, Anthony Maggio explains VP facility computer operations to Law and Marshall who were accompanied by NADC's Stuart Simon, Director of Corporate Planning. (see add'l photo page 7)

## Command Corner



**Captain Curtis J. Winters**  
Center Commander



**Guy C. Dilworth, Jr.**  
Technical Director

## Letter to the Editor

### The unseen Randolph-Sheppard Tax

Dear Editor:

If you are like me and had never heard of the Randolph-Sheppard Act you may be as surprised as I was to learn that if you eat in the NADC Cafeteria or frequent the vending machines you are being taxed by the Randolph-Sheppard Act. In the case of vending you are being taxed at the rate of 50% of all the profits from vending machines that make more than \$3000 a year, most of our banks do. In addition, the act also requires that before any solicitations can be offered for a food service contract at a Government facility the Association of the blind must be given exclusive priority right of first acceptance. In this case the contract would be awarded to the Association of the Blind without competition, at any price. The Act further states that if they elect not to accept the contract and there happens to be a blind vendor operating in the area, we would then be judged to be in competition with that vendor and we would be subject to paying 100% of all vending profits to the Association of the Blind. Therefore, by just saying no, they are entitled to a minimum of 50% of all vending machine profits. I wonder what the deaf and other organizations for the handicapped think about the Randolph-Sheppard Act. In fact, I wonder what you think about it. The Food Service Board is a facility of the Government and as such is subject to all the requirements set forth in sub chapter 7 of OCMINIST 12000.1 for unappropriated funded activities. In essence it says that the Food Service Board is a non profit activity and that the funds it receives from the on-board food service contractor are to be disbursed in two ways. One, a predetermined amount is to be held in escrow to operate food service operations for a period of 60 days in the event of default by the contractor. Two, funds above and beyond this escrow amount are to be returned to the employees either directly, this is how all the monthly specials at only a \$1 cost to you are possible, or to improve the overall

health and wholesomeness of the dining facility, this is how the cafeteria was remodeled, dishes, trays and tableware purchased.

The Randolph-Sheppard Act not only taxes the funds received from you it prevents those funds from being returned to you as prescribed by sub chapter 7. At the very least, it plays a major role in driving up prices during a time when the increased costs of today's market place are already placing an unfair burden on the underpaid Government employee. This is especially grievous in that the private sector is immune from paying this tax. Not one of us is unsympathetic to helping those less fortunate than us but isn't this why we voluntarily contribute to the United Fund and other welfare organizations of our choice?

**Donald A. Morway**  
Code 4001

*This letter refers to a previous Letter to the Editor printed in January 1989*

Dear Ms. Wild,

Thank you for the letter you wrote to the Reflector regarding designated smoking areas. I am in hearty agreement with it and have suffered much more from the effects of second hand smoke from smokers here at NADC since the designated smoking areas have been in effect. As you stated, it is commonly difficult to avoid these areas of high concentrated smoke.

I applaud your boldness and willingness to make your self heard and hope the hierarchy here will be responsive to you.

**Donald M. Miller, Code 5041**

#### Federal Income Tax Tips

##### Medical Expenses

Taxpayers may deduct only that part of their unreimbursed medical and dental expenses that are more than 7.5 percent of their adjusted gross income.

## Commander Salutes

**Frank Flannery, Elizabeth Bednarzik, Janice Hinchliffe, Christina Miksis, Thomas Ames, Karen Adams, William Walker, Manny Pine, Beth Shadday, Nancy Jordal, Lou Vollrath, Marti Malin, AW1 Kevin Sheldon, ATC Thomas Mathey, LT Richard Truitt, HM3 Elvin Santiago, LT James Gross, CDR Roger Hill, AW2 P. Benn, LCDR Earl Smith, JO2 Todd Lufkin, Major Barry Hansen:** For enthusiasm and dedication resulting in a successful 1988 Navy Relief Fund Drive.

**DPC Terry Darnell:** For assistance as a proctor during the Cycle 120 Navy-wide Enlisted Advancement Examinations.

**Laura Huber, Charles Booth, Thomas Merkel (Code 10):** for professional performance contributing to the formal release of LAMPS Mark III, SH-60B software, Fleet Issue 18.1.

**Joyce Moore (Code 10):** For outstanding support and professionalism during the debrief of Computer Based Systems personnel concerning their proposal.

**Douglas Lundberg (Code 03):** For assistance to the Office of Civilian Personnel Management in developing an automated Merit Staffing process.

**Edward White, Robert Di Girolamo (Code 60):** For assistance to the NASA Space Station Program Office.

**John Cunningham (Code 50):** For technical support during the CF-18 EW suite integration efforts at the Pacific Missile Test Center.

**Chief Donald Meadows and all the firefighters of Engine Company 69 (Code 90):** For invaluable assistance to Upper Moreland Township during a flammable liquid spill.

**John Walker (Code 70) and Brian Brady (Code 20):** For exceptional performance in supporting the AQM-127A target program and the Naval Air Systems Command.

**David Herbine (Code 60):** For volunteering personal time to support a cockpit display demo for the NR NAVAIRSYSCOM 0933 Reserve Unit.

**Lewis Lippel (Code 60):** For volunteering personal time to brief the NR NAVAIRSYSCOM 0933 Reserve Unit on cockpit display technologies.

**John Perazza (Code 70):** For valuable contributions to NAVAIR's LRAACA Source Selection Evaluation Board and the Force Level Reduction Team.

**Alan Kaniss (Code 05):** For outstanding leadership resulting in a very successful Combined Federal Campaign grand total of \$126,684.

**John Bergey (Code 70):** For exceptional performance in effectively leading the NASEE Phase I effort providing the NAVAIR Software Support Activities with a common software tool set.

**Dr. Donald McErlean, Douglas Bogwell, Edward Boscola, Samuel Delserro, Jacob Eyth, Georg Frisch, Marvin Walters, Edward White (Code 60):** For support and hospitality to National Aerospace Plane Joint Program Office Air Force personnel during their recent visit.

**Albert Waynick (Code 50):** For technical expertise and dedication in planning and executing the Critical Sea Test Program for the Space and Naval Warfare Systems Command.

**Richard Imhof, Bryan Rittenhouse, Michael Warren (Code 50):** For technical support during the ALFS demonstration/test program for Sanders Associates.

**Robert Gindhart, Blaine Rineer (Code 50):** For significant contribution to the Outpost Sunrise gathering environmental and acoustic data in the Northeast Pacific Ocean.

**James Kingston (Code 04):** For outstanding assistance to the Federal Emergency Management Agency during their recent visit to NADC.

Continued on page 6

### Planned your vacation yet?

To help with all of your personal travel arrangements, call SATO Travel, ext. 2729, Mon. thru Fri., 8 AM to 4 PM.



# Reflector

Volume 34  
Number 3  
March 1989

NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA.

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**Commander, NADC** ..... CAPT Curtis J. Winters  
**Technical Director** ..... Guy C. Dilworth, Jr.  
**Public Affairs Officer** ..... James S. Kingston  
**Editor** ..... Mary Ann Brett



# Becker merits Navy service award

By Mary Ann Brett

"For me?!" said the surprised Associate Technical Director (ATD) Robert Becker when the Center Commander CAPT Curtis Winters announced the meeting was called in his honor. Moments afterward, Becker received the Navy's Meritorious Civilian Service Award for "... outstanding contributions ... extraordinary executive leadership ... (and) consistent diligence and technical excellence."

The Captain called particular attention to Becker's recent exceptional efforts in responding to a variety of data and analysis requirements for the Defense Secretary's Commission on Base Realignment and Closure. "In my judgment," said Winters, "Mr. Becker's efforts had a direct influence on the decision to keep NADC off the base closure list announced on 30 December 1988."

For the major portion of his more than 27-year career at this Center,

Becker worked in avionics development and software and systems engineering; seven of those years in executive level positions. For the past two years he has served as Associate Technical Director, a position requiring effective executive and scientific leadership in a multitude of critical, technical and management tasks. As ATD, Becker also serves as Chairman of the Center Management Group and the Center Advisory Board and is the Position Management Officer and Competition Advocate.

Becker received his Bachelor of Science in Mechanical Engineering from the University of Pennsylvania in 1960 and his Master of Science in Aeronautical and Astronautical Engineering from the Massachusetts Institute of Technology in 1961. A dissertation away from his doctorate in Systems Engineering and Operations Research and a graduate of the Naval War College, Becker has been the recipient of several on- and off-Center awards and the author of numerous technical papers.



Center Commander CAPT Curtis J. Winters (left) congratulates Associate Technical Director Robert N. Becker on receiving the Navy Meritorious Civilian Service Award.



## STANDARD CIVILIAN PAYDAY

*Some good news for a change.* Under previous guidance from the Secretary of the Navy (SECNAV) payday for most Navy civilian employees would have been uniformly established as the eleventh day (second Wednesday) after the end of the pay period. Such a change would have pushed our payday back from Friday (sixth calendar day following the end of the pay period) to Wednesday of the next week. The standard payday was to be effective not later than 12 July 1989. A recent SECNAV message directs this action to be held with consideration now being given to making the sixth calendar day following the end of the pay period (current Friday payday at the Center) the standard civilian payday. We will keep you informed as further guidance is provided.

## Atkinson to attend MIT as Sloan Fellow

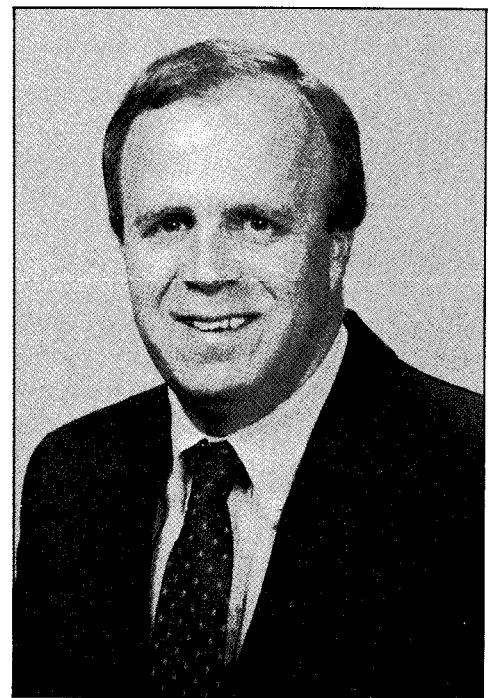
Andrew J. Atkinson of the Air Vehicle and Crew Systems Technology Department (AVCSTD) was recently selected as a Sloan Fellow and will attend the Massachusetts Institute of Technology's (MIT) Alfred P. Sloan School of Management founded in 1952.

Nominated by NADC and endorsed by the Space and Naval Warfare Systems Command, Atkinson was one of approximately 50 selected by MIT from men and women across the nation and abroad and from the private and public sectors. He will participate in a twelve month program which leads to a Masters of Science in Management and covers five major areas: policy and strategy formulation, critical elements of the dynamic external environment, managerial decision making, organizational and human factors in management and applied research presented in a thesis. The program is designed to broaden specialized mid-career executives for general and senior management responsibilities in

the future.

At the Center for eight years, Atkinson manages the Aero-Engineering Division of AVCSTD. The division is comprised of 120 engineering personnel responsible for developing advanced aircraft systems including: flight control, electrical power, armament, fuel systems and numerous other aero-mechanical products as well as in-house mechanical and electrical designs for all Center aircraft installation/modification programs.

Supervision at NADC is enthusiastic about the Fellowship and Atkinson's attendance. A former Sloan Fellow himself, Dr. Donald McErlean, Department Head of AVCSTD says, "As a Sloan Fellow, I am keenly aware of the value of this program and the need to nominate only the very best. It is with that in mind that I unhesitatingly endorse Mr. Atkinson's nomination; he will make an outstanding contributor to an extraordinary program."



Andrew J. Atkinson

## Sherrod rescues hunter in the Arctic

By JO2 Michael A. Delledonne

LT Barry Sherrod has received a commendation from the Commander Patrol Wings, U.S. Pacific Fleet "For professional achievement in the superior performance of duties while conducting search and rescue operations for Crew 2, Patrol Squadron One at Adak, Alaska ..."

"We received word that a Navy Lieutenant was lost while on a hunting trip, and we were sent out to find him," said Sherrod. "We left Adak and headed for the western side of the island. After being in the air for 20 minutes, we saw him waving to us from the ground."

Sherrod returned to base, then went back out and air-dropped a survival kit until ground help arrived.

After graduation from Cornell University with a Bachelor's Degree in

Mathematics, Sherrod served numerous assignments before landing at NADC where he is currently Line Division Officer in charge of ground operations for aircraft.

Nearly seven years in the Navy, Sherrod is originally from Rhinebeck, New York, but currently lives in Willow Grove with his wife Kelly.

### Editor's note:

Petty Officer JO2 Michael A. Delledonne is the newly assigned military journalist in our Public Affairs Office. As part of the REFLECTOR's staff, he will concentrate on covering the Center's military personnel as well as Recreational Services news. His "byline" will become a familiar part of our newspaper for the next three years.



LT Barry Sherrod

**DAYLIGHT  
SAVING TIME**

**BEGINS  
— 2 APRIL —**

**SPRING  
FORWARD**

# Baby . . . it's too cold outside

By Tom Joyce

It's winter. And some of us have hibernated for the season, becoming the very best couch potatoes we can.

Don't. That's Jack E. McKenzie's advice. He is an associate professor of physiology at the Uniformed Services University of the Health Sciences, the nation's only military medical school. "Research shows that the body begins to decondition immediately after a person stops exercising regularly. After 21 days, tests for maximum oxygen consumption can even be below the point when a person started conditioning."

For example, each spring and summer thousands of military personnel and civilians embark on ambitious "get into shape" programs. And each year, they endure the pain and soreness associated with using muscles forgotten during a long, cold winter. That's because it can easily take up to 30 days for a person who has been sedentary to regain a normal level of physical fitness.

McKenzie, who has a doctorate in physiology, recommends keeping up with a fitness program year-round. "It isn't a legitimate reason to give up on fitness just because it's cold outside," he said. "If the cold bothers you, switch to indoor activities like basketball, aerobics or weight training." McKenzie, an avid racquetball player, notes it's a sport that causes a person to expend more energy ("It's totally exhausting") than any other indoor sport.

However, a physical fitness program doesn't have to be at the totally exhausting level to benefit the individual. "Twenty minutes a day, three times a week, with a heart rate 70 percent of maximum will do it," said McKenzie.

As with any physical fitness program, if you have been sedentary for any period of time, it's a good idea to check with a physician before starting up again. And most physicians will usually offer the same advice—start slowly and build up to a desired level of fitness.

## USA becomes more energy efficient

By Michael Blank, P.E.

We have good news!!!

According to a 15 year study published by the Energy Information Administration (EIA) in Monthly Energy Review (April, 1988) Americans are becoming more energy efficient and made significant progress in energy savings.

This study shows energy consumption per dollar of gross national product (GNP) has declined since 1973. For years, many economists insisted the BTU's/dollar GNP must rise if the country were to grow. But actual consumption shows a sharp decline from 27,100 BTU's of energy consumed per dollar of GNP to only

Still, cold weather doesn't mean a person has to give up outdoor activities. Two keys are to avoid hypothermia and frostbite.

Hypothermia, or excessive loss of body heat, kills more than 1,000 Americans every year. And a jogger drenched in sweat exposed to a sudden breeze in temperatures from 32 to 50 degrees can die as chilly a death as a stranded climber on a snowy mountain.

"The key, obviously, is to dress warmly," said McKenzie, a veteran runner who has braved temperatures of minus 20 degrees Fahrenheit on the Idaho plains. "But of even more importance to a cold-weather runner is avoiding frostbite."

That means covering up the parts of the body that are most susceptible to injury—the hands, ears and face. "The ears are especially prone to exposure since they are so thin," said McKenzie. "It's almost mandatory that runners wear gloves in cold weather and always a good idea to wear a hat since a lot of body heat is expended through the head."

Another problem associated with cold-weather running is cold-induced asthma. "People who run in very cold weather and breathe through their mouth are the most likely to suffer from cold-induced asthma," said McKenzie. "Simply put, when the cold air hits the bronchial tubes, it induces a spasm of the trachea and bronchus."

McKenzie noted that the malady can be more pronounced when a person comes in from the cold weather to a warm room. "The body releases histamines, sometimes making it difficult for a person to breathe."

Dressing warmly for cold-weather runners, then, should include not only gloves and a hat, but some type of scarf to warm the air before it enters the mouth," said McKenzie. "Or be sure to breathe only through the nose, which can be difficult sometimes."

Still determined to sit out the winter months? "Then watch your diet very closely," said McKenzie. "Low fat, minimal cholesterol and cut down on the number of calories you normally consume." Remember, what people don't eat today, they don't have to take off tomorrow. Or in the spring.

20,000 BTU's in 1987 and still declining despite the increase in buildings, cars, and people over the past 15 years.

One of the major reasons for this decline is more energy efficient American technology and production.

Our experience indicates there are several methods, techniques and procedures to reduce today's energy costs, to minimize the impact of future price increases and to improve the energy efficiency and conservation in your home. One is eliminating energy waste in various systems and components like HVAC system, lighting system, water heating systems as well as applying new technology and materials to building and facility.



Photo by NADC Photo Lab

**Hearts and flowers for Valentines Day — Each year the NADC Officers' Wives Club makes flowers and sometimes candy available on Valentines Day. It's convenient for the employees and a good fundraiser for the club which contributes to several charities throughout the year.**

## If the SOC Fits

By Robert Janes

Over the past few years, Congress has shown a great interest in government Standards of Conduct (SOC) matters. Its latest statement on the subject was included in the amendments to the office of Federal Procurement Policy Act, passed last November and effective this coming May.

The thrust of this new law, which appears in the section entitled "Procurement Integrity," is to achieve fairness in the award of government contracts. The law applies to both contractors and federal "procurement officials", a term which, at NADC, would extend beyond our Contracts Division, and include the people performing the technical evaluation, as well as others involved in a particular procurement.

Much of the statute focuses on the conduct of government employees during the course of an on-going procurement. The statute prohibits federal employees involved in a procurement from: (i) discussing future employment with a competing contractor, (ii) soliciting or accepting gratuities from a competing contractor, and (iii) disclosing any proprietary or source selection information regarding the procurement to anyone who does not have a need to know. Each of these things is already prohibited by the Navy's SOC, but this new law makes the penalty for each of them much more severe. The statute provides for

contractual penalties to be assessed against the contractor involved, and administrative penalties, up to and including removal from the job, to be assessed a government employee who violates this law. It likewise provides for civil and criminal sanctions, which for individuals can be as high as a \$100,000 fine and five years in prison.

In addition, the law imposes new post-employment restrictions on federal employees. Anyone who participates in a procurement as a federal employee may not, for a two year period thereafter, work on that contract for the awardee. We have the text of the statute in the Office of Counsel. Government-wide regulations are due to be enacted soon but are not yet available. As is always the case, I encourage anyone with questions about this new law to refer them to us in the Office of Counsel on extension 3000.

### And the nominees are . . .

There are nearly one hundred honorary awards available throughout each year for which NADC's outstanding employees might qualify. However, unless deserving individuals are nominated, these awards will surely elude us. The nominations themselves are a way to recognize dedicated and diligent employees. Those awards accepting nominations through May 1, 1989 are:

- Equal Employment Opportunity (EEO) Achievement Awards (Honorary)
- National Medal of Science Award (Honorary)
- Government Computer News Scholarship (Honorary)
- Federal Executive Institute Alumni Assoc. Executive of the year Award (Honorary)

For specific information about these or any awards, contact Bettie Simpson, Code 031, extension 3079.

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Do them today.**

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# Fordham named NADC Sailor of the Year

By JO2 Michael A. Delledonne

NADC's 1988 Sailor of the Year is AMH1 (AW/NAC) Robert T. Fordham.

"It really felt good," said Fordham, "of being selected as NADC Sailor of the Year. I figured I had a 50-50 chance because of the competition. There are a lot of top quality sailors here, so I was very excited about receiving the award."

A native of Dixon, Ill., Fordham stayed in his state attending boot camp at Great Lakes Naval Training Center. After graduation, he was sent to Naval Air Technical Training Command, Memphis, Tenn. From there, Naval Air Station, Keflavik, Iceland; NRMC Reserve Center, Peoria, Ill.; Naval Air Station, Jacksonville, Fla.; Navy Recruiting District, Chicago, Ill.; Training Squadron Nineteen, Naval

Air Station, Meridian, Miss.; Patron, Four Nine, Pensacola, Fla.; and finally to NADC.

Fordham, 30, is a 13-year Navy veteran and reported to NADC in August 1986. He is leading petty officer for the Quality Assurance Division. "We ensure aircraft quality maintenance and the overall safety of the plane. It's a lot of responsibility, but I like that."

Captain C. J. Winters, Commander of NADC, commended Fordham for his "Superior professional performance of duties while assigned to Aircraft Maintenance Department's Quality Assurance Division."

Additional accomplishments noted by Captain Winters were: Petty Officer Fordham's qualifications in four different aircraft, assisting in the development of an Aviation Gas Free Engineering program which enhanced

the overall safety record of the department, coordinating a P-3 Flap Modification program, acting as on-site Quality Assurance Representative sacrificing several off duty hours to ensure work completion and to maintain schedules, and earning his Enlisted Aviation Warfare Specialist Pin.

As Sailor of the Year, Fordham will receive the nomination for the Space and Naval Warfare Systems Command Sailor of the Year, nomination for the Navy Commendation Medal, special liberty, a Navy League plaque, exemption from the watchbill for three months, and a designated parking space for the year.

"This is really a great place to be because you see the new and improved equipment that is coming to the fleet and you feel like you had a hand in that process. It's good to be a part of it."



AMH1 Robert Fordham  
NADC Sailor of the Year

## Two to attend executive training

By Mary Ann Brett

Susan Casagrand and Elaine Picard have been selected by the Space and Naval Warfare Systems Command to participate in the office of Personnel Management (OPM) sponsored Women's Executive Leadership (WEL) program.

This one-year training program prepares talented and professional women in the federal environment for management, an area lacking in adequate female representation. It provides training and developmental experiences to parallel the abilities and characteristics of a supervisor. Participants are exposed to a broad overview of careers and get the opportunity to closely observe managers as role models.

By a Special Act of Congress, OPM was asked to create a program for

federal women. "The program was actually charted by a young minority woman," said Varma. WELP is a modified version of a two-year Senior Executive Service training course. Because of the tremendous interest in the course, applicants are now limited to a current grade level of GS-11 or -12 at the time of application.

The program consists of 25 days formal classroom training conducted by the OPM plus rotational, self-development assignments.

Casagrand, a contract negotiator in the contracts division of the Supply Department, is responsible for all pre-award and post-award functions for a variety of supply, service and research and development contracts.

Picard is a Systems Engineer for the Integrated Tactical Decision Aids program responsible for fleet operations analysis, system

requirements definition, program problem analysis and correction and coordination of fleet distribution and training.

Casagrand and Picard were unavailable for comment at this writing, but past WEL program graduate Dr. Asha Varma is enthusiastic about the program and encourages all interested eligible women to apply.

### Personal Interest

The deduction for personal interest is being phased out. This deduction is limited to 40 percent in 1988, 20 percent in 1989 and 10 percent in 1990. No deduction will be allowed thereafter. Personal interest generally includes interest on car loans, credit cards, personal loans and most tax deficiencies of individual taxpayers.

## Commander Salutes

continued from page 2

**CDR Victoria Voge** (Code 60) and **ACC Jan Becknell** (Code 90): For personal commitment to the Center's smoke-free workplace program, including "Fresh Start" which resulted in five employees stopping smoking.

**Dr. James Whinnery** (Code 60): For outstanding performance involving the centrifuge training program for the Naval Air Force U.S. Atlantic Fleet tactical aircrew.

**Wendy Lin** and **Thomas Milhous** (Code 60): For serving as an evaluator on the Advanced Interdiction Weapon System source selection effort.

**Geraldine Keenan** (Code 03), **Ira Bellew** (Code 50) **Carl Ruzicka** (Code 80): For professional negotiating skills resulting in quality products in a timely fashion at a competitive price.

**Dr. James Whinnery**, **LCDR Timothy Singer** (Code 60) and **Dennis Kiefer** (Code 80): For significant contribution to the Navy's G-tolerance Improvement Program.

**Howard Sheckman**, **William Wentz**, **AWCS Steven Markham**; and **Joseph Camaioni** (Code 10): For significant contributions to the Naval Air Systems Command's CP-901A Tactical Computer upgrade program.

## Security reminder

**WATCHSTANDER**—A security check should be made at the end of each work day to ensure that:

- a. classified material is properly stored,
  - b. all burn bags are stored or destroyed, and
  - c. security containers are locked.
- Standard Form 702 (Security Container Check Sheet) must be posted on all security containers.

## Women's program active

FROM THE FWPC

The Federal Women's Program Committee (FWPC) is organized under the guidance of the Equal Employment Opportunity (EEO) Program, serving in an advisory capacity. The committee may, according to its by-laws, study any problems affecting Center women or sponsor events which will enhance the federal Women's Program. The program's primary goals are:

1. to end sex discrimination and prevent sexual harassment;
2. to increase job opportunities;
3. to increase educational opportunities; and
4. to become involved in the community.

The FWPC is comprised of members from each department across the Center. This year, under Chairperson Margaret Russo (Code 6062) and Vice-Chairperson Marianne DeCicco (Code 0325), the FWPC will be focusing on career development activities, day care concerns, and other enriching programs and functions. The highlights of the year are the Women's History Month events in March, and the Women's Equality Day luncheon in August at which the NADC Woman of the Year Award is given. Watch the Log and FWPC flyers for information.

The FWPC meets the third Wednesday of every month at 1030 in the Walnut Conference Room. If you are interested in what we do, we invite you to attend our meetings (with supervisory permission). Or, send your questions or comments to the FWPC Chairperson or the Federal Women's Program Manager (Code 03E).



Margaret Russo  
FWP Chairperson



Marianne DeCicco  
FWP Vice Chairperson

### Here's a tip . . . a tax tip.

- Be careful when selecting a tax preparer.
- stay away from someone who claims to have an "in" with the IRS,
  - don't accept promises of a refund
  - Get the preparer to sign the return,
  - NEVER agree to sign a blank return.





Photo by Susan Sestak

**Pilot soars in children's eyes** — LCDR Tim Sestak of the Vertical Flight Program, seems to be enjoying his visit to the Kutz Elementary School in Doylestown for their Career Day. He demonstrated his flight gear and explained what it means to be a Navy pilot.

## Navy League makes annual visit to NADC



Photo by Jim Kingston

Tom Zenobi of the Air Vehicle and Crew Systems Technology Department briefs members of the Navy League on NADC's participation in the National Aeronautics and Space Administration's Shuttle Ejection Seat Study. The Navy League visits the Center each year for a dinner meeting and a tour or briefing on NADC developments.

## Prevention is best cure

### American Forces Information Service

"Curious Minds Plus Busy Hands Equal Potential Poisoning" is the slogan for the 27th annual observance of National Poison Prevention Week, March 19-25.

According to the American Forces Information Service in 1962, when the first National Poison Prevention Week was observed, there were almost 500 accidental poisoning deaths to children under 5. In 1986, there were only 59 deaths.

The Poison Prevention Week Council attributes this reduction to emergency first aid information from poison control centers, increased vigilance by parents, grandparents and other adults and child-resistant closures—all of which amount to greater awareness of the problem.

Poison control experts say you can get help more quickly if you keep the emergency room or poison control number on your phone. When you call, tell the expert the victim's age and weight, the poison involved (have the label ready if you have it) and whether it was ingested, inhaled, absorbed

through skin contact or splashed into the eyes.

Of course, prevention is better than having to make a trip to the emergency room or a call to the poison center. Here are some tips from the experts:

- Keep all household chemicals and medicines out of reach and sight of youngsters.
- Throw away bottles of medicine that have passed their expiration dates. The more bottles of medicine you keep around the house, the more likely a child is to get into them. Also, medicines become less effective when they are old.
- Have a bottle of ipecac syrup available in case the poison expert advises you to induce vomiting. However, if you have HUMCO-brand ipecac, throw it away. Some HUMCO-brand eucalyptus oil—a deadly poison—was mistakenly labeled as ipecac.
- Close containers securely after use.
- Don't keep food on the same shelf as medicine or cleansers.
- Keep all poisons and medicines in their original containers.
- Never refer to medicine as candy.
- Avoid taking medicine in front of children, since they may imitate you.
- Take medicine in a well-lit room so you can see what you're taking.

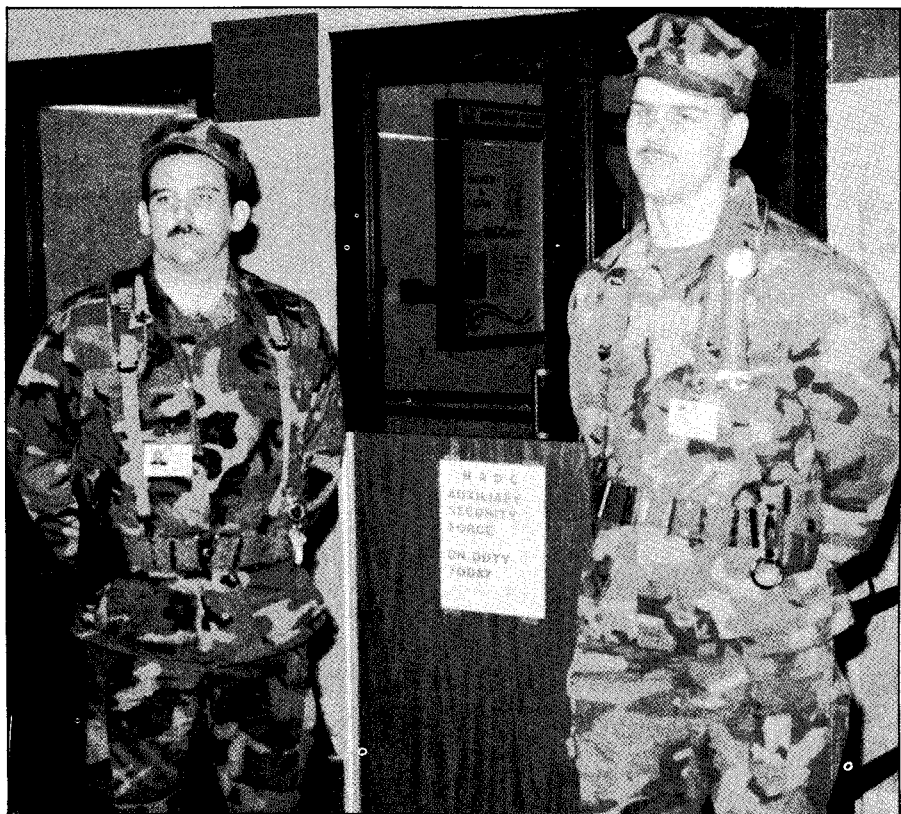


Photo by Jim Kingston

**Camouflaged at NADC** — Participating in a special training exercise are Petty Officers AD2 Gary Rippert (left) and AME2 Jeffrey Tonn. These full-time sailors are also members of NADC's Auxiliary Security Force, standing guard at the Center's Credit Union entrance.

## TAXPAYERS with dependents

### HERE'S A TAX TIP:

For your 1988 tax return, you generally must list Social Security numbers for dependents who are at least 5 years old by the end of 1988. If any of your dependents do not have this number, get an application today from the Social Security office in your area.



## CATCH THE CHRISTMAS SPIRIT — NOW...

The Welfare and Recreation Association is looking for a few good people to serve on the 1989 Children's Christmas Party Committee. Your help is needed. To volunteer, please call Phil Horne, ext. 1486.



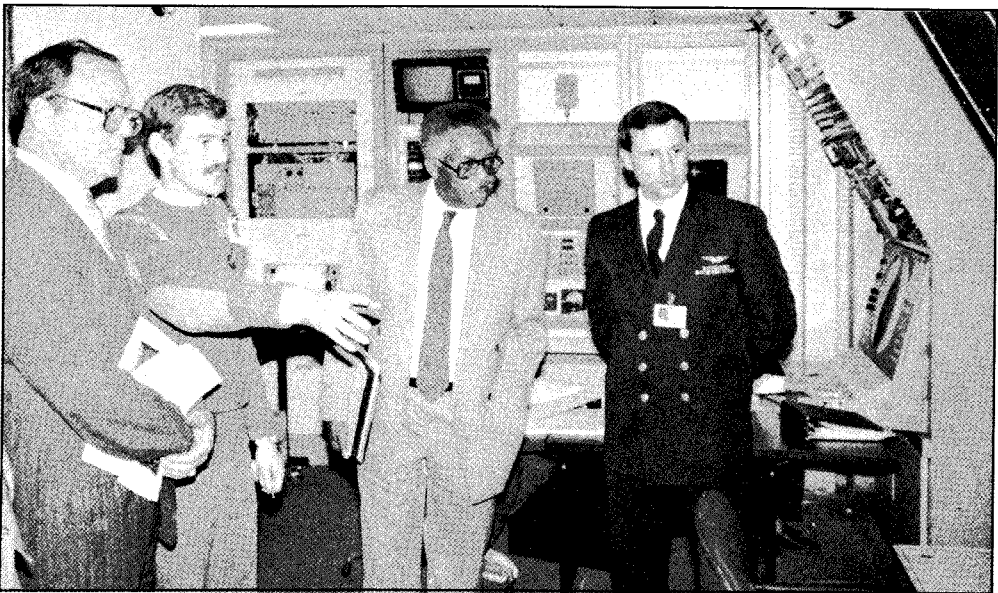
# VIPs welcomed by NADC



Top Left: LCDR Charles Messick (left) gives a presentation on to Director of Navy Laboratories (DNL) Dr. Edward Tunstall accompanied by Center officials including Center Commander CAPT Curtis Winters and Technical Director (TD) Guy Dilworth.

Lower Left: Squadron Leader John Coote, RAF, briefs DNL Dr. Tunstall on the Center's P-3C software development facility. TD Guy Dilworth and LCDR Brian Gritte pay close attention.

Below: Steve Russo explains CV-Anti-submarine warfare module displays to DNL Dr. Tunstall.



Photos by NADC Photo Lab

## Technical Highlights

### Next Generation Computer Resources (NGCR) Program

The OSSWG has drafted a charter to establish a commercially-based family of operating systems interface standards for development and deployment of NAVY MCCR application systems in the mid-1990s and beyond. The OSSWG shall:

- identify Navy applications systems requirements for operating systems
- identify existing and evolving operating systems standards, operating systems implementations and operating systems technology
- determine the applicability of identified operating systems capabilities to the requirements
- recommend operating system interfaces, protocols, and services to the Program Office for NAVY-wide standardization

Six major requirements have been identified for the NGCR OSS: Ada-oriented, distributed, real-time, heterogeneous processors, reliable/fault tolerant, and multi-level secure.

The OSSWG tasks be coordinated with the other NGCR standards areas: Backplanes, Local Area Networks, Database Management System, Graphics Interface and Software Engineering Environment.

### V-22 Mission Planning Functional Requirements Document (MPFRD)

The Tactical Air Systems Department led a multi-laboratory team to prepare the V-22 MPFRD for

the Naval Air Systems Command (NAVAIR). NADC worked with NAVAVIONICCEN, Wright-Patterson AFB, NAVAIRTESTCEN and the user community who all provided inputs. A third generation draft was presented to the sponsor on 27 February 1989. It was well received and NAVAIR agreed to review the document in detail and provide comments during March.

The MPFRD will define the V-22 mission planning functional requirements addressed during preflight and inflight planning and during postflight debriefing activities to insure mission success. The functional requirements defined in this document will be used to design the software required for the mission planning system and to generate the ground station mission planning procurement requirements. The document will be updated as the mission and/or technology changes.

### Vertical Flight Program Delivers Key SFIR Software for TECHEVAL

The Standard Flight Incident Recorded (SFIR) data extraction software package was delivered to NAVAIRTESTCEN for use in TECHEVAL. The SFIR will provide the Navy with a standardized capability similar to an airliner "black box" recorder for use in evaluation of post-accident determinations for helicopter aircraft. Smith Industries is building the hardware under contract to NAVAIRSYSCOM. TECHEVAL of the SFIR is scheduled for August 1989.

David Morris (right), Head of the Air Navigation Sensor Section gives Deputy DNL Howard Law and Michael Marshall a comprehensive tour of the Center's unique Inertial Navigation Facility.



Photo by NADC Photo Lab



The Congressman said "... — and NADC employees were all ears during a question and answer session held in the Center auditorium. Federal pay comparability was just one of the subjects discussed during Congressman Peter Kostmayer's recent visit.

# Technical Highlights

## Next Generation Computer Resources (NGCR) Program

The Software Computer Technology Division was tasked by SPAWAR to lead the Operating System Standards Working Group (OSSWG) for the NGCR program. The OSSWG is co-chaired by Tricia Oberndorf with a military chairman at SPAWAR, and supported by other NADC personnel representatives from other NAVY laboratories, industry, and academia. The first two meetings were held here

in January and February 1989. The first joint meeting with industry is scheduled for March 1989. The major motivation behind NGCR is to align NAVY standards with industry's. By adopting industry standards that meet NAVY requirements the NAVY is in a better position to take advantage of industry investments and technology advances. Where existing standards do not meet NAVY requirements, the OSSWG will work together with industry to establish improved joint standards that do.



# Mixed Bowling News

By Tom Reiter

Check out the standings. Since the Who Cares fired **John (Felske) Bowes**, and hired **Dorothy Gramlich**, they have clawed their way out of the cellar in the A Division. The Goofers are in first place, being chased by last year's champs, the Alley Cats. The surprising Rolling Thunder with their sparkplug **George Delisi** are also in the hunt. Watch out for the Destroyers

now that **Lorrie Dunn** is back in town. In the B Division, the Falcons, led by **Steve Jerden**, have wrested the lead from **Wes Gleason's** Gutter Dusters. **Larry Sicher's** Magic Markers are always tough, and the Lucky Strikes captained by **Cathy Burian** are still in the picture. Both Divisions are having a very competitive second half... stay tuned.

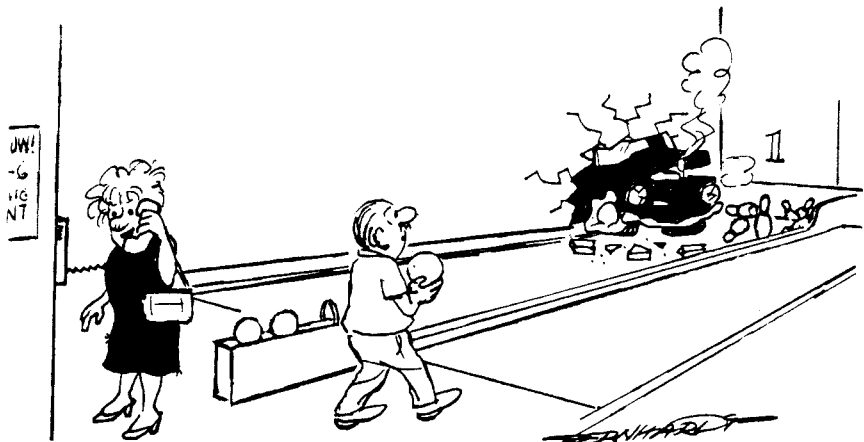
League Standings and each team's high games as of March 2nd:

### A Division

Goofers	22.0—10.0	Al Knobloch (225) Lorraine Reidinger (218)
Alley Cats	21.0—11.0	Bob Geyer (241) Patti Aspinall (208)
Rolling Thunder	20.0—12.0	Mike D'Aulerio (222) Vicky Schwartz (188)
Warveyhallbangers	18.0—14.0	Jack Figgles (226) Caroline Tierney (200)
Destroyers	17.5—14.5	John Lommock (196) Lorrie Dunn (209)
Red Winos	16.0—16.0	<b>Mike Dent (247)</b> Elaine Granieri (212)
Eleventh Frame	16.0—16.0	Allen Goldstein (227) Helen Halko (186)
From The Gutter	16.0—16.0	Rick Yeager (211) Lorraine Williams (189)
Nine Pins	14.0/18.0	Jim Campana (246) <b>Linda Stickney (226)</b>
Les Champigon	13.0—19.0	John Harris (242) Ann Harris (190)
Who Cares	11.0—21.0	Cliff Tierney (226) Stephanie Hall (169)
Spare Us	9.0—23.0	Dick Coughlan (230) Donna Morgan (192)

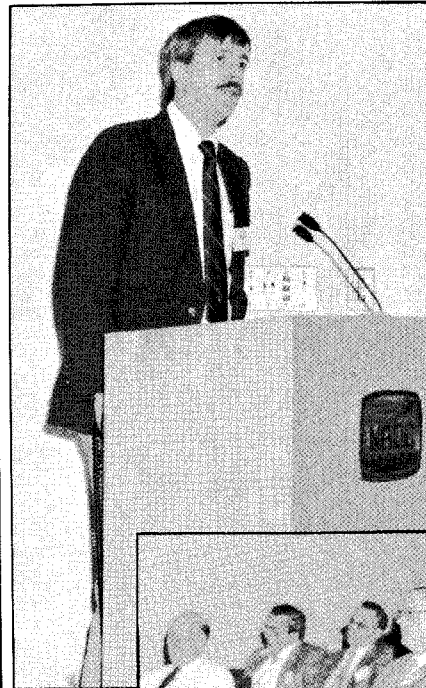
### B Division

Falcons	24.0—8.0	Steve Jerden (231) Denise Beck (222)
Gutter Dusters	23.0—9.0	<b>Wes Gleason (262)</b> <b>Mary Vaughn (225)</b>
Magic Markers	22.0—10.0	Jeff Irvin (214) Maria Cusanelli (197)
Lucky Strikes	21.0—11.0	Bob Gindhart (212) Mary Feeley (222)
Bullshooters	20.0—12.0	Tom Leahy (233) Audrey Dinkins (203)
Dynamic Duos	16.5—15.5	Nick Doto (222) Janet Hinchliffe (164)
Blue Light Special	14.0—18.0	Scott Kee (210) Eileen Bradley (187)
Big Spenders	14.0—18.0	Mack Cox (209) Sue Casagrand (157)
Pinheads	12.0—20.0	Jeff Mansfield (191) Lisa Johnson (151)
White Winos	11.5—20.5	Rick Eppright (244) Terese Wells (188)
Neiners	10.0—22.0	Mark Lind (224) Nelda McMillen (165)
Screwballs	6.5—25.5	John Ryan (215) Pat Tease (190)



"The good news is I think I can pick up the spare."

# Optical disk symposium held



"CD-ROM Requirements" was addressed by Mark Shilberg (Top Left) of the Defense Mapping Agency. He was one of several who spoke to a full house during the recent Optical Disk Technology Review held in the Center Auditorium. NADC coordinator Ron Kushnier is seated in the near foreground among and government industry representatives.

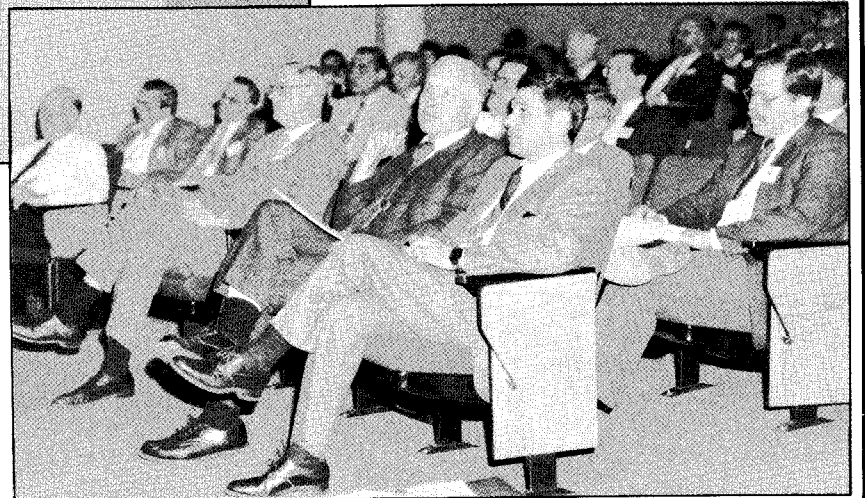


Photo by NADC Photo Lab

# NADC in the NEWS

The big news is...



News items about NADC appear frequently in the Intelligencer/Record, Bucks County Courier Times, Today's Spirit, and the regional edition of the Philadelphia Inquirer. However, more often news items about the Center are regularly found in trade publications such as Aviation Week and Space Technology, Naval Aviation News, Defense News, Aerospace Daily and the like.

As a means of assuring that NADC is, indeed, in the news, we will be listing here the kinds of news we have released and some of those publications where stories appeared.

The most recent news clippings include:

- Today's Spirit, Feb 8, 1989, "NADC to test Optical Disks"
- Today's Spirit, Feb 15, 1989, "'Top Gun' comes to NADC for testing"
- The Intelligencer/Record, Feb 15, 1989, "In for tests--NADC will outfit F-14 with new radar, electronics"
- Bucks County Courier Times, Feb 17, 1989, "NADC will outfit F-14 with new radar, electronics"
- The Philadelphia Inquirer NEIGHBORS, Feb 26, 1989, "Warminster NADC begins job of fine-tuning the F-14"
- Navy News Wire Service, Feb 17, 1989, "NADC flies 14 years mis-hap free"
- Defense Daily, Feb 17, 1989, "Navy opens design for 21st century fighter crew station"
- Navy Technology Transfer Fact Sheet, "NADC tests SMOOPI"
- The Philadelphia Inquirer NEIGHBORS, Feb 23, 1989, "Career Day-- Focus on women in work force"



## T-2 Flies first fluidically controlled formation

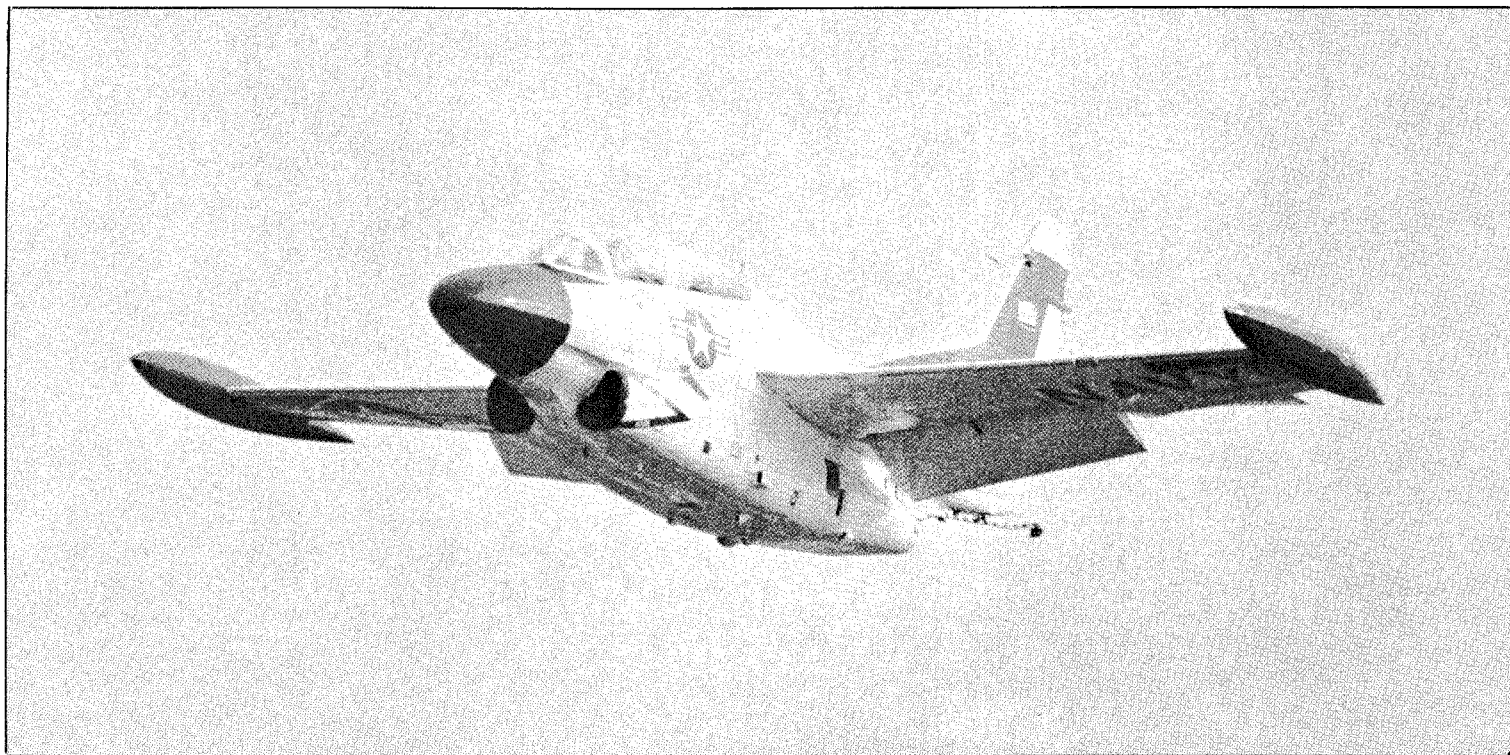
NADC Navy pilots have flown the first fluidically controlled formation flight in T-2C aircraft, accompanied by one of the Center's A-7 aircraft.

This formation flight demonstrated that the fluidic flight control system has the stability and control necessary for close formation flying such as would be necessary during tactical maneuvering and in-flight refueling.

As of mid-February 1989, the T-2C Fluidic Flight Test project has accumulated approximately 37 flight hours during 39 test flights and has performed takeoffs, landings, and formation flight under fluidic control.

This aircraft, reconfigured at NADC in July 1988, was equipped with an 8000 PSI hydraulic system with dual fluidic flight controls and an electric fly-by-wire flight control system in place of the aircraft's conventional mechanical flight controls.

There are three additional formation flights planned during which more aggressive, dynamic maneuvers are planned.



T-2 aircraft during its first fluidically controlled formation flight.

## CNO gives ASW 'top priority'

Chief of Naval Operations, ADM Carlisle Trost reaffirmed anti-submarine as a top priority in his annual posture statement to Congress March 1.

"I am particularly mindful of Soviet submarine capabilities," Trost said, "and our own anti-submarine warfare efforts remain my top warfighting priority."

"The new SSN 21 Seawolf attack submarines and the new long-range air ASW capability aircraft (LRAACA) are

the essential next generation of ASW forces. When combined with planned improvements to our carrier based ASW aircraft and helicopters, and the integrated ASW capability of our new surface combatants, they provide us the forces necessary to meet the Soviet ASW challenge."

The CNO told committee members anti-submarine warfare is a "force structure intensive problem" and that it takes more than one type of ASW platform to succeed in a complex and ever-growing ASW environment.

"There are no silver bullets or easy answers to ASW, nor is there a technical breakthrough on the horizon to make ASW simple. It takes the combined efforts of all our ASW forces — surveillance systems, attack submarines, ASW aircraft and helicopters, and surface combatants — to defeat a large submarine threat. To succeed at ASW, you have to do it the old-fashioned way: work hard and combine all the forces at your disposal. This is a lesson we learned in WW II and it remains valid today."

## Small Business . . . big goals

According to John D. Scott, NADC's Deputy for Small Business, in the first five months of fiscal year 1989, contracting to small businesses is running at a rate of 45% of total contracting dollars. The goal for the full year is 40%.

For the period, that amounts to \$33.6 million going to small businesses out of a total of \$74.5 million available for contracting. In addition, more than \$6 million or 8.2% went to minority-owned and nearly \$700,000 to women-owned businesses.

NADC has exceeded its small business goals by significant margins for three consecutive years. The Center received the Secretary of the Navy "Omnibus Award" for Small and Disadvantaged Business Utilization in recognition of its achievements in 1987.

## Dilworth named Outstanding Engineer receives Penn State alumni Award

By Mary Ann Brett

Technical Director (TD) Guy Dilworth has been named one of the Pennsylvania State University Outstanding Engineering Alumni by its College of Engineering. Award winners received a plaque and will have their names and likenesses engraved on the Outstanding Engineering Alumni Awards Plaque hanging in Kunkle Lounge at Penn State.

According to John Brighton, Dean of Engineering, this award is the highest honor the College can bestow on one of its alumni. "One of the best measures of a college's excellence is the success of its graduates . . . These awards are given in recognition of their success

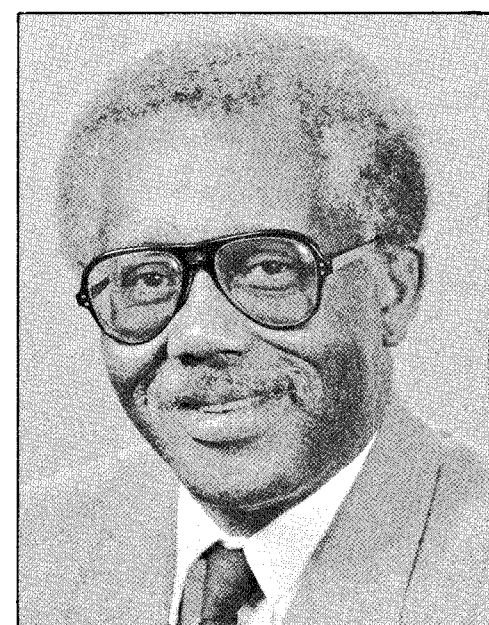
and the impact they have had . . . on the engineering profession, their communities and their university."

A member of the Senior Executive Service since 1979 while serving as NADC's Director of Software and Computer Technology, Dilworth then became TD at the Naval Coastal Systems Center and five years later, in 1987, he returned to NADC.

"His primary focus has been and continues to be technical excellence and innovative achievement."

Dilworth was cited for greatly enhancing the technical product and

Continued on Page 6



Guy C. Dilworth

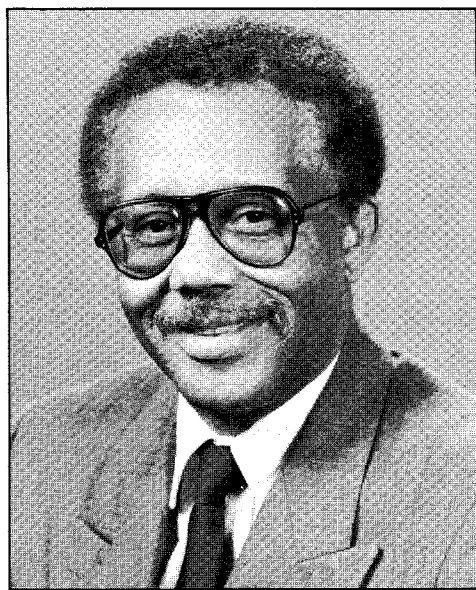
### MAY:

- Family Day Open House
- National High Blood Pressure Month
- National Physical Fitness and Sports Month

# Command Corner



**Captain Curtis J. Winters**  
Center Commander



**Guy C. Dilworth, Jr.**  
Technical Director

## FAMILY DAY OPEN HOUSE

Often our spouses and families ask us what we do at work and just as often it may be difficult to describe. Other relatives and friends are curious about what goes on at NADC. A good way to satisfy our families and friends is to bring them here on Saturday, May 20th. In addition to being Armed Forces Day, it's also our Family Day Open House.

This year, all the activity will take place on the airfield side of the Center and will feature a huge display of aircraft — our own, some visitors, and some vintage. The technical departments are planning some very interesting displays to be set up in Hangar Bay #1 in Building #4. The centerpiece of the displays will be a nearly-completed Brewster Buccaneer dive bomber. This rare, vintage aircraft was built here in 1943 and has been accurately restored by volunteers who were former Brewster employees.

I think it's important for as many of you as possible to take advantage of

this opportunity to have a pleasant day with your family and friends and see what's happening on Center. Frequently, we become myopic and can only see our own narrow area and miss the big picture. Open House will broaden your outlook. You'll be seeing and hearing more details as the date draws nearer. I hope to see you there.

*Guy C. Dilworth, Jr.*  
**GUY C. DILWORTH**  
Technical Director

*C. J. Winters*  
**C. J. WINTERS**  
Commander

# Commander Salutes

**William Ailes and Kenneth Foulke** (Code 50): For providing technical expertise for the Advanced Interdiction Weapon System source selection effort.

**Leon Domzalski** (Code 60): For briefing the NR NAVAIRSYSCOM 0933 Unit on the V-22 crash-worthiness, seating and ejection seat system.

**Herb Heffner** (Code 20): For invaluable assistance during the technical evaluation of the Advanced Interdiction Weapon System source selection effort.

**Lawrence Coor** (Code 50): For significant contributions to the successful development of new sonobuoy concepts and technology.

**Stuart Simon** (Code 01): For performance as an executive staff assistant advisor, and expert in corporate planning, analysis, and assessment.

**Anthony Cappetta, Marshall Hynes, John Johns** (Code 60): For contributions to the V-22 air-to-air simulation experiments and the MV-22 air-to-air simulation evaluations.

**Kenneth Danser, Dennis Kiefer,**

**Joseph Armstrong** (Code 80): For an outstanding job during 1988 as a member on the Center's Advisory Committee for the Protection of Human Subjects.

**Robert Jones** (Code 09): For significant contribution as instructor in the Government Contracts Law Course.

**Morton Metersky** (Code 30): For an outstanding presentation to Naval Postgraduate School students on Joint Command, Control and Communications.

**Robert Reichart** (Code 80): For attaining Honor Graduate status for the Navy Management Training Office, Fitting Out and Supply Support Assistance Center.

**Faye Brown** (Code 02); **Rebecca Gray** (Code 04); **Marilyn Strothers** (Code 09); **Darren Fields, Sidney Williams, Maureen Sullivan, Joseph Cameron** (Code 10); **John Hester, Morgan Woods** (Code 50); **Sharon Robinson, Desiree Beverly, Shirley Jones** (Code 70); **Teri Berrian, Frances Pannell** (Code 80): For participation in the Center's Black History Awareness Month celebration.

## Letter to the Editor

Dear Editor,

The VIEWPOINT column in your February issue was tremendous and must be re-emphasized. The question: What advice would you give to blacks

trying to reach their full potential? The responses were inspiring, so much so that I have saved it for future reference and it would be wise for others (including non-blacks) to do the same. The advice transcended racial, handicap, age, economic, and other "boundaries" which can provide a convenient excuse to not meet one's full potential . . . if we focus on reaching our full potential, being the best that we can possibly be, the outcome is self-rewarding.

There are two more phrases of wisdom to consider. "Your limitations are set by your expectations" — author unknown. "Hard work earns just rewards" — Willie Stargel during his induction into the baseball Hall of Fame.

**Charles Hegedus**  
Code 60

### A Matter of Letters

"Letters to the Editor" offers employees an opportunity to ask reasonable Center-related questions and express legitimate opinions, interests, and concerns in an open forum.

We reserve the right to accept or reject letters based on their content and intent and the right to edit for brevity or clarity those letters we select to publish.

**James S. Kingston, Public Affairs Officer**  
**Mary Ann Brett, Editor**

## FAMILY DAY

**SATURDAY**  
MAY 20  
1000-1600

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**Commander, NADC** .....

**Technical Director** .....

**Public Affairs Officer** .....

**Editor** .....

**Assistant Editor** .....

**Assistant Editor** .....

**CAPT Curtis J. Winters**

**Guy C. Dilworth, Jr.**

**James S. Kingston**

**Mary Ann Brett**

**JO2 Michael Delleddone**

**Margaret Vigelis**



*CROSS your fingers for*

# New remote surveillance system

By Harry Koper

In the Reconnaissance/Surveillance Branch, engineers are responding to a Navy need by exploring the concept of developing a low-cost, expendable sensor system for real-time day or night surveillance of surface ships at a remote reconnaissance/control center. This system is called the Combined Remote Ocean Surveillance System or CROSS, which can be deployed by various methods including air-launched in the tactical environment to observe ships at sea.

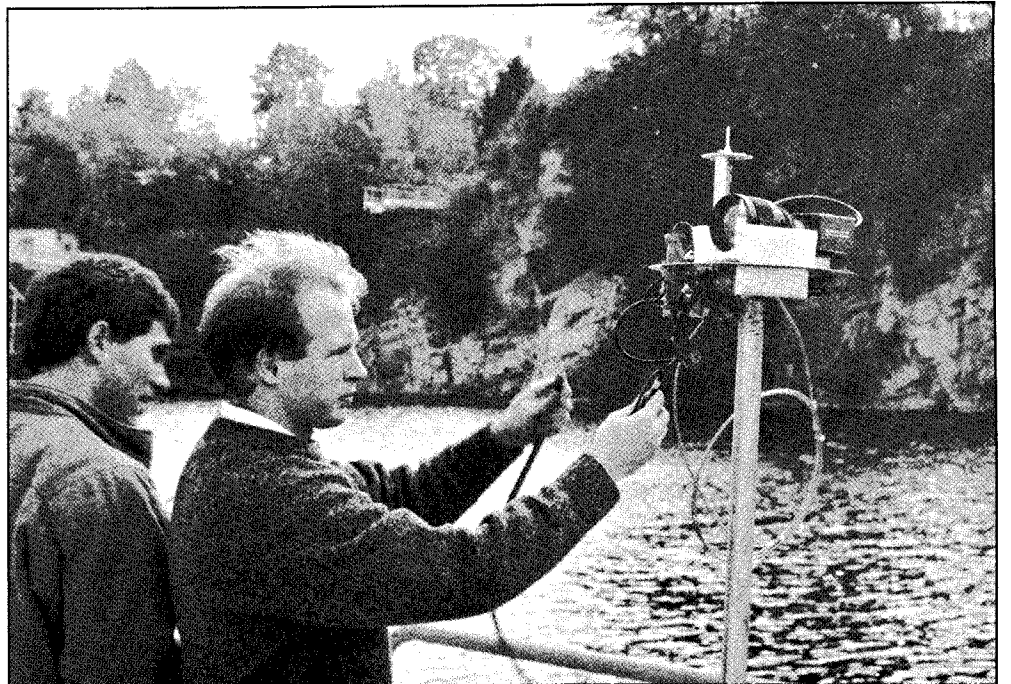
The Navy needs a system capable of assessing real-time pre- and post-strike battle damage for long range missiles, as well as collecting information without risking manned vehicles.

CROSS can satisfy these requirements by transmitting real-time optical and other surveillance data to the tactical commander via an airborne relay data

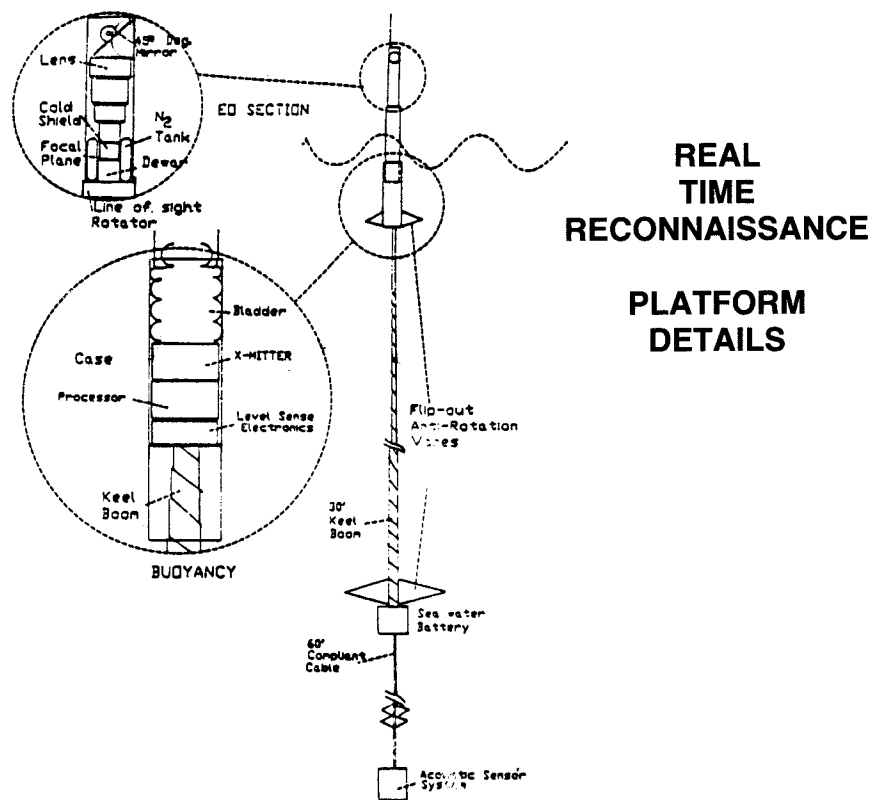
link. Its sonobuoy-shaped canister self-deploys into a spar buoy and contains electro-optical (EO) and other types of sensors, direction sensing, and a video data link.

The CROSS observes the area above the water's surface with the EO sensors through a lens and stabilization mirror arrangement housed in the extended rotating end of a floating vertical buoy. To observe ship targets and transmit surveillance information to the command center, CROSS pans a 360° horizon and records all targets within its field of view. An electromagnetic compass determines the sensors viewing direction. An RF data link transmitter within the buoy transmits the sensor data to an airborne relay platform or to a surface receiving station.

Early studies project the CROSS concept as highly positive and a proof of concept brass board is being designed and fabricated.



Joe Bradley and Dennis Kent attach the CROSS sensor pallet to the mast at NADC's Deep Water Testing Facility.



**REAL TIME RECONNAISSANCE PLATFORM DETAILS**

## Divona promoted to warrant officer

"Yes sir!" will be a common response to newly promoted Chief Warrant Officer (CWO) Michael Divona. "I applied for Limited Duty and Warrant Officer programs," said Divona. "I didn't really expect to get the promotion because I had been passed over before and I didn't think this time would be any different."

Divona, 33, a 15-year Navy veteran from Cranston, R.I., wasn't even going to apply. "I had to beat him up to go do it," chided LT Bob Toth, Material Maintenance Control Officer at NADC. "He had his package all done but wasn't going to go to the selection

committee until I kicked him in the behind."

Divona said he'll miss being a chief. "The comradery of the chiefs will be tough to leave. If we had a problem we sat down and discussed it until it was solved. Now I'm not a chief and I'm not exactly an officer so I'm kind of in between."

Divona's new assignment will be with VP-62 in Jacksonville, Fla.

**"... looking forward to the challenge"**

Though he'll miss the enlisted ranks, Divona is looking forward to the challenge ahead. "The job sounds really exciting. I have family in the area and I really like the hot weather. I can't wait to get started."



CWO2 Michael Divona

## Cannon takes ASW fleet assignment

By Mary Ann Brett

Michael P. Cannon of the Life Support Engineering Division will soon be spending one year in Brunswick, Maine at the Commander Patrol Wings Atlantic Command.

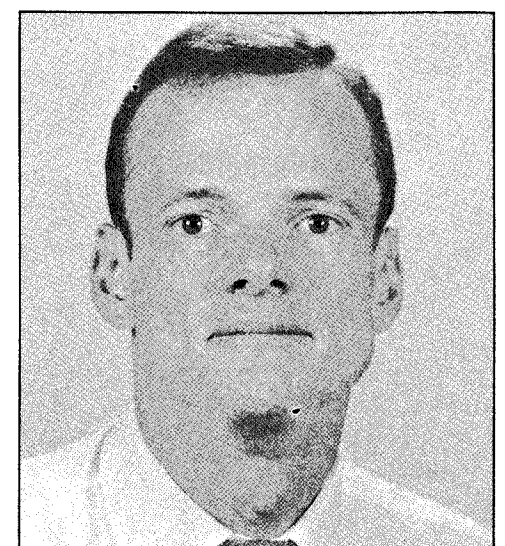
Participating in the Fleet Assistant Program (FAP), Cannon will work on operational anti-submarine warfare (ASW) problems. He will be a link between the operational organization, deployed P-3 squadrons, and NADC's technical resources.

The FAP is a new training program coordinated through the Warfare Systems Analysis Department. While it currently consists of this one assignment, the program may expand to offer as many as six training opportunities.

Cannon, engineer, has worked at the Center. Looking forward to his new position, he said, "The assignment will be career enhancing for me. It will increase my knowledge of ASW as well

as my knowledge of the Navy's mission."

Division Manager Jim Harding had mixed emotions about Cannon's leaving. "I was initially quite concerned about losing a valuable employee," said Harding, "... but the eventual payoff is worth the risk."



Michael Cannon

### Calling all disks . . .

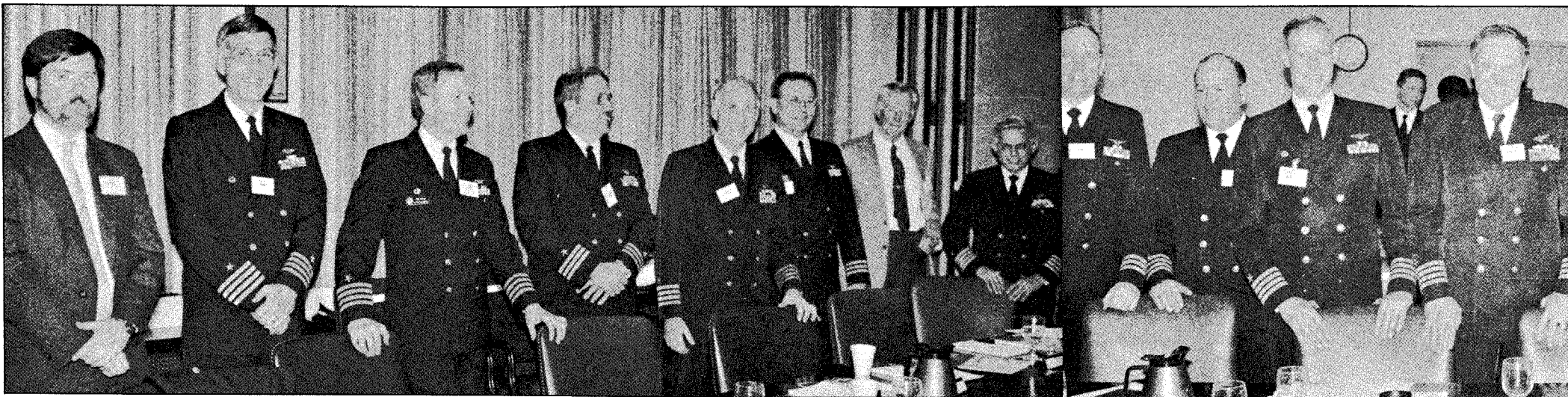
REFLECTOR staff needs your help!

We will soon be using desktop publishing to typeset REFLECTOR newscopy in-house. Because of this I am requesting that all articles intended for publication be submitted on IBM compatible document disks in MICROSOFT word format. We will continue to accept articles submitted via electronic mail to "mabrett."

Thank you for your cooperation. Your ideas and support are greatly appreciated.

Mary Ann Brett  
Editor

# ASW review



During a two-day meeting held at NADC, and chaired by RADM (Select) W. Vincent of the Naval Air Systems Command, all the major and functional ASW project managers at NAVAIR and NADC evaluated current plans for future ASW programs and their relationships. The meeting focused on the direction of AIR ASW programs in the

## Fitness week to be held

By Neil Abramson

For the past four years this Center has celebrated Navy's fitness month, (May) with a day during that month dedicated to providing employees with health information, and blood pressure screenings. Last year, for the first time cholesterol screenings were provided to employees at a reduced cost, and an inter-department bicycle relay race was held on the landing strip.

For 1989 we have expanded fitness day to fitness days, with a variety of events scheduled from Monday through Thursday, 15 to 19 May 1989. The activities kick-off on Monday, 15 May 1989 with a *Blood Pressure Screening* performed by this Center's Emergency Medical Technicians (E.M.T.'s) in the hangar of building 1. (Schedule for blood pressure screening will be posted in "The Log" during the week of 8 May 1989). Also on Monday, Registered Nurse Practitioner's from Lower Bucks hospital will be in the Center's dispensary to provide *Breast Exams* between 1100 to 1300 and Natalie Costa, A Cardiac Rehabilitation Nurse from Doylestown hospital will speak on *Reducing the Risk of a Heart Attack* in the Center Auditorium from 1030 to 1130 (supervisory permission is required to attend). Please contact Betty Beans on X1167 to arrange appointment.

On Tuesday, 16 May 1989 blood pressure screenings will continue in

the hangar and a *Cholesterol Screening* will be provided to employees at a cost of five dollars per person (schedule will be posted in "The Log" during the week of 8 May 1989). On Tuesday from 0900 to 1130 tables will be set up in the hangar with *Health Information Brochures*, and representatives from the Center's employee assistance resource, BEACON will be on hand to answer questions/provide information on their services. At 1130 a luncheon will be held in the Center's dining room. Dr. Vail Garvin of Blue Cross/Blue Shield will be the keynote speaker. Dr. Garvin will be accompanied by the Blue Cross/Blue Shield *Wellness Robot*. The robot will be on display to center employees in the hangar of building 1, from 1315 to 1430.

On Wednesday, 17 May 1989, a series of fitness events will be held on the Center's runway. Employees who *Run/Bicycle* for exercise are invited to call John Markow on X1026 for additional information, and to register for the activities listed below:

EVENT	TIME
100 YD. DASH (men)	1130-1140
100 YD. DASH (women)	1145-1155
RELAY RACE (2 Men & 2 Women)	1200-1210
Inter-Department BICYCLE RELAY RACE (2 Men & 2 Women)	1215-1225
(Inter-Department)	

On Thursday, 18 May 1989, a series of events will be held on the 4.3 mile emergency access track which circles the airfield. Employees who *Walk or Jog* for exercise are invited to call Mary Ann Brett on X1842 or Margaret Vigelis on X3067 for additional information and to register for the activities listed below:

EVENT	START TIME
5K JOG	1100
5K WALK	1200

Also on Thursday, inter-department *Softball, Touch Football, Volleyball, and Tennis* championships will be held. The specific time and location for each event will be announced during the week of 8 May in "The Log." Departments interested in entering a team should contact:

EVENT	POINT OF CONTACT	PHONE
SOFTBALL	JACK EYTH	2891
FOOTBALL	BOB GEYER	1339
VOLLEYBALL	NEIL ABRAMSON	1120
TENNIS	CHRIS THOMPSON	1082

## If the SOC Fits

A fundamental provision of the Navy's Standards of Conduct (SOC) is the prohibition against the use of inside information. The SOC instruction provides, "Naval personnel shall not use, directly or indirectly, inside information to further a private gain for themselves or others if that information is not generally available to the public and obtained by reason of their DoD positions."

Aside from this rather general statement in the instruction, there is not much guidance on just what constitutes inside information. We had an interesting question arise a few months ago involving this issue. A small company had given a briefing to 3-4 NADC employees to advise them of its capabilities in a specialized technical field. One of the attendees was so impressed by the presentation that he went out and purchased some stock in the company. I should note that aside from this briefing, he has had no dealings with the company on the job, and thus the stock holding did not present a conflict of interest per se, but his purchase of it did raise a question of whether or not he had improperly utilized inside information.

In the SOC instruction quoted above, there are two elements to inside information — it is something not generally available to the public, and it is obtained by reason of one's DoD position. In this case, there was no question that the information was indeed obtained by virtue of the individual's DoD position. The issue here was whether or not the information was generally available to

the public. At the briefing, the company had provided certain promotional brochures and pamphlets touting its capabilities. These things were available to the general public, and there was nothing the least bit secret about them. On the other hand, the general public is not privy to briefings such as what was conducted here, a personal pitch to a select audience set up solely to persuade the Navy of the firm's capabilities.

Because this was a close case, we discussed it with one of the Navy's SOC experts in Washington. While we could reach no agreement as to whether this was indeed inside information, it was clear to us all that simply because it was a gray area, it was certainly advisable, if not in fact required, that the employee get rid of the stock. As it turned out, the stock had actually dropped in value since he had bought it, so we resolved the matter by agreeing that he would be permitted to retain the stock until it went back up to a point where he could sell it and break even on his investment.

## Security reminder

**UNRECORDED SECRETS** — SPAWAR directed the strengthening of controls over secret documents by eliminating unnecessary holdings and establishing positive accountability. All secret documents must be entered into the Central Control Point records (Code 04624).

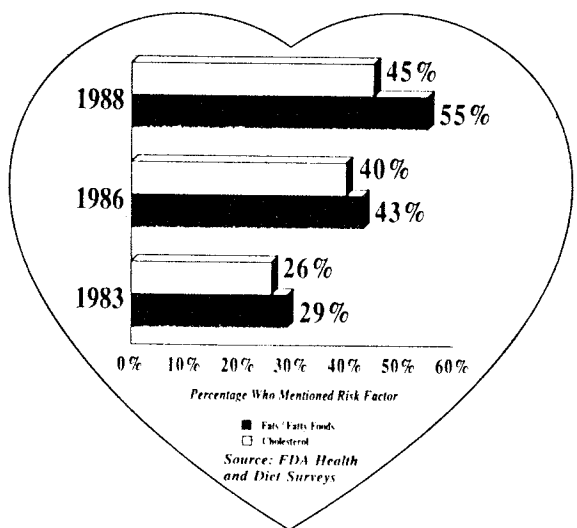
### Eating to Reduce Cholesterol

The way to a healthy heart is through the stomach. The National Heart, Lung, and Blood Institute offers these tips to lower blood cholesterol and reduce the risk of heart disease:

- Less than 30 percent of total daily calories should come from fat.
  - Less than 10 percent of calories should come from saturated fat.
  - No more than 10 percent of calories should come from polyunsaturated fat.
  - Ten to 15 percent of calories should come from monounsaturated fat.
  - Fifty to 60 percent of daily calories should come from carbohydrates.
  - A daily diet should contain less than 300 milligrams of cholesterol.
  - Caloric intake should be adjusted to achieve or maintain a desirable weight.
- Remember, while protein and carbohydrates contain four calories per gram, fat contains nine.

### Growing Perceptions of Diet-Heart Disease Links

Question: What things that people eat or drink cause heart disease?





# held at NADC



future and the alternatives necessary to meet the trends. NAVAIR/NADC participants are pictured above during one of their breaks.

**Who they are:  
What they do**

Albert Masson who reported to NADC in October 1988 is an AX1. What is an AX you ask? It's the Navy enlisted rating: Aviation Anti-Submarine Warfare Technician.

According to Masson, an AX's job falls into two categories . . . "flyers" and ground maintenance. Masson said, "In ground maintenance we cover routine and phase inspections and, if during the pilot's inspection, a problem is found, we correct it."

"We flyers," Masson explained, "are responsible for bringing up the data processing systems, checking out the different sensor stations, and insuring the flight instruments and navigational communications are working. If everything is all right we are, essentially in-flight observers. If a problem occurs with the equipment, we are trained to trouble shoot on the spot. Call us in-flight technicians."

Originally from Lincoln, R. I., the 15-year Navy veteran says he enjoys working at NADC. "I like it. It gives you the opportunity to travel if you want," said Masson. "You're not pressured into doing things. It is pretty much what I expected."

Asked why he chose an aviation rate, Masson's answer was brief: "I wanted to fly."



AX1 Albert Masson

## Sailor and Blue Jacket named

By JO2 Michael Delledonne

NADC's Sailor of the Quarter is AW1 Raymond Gottry. "I was really excited about the nomination and the interview," said Gottry. "It was my first nomination for anything like this so being selected was quite an honor."

A key to Gottry's nomination was his involvement in several different areas. "Ray has his hands on every activity going on at NADC," explained AW1 Richard Hooper, Gottry's immediate supervisor in the VP Projects Office. "He is the Drug and Alcohol Program

Advisor, which in itself is a full time job, coordinates flights, and belongs to Team Valvoline which is a non-military program heavily involved with drug prevention."

A 31-year old native of Pico Rivera, Ca., Gottry reported to NADC in May 1986, and is VP Program Leading Petty Officer. "I like NADC. For me it's an ideal shore duty. I could have gone to Memphis, but I came here. I'm glad I did."

Hooper, who works with Gottry daily, described him best. "He's a take charge kind of guy."

Continued on Page 6



AW1 Raymond Gottry

## Dunn completes 1 yr D.C. tour

By Mary Ann Brett

Contract negotiator Loretta Dunn has returned from her one year NSTEP assignment in the Contracts Office at the Space and Naval Warfare Systems Command (SPAWAR), Washington, DC.

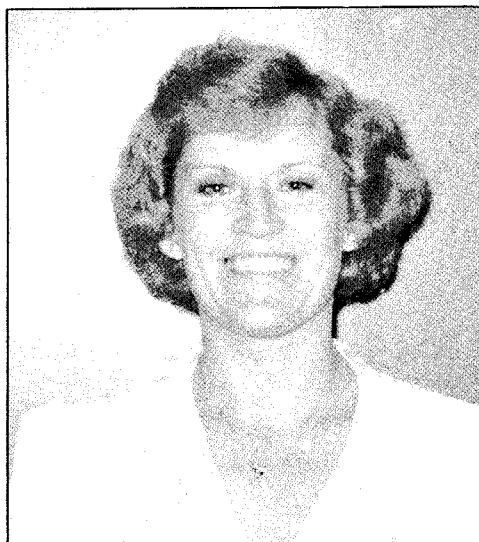
New techniques, contacts at SPAWAR as well as other Navy laboratories, and a familiarity with the systems command methods of operation were among the things Dunn brought back with her. Additionally, since contracts typically ranged from \$20 million to \$40 million, she interfaced regularly with Secretary of the Navy office personnel.

"It's always beneficial to gain another perspective," said Dunn. "In fact, I think the assignment was mutually beneficial to both SPAWAR and me." According to Dunn, there was a comfortable, open information exchange that transpired between her and her co-workers and superiors there.

Dunn also gained a comprehensive, working knowledge of the computer systems which were just being installed at the Center when she left but were already in use at SPAWAR when she arrived.

Although she enjoyed the experience

of a one-year assignment, Dunn is also glad to be back. "I missed being able to see the items and systems I help buy actually being installed in our aircraft." She added, "Besides, the old cliché is true: there's no place like home."



Loretta Dunn

### U.S. SAVINGS BOND TAX ADVANTAGE

Reporting of interest for federal income tax purposes may be deferred until EE Bonds are cashed, disposed of, or reach final maturity, whichever comes first. Reporting of accrued interest on bonds and notes presented in exchange for HH Bonds may continue to be deferred, for federal tax purposes, until the HH Bonds are cashed, disposed of, or reach

final maturity, whichever comes first. However, the interest earned on the HH Bonds must be reported each year for federal income tax purposes. EE and HH Bonds are exempt from state and local income and personal property taxes, but are subject to inheritance and estate taxes levied by states and localities.

### Cumulative Market-Based Rates

For Bonds Purchased:	Average Rate	Rate at Redemption*
Through 4/30/83	8.32%	8.50%
5/1/83-10/31/83	8.09%	8.25%
11/1/83-4/30/84	8.04%	8.00%
5/1/84-10/31/84	7.91%	
11/1/84-4/30/85	7.68%	
5/1/85-10/31/85	7.28%	
11/1/85-4/30/86	6.96%	
5/1/86-10/31/86	6.73%	
11/1/86-4/30/87	6.67%	
5/1/87-10/31/87	6.82%	
11/1/87-4/30/88	7.14%	
5/1/88-10/31/88	7.13%	
11/1/88-4/30/89	7.35%	

Market-based rates apply only to Bonds held five years or longer and to Bonds purchased before November 1, 1982.

\*Rate used to calculate value of Bonds redeemed from November 1988 through April 1989. Applies from first interest date on or after November 1, 1982.

SBD-1955

**U.S. SAVINGS BONDS**  
THE GREAT AMERICAN INVESTMENT





**FIREFIGHTERS DONATE TO WELFARE AND REC** — On behalf of NADC's Fire Department, CAPT Curtis J. Winters presents a check for \$100.00 to Patsy Schaefer, the Assistant Director for Military Morale, Welfare and Recreation. This money will help provide youth activities and fitness programs for the Center's Navy personnel and their dependents. The Fire Department also donated a similar amount to the Civilian Welfare and Recreation Association.

### Planned your vacation yet?

To help with all of your personal travel arrangements, call SATO Travel, ext. 2729, Mon. thru Fri., 8 AM to 4 PM.

## NADC opens summer camp to civilian employee dependents

By Joy James

Summer is just around the corner. What will your children be doing during their summer vacation? Shenandoah Woods Community Center, located in the Naval Air Development Center Housing Complex, has a summer day camp program planned for ages 6-12. This program was previously limited to dependents of NADC, NASWG Willow Grove military personnel and military

members residing in Shenandoah Woods Housing Complex. This year we are opening our invitation to the children of NADC civilian employees.

Day camp will include sports, arts and crafts, swimming, weekly trips and special events. There are several outdoor recreational areas the day camp utilizes including a basketball court, skating rink, baseball fields, a wooded picnic area and pavillion, an authentic log cabin and a modern

youth center. Day camp participants will enjoy a well balanced day of indoor and outdoor activities as well as develop skills in drama, reading and social skills. Weekly trip ideas include miniature golf, Shore or Pocono Trip, bowling, horseback riding, the Zoo, Dorney Park, Franklin Institute, Hershey Park, Please Touch Museum and other ideas. There will be a minimal charge for these weekly trips.

Day camp will begin on June 26 and

run through August 25 (9 weeks). Regular hours will run from 0800 to 1630. Special extended care hours (from 0730-1700) will be available at an additional charge and providing there are enough children.

For information on prices for the Shenandoah Woods Community Center Day Camp, please call 441-7233. Make your child's summer plans now! Join us for a summer full of fun!

## Dilworth receives alumni award

Continued from Page 1

reputation of these Centers, "His primary focus has been, and continues to be, technical excellence and innovative achievement . . . he has greatly increased capabilities in plant, personnel and management systems, along with continued improvements in the timely completion of program and project assignments. Wherever he was assigned, the organization achieved increased productivity levels, ensured cost reductions, improved technical delivery of enhanced products and increased in effectiveness and stature. Throughout his career, Mr. Dilworth's personal values of integrity, professionalism and technical excellence have been evident and are acknowledged by the numerous awards and honors he has received."

### HOW DO U.S. SAVINGS BONDS RESEMBLE FLOWERS?

Answer: They bring happiness when they bloom. And, they grow from little seeds. Buy Savings Bonds regularly through your company payroll savings plan.



## Fire Fighters receive Ogden Award



CAPT Curtis J. Winters presents Fire Chief Donald Meadons with the Allen G. Ogden award for second runner-up in the medium-sized station category for aircraft crash rescue. The Ogden award is presented annually to competing Navy and Marine Corps Fire Departments world-wide.

## SOQ, BJQ named

Continued from Page 5

Shock was the reaction of YN3 Anthony Fletcher on being selected as NADC Blue Jacket of the Quarter. "I was totally stunned," said Fletcher. "This was my fifth time up for the award so I didn't expect to win anything. You know what they say . . . Three strikes and your out."

Ensign Kimberly Baker, NADC Legal Officer and Fletcher's Division Officer, said his work ethic sets him apart. "Petty Officer Fletcher is an outstanding sailor. He's enthusiastic towards everything whether it is paper work or dealing with people. He's been nominated several times before so that alone tells you about the quality of his work."

Originally from Philadelphia, Pa., the seven year Navy veteran works in

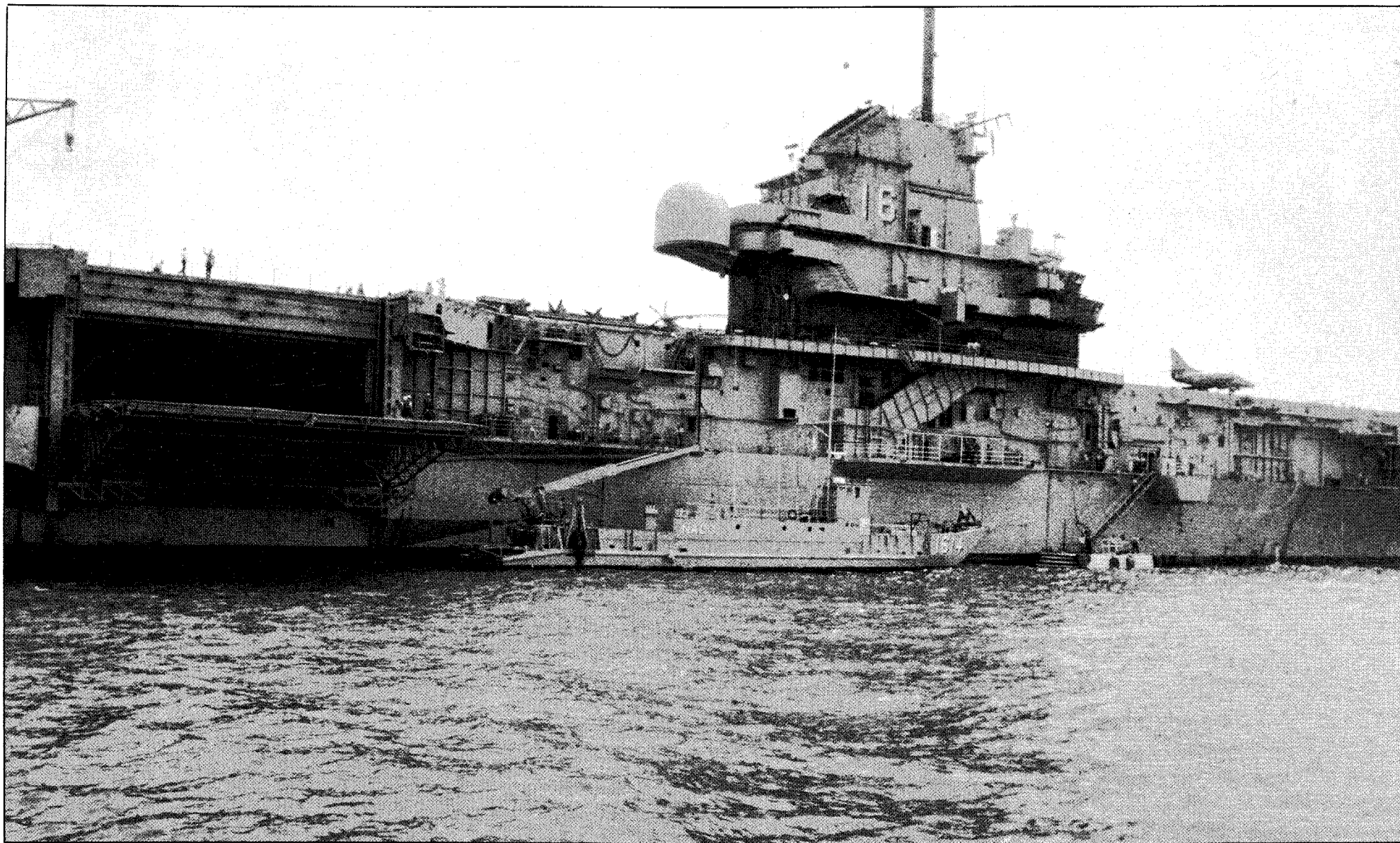
Command Administration. "I like it," said Fletcher. "It really keeps me busy."

After three and a half years at NADC, Fletcher rotates in August and will be stationed on the Aircraft Carrier USS Kitty Hawk.



YN3 Anthony Fletcher





**SMALL SHIP FILLS TALL ORDER** — The aircraft carrier USS LEXINGTON which recently visited Key West, Florida for the weekend is shown here receiving emergency supplies from the NADC LCU-1614. The LCU is operated by our Key West detachment and while being 137 feet long, it appears small when beside the Navy's smallest aircraft carrier.

## Technical Highlights

### Infrared Target Acquisition Program

Initial documentation of a simulation model Infra-Red Target Acquisition Program (IRTAP) was completed. This model was developed for NAVAIR (PMA-259) to assess IR missile acquisition parameters and was developed by NAVAIRDEVCCEN to support the AAAM Advanced Air-to-Air Missile program.

### And the nominees are

There are nearly one hundred honorary awards available throughout each year for which NADC's outstanding employees might qualify. However, unless deserving individuals are nominated, these awards will surely elude us. The nominations themselves are a way to recognize dedicated and diligent employees. Those awards accepting nominations through May 1, 1989 are:

- PARS Performance Award (Cash)
- Executive Excellence Awards (Honorary)
- Young Federal Lawyer Award (Honorary)
- Bryce Harlow Business-Government Relations Award (Honorary)

For specific information about these or any awards, contact Bettie Simpson, Code 031, extension 3079.

### CV-ASWM Model 4.2 System Completes Testing

The CV-ASWM Model 4.2 system successfully completed Phase IIA Development Testing aboard the USS DWIGHT D. EISENHOWER (CVN-69). Model 4.2 provides improved performance of many current functions on a new Navy Standard Display and AN/UYK-43 computer and provides the added capability of mapping, message management, improved interface with the Advanced Combat Direction System and growth capacity for future significant features. Interim Operational testing is expected to follow in May 1989.

### LAMPS Block II Upgrade RFI Delivered to NAVAIR

As Lead Field Activity to PMA-266 in procurement planning for the LAMPS Block II Upgrade effort, a detailed RFI for industry comment was developed at the Center for NAVAIRSYSCOM approval. The planned Block II effort for the MK-III includes an Acoustic Upgrade (Integrated UYS-2 with consideration of future sonobuoys [broadband and digital] and dipping sonar (ALFS), Inverse Synthetic Aperture Radar (ISAR) and Tactical Data Transfer.

### P-3C CHEX Software Ready for TECHEVAL Resumption

The P-3 Update III Project has

completed the rehabilitation of the Channel Expansion (CHEX) software. All corrections for known reproducible problems have been made. All tests have been successfully rerun. At the end of March 1989, the CHEX aircraft with its rehabilitated software was turned over to the Naval Air Test Center for resumption of TECHEVAL. CHEX will permit increased ASW capabilities by doubling the number of sonobuoy communications channels available in the P-3C from 16 to 32 using a 99-channel computer controlled receiver. Other improvements include menu-driven touch sensitive plasma panels (in lieu

of mechanical switches) and Air Common Acoustic Processing (ACAP) software for signal processing enhancement.

### TAS DOP Delivered to PMA-264

The ASW Advanced Systems and Sensor Integration Program delivered a final Development Options Paper (DOP) for the Tactical Arctic Sonobuoy (TAS) to PMA-264. The TAS will provide the Navy with an Air ASW sonobuoy with the capability of performing in the varying Arctic environment.



**GRAND OPENING** — of the NADC Fitness Center took place on April 3rd. Present for the ribbon cutting ceremony were Neil Abramson, Wellness Coordinator, Ron Brewer, Military Morale, Welfare and Recreation (MWR) Director, Joy James Recreation Director, Patsy Schaefer, MWR Asst. Director, and CAPT. Roy Murphy, Chief Staff Officer.



**Small Business is big**

# NADC goes to the Fair

Participating in the Lower Bucks County Chamber Commerce (LBCCC) 3rd Annual Delaware Valley Regional Procurement Fair, NADC's Small Business Office assisted in coordinating this event which hosted nearly 100 government and private industries on March 21st, in Bensalem, Pa.

According to NADC's Small Business Manager, the Fair helps companies become more aware of the enormous business potential in the government contracting market.

In a letter to all the fair attendees, the Chairman of the Government Contractors Committee Steven White and the Executive Vice President of the LBCCC say: "... A government

contracting... is a specialized market with complex regulations and procedures. Today's fair is designed to provide an opportunity to learn... and meet prime contractors and governmental agencies who can provide useful information, answer questions and help you get started. Many attendees at last year's Fair have received actual contracts as a result of their marketing efforts at the Fair."

**At NADC's booth during the Fair are Diane Heal, Marilyn Strothers of the Small Business Office. Center Commander CAPT Curtis Winters and Small Business Manager John Scott.**



## Mixed Bowling News

By Tom Reiter

Plans are under way for this year's banquet which will be held on Friday night, June 16th, at the Warrington Country Club on Almhouse Road.

The votes are in. Next season's League Officers have been elected. Our new President will be **Lorrie Dunn**, Vice President — **Lois Savage**, Treasurer — **Tom Reiter**, Secretary — **Neal Polin**, and the three elected Executive Board members — **Jeff Irvin**, **Pat Tease**, **Rick Yeager**. Congratulations to all, it looks like we will again have a strong administration.

The Red Winos thought **Dennis Hargis** was playing an early April Fool's joke when nobody from his Les Champignon team showed to bowl on the 29th of March. We'll take the forfeit, but it would have added some competition to **Mike Dent's 665 (236-227-202)** if five bowlers had been

on the other lane. Besides Mike's big series, the night included **Kevin Ryan 576**, **Rick Yeager, 571**, **Caroline Tierney 540**. High single games rolled — **Linda Stickney 210**, **Rick Yeager 209**, **Caroline Tierney 205**, **Tom Reiter 203**, **Mack Cox 200**.

Thunderbird Lanes has been awarding desk memo pads for games above 225 for men and over 180 for women. Winners to date are:

- |                        |                       |
|------------------------|-----------------------|
| 262 Wes Gleason        | 208 Patty Aspinall    |
| 247 Mike Dent          | 205 Caroline Tierney  |
| 246 Jim Campana        | 203 Audrey Dinkins    |
| 244 Rick Eppright      | 197 Maria Cusanelli   |
| 242 John Harris        | 196 Helen Valko       |
| 241 Bob Geyer          | 194 Lorraine Kittner  |
| 235 Dave Oliver        | 193 Eileen Cunnane    |
| 233 Tom Leahy          | 192 Donna Morgan      |
| 232 Steve Metcalf      | 190 Sharon Robinson   |
| 231 Steve Jerden       | 190 Pat Tease         |
| 231 Bob Pullen         | 190 Dianna Beach      |
| 230 Dick Coughlan      | 190 Ann Harris        |
| 227 Allen Goldstein    | 189 Lorraine Williams |
| 226 Jack Figgles       | 189 Kathy Barnes      |
| 226 Cliff Tierney      | 189 JoAnn Coughlan    |
| 226 Linda Stickney     | 188 Terry Schwartz    |
| 225 Bob Lubanski       | 188 Vickie Wells      |
| 225 Al Knobloch        | 188 Dolores Mitchell  |
| 225 Aaron Burstein     | 187 Eileen Bradley    |
| 225 Mary Vaughan       | 187 Aggie Harris      |
| 222 Mary Feeley        | 186 Claire Bayer      |
| 222 Denise Beck        | 182 Karen Thomas      |
| 218 Lorraine Reidinger | 181 Jane Gifford      |
| 212 Elaine Granieri    | 180 Cathy Burian      |
| 209 Lorrie Dunn        |                       |

## Guzzler Masters meet

By Bob Geyer

It's another softball season. You're headed over to the field for some pre-season practice. In the parking lot you greet a couple of your teammates, grab your glove and begin to walk down to the field. On the way you start checking out its condition. Fences look OK, baselines are a bit ragged, but the grass sure is green. Wait a minute! That's not grass, it's the Guzzlers! And there are about thirty of them out there. Some of them look as if they can hardly walk, let alone run or swing a bat. Who are those guys?

They are the 1989 Guzzlers. More precisely, they are the 1988, the 1987, the 1986, ... and the 1974 Guzzlers. This year the Guzzlers have invited every player who ever wore the green and gold (and some who wished they had) to return to the field as a Guzzler Master. They have signed up as full-time, five-game and one-game

players. The goal was to encourage all former Guzzlers to make a last appearance, even those who are over the hill. In return, they will get to participate in a season full of high-jinks and high-fives. Players and fans alike will be treated to game time barbecues, reminiscing and retirement ceremonies. Off the field, a whole host of events have been planned, including a beef and beer, an excursion to the Phillies businessman's special, a special Guzzler Open and of course the annual Guzzler picnic. To keep track of all these events, the Guzzler Gazette has been established. Editor Jack Eyth has agreed to put anyone on the mailing list who wishes to follow the Guzzler season or participate in a Guzzler event.

So, throughout the season, if you encounter a field covered by three Guzzlers at every position, you won't have to ask "Who are those guys?". You'll already know. They're the Guzzler Masters. And this is the Guzzler Masters' Season!

## 52 scramble for opener

By Pete Brown

The 1989 W&R golf season got underway in March with a "Winter Scramble" at Warminster's Five-Ponds Golf Course. 52 "hard-core" golfers fought high winds, temperatures in the 40's and soggy fairways to complete the



tournament. First low net was awarded to B. Hines, W. Miller, B. Zarkowski, and E. Boscola with team score of 60. One stroke back at 61 for 2nd low net was B. Hearn, T. Kerwin, F. DelColumbo, and C. White. 3rd low net went to F. Sheedy, R. Lehman, J. Bethke, and S. Sikora with a 61.5. 4th low net was earned by "crushers" B. McAvoy, A. Salik, R. Virga and H. Frost at 64.25. Low gross (no handicap) honors were secured by R. Muller, S. Harrar, B. Harvey and S. Delsarro with a 4-under par 67. 2nd low gross went to T. Stranges, P. Brown, S. Cloak, and C. Swatchick with a 2-under par 69. Closest to the pin awards went to F. DelColumbo, B. Hines, C. Swatchick and B. Harvey, while Scott "Boomer" Perry won the longest drive with a 289 yard blast on 18!! (Next time follow-through Boomer!)



**A meeting of the Guzzler Master minds includes: Back row (L to R) Jim Eck, Mike Strizak, Jack Eyth, Pat Finnegan, Bill Mulley, Bob Casagrand, Bob Reichert (hidden), Carolyn Richards, Linda Lenhart; Front Row Bill Mulley, Jr., John Bowes, John Markow, Steve Fleischlat, Bob Geyer, and Ken Mergner**





# Reflector

**In This Issue:**

- President's Memorial Day Message
- PROFILE
- Singer ready to lift off
- Realities of R & D
- Hole in One

Volume 34 Number 5

NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA.

May 1989

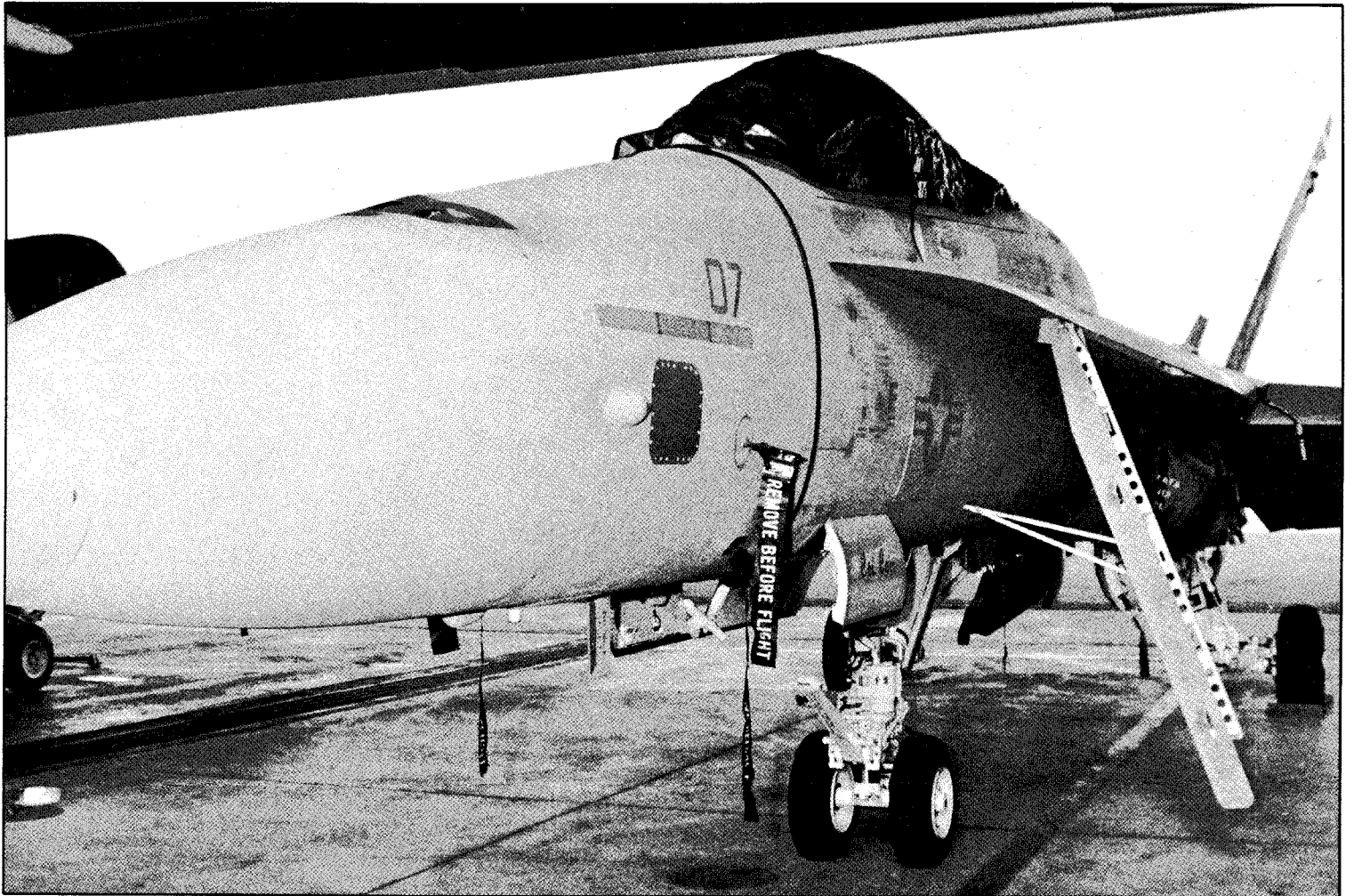
## NADC alloy part installed on F/A-18

By Mary Ann Brett

Scientists and engineers at the Naval Air Development Center's Aerospace Materials Division have led the way in developing and expediting the use of aluminum-lithium (Al-Li) alloys (such as 2090 and 8090) on naval aircraft. Al-Li alloys have several property advantages over standard aluminum alloys including a 7-10% weight reduction as well as increased stiffness and fatigue resistance.

NADC's work has resulted in manufacture and installation of the first Al-Li part on aircraft in service. Once the AIR-45 access door on the F/A-18 aircraft was identified as a promising candidate part, access doors were manufactured from sheet 2090-T8E41. In early 1989, the Center installed the access covers on eight F/A-18 aircraft. Six of these aircraft will be carrier deployed, while the other two are land based.

The long term in-service evaluation of these access doors will provide information on alloy performance and maintenance requirements.



F/A-18 aircraft with aluminum — lithium access door installed before painting.

Photo by NADC Photo Lab

## NADC pilots fly safely for fourteen years

By JO2 Michael Delledonne

Safety in flying is everything. A disaster is possible if safety is overlooked or not taken seriously. Everybody must do their job and do it well when it concerns aircraft. At NADC every precaution is taken and that proof has led to 14 years and more than 40,000 hours of accident free flying.

"I think the major reason for our success is the Maintenance Department," said LT John Hovland, NADC Aviation Safety Officer. "Our people usually come here with years of experience so inexperience is not a

problem. Our pilots are highly qualified and some served as instructors. We have a good background at both ends."

A major accident is one involving more than \$500,000, destruction of aircraft, or loss of life. The last serious accident at NADC occurred July 1974.

Flying safely is not an exact science as Hovland explained. "When we go up there's a chance something may go wrong. We do everything within our power toward preventing an accident. A little luck and a lot of good people are on our side."

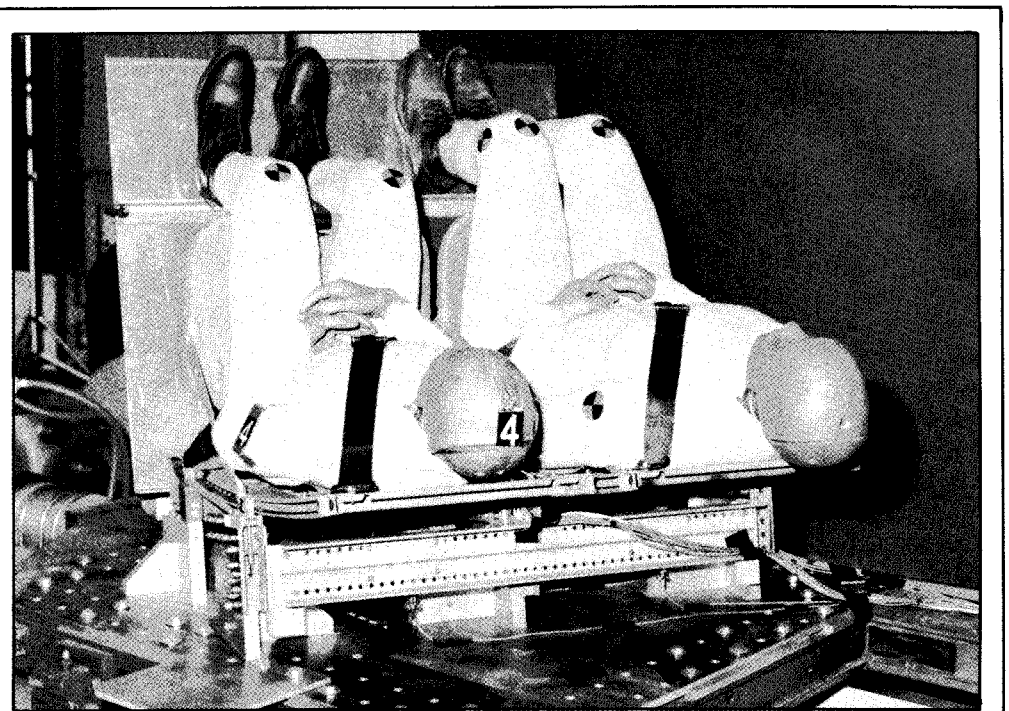


Photo by NADC Photo Lab

Anthropomorphic dummies are testing in the V-22 "Osprey" troop seats at the Center's Horizontal Accelerator.

## Troop safety drives V-22 seat testing

By Mary Ann Brett

"The bottom line is troop safety," said Richard Hate about the V-22 "Osprey" troop seat testing and other NADC contributions to the tilt-rotor

aircraft's design. Hate is the V-22 aircraft system engineer in the Tactical Air Systems Department. "Many injuries, even fatalities, are based on inadequate seat systems," Hate added.

Continued on page 7

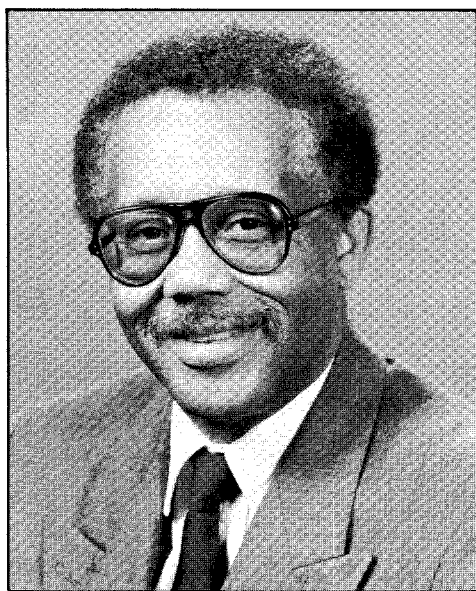
## 1989 Navy Relief Drive's on

The Navy Relief Society drive is well underway. The drive began May 4 and runs through June 20. A variety of services and sales will be held to help raise money for this organization which benefits Navy families. Keep your eyes open for upcoming events posted throughout the center.

## Command Corner



**Captain Curtis J. Winters**  
Center Commander



**Guy C. Dilworth, Jr.**  
Technical Director

## If the SOC Fits

By Robert Janes

The prohibition against gratuities is a key feature of the Navy's Standards of Conduct (SOC). This rule forbids Navy employees from accepting anything of value from a company that does or seeks to do business with DoD. One of the most frequent applications of the rule occurs with meals, and as most of us know, we are prohibited from accepting free meals from DoD contractors. Although it may be commonplace in the private sector for a company salesman to buy meals for employees of his customers, this practice is prohibited by DoD.

One of our senior scientists recently asked whether he might accept a meal, not from a defense contractor per se, but from an organization of defense contractors which was putting on an annual symposium at which the employee was scheduled to present a paper. He had been invited to a dinner, free of charge, in connection with this

presentation, and asked whether his acceptance of the dinner would violate the SOC. It turned out that the acceptance of the meal fit within an exception to the gratuities prohibition, and was therefore acceptable. That exception provides that Naval personnel may accept lunch, dinner or refreshments that are part of a widely attended gathering of mutual interest to government and industry, so long as that gathering is sponsored or hosted by either an institution of higher learning or an industrial, technical, or professional association and, in the case of an association, the program has been approved by DoD in advance. In this case, since the program had been approved in advance, it was permissible for the NADC employee to accept a meal in conjunction with his attendance. I note that if this identical symposium had been put on by an individual contractor, the acceptance of a free meal would have been flatly prohibited.

## Commander Salutes

**Cdr. Winston Scott** (Code 20): For a motivational lecture "Soaring to the Heavens" given to PRIME, Inc. students.

**Carl Schmiedekamp** (Code 70): For participation as a member in the Software Technology for Adaptable, Reliable Systems (STARS) Source Selection Evaluation Board.

**Dr. Gloria Chisum** (Code 60): For time and assistance to the Naval Aviation Supply Office in responding to the Government Accounting Office on an intricate protest.

**Laurie Bryner** (Code 50): For a briefing on Night Vision Imaging Systems to the Society for Information Display.

**Francis Chamberlain** (Code 50): For assistance to the VP Special Projects Program in support of the Tactical Optical Surveillance System (TOSS).

**James Brindle, Charles Halsted, John Parker III, Dr. James Sheehy** (Code 60): For presentations to the Society for Information Display at the Night Vision Imaging Systems Program.

**Sergeant Wilkie, Patrolman Theiss, Patrolman De Ginto,**

**Patrolman Rangnow, Patrolman Trusty** (Code 04): For outstanding efforts and professionalism while assisting the Warminster Township Police Department.

**Ferdinand Reetz** (Code 20): For an outstanding Night Vision Imaging Systems presentation to the Society for Information Display.

**Robert Janes** (Code 09): For time and effort as a member on the Center's Advisory Committee for the Protection of Human Subjects.

**Harry Koper** (Code 50): For a briefing to Reserve Unit 0193 at NAS Willow Grove.

**Dr. James Whinnery** (Code 60): For invaluable training to the pilots of Marine Fighter Attack Squadron 251.

**Harriet Feder, Davene Sheppard** (Code 02), **Edward Calvello, Marianne De Cicco, Judith Scott, Lynne Edwards** (Code 03), **Ruth Pickering** (Code 10), **Jeanne Kita** (Code 30), **Carolyn Richards** (Code 50), **Margaret Russo** (Code 60), **Barbara Baum** (Code 70): For coordination and participation in NADC's Women's History Month celebration.

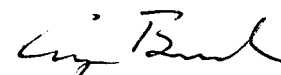
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## The President's Memorial Day Message

On Memorial Day, the citizens of the United States pause to reflect upon the courage and selflessness of the men and women who have given their lives in defense of our Nation. These heroes paid the ultimate price to ensure that their fellow Americans could continue to live in "freedom's holy light." We owe them our eternal gratitude.

As we honor those Americans who have made the supreme sacrifice in service to our country, we also salute you, the current members of our Armed Forces. By protecting our Nation's hard-won liberty, you help to ensure that the sacrifices of those who have gone before us were not made in vain. Your sense of purpose, professionalism, personal courage, and loyalty are an inspiration to us all.

As Commander in Chief, I proudly salute the past and present members of our Armed Forces who have so faithfully defended freedom -- the only sure foundation for peace -- around the world. Thank you, God bless you, and God bless America.

  
George Bush  
President

## TEMPORARY ASSIGNMENT

According to Otto Kessler, Head of the Warfare Systems Analysis Department, effective 21 May 1989, Bruno Cavallo will assume the duties of Head, Multi-Warfare and Advanced Concepts Division (Code 303). Cavallo will perform these duties until Robert Johnstone returns from DARPA in April 1990.

## JUNE -- BACK INJURY PREVENTION MONTH

Eight out of ten Americans suffer from back problems, and more than 250,000 have back surgery each year. Many back injuries can be avoided by prevention, which means losing excess fat, maintaining physical fitness, lifting objects properly, using proper body mechanics and proper posture. It is always better and less painful to prevent an injury than to cure an existing one.



# Reflector

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NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA

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**Commander, NADC** ..... CAPT Curtis J. Winters  
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**Public Affairs Officer** ..... James S. Kingston  
**Editor** ..... Mary Ann Brett  
**Assistant Editor** ..... JO2 Michael DelleDonne  
**Assistant Editor** ..... Margaret Vigelis



**PROFILE:**

# Adversity overcome in Computer Dept.

By Bob Greenblatt

Jude Da Shiell probably knows more about overcoming adversity than most people. Born prematurely, he spent his first six months of life in an incubator (which burned his retinas and left him blind). Despite his handicap he was determined to make something of himself. After graduating from Delaware Valley College, with a BS degree in Business Administration, he is now only 13 credits from earning a BS degree in computer information systems management.

Jude's goal is to become a top-notch programmer, but up until now it hasn't been a piece of cake. Statistics show that 76% of blind people between the ages of 18-65 have never had a job (12% have only had a part-time job). For the remaining 12%, most full-time jobs start at an average of \$13,400. To think that Jude is grateful for the opportunity to work at NADC is an understatement. "I appreciate the opportunity to work for the government. Things are just so limited in the private sector for blind people," Jude said.

Assigned to the Computer Department, Jude is currently working on a communications project that requires using COAS programs such as dBase III+. Most people would probably wonder how Jude can use a COAS workstation and write/debug programs if he's blind. To aid Jude, the Computer Department is providing a speech synthesizer board that plugs into an expansion slot in his PC. Jude can then plug in earphones to listen as his computer 'talks back to him.' Some initial problems occurred when Jude typed in the 'print screen' command and the computer generated voice started to talk non-stop. However, the software has now been adjusted to go at a pace that is understandable. Another

problem came up when it was noticed that Jude was methodically punching out notes on a manual Braille notetaker. Technology once again came to the rescue and state-of-the-art braille notetaker is now on order. This will allow Jude to tap out notes on a stand-alone device that has a keyboard. He can then listen as his notes are spoken back to him. Another special help is a braille IBM compatible printer. With these special tools playing a major help-role Jude's spirit's have taken a huge turn upward.

Sometimes, when co-workers get the Monday blues or just get depressed about things, all they have to do is look in Jude's cubicle to understand things could be harder. Jude still has to struggle but he is determined to make something of himself and thank NADC for giving him a chance to prove that handicapped people can be productive employees.

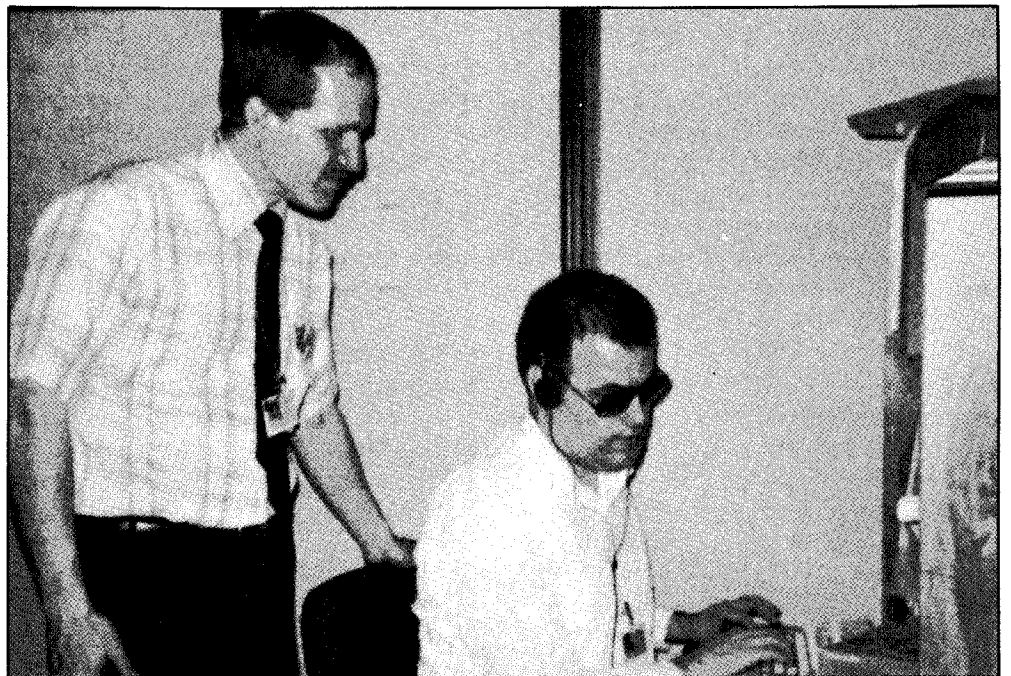


Photo by Mary Ann Brett

Al Kaniss, Deputy of the Computer Department with Jude Da Shiell at his workstation.

## Tap the handicapped for hires

By Lois Savage

As Handicap Program Manager, I first spoke with Jude DaShiell while he was a college student looking to the future for a job. He was concerned that his inability to see would blind employers to his potential. We kept in touch until he was available for employment last fall. Although we were not in a hiring mode, DaShiell was eligible for a 700 hour temporary appointment under the Handicap Employment Program which doesn't require MTP dollars. He has since been converted to a full time permanent position. Fortunately for all concerned, the Computer Department saw beyond Jude's disability and now has another energetic capable employee on its staff.

The Handicap Employment program provides a quick and easy hiring alternative allowing us to a largely untapped pool of talented, capable

candidates. These individuals might otherwise find employment difficult to obtain. Any qualified handicapped individual meeting the job requirements with or without Reasonable Accommodation, can be hired under this special hiring authority with certification from the State Office of Vocational Rehabilitation or Veteran's Administration. The appointment can be full or part time, permanent or temporary, or a 700 hour MTP free trial appointment to any General Schedule or Wage Grade position. To facilitate this hiring, the EEO Office maintains an Applicant Supply File of qualified individuals. We also maintain contact with local and state agencies to obtain additional applications when needed, along with aid in any needed accommodations. The accommodations can be accessibility changes to the work site,

special equipment such as DaShiell speech synthesizer board, flexible work schedules, or restructuring of the job to better utilize an individual's abilities.

Approximately 200 of our employees have self-identified a handicap. Of that number, 28 have identified a targeted handicap. Targeted handicaps are those identified by the government as causing the most discrimination in obtaining employment and for which the alternative hiring programs can be used.

The Department of the Navy has increased its goal of employees with targeted disabilities from one to two percent by 1992. This is still way under the percentage of individuals with severe handicaps who are available for employment. So remember, supervisors and managers, use this excellent source of candidates when you are looking for new employees.

## Dreams may come true

# Singer ready for lift off for NASA

By JO2 Michael Delledonne

Becoming an astronaut is virtually every kid's dream. They imagine blasting off in the space shuttle and being part of a world that few will ever experience. That dream could become reality for LCDR Tim Singer.

"This is the third straight year the Astronaut Selection Board nominated me for mission specialist," said Singer. "The trend seems to be after the third or fourth time you move into the highest selection rate. I'm 41 so that makes me one of the oldest on the list. I trust that like wine I get better with age."

Singer's career has taken a few twists on his way to being selected for the space program. The oddest of which in his service in three of the four

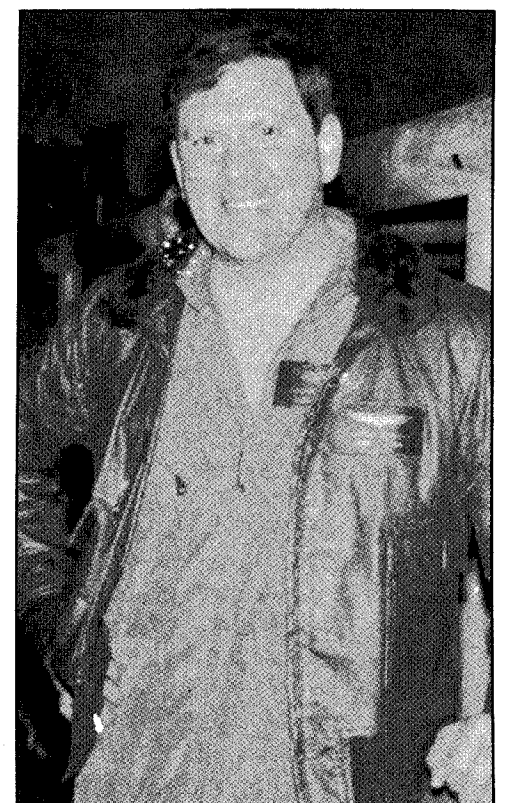
branches of the military. "The Army gave me the discipline to go to college where I earned two Master's degrees in Experimental and Clinical Psychology and a PH.D. from Yale," said Singer. "While in the Air Force medical department I became more and more aware of the engineering and biochemical issues associated with the aviation environment. I was actually moving towards a career change without knowing it."

While in Houston, with the Air Force, Singer heard of a special Navy program of about 35 people called Aerospace Experimental Psychologists. Seven months later, Singer transferred to the Navy. Since then he has served as an aircraft accident investigator and an aviation systems designer. Currently, he is the

Superintendent of the Human Factors and Protective Systems Division.

The Astronaut program offers intense personal and professional interest to Singer. "It would be great to be involved with the space program," he said. "I can't imagine a more useful way to spend your life. To me, it enables a special combination of being a Navy officer, serving your country, and working in something that demands your very best while allowing you to work with the very best."

A space station is what interests Singer the most. As he talked about his chances of designing and building one, excitement and anticipation entered his speech. "Being an Astronaut is a super opportunity. I feel lucky I made the cut. There's a bunch of us that share the dream."



LCDR Timothy Singer

## Realities of IR & IED

# Research, development keeps NADC at the forefront of technology

By Dr. Asha Varma

The concept of IR/IED program originated from an 1962 report on Government Contracting for Research and Development (R&D) by the Bureau of Budget (currently the Office of Management and Budget) and submitted to the President. It was concluded that the substantial increase in contracting out for research had seriously impaired the Government's in-house ability to execute R&D work. The Department of Defense (DoD), in particular, had come dangerously close to permitting contractors to perform functions that were the responsibility

of Government officials. This deterioration was due mainly to recruitment of the best Government research scientists, engineers and administrators by private industry, who could provide higher salaries, significant and challenging work and better working conditions.

To reverse this trend, it was recommended that laboratory directors be given discretionary funds and the authority to make decisions relating to research projects, personnel and other resources. Therefore, In-house Laboratory Independent Research Program was initiated Defense-wide in 1963.

The programmatic philosophy of the IR/IED program is; to sustain scientific and technological superiority for naval missions; to provide source of new concepts and technology options; to support theoretical and experimental research in Physical & Mathematical sciences, Life sciences, Engineering and Environmental sciences; to retain vigorous scientific manpower and laboratory base, and to apply research results in naval warfare and warfare support areas.

Originally managed by the Director of Navy Laboratories (DNL), this program was taken over by the Office of Chief of Naval Research (OCNR) during FY-87. Allocation of IR/IED funds to in-house Navy laboratories is now based on allocation algorithm per OCNR Memo 5000 SER 10P8/559 of 11 Feb. 88. Funding had a direct correlation with the number of full-time Scientists & Engineers (S&E) at the laboratories or centers.

In contrast to other Navy R&D programs, the IR/IED programs provide discretionary funding resources to the Technical Director (TD) of a participating laboratory/center to utilize in a manner that he considers as most supportive of his Center's mission areas. The OCNRINST 3910.3 places personal responsibility on the TD to encourage creative and productive scientific R&D in accomplishing assigned missions of

the Navy. The accountability to OCNR is based upon an effective after-the-face review process (biennial on-site review) by ONR and ONT directors and their interaction with the laboratory technical director. OCNR has designated the following Navy Laboratories/Centers as recipients of IR/IED funding: David Taylor Research Center, Naval Air Development Center, Naval Civil Engineering Laboratory, Naval Coastal Systems Center, Naval Oceans Systems Center, Navy Personnel Research and Development Center, Naval Surface Warfare Center, Naval Training System Center, Naval Underwater Systems Center, Naval Weapons Center, Naval Medical Research and Development Command.

NADC's IR/IED program has been established since 1963. From time to time R&D accomplishments from this program have been highlighted in an Executive Summary, Accomplishment Report of NADC, ONR/ONT publications etc. For FY-89, NADC received \$2,949K from ONR and \$1,633K from ONT for IR/IED programs respectively.

During the months of March or April, calls for new IR/IED proposals submission for next FY is made Center-wide on behalf of the TD. Generally, certain guidelines and criteria for selection of proposals for

Continued on page 6



**SECRETARIES' DAY** — was remembered at NADC with the help of the Officers' Wives Club who arranged and made available bouquets of flowers for the convenience of Center employees. Proceeds go to various charities throughout the year.

### TRIATHLETES, GET READY!

## NADC HOLDS TRIATHLON

DATE: June 25, 1989 Sunday

TIME: 1100

Run—3 miles

Bike—13 miles

Swim—.25 miles

ENTRY FEE—\$10/MIL & DEP  
\$15/NADC CIV EMP

#### Eligible Participants:

Active Duty Military & Dependents age 16 and above

Retired Military & Dependents age 16 and above  
NADC Civilian Employees

Proceeds to benefit Military Morale, Welfare and Recreation Association at NADC.

(\$10.00 includes T-shirt and party!)



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- STRENGTHENING AMERICA** — Buying Bonds is patriotic. It helps you while you help your Country. Bonds serve to underwrite Federal monetary needs and help fight inflation by supplying dollars that might otherwise be borrowed at much higher interest rates.
- COLLEGE COSTS MADE EASIER** — Accumulating U.S. Savings Bonds in your child's name can, if certain conditions are followed, render them totally TAX FREE when they are cashed in for college use.
- PEACE OF MIND RETIREMENT** — You can cash bonds to supplement your retirement income, reporting the tax-deferred interest as income on your tax return. You will likely be in an advantageous tax position and you will keep more of the money you've saved to enjoy.  
Or, you can produce income from your savings by exchanging accumulated Series EE Savings Bonds for Series HH Bonds, which pay interest as it's earned by semiannual Treasury checks. You need not pay tax on the accumulated interest on the bonds you exchange until the HH Bonds are cashed or reach final maturity. This way you keep your principal intact, have a steady income for at least 10 years, and, when the HH Bonds are cashed, the tax will be at your post-retirement rate.
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- NO COMMISSIONS OR MAINTENANCE CHARGES**

#### SUMMARY OF RATES TO DATE:

NOVEMBER 1, 1988 - APRIL 30, 1989	7.35%
MAY 1, 1988 - OCTOBER 31, 1988	6.90%
NOVEMBER 1, 1987 - APRIL 30, 1988	7.17%
MAY 1, 1987 - OCTOBER 31, 1987	5.84%
NOVEMBER 1, 1986 - APRIL 30, 1987	6.06%
MAY 1, 1986 - OCTOBER 31, 1986	7.02%
NOVEMBER 1, 1985 - APRIL 30, 1986	8.36%
MAY 1, 1985 - OCTOBER 31, 1985	9.49%
NOVEMBER 1, 1984 - APRIL 30, 1985	10.94%
MAY 1, 1984 - OCTOBER 31, 1984	9.95%
NOVEMBER 1, 1983 - APRIL 30, 1984	9.38%
MAY 1, 1983 - OCTOBER 31, 1983	8.64%
NOVEMBER 1, 1982 - APRIL 30, 1983	11.09%

AVERAGE RATE 8.32%



## What they do; Who they are

By JO2 Michael Delledonne

The Navy enlisted rating Aviation Maintenance Administrationman (AZ) is a log and records manager for aircraft. That's what AZ2 Scott Rice does and he likes it. "It's challenging here because of the five different types of aircraft," said Rice. "At other duty stations, I would have maybe two."

Rice, 24, originally from Canton, Pa., described the AZ rating. "We're responsible for routine office administration and maintenance of all aircraft log books. We also keep track of records for the Center's P-3, two H53 helicopters, A-7, T-2, and F-14 specially configured research and development aircraft."

After high school, Rice attended Williamsport Area Community College where he studied aviation maintenance. "I wanted to pick a rating that was close to what I had studied in college," said Rice.

In January '89, Rice reported to NADC and has noticed it's the people at the Center that make the big difference. "It's small, but individuals here really care about each other. You're not just another number here. People will bend over backwards to help you. That's the best part."



AZ2 Scott Rice

## And the Nominees Are . . .

There are nearly one hundred honorary awards available throughout each year for which NADC's outstanding employees might qualify. However, unless deserving individuals are nominated, these awards will surely elude us. The nominations themselves are a way to recognize dedicated and diligent employees. Those awards accepting nominations through May 1, 1989 are:

- SES Performance Award (Cash)
- GEICO Award (Honorary)
- Federal Executive Board Hispanic Employment

For specific information about these are any awards, contact Bettie Simpson, Code 031, extension 3079.



**WELL DONE!** — In recognition of outstanding efforts of its personnel in the Air Vehicle and Crew Systems Technology Department which significantly contributed to the enhancement of mission safety and combat performance for the fighter aircrews of the New Jersey Air National Guard. The HIGH-G Centrifuge training provided by NADC demonstrated their commitment to fostering the total force policy in the Defense of this nation.

First row kneeling: Elvin Santiago and William Grimes; Second row: Duane Murray, Melinda Gonzalez, Tim Carrega, Brian Brown, Joseph Kallis, Steve Holler, and David Edwards; Third row: Luke Maxwell and Frank Mitchell.

## Data link capability demonstrated

The Right Combination of micro processors, antennas, communications equipment allows NADC a unique capability explains Michael Mocerter (center) of the Mission Avionics Technology Department (MATD). He and Thomas Castoldi (right) Head of MATD explain to Center Commander CAPT. Curtis Winters how NADC's unique capability to data link, a still image over the Fleet satellite seven, 23,000 miles away, a hi-resolution, black and white image in 17 seconds.



Photo by NADC Photo Lab

Center Commander CAPT Curtis Winters, Michael Mocerter and Thomas Castaldi view a still image transmission.

## Commander Salutes

Continued from page 2

**John Scott, Diane Heal** (Code 09): For participation and assistance during the Third Annual Delaware Valley Regional Procurement Fair.

**Calvin Dresser** (Code 20): For outstanding support in the investigation of combat survivability enhancement for the F-14 Tomcat.

**David Bailey, Bruno Cavallo, Edward Kenkelen, John Strobel, Arleen Anderer** (Code 30): For

technical assistance and participation in briefings to the Operational Research and Analysis Establishment, Ottawa, Ontario.

**Margaret Tomlinson** (Code 02): For outstanding financial and programmatic support to the A-12 program.

**Stanley Dunn** (Code 10): For significant contributions in support of Japan Maritime Self Defense Force P-3C program.

**James Kingham, John Metzger** (Code 20): For untiring support to the Medium Range Unmanned Air Vehicle evaluations of the acquisition proposals.

**Margaret Vigelis** (Code 04): For outstanding efforts and professional attitude during the recent Deborah Hospital Foundation Walk-Jog-Bike-athon.

**Norbert Armstrong** (Code 50): For assistance in enhancing the capability of the F-14 TARPS.

# Stimulate the R & D atmosphere

By Dr. Asha Varma

The Center's IR/IED program provides an opportunity for scientists and engineers to conduct self-initiated research and development (R&D) to capitalize immediately on ideas generated in-house to solve Navy and Marine Corps problems; a stimulating R&D atmosphere conducive to the formulation of new concepts and ideas; research that will establish scientific knowledge to be used in solving both immediate and long term naval problems; opportunities for preliminary investigation on the more speculative solutions to problems that are unsuited for study under specific task; and maintenance and advancement of the Center's high tech

base skill levels and provides visibility among peers and other Navy scientific community.

In June 1988, OCNR sponsored the Navy's first IR/IED Symposium at the Applied Physics Laboratory, Johns Hopkins University, Md. At this symposium, NADC presented six oral, 5 poster and two transition posters. The participants in this symposium were Dr. V. Agarwala, Dr. L. Buckley, Mr. L. Gause, Mr. D. Keyser, Dr. W. Scott, Dr. J. Sheehy from CODE 60, Mr. V. Contarino, Mr. R. Dechico, Mr. R. Simms, Mr. A. Passamante from Code 50 and Mr. C. Heithecker from Code 70. The two transition posters were placed on display at the Pentagon after the symposium. Proceedings of this symposium were published in

three volumes.

The highlight of the first Navy's IR/IED Symposium was the award presented by ONR/ONT for the best IR/IED paper. Mr. R. Dechico, Code 50 received the award for presenting a best IED paper. The monetary award was five thousand dollars to an individual and fifty thousand dollars to the laboratory. Dr. V. Agarwala was the runner-up for best IR award.

This year NADC participants in the Navy IR/IED symposium are Dr. E. Lee (best IR award winner for FY-88 at NADC), Dr. J. Sheehy, R. Sands, A. Scotese (best IED award winner of FY-88 at NADC) of the Air Vehicle and Crew Systems Technology Department and Dr. J. Davis and Dr. W. Rosen of the Mission Avionics Technology

Department. Two papers by Lee and Scotese have been nominated by the Technical Director to the Office of Naval Research/Office of Naval Technology (ONR/ONT) for Symposium award consideration.

The successful IR/IED program at NADC can still be improved to keep NADC at the top and forefront of the technology. It is requested each S&E take an active role in submitting quality proposals and participating in the review process. Please write to the Technology Base Manager's Office, Code 01B, and make comments and suggestions for improving the present system. S&Es are also welcome to pose questions and comments pertaining to the center's IR/IED program to Dr. Varma at x3975.

## R & D: forefront of Naval technology

Continued from page 4

funding purposes is provided to S&Es. The S&Es can submit their ideas in the proposal format to their departments as well as to the Technology Base Manager's office for consideration. Departments may provide their guidelines for selection and prioritization of the proposals. Once the proposals are received in the Technology Base Office, these are reviewed by Committees formed of S&Es, who are experts in various technologies and faculty members of local Universities. An oral presentation is required from each principal investigator before the

committee. Results are tabulated and list is presented to the TD for the final selection. He has the option to approve or reprioritize the list.

Once the proposals are selected for funding, each candidate is informed through a formal letter via chain of command. DD 1498 forms are submitted for Center planning and sent to Defense Technical Information Center (DTIC). These forms are also supplied to OCNR by 15 January to indicate past and current program progress, identify significant achievements and assist in the after-the-fact assessment. The Technology Base Office funded 24 IR

and 16 IED projects including on-going projects from FY-88.

Reviews of the selected projects are a validation of the IR/IED program on an after-the-fact basis, confirming program conduct with respect to OCNR guidelines, identifying promising technology areas and providing a measure of peer review to the investigators. At NADC, the Technology Base Office conducts mid-year and annual review of each project for merit, relevancy and progress. To encourage high quality R&D, selection of best IR and IED project is made and awards are given by the TD for accomplishments to the

principal investigators.

OCNR performs on-site biennial review of IR/IED programs. NADC had its first review in May 1988 and next one is scheduled for FY-90. OCNR selects projects for detail presentation and critical review. Progress of IR/IED program is also submitted in the form of an annual report which is due to OCNR by the end of April. This annual report highlights some projects in the form of a paper and includes accomplishments, paper presentations, technical reports, patents, awards etc. of each investigator related with the IR/IED projects.

## Be ethical about water conservation

By Michael Blank, P.E.

During the past two decades it has been clearly demonstrated that a water conservation ethic is vital both at work and at home. The demand for water since the 1960's has increased dramatically because industry and population has grown tremendously.

Oceans cover 70 percent of the earth's surface and contains 97 percent of all the water. But this water is too salty for drinking, farming or manufacturing. Only 3 percent of the world's water is fresh and unsalty. There is a strong correlation between water and civilization; the more advanced countries use more water for productivity and personal use.

According to the World Book Encyclopedia, the United States has more homes with kitchen faucets, flush toilets, air conditioners, garbage disposals, and automatic washing machines than any other country. For many people in Asia and Africa, water is a luxury. The people must haul water up by hand from the village well, or carry it in jars from pools and rivers far from their homes. American people do not have such problems. Every American uses an average of 70 gallons (260 liters) of water a day at home. It takes about 3 gallons (11 liters) of water to flush a toilet; 30 to 40 gallons

(110 to 150 liters) to take a bath (and each minute under a shower takes at least 5 gallons (19 liters); up to 10 gallons (38 liters) of water to wash the dishes; and, up to 30 gallons (110 liters) to run an automatic washing machine.

A water meter accurately measures the amount of water that flows through a pipe. It assures you will be billed only for the water actually entering your plumbing system. It's also a reliable detector of water leaks in your pipes or plumbing fixtures. A faulty toilet, for example, one of the most common sources of household leakage, can silently waste hundreds of gallons of water a day. The Water Company owns and is responsible for maintaining your water meter and making sure that it functions properly. Normally, conventional meters are read by the water department during their regular quarterly visits. If a meter reader cannot gain access to your home, you will be left a Call-A-Read card with instructions for obtaining the meter reading and calling it into the water company's office. If the water company cannot read your meter they estimate the amount of water you have used: This could be higher or lower than actual consumption, resulting in a surprise when you are finally billed using an actual meter reading.

The water meter is also a safeguard against undetected leaks. Leaks can be

costly, and you can easily check for these yourself. First, turn off all of your faucets and other water-using devices like automatic ice makers and humidifiers. Write down the reading from the 10-gallon red sweep indicator or small circular dial on your water meter. If the reading has not changed after an hour has passed, overnight is even better, you know that your plumbing system is leak free. If there is a change in the reading, look for the leak and either fix it yourself or call a plumber. In the long run, the cost of a modest repair is far less than the cost of higher water and sewer bills.

Checking for leaks on a regular basis is a good idea and water can be conserved only if people are interested in learning about existing and future water problems.

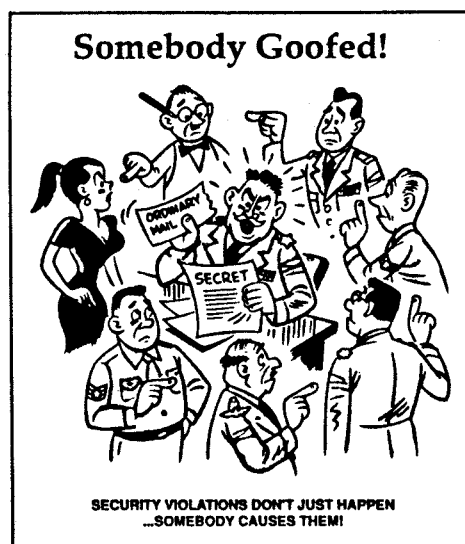
## ENERGY TRIVIA

**Q.** If the sun died out and it were possible to use all of the earth's resources of coal, oil, and other fuels to heat the earth, how long could the earth be kept as warm as it is now?

**A.** Three days.

## Security Reminder

**CLASSIFIED MATERIAL**—Classified material must be handed to an individual personally, and the individual must be made aware that they are receiving classified material. NEVER leave classified material on an unattended desk. New employees with a clearance and a need to know must be indoctrinated in the proper handling and safeguarding of classified material.





# Troop safety drives seat tests

Continued from page 1

Involved with various stages of V-22 preliminary design since 1981, the Center has recently performed crashworthy, dynamic testing of the troop seats on the Center's own horizontal accelerator facility. The test plan used, which requires measurement of accelerations and loads on dummies as well as on the seats, was written by Life Support Engineering Division personnel in the Air Vehicle and Crew Systems Technology Department.

The crashworthy or load-limiting seats are designed to enhance troop safety by absorbing the impact energy during a mishap. By using a mechanism similar to a shock absorber, the load transmitted to the occupant is limited to a survivable level and the seat is prevented from breaking free.

According to Leon Domzalski, instrumental in developing the test plan's dynamic criteria, "qualification tests have been completed and the results are being evaluated."

"NADC is evaluating V-22 crashworthiness from a systems perspective," stated Hate, "considering not only the crew and troop seats, but also the landing gear, fuselage, and cargo restraints as well."

# Artist's rendition in oil displayed in lobby

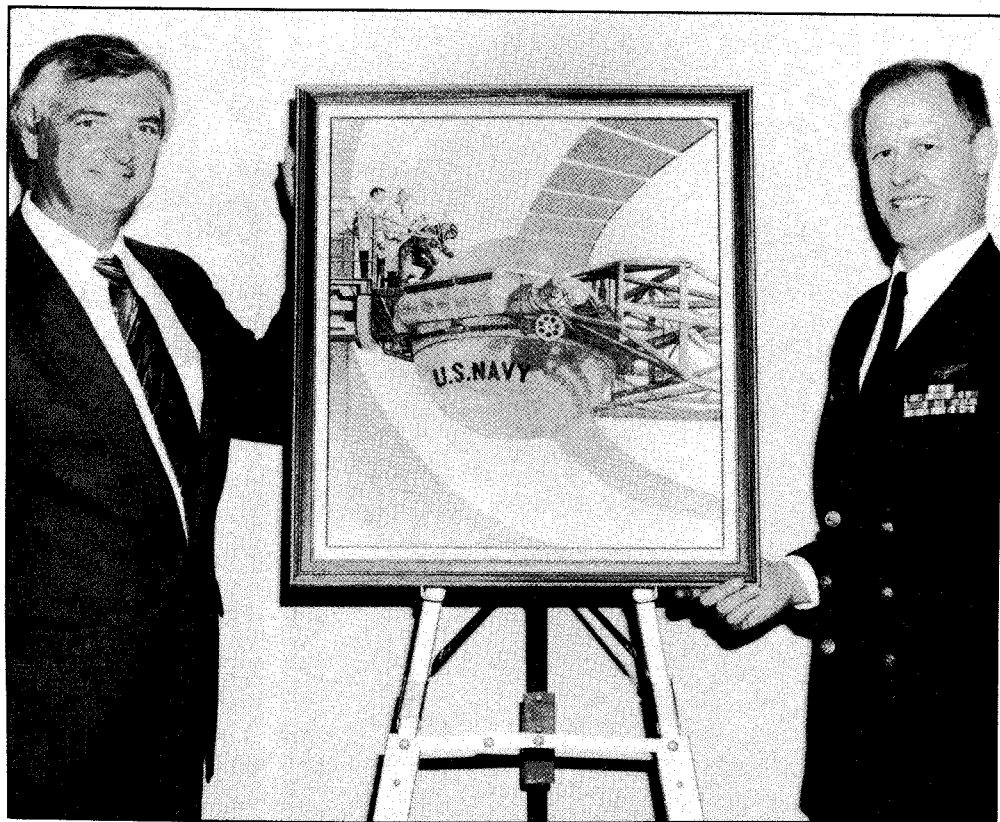


Photo by NADC Photo Lab

William F. Morando, President and Publisher, Romaine Pierson Publishers, Inc. of Long Island, presents an original oil painting of the Centrifuge to Center Commander, CAPT Curtis J. Winters. Painted by renowned artist, Stevan Dohanos, the work was used as the cover photo for the March 1966 issue of MEDICAL TIMES magazine. It is being prominently displayed in the main lobby.

# Chamber sees the chamber



John Cunningham, of the Microwave Technology Techniques Branch, explains the function of the Anechoic Chamber to members of the Greater Warminster Chamber of Commerce. The visitors also enjoyed lunch at the Crews Rest and viewed the "up-side down" airplane at the radar range.

# Technical Highlights

## SURVEILLANCE IRST PROGRAM

The Video Display and Analysis System (VDAS) being developed by the Remote Sensing Branch along with its support contractor — AMPAC — was completed and delivered to Texas Instruments (TI). This system will be used to support the performance and acceptance testing of the High Altitude Remote Piloted Surveillance System

(HARPSS) IRST being developed by TI. VDAS will also be used to control the IRST during P-3 flight testing in addition to supporting post flight analysis as part of the Surveillance IRST Advanced Technology Demonstration. The HARPSS IRST and the VDAS system are being developed under the Airborne Surveillance Block Program managed by NAVAIRDEVCON for the Office of Naval Technology.

## DEMONSTRATION SYSTEM DELIVERED

Communication Technology Division personnel completed a demonstration system to test the jam-immunity of the uplink to ASW aircraft from sonobuoys. The demonstration system was delivered to North Island Naval Air Station for use in fleet exercises.

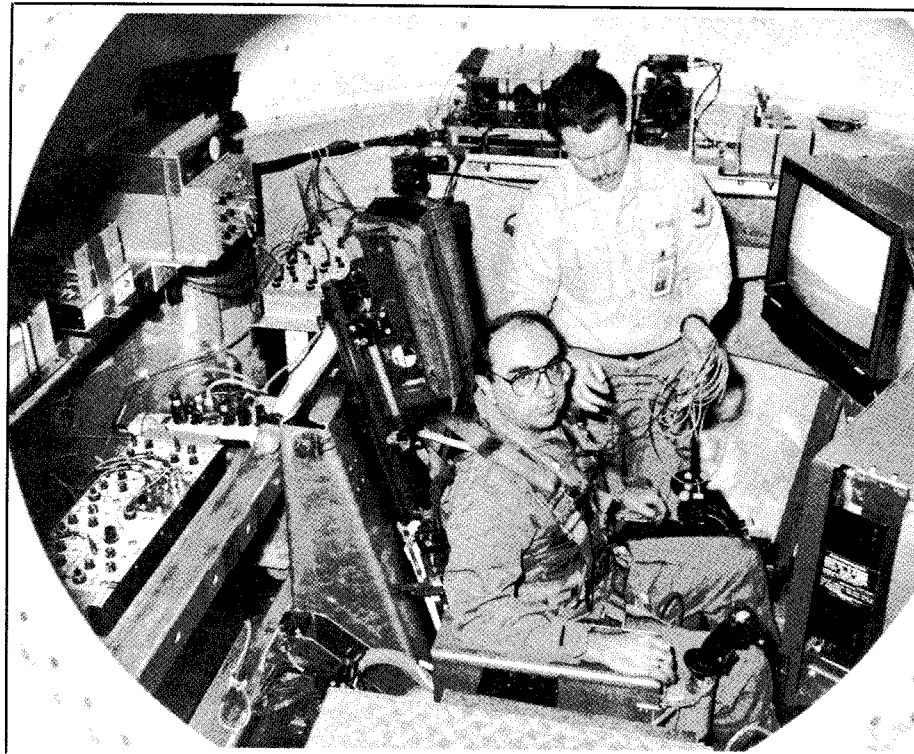


Photo by NADC Photo Lab

**IN A SPIN** — Dr. Donald P. McErlean, Head of the Air Vehicle and Crew Systems Technology Department got first hand experience of a spin in the Center's Dynamic Flight Simulator. Undergoing pre- and post-flight medical screening, McErlean took the standard familiarization rides including gradual and rapid onset up to 3g's.

## Planned your vacation yet?

To help with all of your personal travel arrangements, call SATO Travel, ext. 2729, Mon. thru Fri., 8 AM to 4 PM.



# Hole in one at 6th



By Pete Brown

Forty-six WFR golfers overcame showers and mud during May's outing at Middletown Country Club in Langhorne. The highlight of the tournament was a Hole-in-One by Steve Kochanski on the 6th hole! Low net honors went to B. Hearn (60), B. Hines (62), K. Miller (63), B. Wiggs (63) and D. Stadler (64). Low gross honors went to S. Cloack (77), Scott Perry (78), R. Miller (79) and B. Harvey (79). Twenty-six better ball teams fought it out with S. Perry and S. Cloack taking 1st with a net 58. B. Hines and B. Zarkowski tied with R. Miller and K. Miller at 59. Longest drive went to R. Miller at 273 yards. Closest-to-the Pin Awards went to B. Hines on #3 (1 Foot); S. Kochanski on #6, Hole-in-One; S. Clark on #8 (16 Feet); G Wercznski on #10 (17 inches); and C. Tierney on #14 (25 Feet). Don't forget to read the golf bulletin board in the open bay area for golf league standings and general golf information!

# "Boomer" boasts longest drive

By Pete Brown

Under sunny skies and cool spring temperatures, 48 W + R golfers battled the Center Square Golf Course to its knees on April 11th.

Individual net honors were captured by J. Koroncai with a 65. Close behind at 67 was A. Madera, J. Markow, along with B. Hearn and K. Stingel were all tied for 3rd low net with 70's. First low gross went to B. Harvey with a 78, second low gross to S. Perry (79) and third low gross to R. Miller (81).

In two man better-ball competition, the Koroncai's won honors with a net 59, followed by R. Miller and B. Zarkowski (63), P. Finnegan and J. Markow (64), and S. Perry and M. Mirabella (64).

Closest to the pin awards went to C. Swatchick on the 3rd hole (21 feet), H. Frost on number 7 (9 feet), A. Madera on the 14th (10 feet) and B. "Hole-In-One" McAvoy, 11 feet on the eighteenth hole.

Longest drive went to "Boomer" Perry again with a 240 yarder — let's go folks and beat this guy!!!

# Mixed League Bowling News

By Tom Reiter

May 3rd saw our knockdown night finish with some interesting results. Knockdowns occur on the last regular scheduled nights of each half. The second place team bowls the first place

# Old, new, recycled play

By Jack Eyth

The NADC Intramural Softball League has shrunk slightly, survived a major organizational change within its Board of Directors, and actually seems to be thriving as a result of new leadership both on and off the field. This year's Board of Directors is made up of Steve Spadafora, John Bowes, Jack Eyth, Joel Wexler, Bob Bello, Mark Lilly and John Metzger. The league is comprised of 15 teams, down three teams from 1988. Gone are the Druids, CSC, Nightriders, and analytic Animals; new this year are the Life Supporters, managed by Dan Schmidt; and two teams, the Guzzlers, and the perennial powerhouse Granfallon, have undergone significant personnel changes. The Granfallon, winners of 7 of the last 10 league championships, have lost many of their top players and may or may not be a factor in this year's playoffs. The Misfits, Eighth Inning, and Renegades, are all basically unchanged from last year and are expected to finish in the top five. The Bandits, last year's number-one regular season team, have lost slugger Rick Sames but are still a dangerous team and should contend. The biggest surprise of the new season are the currently undefeated Intimidators. Although their star pitcher Ken Bebbe was rumored to be out of action with an injured elbow, he has apparently risen from the ashes to lead his team to the top of the standings. Other teams off to unexpected good starts are the Rebels and the Herassers. if you believe the pre-season hype of the revived (or is it recycled) Guzzlers, they should fight it out with the Bearcats to fill the final playoff spots. the Dynatigers, Orange Crush, Phantoms and Life Supporters will all have a long road to hoe this season. As of 5 May 89, the league standings were:

Intimidators	4-0
8th Inning	3-0
Rebels	3-0
Herassers	2-1
Misfits	2-1
Bandits	2-1
Renegades	2-1
Rumblers	2-2
Guzzlers	2-2
Granfallon	1-2
Dynatigers	0-2
Orange Crush	0-3
Phantoms	0-3
Life Supporters	0-4

team, giving them a chance to go head to head and move up in the standings. In the A Division, the Red Winos (Tom Reiter 224, Mike Dent 211, Elaine Granieri 209) held off the late season charge by the Goofers (Leo Markushewski 222, Lorraine Reidinger 205) to win the second half. Added to their first half title, the Red Winos are the undisputed A Division champs. In the B Division, the first half champion Gutter Dusters, without their captain and high average bowler Wes Gleason, needed a sweep after slipping into second place. They only went out and beat the Falcons 4-0 with a two pin victory in the last game to also win both halves despite a Steve Jerdan 209/512. This is the first time in the history of our league that the same teams won both halves in both divisions. While first place was being decided, there was some excitement down the other end of the alley when Jim Campana rolled a 276 game. Jim started out with nine strikes, tried his best to stay calm in the tenth frame, and ended with a league high 276 game on our last night.

The battle of the titans took place on Wednesday night, May 10th. The opening game of the three game,

championship series was a close two pin (987-985) Red Wing victory, but from there it was all Gutter Dusters. Led by Wes Gleason's 211, 231/619 series the Dusters crushed with two straight 1000 plus games to win total pins 3002 -2819. Congratulations to all the champs. Bowling is a team sport and Wes had great support from Mary Vaughn, Bruce Vaughn, Ann Fowler, Jack Kinskey, Pam Kinskey, Dom Zaccaria, Chris Zaccaria, Aaron Davidson, Kathi Call, Bill Flannery. The runner-up Red Winos also deserve mention for their season — Tom Reiter, Ernie Wykes, Mike Dent, Bob Andrews, Miriam Lentz, Elaine Granieri, Claire Bayer and Debbie Erney.

As we went to press, all of our league statistics have not been compiled. Next month's edition will salute all of our high individual accomplishments. Thanks to all league bowlers for a fun year, see you at the banquet.

The men's league wanted me to congratulate the Grandfallon for capturing their championship with high games from Wes Gleason 233/203, and Jim Michell 220. The runner-up Phantoms were led by Joe Leonard 210/204.

# NADC in the NEWS

The big news is...



News items about NADC appear frequently in the Intelligencer/Record, Bucks County Courier Times, Today's Spirit, and the regional edition of the Philadelphia Inquirer. However, more often news items about the Center are regularly found in trade publications such as Aviation Week and Space Technology, Naval Aviation News, Defense News, Aerospace Daily and the like.

As a means of assuring that NADC is, indeed, in the news, we will be listing here the kinds of news we have released and some of those publications where stories appeared.

The most recent news clippings include:

- Aerospace Daily, Mar 18, 1989, "NADC developed composite avionic boxes set for fleet test"
- Aerospace Daily, Mar 7, 1989 "NADC seeks study of advanced active sonobuoy"
- The Intelligencer/Record, Mar 14, 1989, "Civilian gets Navy award"
- Today's Spirit, Mar 29, 1989, "Air Station, NADC report honors, awards"
- The Philadelphia Inquirer NEIGHBORS, Apr 2, 1989, "Petty Officer Fordham, Sailor of the Year"
- The Philadelphia Inquirer NEIGHBORS, Apr 7, 1989, "Becker, Civilian Service Award"
- The Philadelphia Inquirer NEIGHBORS, Apr 13, 1989, "Making science come alive for high school students"
- The Intelligencer/Record, Apr 17, 1989 "Director named outstanding engineering alumnus"





**In This Issue:**

- Graduate study awarded
- Walters named deputy MATD
- Agnew gets BEACON award
- Veterans' Courtyard dedicated
- Wellness Week well done

Volume 34 Number 6

NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA.

June 1989

## Center takes lead with 1st workshop

Another first in the Navy. A workshop on Weapons Internal Carriage and Separation (WIC&S) sponsored by the Air Vehicle and Crew Systems Technology Department was held at NADC for two days. Seventy-five leading researchers and engineers in the WIC&S field attended the two-day sessions.

With increasing emphasis on stealth technology, the ability to carry weapons internally is becoming a prerequisite in new and upgraded aircraft design. Through wind tunnel test and computational fluid dynamics analysis, researchers hope to achieve safe and accurate weapon separation from a bay by predicting the aerodynamic and aeroacoustics parameters. Internal weapon carriage will increase aircraft survivability, reduce observability and optimize aircraft performance.

The workshop was structured to enhance information exchange among industry, government and university personnel in a relaxed and informal manner. The two previous workshops were sponsored by the Air Force in 1986 and 1988. By sponsoring the Workshop, NADC gains visibility in the field of weapon integration.

Continued on page 3

## War College courses to be held

The Naval War College will hold courses at NADC for the coming academic year which begins in September 1989. This special no-cost-to-the-student program responds to the Chief of Naval Operations' desire to increase the Naval War College attendance and foster strategic thought among naval officers. The program is open to all military officers (O-3 and senior) and to civil servants (GS-11 and above). The enrollment process has begun and will continue until 28 July. Applications are available from John Markow (Code 032), extension 1026. The Naval War College selects applicants on a competitive basis and because of limited class capacity it is important to apply early.

Non-resident study enhances an officer's professional knowledge and

Continued on page 6

## NADC takes SPAWAR EEO award

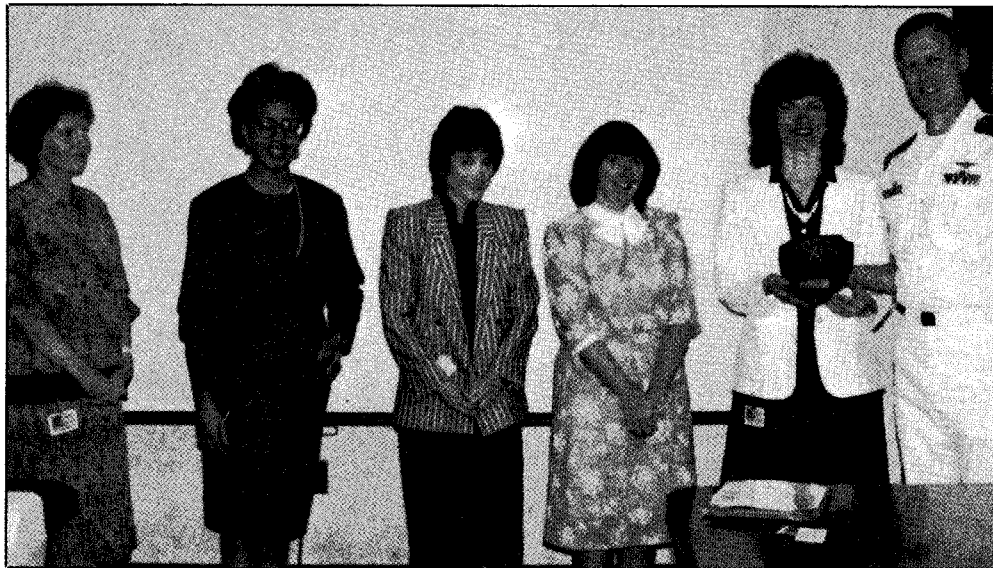


Photo by NADC Photo Lab

**EEO office personnel receive congratulations and SPAWAR EEO award from Center Commander CAPT C.J. Winters. Pictured Joanne Owen, Lynne Edwards, Robin Halperin, Lois Savage, Deputy EEO Officer Kathy Gause and CAPT Winters.**

NADC recently received the Space and Naval Warfare Systems Command Equal Employment Opportunity Award for FY 1988. The Center was selected for this award based on its innovative accomplishments in: the Historically Black (and Hispanic) College/University Program; community outreach programs focused on developing minorities' and handicapped individuals' interest in pursuing engineering and scientific careers; career development programs for women; success in informally resolving complaints; and increasing the representation of minorities, females and handicapped individuals in the work force.

## Thumbs up for Family Day!

By Mary Ann Brett

By virtually all measures, the NADC Family Day Open House on May 20th was a resounding success. Nearly 2000 employees, family members, friends and contractors visited the Center. The day officially began with a ribbon cutting ceremony which unveiled the partially restored Brewster Buccaneer aircraft being reassembled at NADC by volunteers. Technical displays, vintage and present day aircraft including tours through a P-3 aircraft and a CH-53 helicopter and a look inside the F-14 aircraft cockpit held the attention of all.

Departing aircraft created a delightful sight for aviation enthusiasts of all ages.

See additional photos on page 5

**Five year old Christopher Smith, an aspiring Navy Flight Surgeon, gives a 'thumbs up' for Family Day at NADC. His father Allen Smith a lieutenant in the Naval Reserve worked for a time on restoring the Brewster Buccaneer here at the Center.**

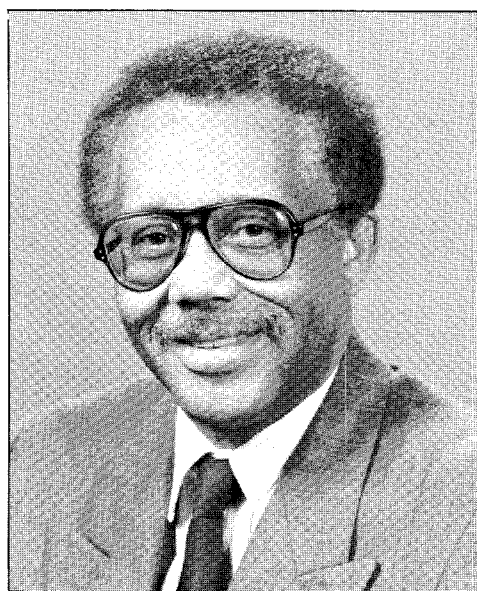


Photo by LT Allen Smith III, USNR

# Command Corner



**Captain Curtis J. Winters**  
Center Commander



**Guy C. Dilworth, Jr.**  
Technical Director

# Commander Salutes

**Frank Allen, Robert Geyer** (Code 30): For significant technical contributions during development of Carrier Battle Force Anti-Submarine Warfare Architectures.

**William Mulley, Charles Koch** (Code 70): For contributions at the 7th meeting of Air Standardization Coordinating Committee Working Party 50, Avionics Systems Architecture held in Ottawa, Canada.

**John Scott** (Code 09): For supporting the needs of the ORFI Systems, Inc.

**Sidney McCleary, Edward Whalon** (Code 50): For contributions to the Electronic Warfare Architecture Working Group and

**Richard Gleich** (Code 50): For Advanced Tactical Airborne Reconnaissance System support.

**Susan Poretta** (Code 60): For administrative support to the Medium Range Unmanned Air Vehicle project.

**Jonathan Harding** (Code 60): For contributing time to the Prime's Saturday Tutorial and Enrichment Program.

**Paul Bumgardner** (Code 30): For support in developing the Team "C" Master Plan for Command, Control Communications and Intelligence (C3I).

**William Ailes, William Birmingham, Alan Blumenthal, Stephen Campana, Gregory Catrambone, Gerald Ferguson, Kenneth Foulke, Arthur Krol, Ronald Kushnier, Ralph Lachenmaier, Joseph Laska, John Lee, Sidney McCleary, Paul Prichard, Warren Rosen** (Code 50): For outstanding assistance to the development and engineering of our new technology aircraft, the A-12, a success.



Photo by J. Jones

## Graduate study awarded

**Scott Livezey** of the Fixed Wing Carrier Based ASW Programs Division was selected to participate in the Center's Graduate Study Award Program for the 89-90 academic year. Livezey, who has worked at the Center for 2 years, will attend the University of Virginia in Charlottesville. Pursuing studies in Electrical Engineering, Livezey will apply his studies to mission software systems on the CV-ASWM project.

# Letter to the Editor

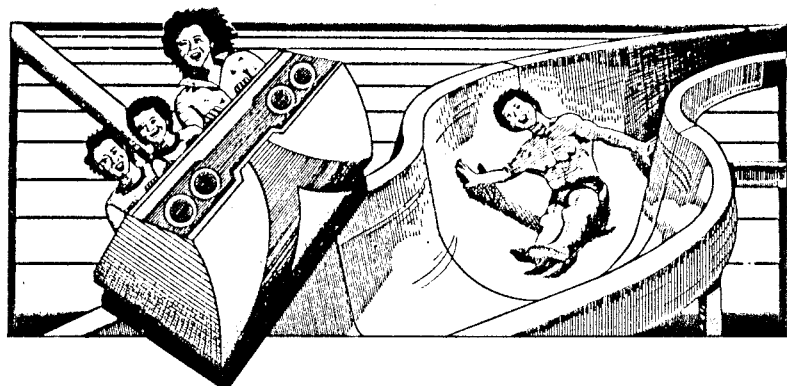
From: The Driver  
To: The Editor

As a singer of some unknown note, I want to recognize a couple of unsung heroes. Once upon a time, in the kingdom of Pennsylvania, a Navy van was transporting a number of people to a Wellness Work Seminar in the Poconos, a resort area of some renown. This van was piloted by a highly competent individual, which was fortunate for the passengers, because a tire blew, calling on all the skill the pilot could muster. After bringing the van to a stop, there were three passengers, who without a word being said, started changing the now obsolete tire. Manning the van lifting device, a veritable jack of all trades, was C.J. Winters, CAPT, USN,

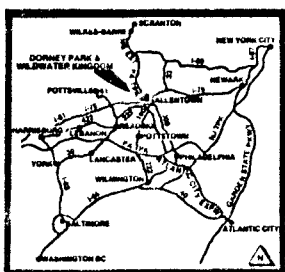
otherwise known as Skipper, and a team of two tigers attacking the lug bolts, W.F. Moroney, CAPT, USN, otherwise known as Doctor Bill, and P. Ayoub, otherwise unknown. Let me tell you, the lugs flew and before you could say Wellness Work Seminar and Neil Abramson, the tire was changed and we were once again on our way to a great learning experience.

These three unsung heroes of the road, CAPT Winters, CAPT Moroney and Peter Ayoub should be recognized for their muscular accomplishments above and beyond the call of duty. What with specialization, the Driver, being the van driver, stood by and watched the feverish activity. Well done men!

The Driver




## Don't Miss the Annual Outing



Coming soon . . . Dorney Park . . . NADC's Civilian W&R is again sponsoring a day of fun, sun, and prizes at Dorney Park and Wildwater Kingdom on 15 July. Tickets go on sale on 3 July at the W&R Office located across from the Credit Union. Cost of tickets: Adults \$14.; children 3-6 yrs./senior citizens 61-over \$9.00; children 2 and under free. Price includes both parks and food.

## Planned your vacation yet?

To help with all of your personal travel arrangements, call SATO Travel, ext. 2729, Mon. thru Fri., 8 AM to 4 PM.



**Reflector**

NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA.

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Commander, NADC	CAPT Curtis J. Winters
Technical Director	Guy C. Dilworth, Jr.
Public Affairs Officer	James S. Kingston
Editor	Mary Ann Brett
Assistant Editor	JO2 Michael Delledonne
Assistant Editor	Margaret Vigelis



# Walters named new Mission Avionics deputy



LCDR Douglas Walters

By JO2 Michael Delledonne

The Mission Avionics Technology Department (MATD) recently named LCDR Douglas P. Walters Deputy of MATD relieving Commander Richard C. Feierabend.

Walters, who recently transferred from the Warfare Systems Analysis Department, is looking forward to the challenge. "I'm excited about the opportunity," said Walters. "My background has always been in the Antisubmarine Warfare (AWS) field. I've been on ships that dealt with the ASW threat for three years. Now I

deal with the threat as a P-3 NFO. It's just a great situation because I'll be on the ground floor in research and development."

Though this is his first tour at NADC, Walters has dealt with the Center off and on since 1980. "I come here every so often to talk about development or software," he said. "There are a number of people in this

department that I have worked with in the past."

Walters, 37, from nearby Bethlehem, PA, has enjoyed his year at NADC. "It's a good opportunity working with civilians again; I enjoy the interaction. The fact that I'm close to home makes it even better. Of course, I enjoy the flying; it's a great deal."

## First-of-a-kind workshop held at NADC

Continued from page 1

Dr. Donald McErlean, Head of the Air Vehicle and Crew Systems Technology Department, was the key note speaker and gave a technology overview on Weapons Internal Carriage and Separation. McErlean concluded his speech by stressing NADC's ongoing efforts in this technology area, including developing a flying cavity test bed validating the NADC developed method for cavity flowfield predictions; validating the NADC developed tow target trajectory program by flight tests, and

continuing in the development of analytic methods for predicting store trajectories.

The twenty papers presented covered all aspects of WIC&S technology including wind tunnel test results of stores separation, aeroacoustic effect in cavity, Navier Stokes solutions to store separation problems, Influence Function Method applications and Advanced Integrated Armament Systems. The Workshop was organized by Dr. David Chen and Robert Turzanski of the Aero Engineering Division and Dr. Alex Cenko of the Aero Analysis Division.

## Financial managers meet

As the result of a request initiated by the Naval Air Development Center, Rear Admiral Stephen F. Loftus, Comptroller of the Navy, Office of Budget and Reports, Washington, D.C., addressed the Federal Financial Management Conference in Atlantic City, N.J. on 11 May 1989. The purpose of the conference was to provide financial managers (approximately 100 attendees) from Federal activities in the Philadelphia, New York-New Jersey, and Boston

areas with current information on a wide range of financial issues including current and upcoming initiatives. Rear Admiral Stephen F. Loftus spoke on "Navy Budget Realities 1990 through 1991." Budget restraints and belt tightening were conveyed during his presentation with no "real" budget growth anticipated during this period. The Center provided photographic coverage of the conference including the Admiral's visit on 11 May 1989.



Rear Admiral Loftus and James White, Deputy of the Financial Management and Planning Department take a break from the harsh budget realities covered during the Federal Financial Management Conference.

## Agnew takes annual BEACON volunteer award



Dennis Agnew (right) accepts Carnwath Award from District Justice Donald Nasshorn.

Dennis Agnew of the Materials Application Branch, Air Vehicle and Crew Systems Technology Department received the Samuel W. Carnwath Memorial award for the outstanding volunteer worker who wishes to continue his education in alcohol studies. District Justice Donald Nasshorn, Chairman of the Awards Committee presented the award to Agnew at the annual Bucks County Council on Alcoholism dinner in Langhorne.

## If the SOC fits

By Robert Janes

In March's column, I wrote about the latest government Standards of Conduct (SOC) statute, the Procurement Integrity Amendments to the Federal Procurement Policy Act. Since that column there have been some developments regarding this statute. For one thing, Congress acted to extend the law's effective date by two months, so it now stands to go into effect on 16 July 1989. In addition, regulations have been issued which help to explain and amplify this new law.

As we previously reported, much of the law simply restates things which were already prohibited. Thus, a Federal employee involved in an ongoing procurement may not: (i) discuss future employment with a competing contractor; (ii) solicit or accept gratuities from a competing contractor, or (iii) disclose any proprietary or source selection information regarding the procurement to anyone who does not have a need to know.

In addition, the law contains some brand new provisions. One of these is a post-employment restriction forbidding anyone who was involved personally and substantially in a procurement from working on that

contract for the awardee during the next two years. This restriction will affect people far beyond our Contracts Division, for the regulations make clear that helping to define requirements, developing specifications or Statements of Work, performing technical evaluations, etc., are all activities bringing one within the scope of the statute. This particular restriction applies only to people leaving the government after the law's effective date of 16 July 1989.

Another change wrought by the act is the need to obtain certifications before the award of any affected contract. As of 16 July, no contract exceeding \$100,000 may be awarded until the Contracting Officer first obtains a certification from the contractor and from all involved government personnel that they are aware of nothing that occurred regarding the proposed contract that would violate the statute. We foresee the possibility of some delays in contract awards while contractors provide these certifications. In addition, the law requires us to provide training to our own employees so to educate them regarding its provisions. If you have any questions regarding the provisions of this statute, please feel free to contact us in the Office of Counsel on extension 3000.

# Veterans' Courtyard dedicated for Memorial Day

Culminating a 2-year effort by the NADC Veterans Committee, the Center's courtyard area was dedicated on May 26 to NADC veterans and military personnel.

Employees and local township officials including Representative Peter Kostmayer participated in the ceremony. An invocation, the playing of taps and a 21 gun salute completed the event.



Photos by  
NADC  
Photo Lab



## TRIBUTE to Personnel of the USS IOWA

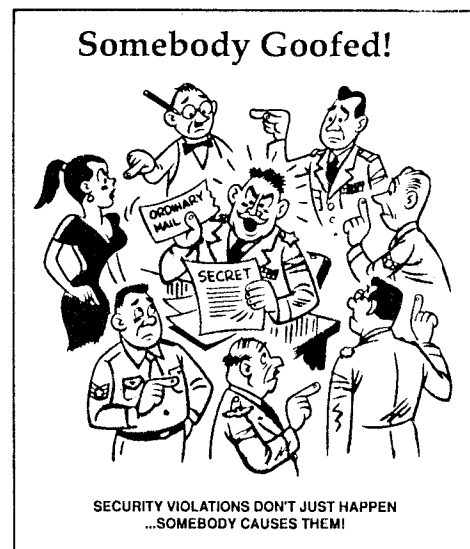
"I had sailed with them and had crawled around their turret, shaken their greasy hands, felt the strong, sure grip that only a gunner's mate can give, seen the ready grin on their faces, and watched the steady and rough way they went about their work. They were good sailors . . . their deaths were a jolting reminder of the dangers faced by those who freely make their choice and serve at sea."

Secretary of the Navy, William L. Ball III relating an experience from a visit to the USS IOWA before the turret explosion.

(Submitted by Frank Drummond)

## Security reminder

**HOUSEKEEPING HINTS**—Keep material off the top of security containers, desk tops, shelves, etc. When there is an accumulation of papers, books, magazines, i.e., classified material could easily be mixed in and overlooked when securing.



## Energy efficiency on the rise

By Michael Blank, P.E.

Naval Air Development Center's total energy usage consists of averages of 84 percent electricity, 12 percent fuel oil, 3 percent natural gas and 1 percent propane gas.

Electrical use is heaviest in the late summer due to air conditioning. Fuel oil use is heaviest December through March due to the heating season.

As little as a 1 percent reduction in total Center energy consumption for only one month is enough for two years of heating, cooling and cooking for an average residential home of 1,728 square feet.

Sixty-five percent of single homes built in 1970 were for speculative sale. The builders were not concerned with energy cost. They did not worry about insulation, lighting and water heating systems or efficient heating and cooling units.

According to the Report of the Energy Project at the Harvard

Business School: "The American people are becoming more interested in and responsive to energy efficiency than in the past. Increasing efficiency in existing and new buildings results not just from one set of decisions or from overall fix, but from an interplay of factors - prices, incentives, regulation, research and development, changing techniques and methods of preparation, and changing human attitudes."

In order for an energy savings we must retrofit existing buildings or upgrade a complex system by improving all components of systems including the following:

### BUILDING ENVELOPE SYSTEM

- Caulk and weatherstrip complete building
- Install storm or thermal doors.
- Install storm or thermal windows.
- Install ceiling insulation and attic vents.

### HEATING AND AIR CONDITIONING SYSTEM

- Install clock set back thermostat
- Tune or adjust heating system
- Seal and insulate pipes and ducts
- Replace inefficient heater
- Install high efficiency air conditioner

### LIGHTING SYSTEM

### WATER HEATING SYSTEMS AND APPLIANCES.

### \* ENERGY "HOT LINE" ENERGY "HOT LINE"\*

1. Any energy violations during work hours (0730 1600) have to be reported to the Public Works reception desk (code 834) on x2700.
2. After hours (1600 0730) energy violations are to be reported to the Security dispatcher on x2097.



# Family Day sees smiles and full house



Photo by Drew Schmith

**Nicholas D'Apuzzo, former Center Commander CAPT Clifford Rigsbee (retired) and present Center Commander CAPT Curtis Winters cut the ribbon to unveil the Brewster aircraft undergoing restoration at NADC. The aircraft is being restored by a group of volunteers led by D'Apuzzo.**

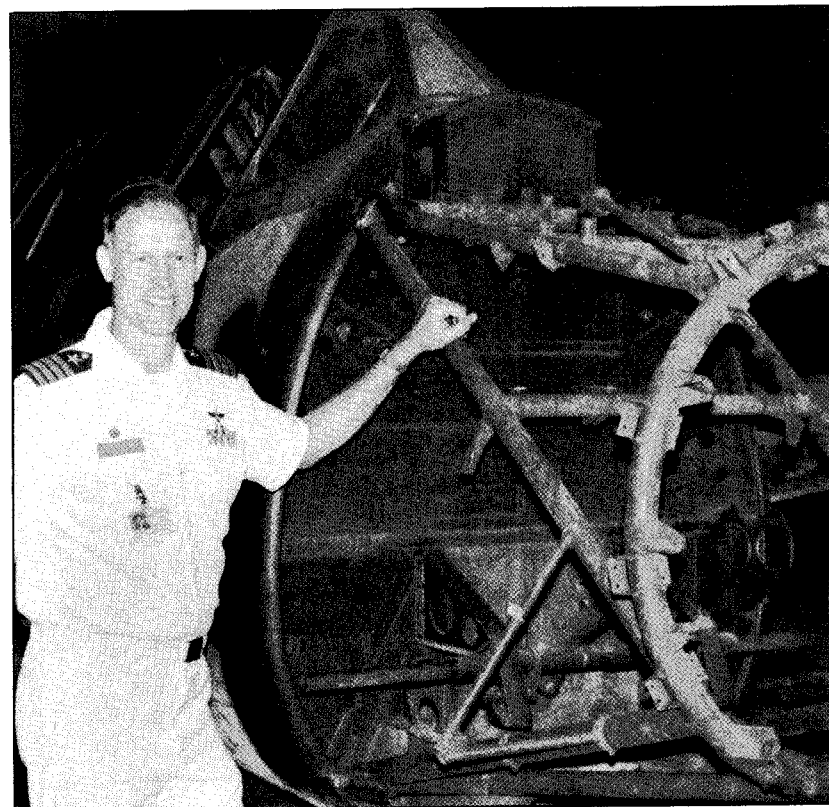


Photo by Drew Schmith

**CAPT Curtis Winters admires the partially restored Brewster fuselage on display for Family Day.**



Photo by Drew Schmith

**LCDR Timothy Sestak, helicopter pilot, tours smiling visitors through a CH-53 helicopter.**



Photo by Drew Schmith

**Nearly 2,000 employees, family members, friends and contractors enjoyed the technical and aircraft displays throughout the day. Departing aircraft were a special treat.**

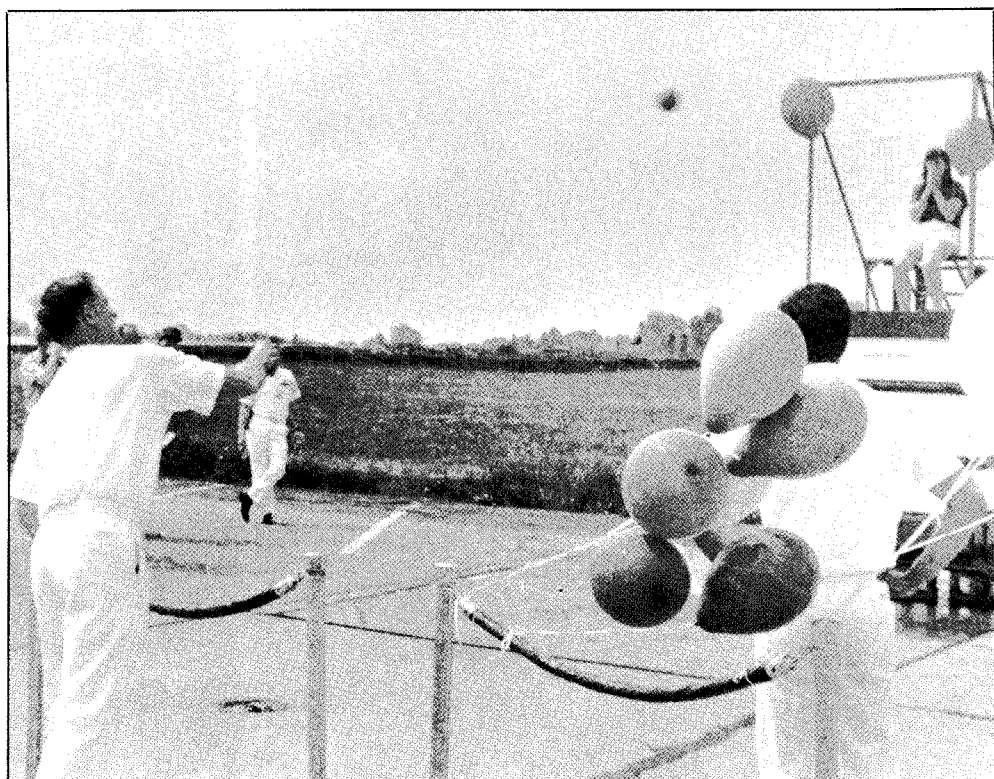


Photo by Drew Schmith

**Is this anyway to treat an Ensign? CAPT Winters contributes to Navy Relief by attempting to dunk Ensign Kim Baker in the dunk tank. He was successful.**

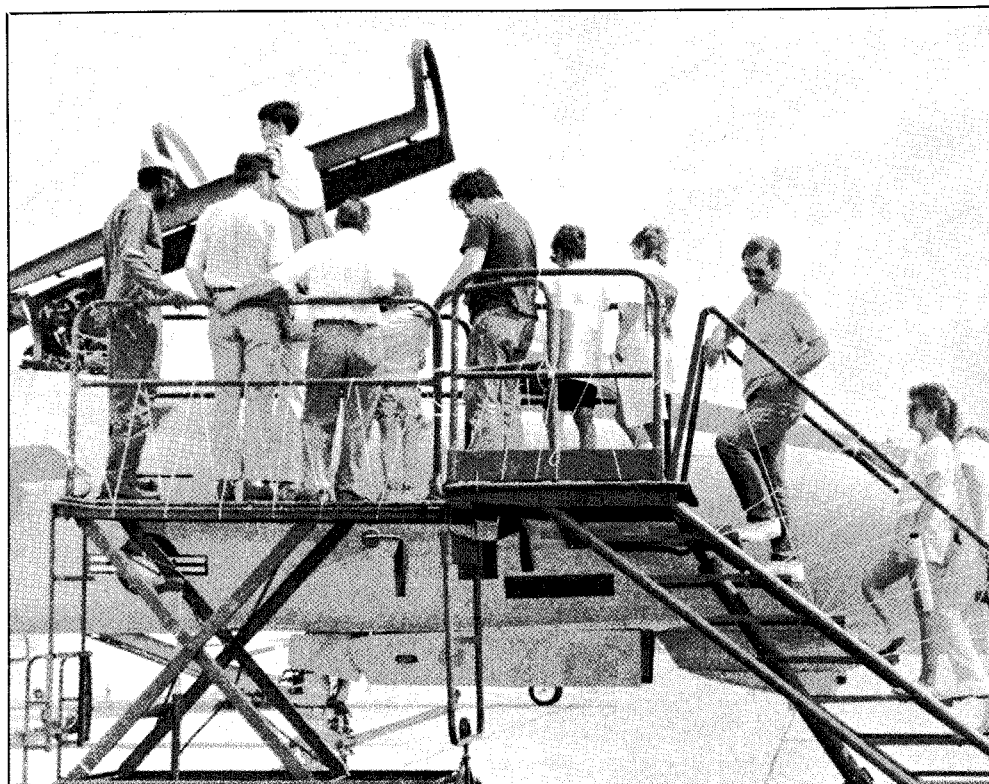


Photo by Drew Schmith

**Youngsters and adults get up close to view the F-14 aircraft cockpit and talk with pilot CDR Winston Scott (far left). Scott is Deputy Head of the Tactical Air Systems Department.**



# Wellness week: well attended and well done!

Even the least physical turned out to play in the Wellness Week activities coordinated by the Civilian Personnel Department's Neil Abramson and organized by various volunteers. A run, walk, 100 yard dash, bike race, volleyball and softball tournament fostered comradery, deep breathing and an increase in circulation. Guest speakers, blood pressure and cholesterol checks topped off the healthful week.

## Who they are; What they do

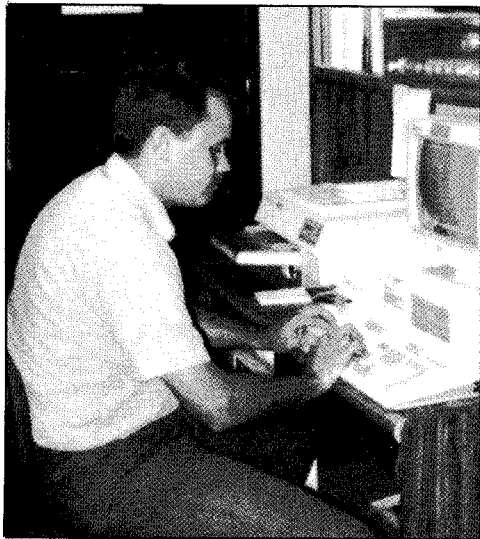
By JO2 Michael Delledonne

Aviation Antisubmarine Warfare Operator (AW) David Fridline wanted to fly. "I picked the AW rating because I wanted to fly and the rating guaranteed that I would."

Fridline, 23, a four year Navy veteran, described his job. "I am an acoustic operator on a P-3 aircraft. We hunt for submarines by taking different sounds and determining if it is in fact a submarine or something else."

Originally from Rochester, NY, Fridline graduated from Eastridge High School in 1983. After joining the Navy in 1985, he reported to NADC in February.

Though only here three months, Fridline noticed the differences between fleet life and NADC. "The stresses here are different than other duty stations I've been attached to. I think shore duty in general is different. It's a bit more relaxed."



AW David Fridline

## And the nominees are . . .

There are nearly one hundred honorary awards available throughout each year for which NADC's outstanding employees might qualify. However, unless deserving individuals are nominated, these awards will surely elude us. The nominations themselves are a way to recognize dedicated and diligent employees. Those awards accepting nominations through August 1, 1989 are:

- All Star Team Awards (Honorary)
- National Public Service Award (Honorary)
- Woman of the Year Award (Honorary)

For specific information about these or any awards, contact Bettie Simpson, Code 031, extension 3079.

One of the pleasant surprises of the Wellness Week Health Extravaganza was the amazingly competitive, single-elimination Softball Tournament which was held from 15-22 May 1989. The brainchild of Neil Abramson, Code 031, the tournament was organized by Jack Eyth, Code 60. All games were played at lunchtime with a format that was designed to take pitching out of the game and to enable a 7-inning game to be completed in less than 90 minutes. To accomplish this the rules included: 3-6 foot arc pitching, no walks, no umpires and a twenty-run rule in case of a runaway.



Volleyball champs: Jim Campana, Dawn Reiser, Larry Coar, Mike Lanier. Not shown: Mark Liparius, Chris Thompson, Paul Bier, Kevin Parson, John Whalen, Maria Cusanelli, Donna Morgan.

Nine teams entered the tournament each managed by a different department/division. Special thanks go to the team organizers: Security, Bruce Heath; Personnel, Dottie Kirkpatrick; CNTD Code 40, Dean Kimelhiem; Supply, Bob Cassagrando; Photo Lab, Cathy Burian; TACAIR, Code 20, Dorothy Gramlich; AVCSTD, Code 60, Mark Lilly; MATD, Code 50, John Andujar; and T&E, Code 90, LT John Hovland.

The Championship game featured an extremely close match-up between Supply and AVCSTD. The outcome went down to the last half of the seventh inning when Jack Eyth drove

home the winning run with a two-out single to gain a 4-3 victory for AVCSTD Supply's team captain, Bob Cassagrando, though noble in defeat, vowed to get revenge in next year's tournament.

The results of each game were:

Security 17	Code 20 7
Security 8	Code 60 Champs!
Personnel 5	Code 20 10
Supply 19	Code 90 BYE
Code 40 8	Code 90 12
Supply 19	Code 60 11
Supply 15	Code 60 BYE
Supply 3	Code 50 4
Photo Lab 1	Code 60 13
Code 20 BYE	Code 50 4



AVCSTD SOFTBALL TEAM CHAMPIONS

L-R: Jack Eyth, Steve Hynes, Sam Delservo, Scott Lassen, Steve Spadafora, Wendy Koenig, Carolyn Richards, Mark Lilly, Jeff Glatz, Jeff Thornton, Mike Searles.

Not Pictured: Dave Rose, Fred Kuster, Joe Bebey and Mary Conyers

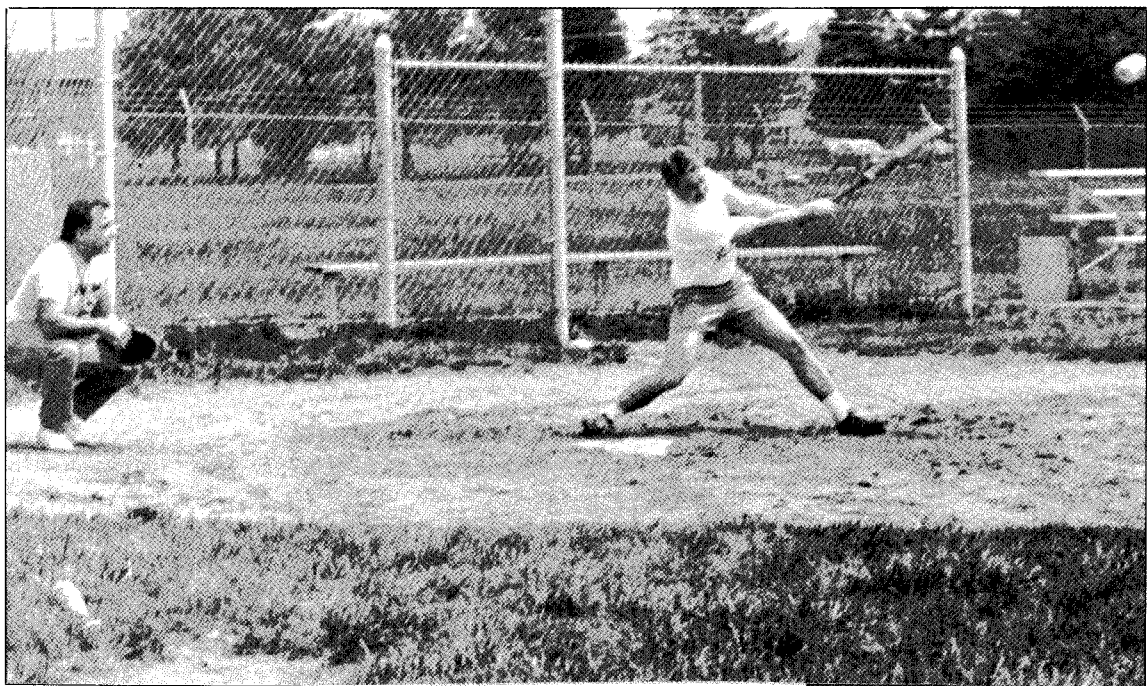


Photo by Ensign Kim Baker

Bruce Heath of the Security Division takes a cut during Wellness Week softball competition.

# Naval War College comes to NADC

Continued from page 1

decision making ability. The role of the naval officer in today's fast-paced environment is a tough one, and it keeps getting tougher. A highly trained and educated officer has an edge over a potential enemy and can make better informed decisions in any given situation.

The Naval War College Nonresident Seminar Program offers the same three core courses (Strategy and Policy, National Security Decision

Making, and Joint Maritime Operations) taught in residence at Newport. Each course requires one academic year of 36 weekly evening seminar sessions to complete. Highly qualified professors, with support from lecturers from the Naval War College, lead the seminars.

The Naval War College will also offer seminars in Newport, RI; Norfolk, VA; Pensacola, FL; New Orleans, LA; Corpus Christi, TX; San Diego and San Francisco, CA; Seattle,

WA and greater Washington, DC areas this year. Students who cannot complete their studies in one area may continue in alternate locations or finish through correspondence study.

Students who complete the entire three course package will receive a Naval War College command and staff level diploma. In addition, many civilian colleges award graduate credits based on satisfactory completion of Naval War College courses.



# Center hosts AIAA

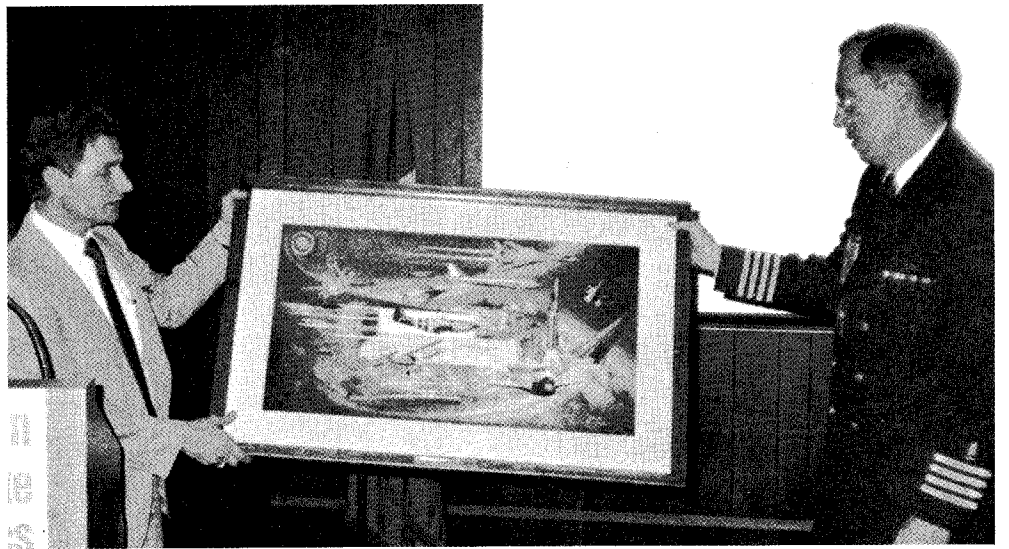
By Nicholas Onorato

NADC and the Greater Philadelphia Section of the American Institute of Aeronautics and Astronautics (AIAA) hosted a technical luncheon at the Center on the V-22 Osprey. Bill Grauer, Section Vice Chairman and V-22 Project Engineer from Boeing Helicopter, Inc. captivated the audience with the history and technology behind the tiltrotor. Slides, test models, and actual film footage of the first successful V-22 flight on 19 March

1989 in Arlington, Texas were used to trace break throughs in the evolutionary aircraft.

The Center's Tactical Air Systems Department and Air Vehicle and Crew-Systems Technology Department are tasked by the Naval Air Systems Command to provide technical support for a number of areas including air system development, avionics, structures, crew systems, materials, and evaluation review of contractor designs.

The Center boasts over sixty active members of Greater Philadelphia's 600 AIAA members.



Nick Onorato, AIAA Section Chairman and NADC employee, presents "The Evolution of Flight" to the Center, accepted by CAPT William Moroney. The original painting commissioned for the Institute is over ten feet tall and resides at AIAA's new \$5 million headquarters in Washington, D.C.

## Technical Highlights

### Successful Testing of LCSS

The baseline Low Cost Sonobuoy System (LCSS) program completed DT-IID testing. The performance of the deployed sonobuoys was satisfactory. Data obtained during these exercises will provide a basis for continued development of this type of sonobuoy. Enhanced designs are proposed for further development. The objective of this program is to provide an affordable passive broadband sonobuoy system capable of effective detection of current and future submarine threats.

### Acoustic Emission Monitoring System Tested

A portable Acoustic Emission monitoring system from the Royal Military College, Canada was installed and flown on an NADC A-7 aircraft. This system, which is designed to detect cracking of airframe components during flight, is being tested as part of a joint US-Canadian research project.

Initial flights on the A-7 aircraft were completed and the ability to produce controlled crack propagation in test specimens was demonstrated during specified high G maneuvers. Future flights will test the capability of the device more fully.

Additional test flights on a P-3 using this system and a more sophisticated NADC system are anticipated in June. If successful, this monitoring technique could produce large cost savings by reducing unnecessary disassembly of aircraft to inspect critical parts.

### Model 4.2 CV ASWM IOT&E on CVN-69

The CV-ASWM Model 4.2 System completed Interim Operational Test and Evaluation (OT-IIa) on board the USS DWIGHT D. EISENHOWER. This test demonstrated that the ASWM Model 4.2 system has the potential to be operationally suitable and operationally effective. OPTEVFOR recommendation of Approval for Limited Fleet Introduction is expected.

### Final ATP SH-60F HSIF

Final acceptance testing was performed on the SH-60F Hardware Software Integration Facility (HSIF). The HSIF is a portable facility that

will be used to support both initial and life cycle software development for the SH-60F. The final report for the HSIF testing has been written and a recommendation for acceptance has been made to the Naval Air Systems Command.

### First P-3C CMOS Software Completed

The VP Program completed the final build of the K4.6 software for the P-3C Update III. This software package converts the CHEX software to operate on a modified (CMOS) CP-901 computer with 1 MB of CMOS used as main memory and a 3 MB Bubble Memory used for secondary storage. The K4.6.C software will undergo systems Quality Assurance testing (August 1989 completion) prior to a Fleet verification and validation. A demonstration of S4.6 System Test Program compatibility with the upgraded CP-901 is planned for September 1989.

### Successful Testing of LCSS

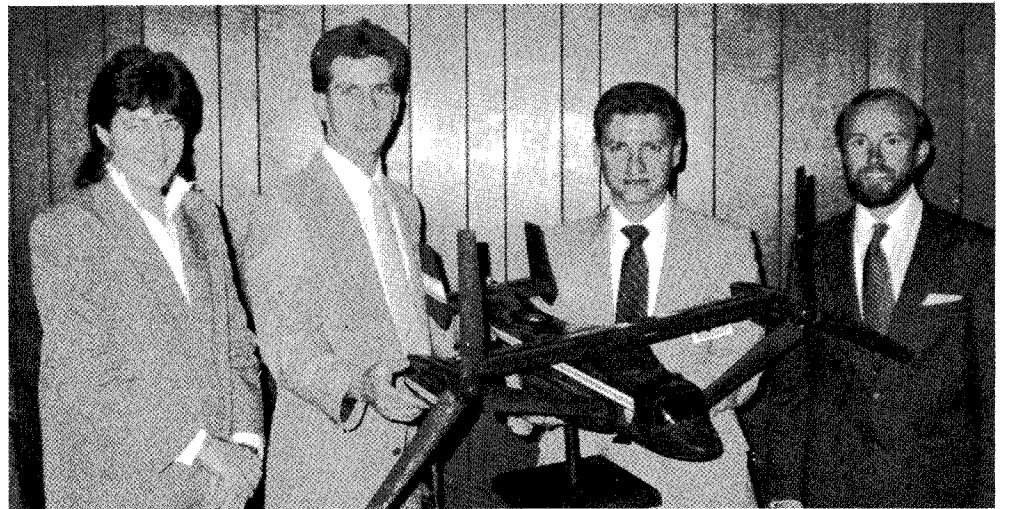
The baseline Low Cost Sonobuoy System (LCSS) program completed DT-IID testing. The performance of the deployed sonobuoys was satisfactory. Data obtained during these exercises will provide a basis for continued development of this type of sonobuoy. Enhanced designs are proposed for further development. The objective of this program is to provide an affordable passive broadband sonobuoy system capable of effective detection of current and future submarine threats.

### Doppler Velocimeter System Installed

A proposal to provide a doppler water mass velocimeter system using NAVAIRDEVCON developed concepts was accepted and funding received from the Strategic Systems Project Office. The system will be installed on the SP-24 Navigation Test Vehicle USNS VANGUARD early in FY-90.

### UK Tours USNS MAURY

A briefing and tour of the new construction deep ocean survey ship, USNS MAURY, was given to representatives of the United Kingdom Hydrographic Office. The briefing highlighted the NAVAIRDEVCON developed SASS Phase IV bathymetric system which is being considered by the United Kingdom for use in conducting their ocean survey program.



AIAA Greater Philadelphia Executive Council members from NADC--Michele Finegan, membership, Steve Kern, young members, Nick Onorato, and Bill Grauer, Vice Chairman, Boeing Helicopter, pose with the V-22 5% scale spin model. The model was tested at Boeing to determine the aircraft's spin characteristics prior to first flight. (Not pictured - Julieta Booz, Honors and Awards Chairperson.)

## NADC

in the

## NEWS

The big news is...

News items about NADC appear frequently in the *Intelligencer/Record*, *Bucks County Courier Times*, *Today's Spirit*, and the regional edition of the *Philadelphia Inquirer*. However, more often news items about the Center are regularly found in trade publications such as *Aviation Week and Space Technology*, *Naval Aviation News*, *Defense News*, *Aerospace Daily* and the like.

As a means of assuring that NADC is, indeed, in the news, we will be listing here the kinds of news we have released and some of those publications where stories appeared.

The most recent news clippings include:

- The *Philadelphia Inquirer*, Apr 13, 1989, "Making science come alive for high school students"
- Today's Spirit*, Apr 19, 1989, "NADC exceeds Navy goals"
- Bucks County Courier Times*, Apr 21, 1989, "Bucks man wins world renowned MIT fellowship"
- The *Philadelphia Inquirer*, Apr 23, 1989, "NADC tops goals for contracts to small businesses"
- Defense News*, May 8, 1989, "First fluid flight control system flown in formation"
- The *Intelligencer/Record*, May 10, 1989, "NADC honors Sailor"
- The *Philadelphia Inquirer*, May 14, 1989, "Heads above the crowd"
- Naval Aviation News*, May-June 1989, "P-3 Testbed Aircraft"



## Rain delays playoff speculation

By Jack Eyth

### Hole in one



Fighting overcast skies and intermittent rain at the Bucks County Country Club, AWC D. Myllenbeck Code 101X, Bob Palmby and Harry Pochik of Pacer arrived at the Par 3 170 yard sixth. Myllenbeck, with honors, selected a 7 iron and drove the ball which landed within 5 inches of the cup and rolled in. Myllenbeck finished the round with a low gross 86.

### Ski club plans new season trips

By Jim Macaulay

The NADC Ski Club was started in 1975 by a small group of friends who simply liked to ski together. The little club grew rapidly as more and more people realized the fun and benefits associated with group trips. The membership now approaches 200, and the dues are nominal.

What kind of people join the club? It's hard to characterize the typical member because his background is as diverse as NADC's employment profile, and then some! They are engineers, secretaries, spouses and friends, but all people who love to ski, and love the company of other skiers.

The main purpose of the club is to run ski trips. The standards are simply a good compromise between economy and comfort. Most trips use privately rented condominiums, because great comfort comes at a very reasonable price that way. And the limit is usually two to a room: no

By this time in a normal softball season, teams are already jockeying for playoff positions. But the excessive rainouts experienced this year leave the ultimate outcome very much in doubt. While some teams, like the Guzzlers, have already played 9 games (with 5 left), teams like the Rebels have played as few as 3 games. As a result, the early trends and final standings are hard to predict.

One team which continues to shine regardless of the weather is the Intimidators. True to their name, they have managed to conquer all of their opponents and are still leading the league with a 7-0 record. Although few of their victories have been blowouts, they have won every close

one behind the pitching of Ken Bebbe (3.83 ERA) and a balanced hitting attack (11 hitters over .500). Other teams with winning records are the Rebels, Misfits, Eighth Inning, Granfalloon, Renegades, Bandits and Herassers. Of this group, the 'Falloon has shown the most resilience. Though their roster was seemingly decimated by off-season player retirements, they continue to field an impressive line-up. Combining tight defense with the veteran pitching of Steve Torok, they are holding their own with a 5-2 record.

Late word from the Eighth Inning has Fred Kuster hanging up his spikes for good after receiving a knee injury in another league. If this is true, our league will be losing a fierce competitor and true leader. One team that is already going out with a "bang", the infamous Guzzlers, promises that the best is yet to come! Team co-manager John "Rock" Markow says that although the fan turnout has not been as large as expected, (averaging 2.5 per game plus an occasional dog), the team's hijinks are really starting to heat up as the regular season winds down and the team looks forward to the playoffs. It's this reporter's hope that the Guzzlers are watching the playoffs

from the field, and not from the stands.

The league standings as of 2 June 1989 are:

Intimidators	7-0
Rebels	3-0
Misfits	5-1
Eighth Inning	5-1
Granfalloon	5-2
Renegades	4-2
Bandits	3-2
Herassers	3-2
Rumblers	4-4
Bearcats	3-3
Guzzlers	4-5
Dynatigers	1-4
Orange Crush	0-6
Phantoms	0-7
Life Supporters	0-8



"packing them in"!

The destinations are chosen carefully to provide good skiing for everyone. World class resorts such as Aspen and Vail, as well as smaller places like Lake Placid, are the typical fare.

What about the up-coming season? It may seem a bit early to worry about next Winter, but (believe it or not) many resorts are almost fully booked already! So a little band of hard workers has been meeting twice a month to plan the 89-90 season. And here are the results (so far):

A four day weekend in Colorado, a three day weekend in the East, a full week in Telluride, Colorado, and possibly a late season Western weekend, depending on demand.

Look for more information on these resorts in next month's Reflector. In the meantime, if you have any questions or suggestions, please contact Diane Heal at 441-7132.

### Boomer finally falls

By Pete Brown

50 W+R golfers competed in the rain for the 3rd time in a row during June's outing held at Fox Hollow Golf Club. Curt "Crusher" Swatchick out-distanced "Boomer Perry" for the longest drive, a wind-aided 327 yards on the 18th hole! Low net honors went to B. Finch and R. Reichert (63's), M. Drager (64), R. Jenkins (69), T. Madera and G. Boyle (71's). Low gross awards went to P. Brown (74), J. Sniscak (79), R. Miller (80) and "Crusher" Swatchick (80). Twenty-six

better-ball teams scrambled for "net" birdies, with B Whiteman and P. Brown winning with a 59. M. Drager and T. Karr tied with R. Jenkins and T. Calkins for 2nd place 60's.

Closest-to-the-pin awards went to C. Swatchick, #2, (12 ft.); B. Costanzo, #5, (5 ft. 9 in.); J. Sniscak, #7, (2 1/2 ft.); J. Vincent, #10, (3 ft.); B. Daymon, #12, (14 ft. 8 in.); and C. Dwatchick (again) on #17, (20 ft.).

See you in July at Warminster's 5 Ponds! (P.S. "Crusher" is selling his clubs for something to turn his game around!!)

## Mixed Bowling League News

By Tom Reiter

Our annual awards banquet was held on June 16th, and as usual we had a rocking good time. In addition to fine wine, food, and music, the following bowlers from both of our Divisions were recognized with an appropriate award. Names with an asterisk next to them had already received a higher award.

### LEAGUE CHAMPIONS GUTTER DUSTERS

Wes Gleason (Captain)  
Ann Fowler  
Mary Vaughn  
Bruce Vaughn  
Aaron Davidson

Pam Kinsky  
Jack Kinsky  
Kathi Call  
Chris Zaccaria  
Dom Zaccaria  
Bill Flannery

### DIVISION A CHAMPIONS RED WINDS

Tom Reiter (Captain)  
Ernie Wykes  
Mike Dent  
Bob Andrews  
Miriam Lentz  
Elaine Granieri  
Claire Bayer  
Debbie Erney

### HIGH AVERAGE

Mike Dent 187  
Linda Stickney 163  
Wes Gleason 182  
Denise Beck 156

### HIGH SERIES

\*Mike Dent 665  
Al Knobloch 616  
\*Linda Stickney 587  
Elaine Granieri 560

\*Wes Gleason 671  
Mark Lind 618  
Mary Feeley 559

### HIGH SERIES WITH HANDICAP

Dave Oliver 710  
\*Linda Stickney 677  
Caroline Tierney 672

Aaron Burstein 726  
\*Mary Feeley 709  
Mary Williamson 695

### HIGH SINGLE

\*Mike Dent 247  
Dick Coughlan 230  
\*Linda Stickney 226  
Lorraine Reidinger 218

Wes Gleason 262  
Steve Jerdan 231  
Mary Vaughn 225

### HIGH SINGLE WITH HANDICAP

\*Dave Oliver 273  
Al Goldstein 268  
Vicky Schwartz 266

\*Aaron Burstein 291  
Tony Wolk 274  
\*Mary Feeley 266  
Eileen Bradley 265

### MOST IMPROVED AVERAGE

Bob Connison +11  
Vicky Schwartz +14  
Ed Beach +12  
Steve Jerdan +12  
Janice Hinchliffe +9

### SPECIAL RECOGNITION AWARD

Jim Campana 276





# Reflector

In This Issue:

- CNO speaks
- Ph. D. Fellowship awarded
- Barnaby Award
- Women's Equality Day set
- In the tank with Navy Relief

Volume 34 Number 7

NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA.

July 1989

## High tech developments pay off

# Scotese takes Navy development award

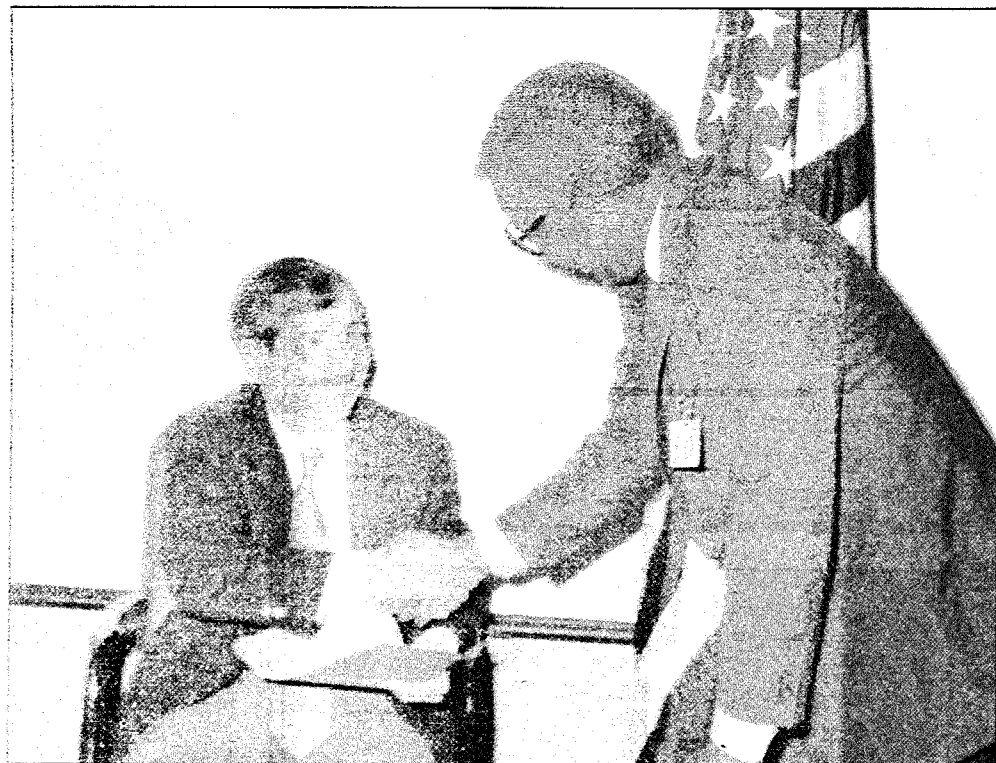


Photo by NADC Photo Lab

Arthur Scotese (seated), winner of the Navy's best development paper award, receives congratulations and a \$5000 check from Technical Director Guy Dillworth.

By Mary Ann Brett

Arthur Scotese of the Aero Structures Division, has been selected by the Office of Naval Technology (ONT) for their Navy-wide Independent Exploratory Development Paper Award. Scotese authored the winning paper which describes the Shadow Moire Out-of-Plane Interferometric Damage Detector or

"SMOOPI." This award meant an additional \$50,000 toward the Center's technology base budget and \$5000 for Scotese.

Leading a small team of NADC scientists and engineers, Scotese developed SMOOPI which is a low cost, lightweight device for field inspection of impact damage and resulting flaws in aluminium honeycomb sandwich and laminated

continued on page 7

## Patent royalties paid to Scott and NADC

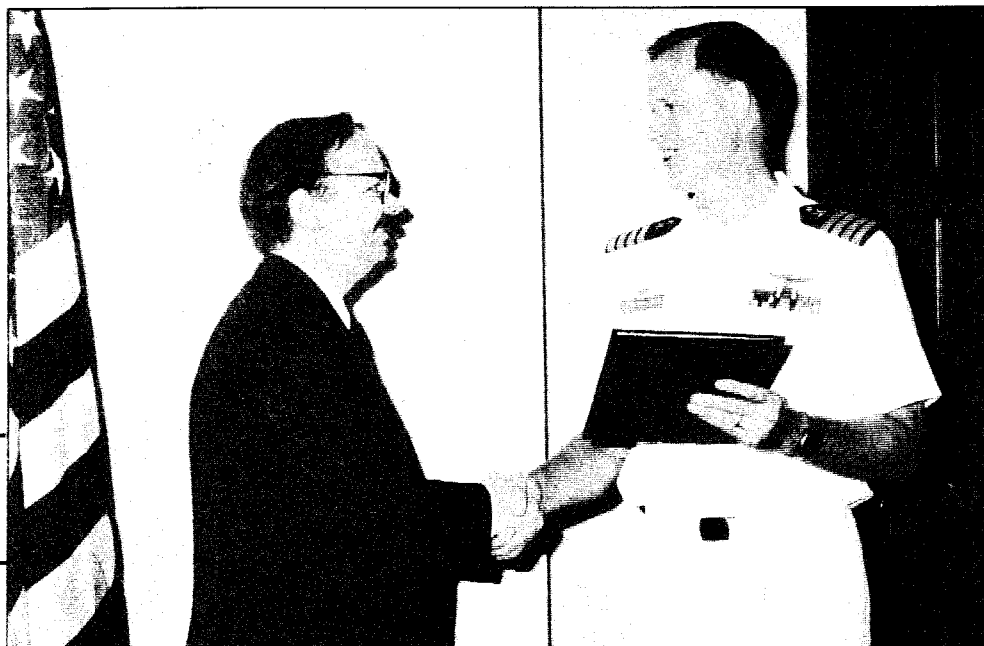


Photo by NADC Photo Lab

William Scott (left), first NADC engineer to receive invention royalties, is congratulated by Center Commander Curtis Winters. (See story on page 7.)

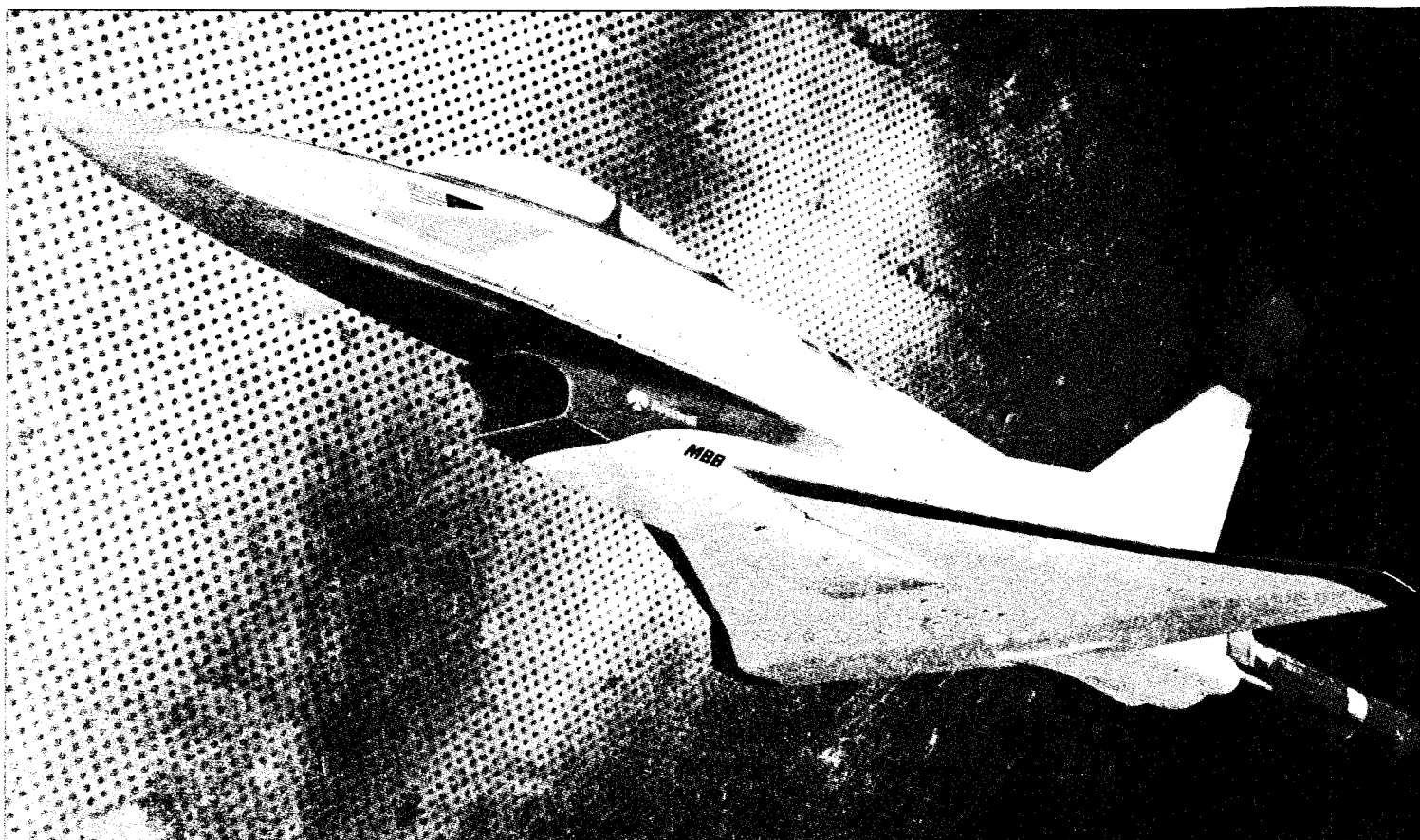
## Center involved in X-31 development

By Larry Lehman

Aircraft for the 21st century will need a tactical advantage for close-in combat in the growing threat environment. This is especially true in the NATO environment where the number of aircraft is limited compared to the potential adversaries.

Responding to this need, the X-31 experimental aircraft program is a joint Defense Advanced Research Projects Agency Navy effort. The vehicle will demonstrate maneuverability in the post-stall regime using thrust vectoring to enable the aircraft to perform close-in combat

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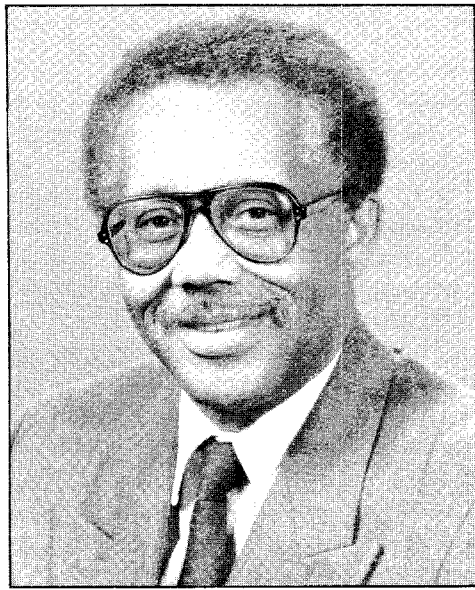


X-31 experimental aircraft

## Command Corner



**Captain Curtis J. Winters**  
Center Commander



**Guy C. Dilworth, Jr.**  
Technical Director

## CNO stresses War College attendance

A recent Chief of Naval Operations Service College Education policy statement urged "officers whose assignments do not permit in-resident education, to avail themselves of the education offered by the Naval War College, College of Continuing Education." The policy statement goes on to say "enrollment in these courses is an important and career enhancing professional undertaking and it should be recognized as such by commanders and commanding officers."

The Naval War College has offered continuing education courses through correspondence since 1914 and through nonresident seminars since 1974. The nonresident seminar program has recently expanded to cover 14 geographic sites around the country including the Warminster

area. Open to officers in grades O-3 and above and civilian employees of the government GS-11 and senior, this graduate-level education program offers the same three courses (i.e. Strategy and Policy, National Security Decision Making, and Joint Maritime Operations) taught at Newport. Completion of the three core courses leads to a Naval War college Command and Staff level diploma. Enrollment for the coming academic year, which begins during the week of 4 September, has already started and will continue through July. For further information contact, John Markow (Code 032) extension 1026 or the Naval War College, College of Continuing Education at Autovon 948-2135 or Commercial (401) 841-2135.

## Commander Salutes

Moise Devillier (Code 20), Frank Scheetz, Joseph Paone, Kathleen O'Brien, Edward Lesoravage, Albert Knobloch, James Driscoll, Donald Davis, Mary Calci, Remo Buono, Donald Booz, Ronald Beliveau, Vincent Sieracki, Barbara Walker (Code 30), Robert Lehman (Code 10), Dr. Donald McErlean, John Olson, Joseph Notaro, Robert Palmer, John Parker III, Alfred Piranian, Albert Simkins, Michael Strizak, Ronald Trabocco, Frank Wenograd, Edward White, Peter Yost, Douglas Bagwell, Edwin McGlynn, James McNamara, Thomas Milhouse, Kenneth Miller, James Brindle, Stanley Brown, Michael Caddy, John Clark, R. Bradley Cope, Richard Dalrymple, Shawn Donley, Dr. Thomas Donnellan, Garry Gross, Charles Hegedus, Marshall Hynes, Mark Katzeff, Mark Libeskind (Code 60), Charles Cerquitella, William Mulley (Code 70), William Gibbons, Gordon Heal, Christine Healy, Jack Jankovitz, Leon Smith (Code 40), Margaret Tomlinson (Code 02): For outstanding support to the Naval Air Systems Command and the A-12 program.

Edward Kenkelen, Vincent Sieracki, Albert Knobloch, Carol Newman, Eugenia Boyes, Edward Lesoravage, Aaron Burstein (Code 30), Thomas Brennan, Robert Skalamera, Moise Devillier, W. Herbert Heffner (Code 20), Mary Calci, Christine Zaccaria, Barbara Walker, (Code 04), Michael Hess, Gregory Catrambone, Edward Mebus, Francis Darreff, Elizabeth Decker (Code 50): For professional technical assistance in presenting Center capabilities during a visit from COMNAVAIRPAC.

Ira Bellew (Code 50), Lois Savage (Code 03), Edward Swiski, Robert Casagrand, Robert Clegg (Code 80),

Joan Fallon (Code 05): For time, energy and commitment to the Veteran's Committee which coordinated a successful Memorial Day Service.

John Shannon (Code 03): For briefing on the P-3 Update IV and LRACCA to the Naval Aviation Depot Executive Board.

Roseanne Petro (Code 20): For contributions as lead activity fiscal budget coordinator in support of the F-14 class Desk.

## If the SOC fits

By Robert Janes

Much of the Navy's Standards of Conduct (SOC) program focuses on contracts--how to utilize them properly and fairly. Indeed, the proper use of subcontracts is one of the big issues coming out of the Ill Wind procurement scandal, and is a subject that warrants a reminder here, for there have been instances where an NADC employee has been pressured, typically by a sponsor in Washington, to get some work into the hands of a particular firm by directing an NADC prime contractor to place a subcontract with that company.

In this regard, a recent memo from the Commander of the Space & Naval Warfare Systems Command (SPAWAR) is instructive. In a portion of that January 1989 memo, Admiral Weaver advises, "Our contract is with the prime contractor. It is his decision on how best to satisfy Command requirements within the scope of his contract. Apparently, on rare occasions, SPAWAR personnel have

identified an emergent requirement for support and have circumvented the procurement process by utilizing an existing prime contractor to acquire that support through a contract with a subcontractor of choice. At times it was also questionable whether such support was within the scope of the prime contract. This conduct is unacceptable. If the work is properly within the scope of the prime contract, it is sufficient to rely upon the prime contractor to perform that work in whatever fashion he chooses. If the work is not within the scope of the prime contract it should not be performed under that contract. If there is work that must be performed by a particular subcontractor, that effort must be highlighted as a directed subcontract at the time an RFP for the contract is issued. SPAWAR employees are not to otherwise influence, direct, or request prime contractors to enter into a subcontract with any business entity or individual."

## Letter to the Editor

Dear Editor:

On Friday 26 May I was on my way to the credit union. As I passed the cafeteria I saw a piece of scrap paper further down the hall. I started toward the piece of paper to pick it up. Mr. Dilworth came out of the door heading to the credit union lobby. He and I both reached for the scrap paper at the same time. He picked it up and asked me if I had intended to pick it up.

I think that this should be an inspiration to all of us that if the TD would stop to pick up some trash, that we all can. Not only that, it might help your waistline. The real change would be for people to take those few extra steps and put trash in a trash container, not on fire extinguishers, window ledges, etc. I don't know of many places on Center that you cannot see a trash can from where you are.

Name withheld

### — Ski for Ice Cream —

Come to the W & R ice cream sale on August 2nd to get details on the Ski Club and its trips. Free toppings for those who renew their memberships or join the club. Memberships are \$4 for NADC employees and family members.

### Planned your vacation yet?

To help with all of your personal travel arrangements, call SATO Travel, ext. 2729, Mon. thru Fri., 8 AM to 4 PM.



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July 1989

NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA

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Technical Director ..... Guy C. Dilworth, Jr.  
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Editor ..... Mary Ann Brett  
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# Gibbons takes NSAP position in Fleet



William Gibbons

By Robert Zaleski

William E. Gibbons, Head of the Communications Subsystems Integration Branch in the Communication Navigation Technology Department has been selected by the Navy Science Assistance Program (NSAP) to become the Science Advisor (SCIAD) to the Commander, Naval Air Pacific (COMNAVAIRPAC).

Chosen from a field of Navy-wide candidates from R&D laboratories and

centers, Gibbons will deploy to COMNAVAIRPAC, San Diego, CA mid-August for a one-year assignment with an option to extend for a second year.

As Science Advisor, Mr. Gibbons, who will receive a temporary promotion to GM-15, will serve directly on the staff of VADM John Fetterman. His primary duty is to make available to the Commander all the technical expertise resident in the Navy Laboratories to provide solutions to combat operational

problems.

The NASP Mission is threefold: to identify and resolve urgent technical problems affecting fleet operations and readiness, to establish direct lines of communication between the operational forces and Navy R&D communities, and to expose system development personnel to the operational environments.

Further information regarding the program is available by contacting Robert Zaleski, NADC NSAP Coordinator, extension 3104.

## Teti selected for 1st Ph.D. Fellowship

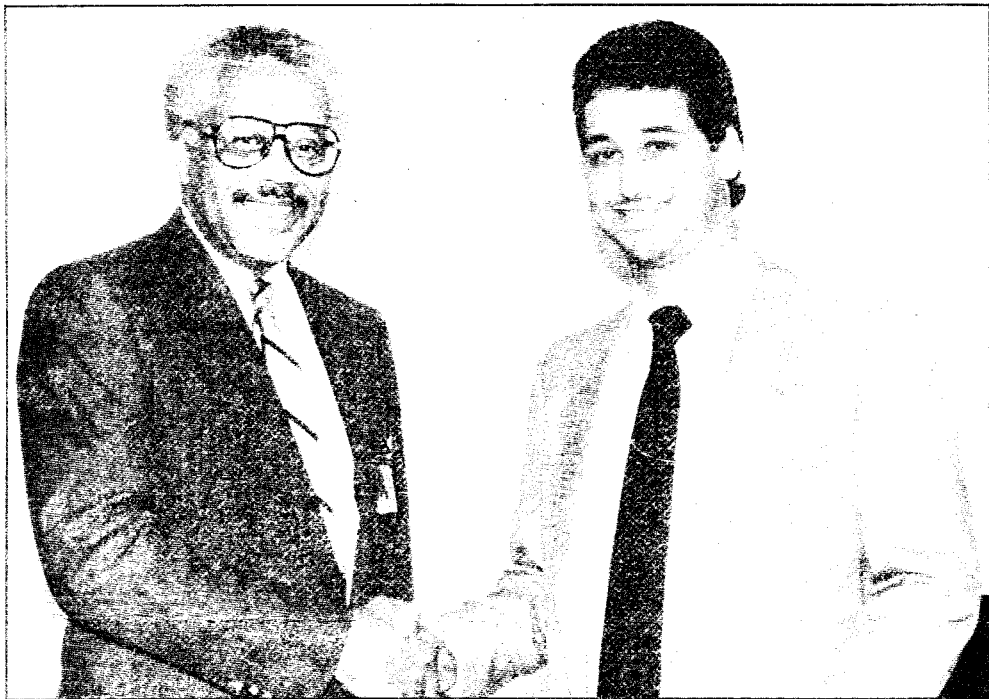


Photo by NADC Photo Lab

Technical Director Guy Dilworth congratulates Joseph Teti on his Ph.D. Fellowship

By Mary Ann Brett

Joseph G. Teti Jr. of the Microwave Technology Division is the first to participate in the Center's new Ph.D. Fellowship program. Teti, an electronics engineer, will be sponsored for up to two years at the University of Pennsylvania's Moore School of Electrical Engineering.

Hired in May '87, Teti is presently project engineer on the L-Band Devices project aimed at a next generation wide-band solid-state transmit receive module which utilizes state-of-the-art custom-developed microwave devices suitable for use in future surveillance radar and communication systems. He is also project engineer for an Independent Research project which developed an ocean surface model.

This model is used to investigate phenomenology associated with the backscatter of electromagnetic waves at radar frequencies and to interpret the effects of backscatter on Synthetic Aperture Radar image spectra.

Funded by the Technology Base Manager Dr. Arno Witt the new Ph.D. Fellowship Program provides an opportunity for competitively selected Center employees to obtain doctoral level academic knowledge in specialized critical areas of expertise. The selectees may be sponsored for up to two academic years of full-time Ph.D. level training and would receive full salary and related authorized academic expenses minus book expenses.

For additional information on this program contact Edward Calvello, Code 032, on extension 1020.

## Brennan named Barnaby Award recipient

By Mary Ann Brett

Thomas J. Brennan, Head of the Tactical Air (TACAIR) Systems Department was named recipient of the 14th annual Ralph S. Barnaby Award by the Center's Naval Civilian Managers Association (NCMA).

Named for the Center's first Commander, CAPT Ralph S. Barnaby, this award was established in 1975 to formally recognize outstanding contributions and distinguished service by an individual to the Center and the Navy at large. The award stresses the administrative and managerial aspects of the contribution.

According to David DeSimone, NCMA President, Brennan was credited with forging a strong set of programs with full Center involvement in both systems and technology. In two years, the department realized a surge of new and significantly growing programs including Morning After, A-12, the Naval Advanced Tactical Fighter and Unmanned Air Vehicles. He described Brennan's career as characterized by "involved leadership" of such diverse Center projects and organizations as VSTOL, the office of the Associate Technical Director, and the Sensors and Avionics Technology Department.

### And the Nominees Are . . .

There are nearly one hundred honorary awards available throughout each year for which NADC's outstanding employees might qualify. However, unless deserving individuals are nominated, these awards will surely elude us. The nominations themselves are a way to recognize dedicated and diligent employees. Those awards accepting nominations through Sep 1, 1989 are:

- PMRS Performance Award (Cash)
- Excaliber Award (Honorary)

- Secretary of Defense Productivity Excellence Award (Honorary)
- Secretary of Defense Letter of Commendation (Honorary)
- Presidential Management Improvement Award (Honorary)
- Department of the Navy Procurements Competition Award (Honorary)

For specific information about these and any awards, contact Bettie Simpson-Lawrence, Code 031, extension 3079.



Photo by NADC Photo Lab

Mrs. Patricia Brennan accepts the Barnaby Award (for husband Tom Brennan) from Center Commander Curtis J. Winters during a special luncheon ceremony at the Center.

## Combined Federal Campaign tops \$100k goal



Photo by NADC Photo Lab

Al Kaniss, Chairman of this year's Combined Federal Campaign for federal agencies in Bucks County, is congratulated by Center Commander CAPT Curtis Winters for conducting a successful campaign which resulted in a \$126,684.47 contribution. More than \$110,200 was collected from NADC employees. The 43 United Way Agencies on the official list serving Bucks County will receive \$14,328.50.

## Center involved in X-31 development

continued from page 1

maneuvers quicker than any existing conventional aircraft.

NADC is playing a major role in the X-31's development aspects including the vehicle and systems as well as the pilot interface. The Center is also supporting the Naval Air Systems Command in a planning process for potential new technologies where the X-31 can serve as a future test bed for evaluation.

Experimental aircraft are significant to the Center's technology research because they will demonstrate aerodynamic and flying qualities as well as pilot interface technology that has never been demonstrated on conventional aircraft. This new technology may lead to new and better ways of building and flying next generation aircraft for the Navy.

Two aircraft are currently being developed jointly by Rockwell in the United States and MBB in Germany. The first is expected to be ready for flight test by the end of this calendar year.

The X-31 program is significant because of the technology potential for new flying qualities and pilot research initiatives. With the limited new efforts for experimental aircraft research, the X-31 offers a major opportunity to demonstrate new technology for what to date has been analytical in nature.

The Naval Air Development Center is the lead laboratory for providing skilled personnel in supporting NAVAIR for the experimental aircraft development. After completion of the flight test program in 1992, the X-31 may continue to be used to demonstrate future technology enhancements for advanced fighter aircraft. This program is proving to be an exciting new technology program for both the Navy and NADC.

NADC also coordinates major project efforts for aircraft systems requiring application of multiple target disciplines. It also supports several new aircraft systems including P-7A, T-45, NATF, V/STOL, HALE as well as the X-31 Enhanced Fighter Maneuverability Aircraft.

## EEO is for everyone

# How to stop sexual harassment

### From the EEO Office

It is NADC policy that all employees work in an environment free from sexual harassment. Although sexual harassment is often considered a women's issue, both men and women may be victimized. Our policy applies to any situation which may be construed as work related, including travel and the actions of contractors. Center employees who violate this policy are subject to disciplinary action. Sexual harassment is defined as: 1) influencing or threatening the career, pay or job of another person in exchange for sexual favors; or 2) deliberate or repeated offensive

comments, gestures or physical contact of a sexual nature in a work or work related environment which are considered intimidating or hostile.

The most obvious forms of sexual harassment include: touching, grabbing, pinching, making gestures of a sexual nature, and displaying pictures, magazines, books or other material with sexual overtones. The most aggressive form is basing employment decisions on sexual behavior.

In the event you are sexually harassed, there are several steps you should pursue. These include: 1) Make it clear to the offender that his/her comments or gestures are unwelcome. DO NOT IGNORE THE PROBLEM. Inaction usually makes the situation

worse. 2) Make a record of pertinent facts including the date, time, place, circumstances and any witnesses to the event. 3) Report the incident immediately, either to your direct supervisor, or if this is not possible, to Kathleen Gause, Deputy EEO Officer, Robin Halperin, Federal Women's Program Manager on extension 3061,

or to any EEO Counselor (pictures are posted on all official bulletin boards).

Remember, sexual harassment is not a personal problem. It is an issue of power and it decreases productivity and morale. It is up to each Center employee to ensure that our work environment is free from sexual harassment.

## Women's Equality Day set

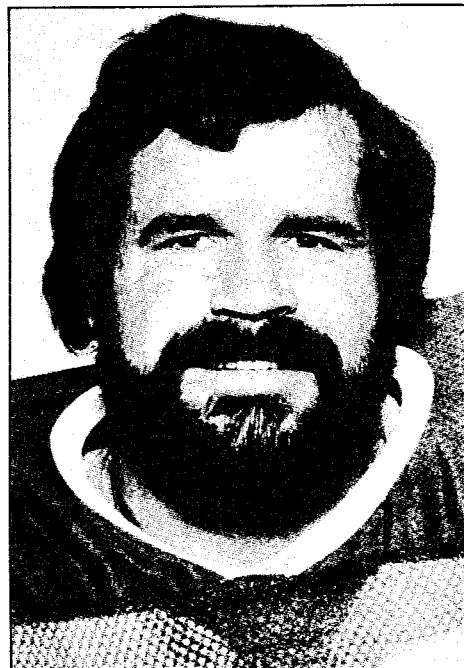
### Bergey to speak on motivation and team spirit

By Robin Halperin

Women's Equality Day is observed each year to remind each of us how far women have come in the work force. This year The Naval Air Development Center is celebrating Women's Equality Day on Tuesday, 29 August 1989 with a luncheon at the Blair Mill Inn. At that time the Federal Women's Program will present its First Annual Award for Excellence (formerly Woman of the Year). This award will be given to the person who best exemplifies the spirit of helping others as well as the desire for self-development.

The Keynote Speaker will be Bill Bergey, former Philadelphia Eagles linebacker, who will address "Motivation and Team Spirit." Bergey was a three-time selection as the Eagles most valuable player and a four-time Pro-Bowl Choice. Since his retirement in 1982, Bergey has appeared in numerous television and radio commercials and has toured as a guest lecturer.

There will be a notice in the LOG when tickets are available.



Bill Bergey

## Plan Your Getaway!

U.S. Savings Bonds are a great way to save for a vacation getaway. Regularly... and they are safe, have guaranteed minimum rates and tax benefits.

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# Navy Relief makes a splash at NADC



Captain Bill Moroney did his "creature from the black lagoon" imitation.

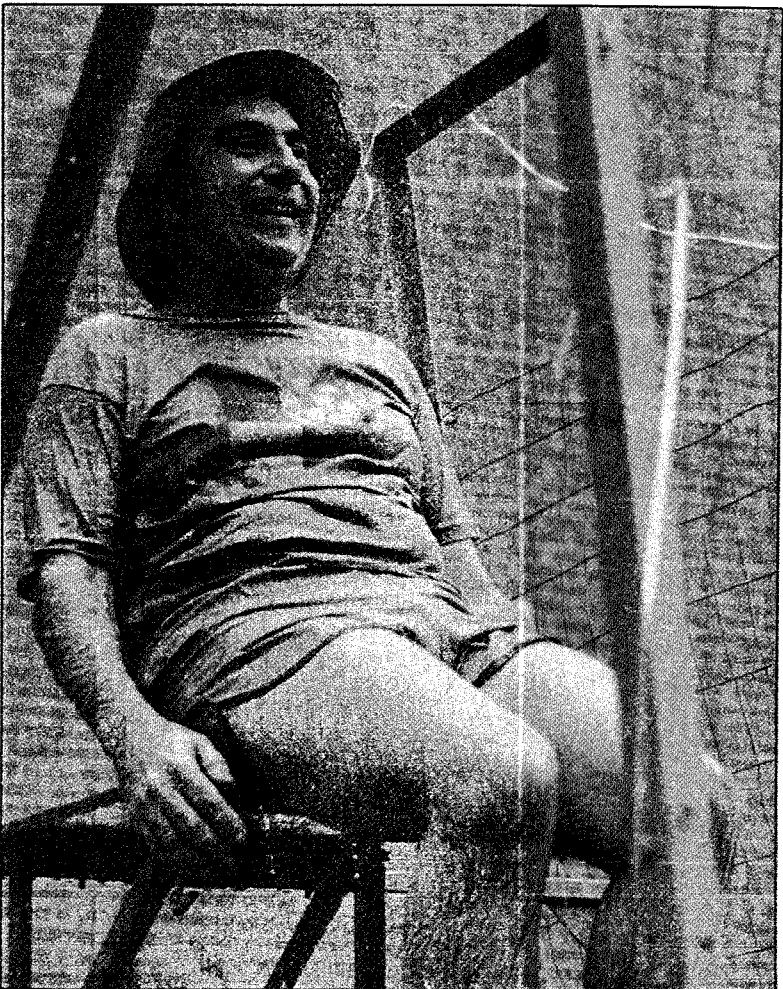


"Gentleman" Tom Brennan is always well dressed for any occasion -- even a dunking.

We call them DUN-KEES because they're all wet -- literally. They chose to tarnish their proper executive images in the interest of supporting Navy Relief. What's more, judging from the photos here, they enjoyed every minute of it. Others got some sadistic satisfaction from dunking their favorite (or not so favorite) department head or Navy Captain.



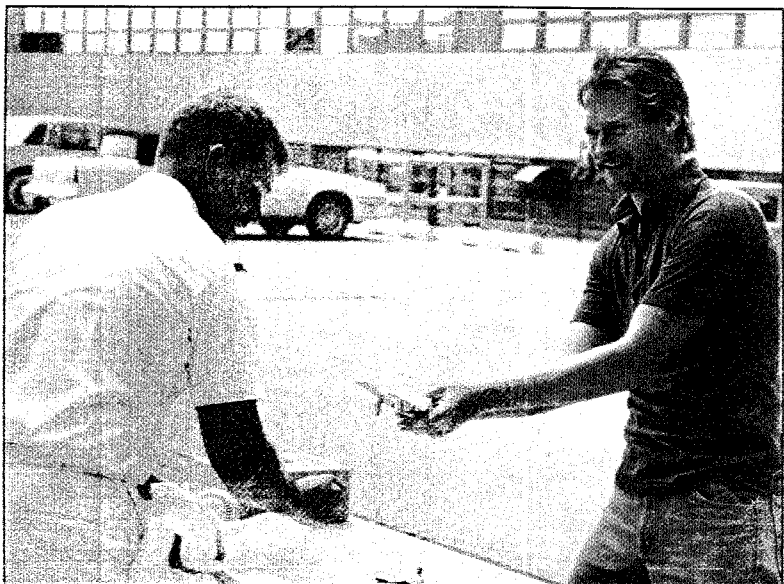
Then...Brennan gets a chance to get even.



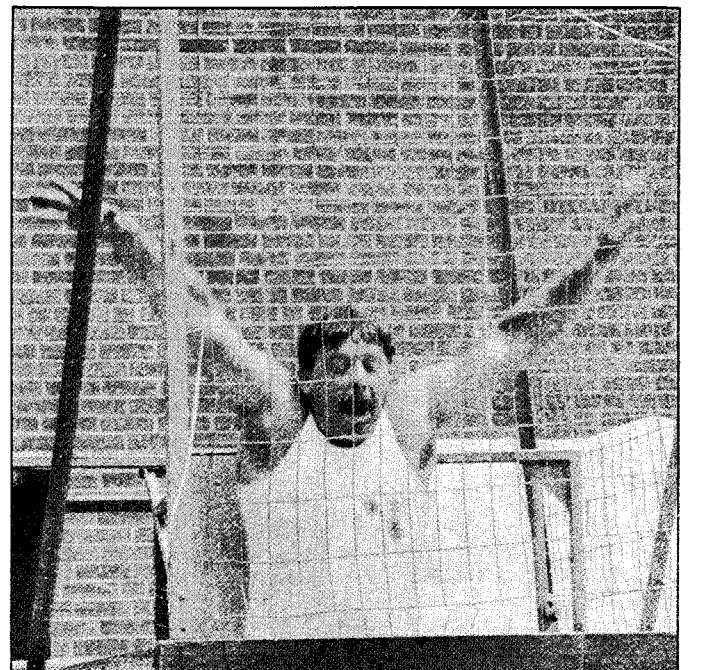
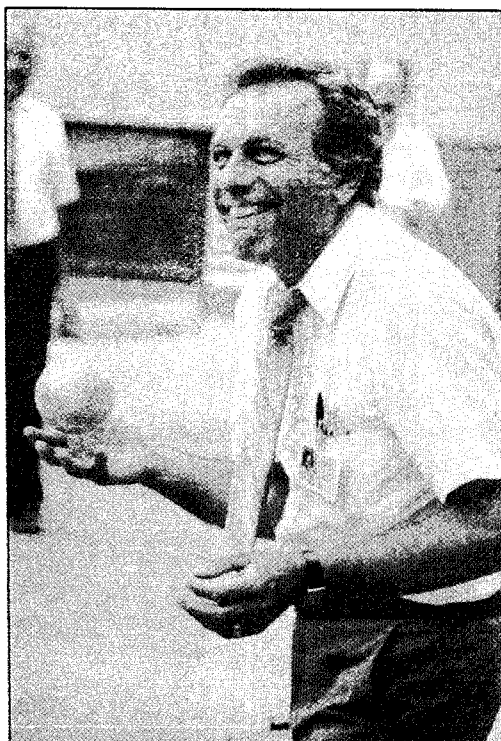
Dr. Don McErlean keeps his hat on tight but still got wet.



Center Commander, Captain Curtis Winters, rises grinning from the deep.



On the other side of the fence, Center personnel supported Navy Relief with varying degrees of enthusiasm.



Fire Chief, Don Meadows takes an Olympic pose as he heads for the water.



# Give a little; get a lot

By Christina T. Miksis

You could be part of a special program by giving a little of yourself. A little bit of your time means so much to a special child. During the summer of 1989, the EEO Public Relations Subcommittee is sponsoring the coordination, solicitation, and indoctrination of volunteers to help support the Handicap Program at the McDonald School. When available, starting in September and running for the entire school year ending in June, volunteers would donate their lunch/leave time to take handicapped children/young adults for walks, play games and/or read to them.

Bucks County is considered a leader

in the area of special education. When a special education program is needed, the local school district is obligated to provide a program to meet the child's needs. If for some reason, the local school district cannot provide this service, the Bucks County Intermediate Unit Special Education Directors establish a program.

In Bucks County, a special education program has been established at the McDonald School. A professional staff of administrators, supervisors, teachers, aides, and support personnel carefully adapt the learning environment, instructional materials, and strategies to meet the diverse needs of the child.

There are many programs that

make these services possible. For example, a Trainable Mentally Retarded Program helps the student gain as much practical skill as their limit potential permits. A Physically Handicapped Program facilitates a child's entry into community life. The Severely and Profoundly Handicapped Program is geared to increase functional independence for a child. The Social and Emotional Development Program allows the students to receive credit toward graduation as approved by the local school district.

Consider lending a hand, it will not only mean so much to a child, but will allow you to feel good about yourself as well. For additional information call the EEO office on extension 3061.

## How to read electric and gas meters

By Michael Blank, P.E.

### Electrical Meter

It is a good idea to keep a monthly record of the electrical and natural gas service that you use in your home.

Electrical meters may have either four or five dials. In any event, four and five dial meters are read the same way, from right to left. According to the Philadelphia Electric Company "Read it Right" is a good way to remember this.

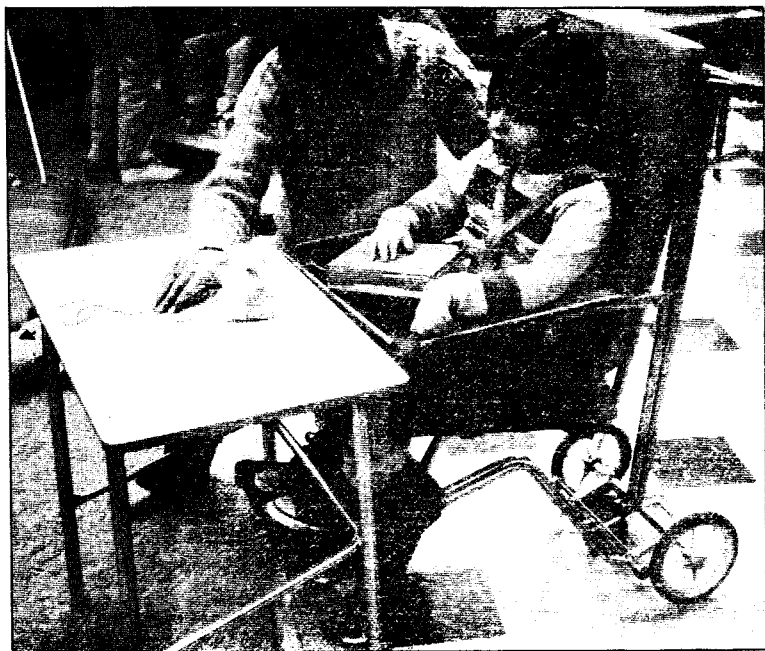
Electric meters are like big wrist watches. They either come with dials or digital readouts, and you read the sequence like any number. The illustration below shows five meter dials. Please note that the pointer on each dial turns in a different direction, clockwise and counter clockwise.

To read the meter, write down the number the pointer has just passed. Always use the smaller number even when it's exactly between the two numbers. (Between 9 and 0, the smaller number is 9.)

In the example, the meter reading this month is 64875 kwh. To check your energy use during a month's time, simply subtract last month's reading (64345 kwh) from this month's then you have used 530 kwh.

### Gas Meters

The pointer system works the same as on electric meters except that gas is measured in cubic feet instead of kilowatt-hours. Most meters are calibrated in hundreds of cubic feet, so each digit on the righthand meters represents 100 units. A reading of 650 on a three-dial meter means you've used 65,000 cubic feet of gas. If next month's reading is 658, then the difference is 8. You've used 800 cubic feet of gas during the month.



Teacher working with student instructing him to use panel switch to activate robot



Child in Sidelyer (for positioning) using large joystick to activate battery operated toy

## Commander Salutes

Rosa Cerankowski (Code 80): For contributions to the Hispanic Employment Council and IMAGE of Philadelphia.

AXAA James Taylor, AZAN John LeFurge, AT3 Derek Horne, AT2 Bradley Levault, AT3 Matthew Edgin, YN3 Anthony Fletcher, AD2 Joseph Zarzaca, AMH2 Gary Poulin, AD2 Howard Kritzberger, AME2 David Blood, PR2 Mark Spencer, AO2 Robert Hines, AO2 Todd Meguet, AO1 William Maynor, AO1 Paul Fries, AOC Julian Boddie, Lois Savage (Code 03): For participation in the Memorial Day Service dedicating the Naval Air Development Center courtyard area to all of the Center's veterans and military personnel.

Robert Lutz, Jerome McGlynn (Code 20): For invaluable engineering professionalism in support of the Phoenix missile and the AIM-54C Upgrades Programs.

Ferdinand Reetz (Code 20): For invaluable leadership in organizing an excellent functional team ready to meet the Reconnaissance Program needs.

William Halpern (Code 03): For the presentation-demonstration on POWER at the Second Annual Navy Scientific and Technical Information Program of April '89.

## NADC firefighters save a life

By JO2 Michael Delledonne

Firefighter James Bassler and Emergency Medical Technician (EMT) Chuck Steinbach of the NADC Fire Department recently teamed up to help save a 74 year old man having a heart attack.

"We had a second alarm assignment to assist in the evacuation at the Centennial Springs Nursing Home," said Bassler. "While I was hooking up a supply line, I glanced over and saw an elderly man go down to the ground. I knew by the way he fell that he was in definite trouble. I told Chuck and he went right over to assist him."

After seeing the victim, Steinbach knew it was a heart attack. "He was unresponsive and had no pulse," he said. "After opening the victims airway, another EMT from a local squad and I proceeded to give Cardio Pulmonary Resuscitation (CPR). We had to bring him back twice before the paramedics arrived."

Fire Chief Don Meadows praised the two men for going beyond the call of

duty. "Their main function was to fight a fire and help evacuate the nursing home. While doing this they were observant enough to save this man's life who wasn't even in the immediate area. They were

outstanding."

"This was a witness arrest or we saw it happen," said Steinbach. "His chances were better because of that. I've had three saves using CPR and it sure beats losing a life."



Photo by NADC Photo Lab

Chuck Steinbach and James Bassler at the NADC Crash House.



# Scotese takes Navy award

continued from page 1

composite materials used in naval aircraft. These inspections assure the composite structures provide the same level of structural reliability as comparable metal structures. The detector consists of a lightweight battery power source, a 4-inch x 5-inch moire' screen and a pistol grip and is capable of detecting surface anomalies of .0001 inch. It has several advantages over existing inspection techniques. It is a fast, simple, accurate, portable, inexpensive device that can be used in the field by personnel with minimal training and eliminates the tedious scanning procedures required to inspect large structures.

A variety of methods, including ultrasonics and x-rays, already exist to detect internal damage; however, these methods tend to be laborious and unreliable in the field where the results are affected by temperature, humidity and vibration.

Scotese explained that SMOOPI

works on the interference fringes created by superposition of two grids (a master grid and a specimen grid) or the shadow moire' technique. "Moire' is the term used to describe a wavy pattern," he stated. These shadows are distorted by the out-of-plane elevation or depth of the surface. When viewed with SMOOPI, moire' fringes are created which represent the topology of the specimen's surface (similar to a contour map). A damaged area can be quickly identified; then ultrasonics can be used at selected locations to further define the nature of the damage. The SMOOPI device is also able to identify minute blisters in anti-corrosion paint.

SMOOPI has been demonstrated at several Naval Air Depots and the Naval Air Systems Command and has received consistent favorable responses. A patent application has been filed and an exclusive license for the commercial development of the device is being negotiated.

## Technical Highlights

### Mission Reconstruction Capability for SH-26 and SH-3H

The Mission Data Playback System (MDPS), developed by the NADC to provide a mission reconstruction capability for the SH-60F (CV-Helo), has been so well received by Fleet personnel that its application has been extended to include the SH-26 and SH-3H. June NAVAIR issued an Airtask and funding to the Center to start the MDPS for the SH-26 and SH-3H.

### Navy Acceptance of CV-Helo HSIF

A CV-Helo Hardware Software Integration Facility (HSIF) was accepted by the Navy and provided to the prime contractor, Sikorsky, NADC, as the lead field activity for NAVAIR, was responsible for establishing the technical criteria for acceptance of the HSIF, performing the acceptance testing and generating for the final report.

### Cockpit Automation Technology

NADC is designated Beta Site for the Cockpit Automation Technology (CAT) Tools developed under the Air Force's CAT program. This Beta Site responsibility was initiated in support of the Navy's advanced Technology Crew Station (ATCS) Program, and is being conducted under a Joint Navy/Air Force Memorandum of Agreement. Currently, two of the seven CAT Tools are being installed in the Man-Machine Integration Facility for initial demonstration in August 1989. Formal evaluation of the CAT Tools will begin in September 1989. It is planned for the CAT Tools to support both the Navy's In-House ATCS efforts and current aircraft programs.

### Standard Targets Processor

The effort was kicked off to develop a standard digital avionics processor for aerial targets. It is a joint program with PMA-208 sponsorship. It is anticipated that the processor will be modular and have a "building block" concept to allow for more or less memory and/or throughput depending on the specific needs of the platform. Low cost and flexibility are the primary requirements drivers. This work is to be conducted in the planned Unmanned Vehicle Laboratory.

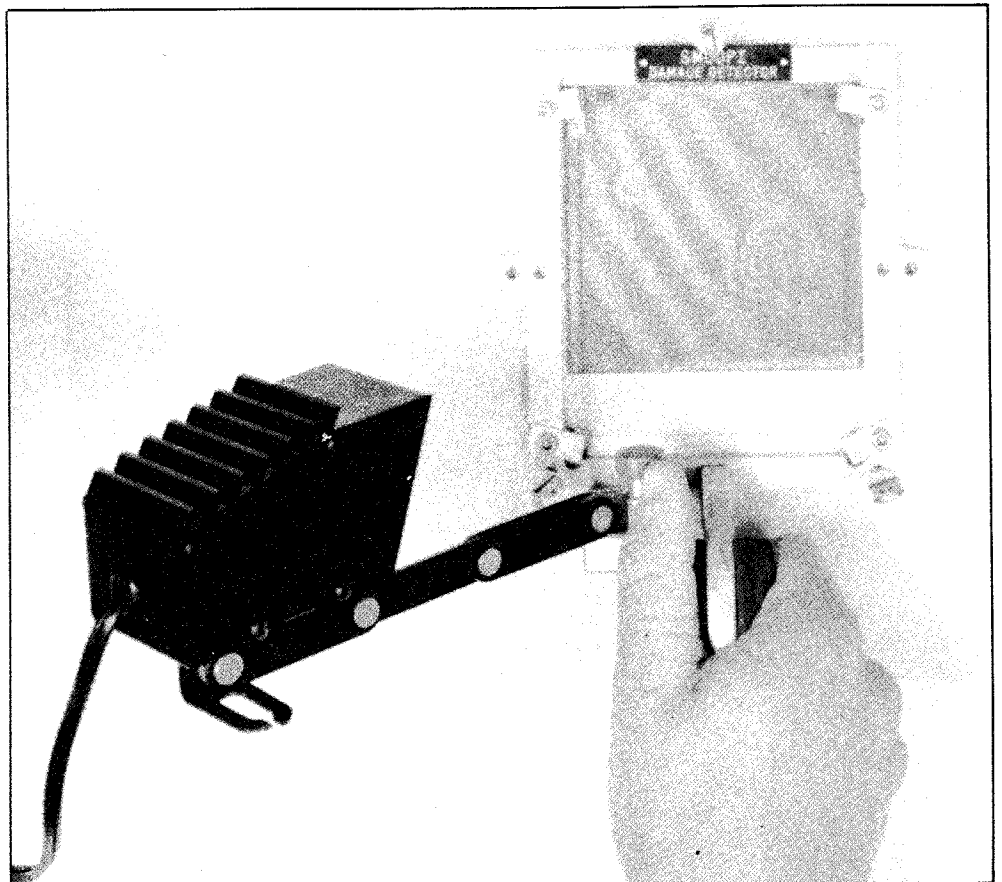
### Unmanned Air Vehicles (UAV) Program

We were designated Prospective Software Support Activity for the Mid Range UAV Program by AIR-546. This means that we are the Software Support Activity through Full Scale Development.

The Request For Proposal (RFP) for the Improved Multi-Mission Optronic Stabilized Payload was released on 26 May 1989. This is a joint Israel/U.S. (non-NATO) program to develop a standard optical payload for UAV's. We prepared all the technical portions of the RFP and anticipate leading the source selection at the Center beginning in mid-July.

### S-3B Software Successfully Completes TECHEVAL

The VS Branch (Fixed Wing Carrier-Based ASW Branch) announced the successful completion of the TECHEVAL for the B4.2.1 software. This software represents the first product baseline update for the new S-3B aircraft. New sensors include the APS-137 ISAR Radar, the UYS-1/OL-320/ARS-2/ARR-7B/AQH-7 acoustic suite, and the ALR-76/ESM system. Additionally, Harpoon capability and ALE-39 Electronic Countermeasures have been added. The Operational and System Test Programs have undergone rigorous Navy testing. OPEVAL is scheduled to start in July.



The Shadow Moire Out-of-Plane Interferometric (SMOOPI) damage detector.

### A first at NADC

## Patent royalties paid to Scott and NADC

By Mary Ann Brett

William Scott of the Aerospace Materials Division is the first at NADC to receive royalties as the result of the sale of his patent on a piezopolymer sensor.

Until the 1986 Federal Technology Transfer Act, royalties on government inventions were paid to the U.S. Treasury. Now, in most cases, the inventor will receive 20% of those royalties and the Center will receive 80%. Scott will receive \$5,000 over the next five years. This patent is the second of two resulting from a Center IR program. The purpose of which was to develop small, light weight, high frequency transducers for application to inspection of critical structural materials on Navy Aircraft.

According to Jerry Bortman, NADC's Technology Transfer Manager, "We see this as a beginning . . . we hope that our inventors will be more concerned with filing patents for their inventions as well as with looking for applications of their developments in the private sector. He also explained that other government inventors are receiving as much as \$100,000 in royalties. At least two other NADC developments are looking forward to commercial licensing; — they are UNICOAT, a one coat primer and paint with corrosion inhibitors, and SMOOPI, the Shadow Moire Out-of-Plane Interferometric Damage Detector.

The sensors use a high strength plastic, known commercially as

KYNAR, which has the property that it produces electrical signals when subjected to strain vibration or changes in temperature. Pennwalt, the Corporation that purchased the patent, originally manufactured KYNAR as a weather resistant coating for the steel siding used on houses, but is now exploiting some of its interesting electronic applications including capacitors, sensors, microphones and loud speakers.

In June of this year, a more advanced piezopolymer sensor was tested. A sensor about the size of a large postage stamp was placed on an inaccessible area of the rotor grip on a V-22 Aircraft prior to structural testing. Using this device NADC specialists were able to monitor the integrity of the material in this critical component at various intervals during the test.

In recent years the Navy has also become interested in using piezopolymer technology in sonar systems for ASW applications and groups on the Center are now active in developing sonobuoys containing piezopolymer arrays.

Piezopolymer technology is an area where US and Japanese companies are in active competition and in which the US is now taking a lead. It is a goal of the new Navy technology transfer initiative to encourage such commercial competitiveness through sale of inventions and through cooperative R & D programs that are beneficial to both the Navy and the private sector.



# Softball standings take shape

Although the weather has extended the softball season, it has not stopped the truly talented teams from rising to the top. As expected, the Misfits and 8th Inning are starting to dominate the league, both with 9-1 records. The Intimidators, are following close behind with a 9-2 record. The Rebels and Bandits fill out the top five and the Granfalloon is still proving to be a force to be reckoned with in sixth place at 7-5.

The middle of the league is a log jam involving the Renegades, Herassers, Bearcats, Guzzlers, and Rumlbers. Only time will determine the final standings of these teams, one of which will probably not make the playoffs. It may come down to several tiebreakers. The Renegades have suffered mightily as a result of injuries and travel. Bill Brower, a big

stick, is out indefinitely due to injury and other key players have missed games due to official and unofficial travel. Coach Steve Spadafora hopes to have a solid lineup back before the playoffs start. With three tough games left, the Renegades had better regroup before the playoffs.

The lower echelon teams have managed to win a few since our last article. The Orange Crush were victorious against the Dynatigers and the Life Supporters, the Dynatigers won their first against the Life Supporters, the Life Supporters took out their frustrations on the Phantoms winning 18-1. The Phantoms now are the only team without a victory.

Surprising news from the Granfalloon. Coach Mike Bubb has accepted an invitation to pitch semi-pro ball in Toledo, Ohio and is

leaving the Center in mid-July. (Actually, Mike is changing jobs.) The league will miss this guy who has been an up-and-coming leader and also one of the league's best umpires.

The standings as of 7/7/89 are:

Misfits.....	9-1
8th Innings.....	9-1
Intimidators.....	9-2
Rebels.....	4-1
Bandits.....	6-2
Renegades.....	7-4
Granfalloon.....	7-5
Herassers.....	5-4
Guzzlers.....	5-6
Rumlbers.....	5-6
Orange Crush.....	2-7
Dynatigers.....	1-8
Life Supporters.....	1-13
Phantoms.....	0-11



# Earl places third in all Navy meet

By JO2 Michael A. Delledonne

Imagine firing a rifle to hit a four-inch bulls-eye . . . 500 yards away! That's just what NADC's LT Martin Earl had to do at the All Navy Shooting Championships. For 20 rounds his patience and steady hand were tested to the limit and he placed third out of 90 competitors to receive the Secretary of the Navy M-1 Garrard Trophy Rifle, and original M-1 Garrard.

"The competition included both surface rifles which have iron sights and scoped (telescopic sights) rifles," said Earl, who has been stationed at NADC for almost a year. "We were given 20 rounds to shoot a full score. I scored 99 on the first ten and 96 for the second. I was very pleased."

Not only did he shoot extremely well, but he did so under trying

circumstances. "The competition was held in Miramar, Ca., which is on the edge of the desert," noted Earl. "After three or four days on the practice range I began to get sun poisoning. I almost didn't even shoot at the competition, but I got a break when the weather turned overcast. It all worked out well."

At the awards ceremony, Earl, 34, who works in Vertical Flight, noticed he was eighth or ninth on the list.

"What I didn't realize was that all but two had shot with scoped rifles. When they called my name for third place I was overjoyed," he said.

Earl's next stop will be at the interservice championships in Quantico, Va., in July and the Nationals at Camp Perry, Oh., in August.

What is his secret to success? Earl smiled and said, "Never make the same mistake twice."



LT Martin Earl

# Colorado ski trip set


By Jim Macaulay

The 1990 ski trip is set for March 3-10 at Tulleride, Colorado. It's a restored Victorian mining town set in one of the prettiest valleys in southwest Colorado. The skiing provides outstanding terrain for all levels. SKI MAGAZINE calls "The Meadows" at Tulleride "the best beginner area in the country." Half of its 756 skiable areas are intermediate, and the expert runs are ranked third in the country. Thirty kilometers of groomed Nordic trails will delight cross country skiers, and powder hounds will want to sample the highest helicopter skiing in the U.S.

An innovation in ski trips is the four-day Colorado weekend. Favorable airfares to Denver make such trips very attractive. Our trip will be to Dillon, giving easy access to Keystone, Arapaho Basin, Breckenridge and Copper Mountain. Plan on spending Martin Luther King's Birthday savoring Colorado's famous powder.

A three-day weekend in New England will delight those who don't feel ready for the West. Bus trips like this have been the mainstay of the club and provide an inexpensive escape with only one day of leave.

Call Diane Heal, 441-7132 for more info.



## HEADS UP!

CYCLISTS TOO, MUST OBEY THE RULES OF THE ROAD:

- Obey all applicable traffic regulations, signs, signals and markings.
- Observe all local ordinances pertaining to bicycle operation.
- Keep right, drive with traffic, not against it. Drive single file.
- Watch out for drain gates, soft shoulders and other road surface hazards.
- Watch out for car door opening, or for cars pulling out into traffic.
- Don't carry passengers or packages that interfere with your vision or control.
- Never hitch a ride on a truck or other vehicle.
- Be extremely careful at all intersections, particularly when making a left turn.
- Use hand signals to indicate turning or stopping.
- Protect yourself at night with the required reflectors and lights.
- Drive a safe bike. Have it inspected to insure good mechanical condition.
- Drive your bike defensively, watch out for the other guy.

Ski club president Diane "Lady Di" Heal with Center Commander CAPT Curtis Winters and ski club officers: (skiing) Jim "Mad Dog" Macaulay, "Shy Donna" Morgan, "Uncle Roland" Bender, Charlie "Faultless" Falchetti, "Mean Marguerite" Hoefling, and "Gordo" Heal. (Not present: Larry Coar.)



Photo by NADC Photo Lab



**In This Issue:**

- Don't keep it to yourself
- College recruiters visit
- Sailor drags against drugs
- SoQ and BJQ named
- Navy Relief photos

# Second Tomcat stalks NADC

By Mary Ann Brett

A second F-14 "Tomcat" has arrived at NADC. Scheduled to remain at the Center for two years, this second Tomcat will be used as a testbed for NADC-developed near term projects such as, metal, paint and composites work and cockpit avionic displays.

The first F-14 to make its home at the Center, arrived in February of this year. It has been devoted, in large part, to long-term development programs including redesigning the cockpit crewstation lighting system to utilize a night vision goggle capability.

These aircraft will contribute to the Center remaining in the forefront of the tactical air warfare arena, continually improving aircraft such as the F-14.



Photo by NADC Photo Lab

A second F-14 "Tomcat" aircraft makes it's home at NADC. This aircraft will be used as a testbed for NADC developments.



Photo by NADC Photo Lab

## General in a spin at NADC

PR3 Mitchell assists BGEN Russell C. Davis, Commander of the District of Columbia Air National Guard in the Dynamic Flight Simulator gondola. General Davis is the first flag officer to undergo GTIP training.

## Center receives CNO aviation safety award



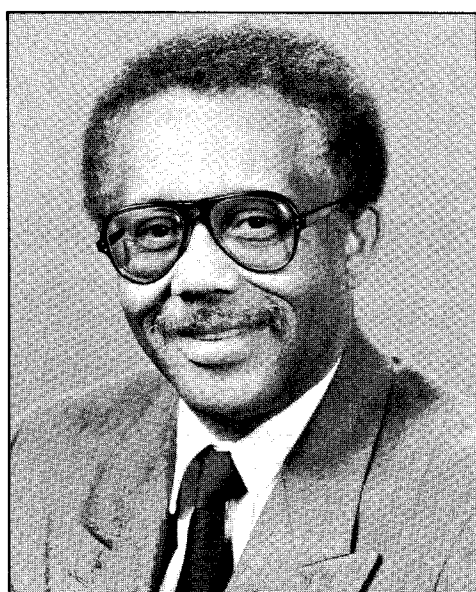
Photo by NADC Photo Lab

On behalf of the Commander Naval Air Systems Command (COMNAVAIRSYSCOM), the Chief of Naval Operations Safety Award was presented to the Center Commander CAPT Curtis J. Winters by LT Alan Byrd, the Center's Aviation Safety Officer. The aviation safety award is given each year for the best Navy safety record, and was awarded to the COMNAVAIRSYSCOM for having a 0% accident rate for 1988.

## Command Corner



**Captain Curtis J. Winters**  
Center Commander



**Guy C. Dilworth, Jr.**  
Technical Director

### —Dedicated to Quality—

Total Quality Management  
(TQM)  
At The Center

#### To: All hands

Our Nation competes daily in both the economic and the military arenas. Our future depends on the successes and failures of these daily contests.

Our Center has already contributed much to ensure that the Nation's interests are being met. However, the challenges grow and change daily, and we must change to meet those challenges. What is needed is a new frame of reference, a system that actively encourages continuous improvement at all levels of the Center. Our efforts should focus on processes as well as products and quality as well as productivity.

Although neither quality nor productivity is a new concept, the relationship between the two is being reexamined. The traditional view has been that productivity increased at the expense of quality—that to produce more or faster, something had to be sacrificed. The new view, held by very successful economic competitors, is that the initial effort should be to improve quality which will inevitably lead to increased productivity through improved processes and the elimination of waste. This new view is being referred to as Total Quality Management (TQM) in the Department of Defense.

We at the Center are already actively preparing for change. The TQM

Steering Group, 14 dedicated individuals from all levels, has been meeting weekly. The Center is an active participant in the DNL TQM Workshops. A reference library of TQM source materials is available. We have sent some individuals to exploratory training, and an expanded training program is scheduled to begin in October 1989. We anticipate initiating a series of Process Action Teams in the near future to define improvements to some of the areas which have evidenced chronic problems. The Center point of contact for TQM matters is Mr. Stuart Simon, extension 2237.

Through this rededication to quality by all of us, the Naval Air Development Center will be a world leader in our assigned mission areas.

*C. J. Winters*  
C. J. WINTERS  
Commander

*Guy C. Dilworth, Jr.*  
GUY C. DILWORTH  
Technical Director

## W&R goes to Winterthur

NADC Civilian W&R Trip — 10 November — Enjoy a guided tour of Winterthur Mansion/Museum home of the late Henry duPont; visit Longwood Gardens Chrysanthemum Festival and stroll the beautiful grounds and conservatories; relax over a delicious dinner at the lovely Longwood Inn. Leave NADC 9:00 A.M. — return 8:30 P.M. Cost: \$48.00 includes all admissions, transportation, dinner, taxes, tips. Call Margaret Vigelis, ext. 3067, for reservations/information.

## Commander Salutes

**Ellen Hayes, HMC Duane Murray, LT Brian Bennett** (Code 60): For time and effort devoted during 1988 as members of the Center's Advisory Committee for the Protection of Human Subjects.

**Gerald Mikliesh** (Code 20): For performance during initial evaluation of the Unmanned Air Vehicle-Short Range (UAV-SR) Source selection effort.

**Richard DeSipio** (Code 30): For efforts relative to Advanced Airborne Combat System (AACCS) and contributions to the Center's technical reputation.

**Kathleen Gause** (Code 03E): For contributions as a workshop leader for the Department of the Navy Worldwide Conference.

**Dr. Donald McErlean, Thomas Brennan** (Code 01), **CAPT Moroney, LCDR Eyraud** (Code 60), **CDR Vanderslice** (Code 80), **CDR Cudia** (Code 90), **ENS Baker, Nancy Rodriguez** (Code 04), **CDR Scott** (Code 20), **Carol Blizard** (Code 70), **CDR Dacey** (Code 30): For contribution as a "sitting duck" for dunk tank activities during 1989 Navy Relief Society Fund Drive.

**Don Meadows** (Code 90): For support as member of the Selection Review Panel for position of lead firefighter.

**Lee A. Biggs** (Code 60): For the many years of service given to our Cooperative Education Program.

**Charles Hegedus** (Code 60): For your outstanding presentation to the RAA/GAMA International Conference on Aging Commuter Aircraft.

**John Johns** (Code 60): For outstanding presentations given at the U.S. Naval Test Pilot School.

**Daniel Lorch** (Code 60): For attending the International Center for Safety Education's Class 89-1.

**Tom Popp, Ray Anderson, Lionel Finzei, William Schork, Ed Dessing, Dale Uyeda, Dan Wells, Dave Kolius** (Code 60): For assistance as an evaluator on the Unmanned Air Vehicle-Short Range source selection effort.

**James Dunn, Chris Guanda, Nelson Hall, Mike Rankin, Arthur Samouris, Marty Squiciarrini, Jack Eyth, Carl Pierce** (Code 50): For involvement in the Bucks County Science Seminar program.

**Kenneth Clark** (Code 60): For outstanding efforts to develop a comprehensive Tri-Service Corrosion Control Manual to Serve DoD activities.

continued on page 4

## If the SOC fits


By Robert Janes

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

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

1. Avoid any action, whether or not specifically prohibited, which might result in or reasonably be expected to create the appearance of:
  - Using public office for private gain,
  - Giving preferential treatment to any person or entity,

continued on Page 6



**NADC**

# Reflector

NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA

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Number 8  
August 1989

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<b>Public Affairs Officer</b> .....	<b>James S. Kingston</b>
<b>Editor</b> .....	<b>Mary Ann Brett</b>
<b>Assistant Editor</b> .....	<b>JO2 Michael DelleDonne</b>
<b>Assistant Editor</b> .....	<b>Margaret Vigelis</b>



# Don't keep it to yourself -SUGGEST-

By Mary Ann Brett

Have you ever thought "why am I doing this" or "there must be a better way" and have an idea how? Well, here's a way to submit your suggestions with a minimum of effort.

The Department of Defense Model Installation Program (MIP) and NADC's Productivity Enhancement through Quality Program (PEP) are two avenues to encourage innovation. The MIP addresses higher authority (outside NADC) instructions with an eye toward eliminating those roadblocks which hinder our performance. The PEP is geared toward

suggestions for in-house improvements.

According to Administrative Services Division's Tom Yeager, NADC's MIP coordinator and a member of the PEP committee, "Most people's gut reaction to the words 'productivity program' is an eventual cut in resources. While productivity improvements do tend to focus on doing more with less, there is now a new emphasis on the quality improvements." Yeager explained, "We're changing the focus of our program to doing things right the first time and needing less as a result."

Yeager and his team of facilitators

will be available to visit each department not only to solicit ideas but also to evaluate and actually help prepare the necessary paperwork. It couldn't be much easier. Also, according to Yeager, he and his team can act as a buffer for anyone who does not want to take credit for a particular suggestion.

You might not be able to fight City Hall, but the MIP and PEP are your chance to change the system, making it easier for all of us.

Remember, don't keep your ideas to yourself; call Tom Yeager on extension 1950 and tell him what you think.

## Small bond deductions end

American Forces Information Service

The payroll deduction program for \$50 or \$75 Series EE Savings Bonds has been scrapped for military and DoD civilian personnel. The Treasury Department stopped the practice, according to a spokesman, because people who buy bonds by allotment cash them in too early to make it cost effective. However, they can still purchase those denominations across the counter at banks.

"A study we've done shows that when the \$50 and \$75 bonds are purchased through a bank they are held long enough to make it cost-effective," said the spokesman. "Military people and DoD civilians have been able to purchase those denominations through payroll deduction two years longer than everybody else in the country; we stopped accepting allotments from the general population two years ago."

The Department of Defense was allowed more time to phase out its \$50 and \$75 savings bond allotment program because of the adverse impact an immediate elimination of the practice would have had on the military pay system.

"This only affects new allotments," said the spokesman. "Those who are now buying them through payroll deduction are 'grandfathered'—they can continue. But once they drop the allotment, they can't restart if for those denominations. They'll have to purchase the \$100 denominations—new allotments can't order \$50 or \$75 bonds."

Those currently subscribing for those bonds can also increase the number of bonds they purchase, but only in the same denomination they're now buying. For instance, if they are purchasing a \$50 bond, they can buy more of them, but they can't buy \$75 bonds, according to a DoD spokeswoman. All new subscribers

continued on page 6

## Minority college recruiters get first hand look at NADC

By Mary Ann Brett

The Center recently hosted its first college co-op recruiters' conference. Twenty-two recruiters representing 17 minority and local colleges, received a two-day comprehensive indoctrination coordinated by the Communications and Navigation Technology Department (CNTD). The goal of this

conference was to provide recruiters with first hand knowledge of Center operations and to bring quality engineers to NADC.

The visitors toured laboratory facilities and received presentations by each of the technical departments.

According to CNTD's Marge Steenhoff who was instrumental in planning the conference, the

recruiters were impressed by the diversity of work being conducted at the Center. They hoped they would be able to convey the information back to their students.

The learning wasn't all one-sided; lunches and a formal dinner provided an opportunity for the visitors to share ideas with Center personnel.

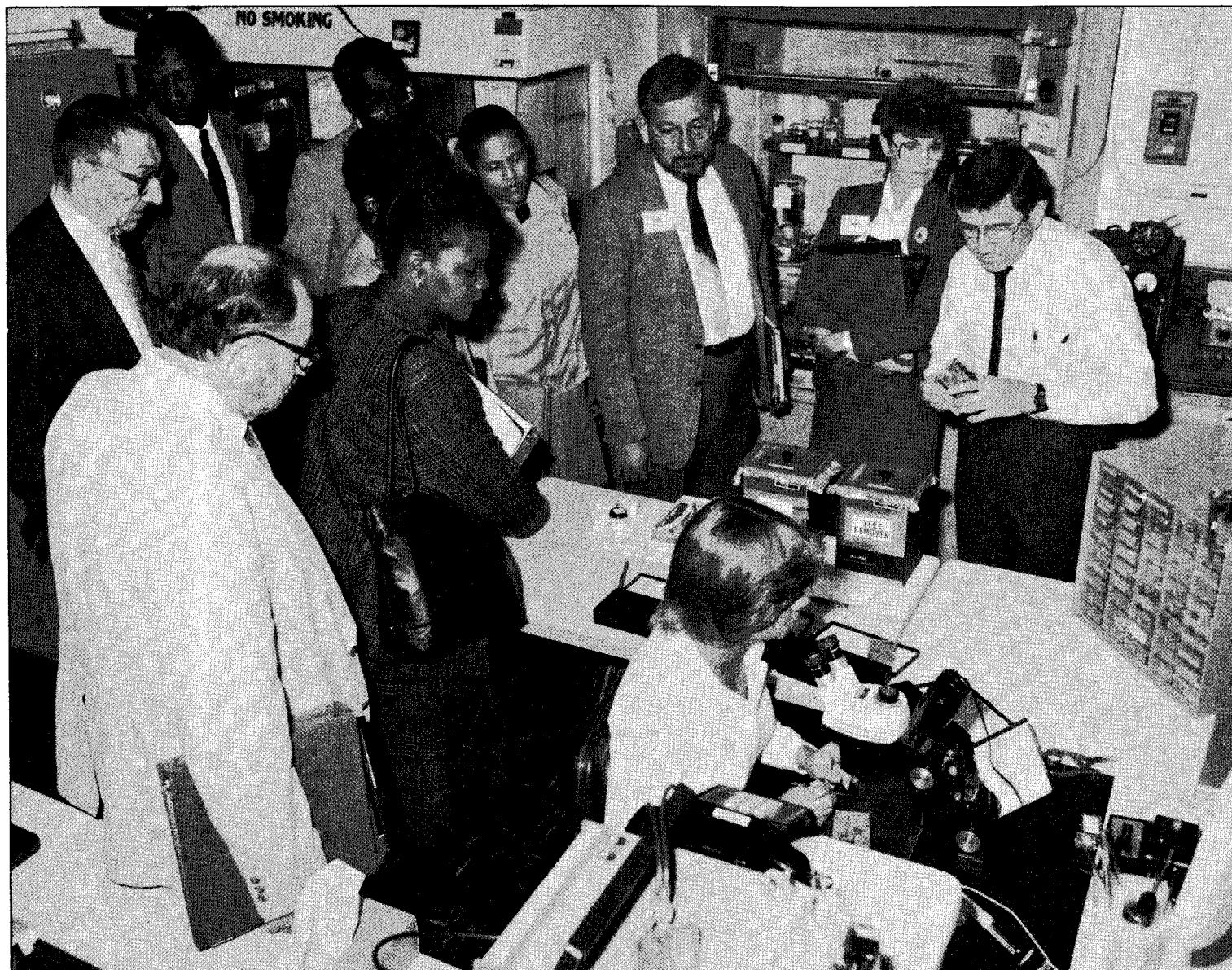
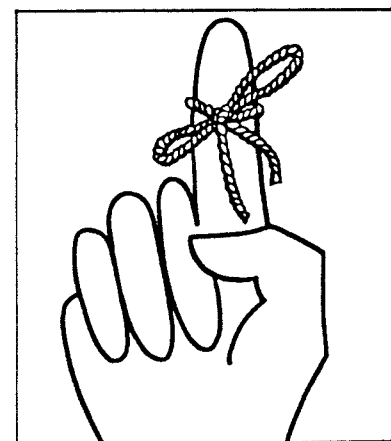


Photo by NADC Photo Lab

CNTD's Elliott Ressler (far right) describes ongoing work in the Center's Micro-electronics laboratory while Patricia Foley assembles components on a circuit board.

**Institute of Navigation Luncheon Meeting**  
 20 September 1989, NADC Dining Rm., 11:30  
**Speaker: Ronald Vaughn, Asst. Dir. of Planning, RDT&E Technology Assessment for the Chief of Naval Operations**  
**Subject: Navy in the 20th Century; Implications for Navigation**  
**POC: Cindy Kehrer, 674-8907**



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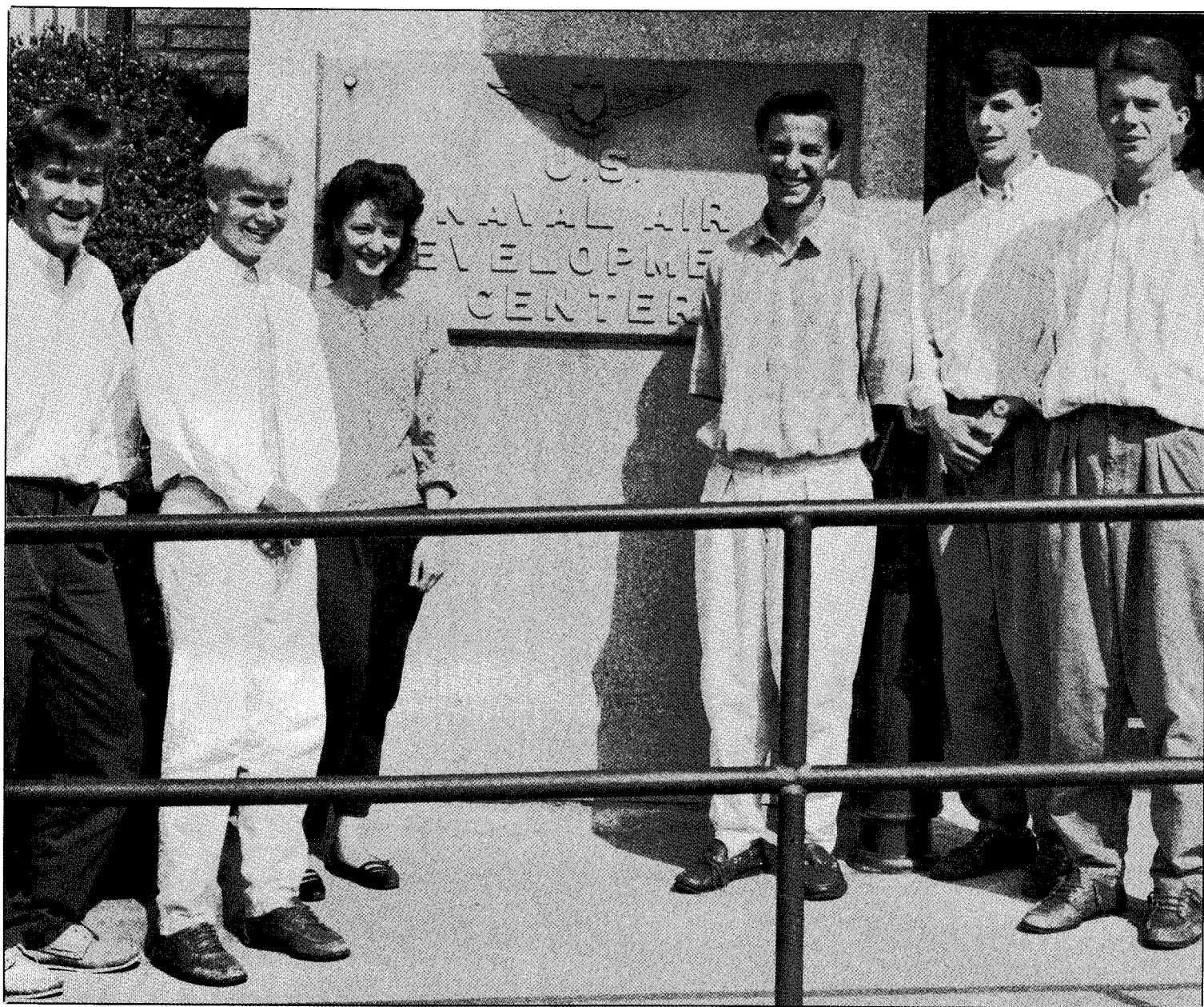
**U.S. SAVINGS BONDS**



# Future scientists apprentice at NADC

By Barbara Ward

Six students from local area high schools got an opportunity to work with the engineers and scientists at the Naval Air Development Center this summer. The students are participants in the Center's Scientific and Engineering Apprenticeship Program, which offers employment and an opportunity for hands-on technical experience in a research and development environment to local talented youth. The program allows for continued employment with progressively responsible assignments throughout the student's high school and college years. Announcements are sent to local high schools early each spring and nominations are made by the high school guidance counselors. Selections are made on the basis of academic achievements, content of the recommendations from high school counselors, and the student's expressed interest in a future career in engineering and science.



Future scientists break from duties. L to r: David Kaiser, Wayne Scarborough, Katherine Viglianesi, Andrew Lesher, Christopher Herstine and Kevin Quinn.

## Commander Salutes

**CDR Richard Cox (Code 90):** For leadership as the NAVAIRDEV-CEN Chairman of the 1989 Navy Relief Society Campaign.

**Margaret Clark, Carol Beckett (Code 30):** For significant support provided to DIAHQ-0193 during the past two years.

**Dr. Shih Huang, Joseph Minecci (Code 60):** For outstanding contributions made to the Composite Structures Workshop.

**Richard Imhof, James Brown, Bryan Rittenhouse, John Harris, Michael Warren, Thomas Polanesky (Code 50):** For technical support provided during the ALFS demonstration/test program.

## Security Reminder

**WATCHSTANDER** — The Security check should be made at the end of each work day is to ensure that:

a. classified material is properly stored, nothing adrift on desks, cabinets or mail bins,

b. all burn bags are stored or destroyed, and

c. security containers are locked. Standard Form 702 (Security Container Check Sheet) must be posted on all security containers and completed each working day.

**Donna Morgan (Code 50):** For participation in our Day Care Needs Assessment Survey.

**James Moore (Code 60):** For assistance to the Defense Advanced Research Projects Agency.

**Gloria Chisum, Samuel Delserrri, James Whinnery (Code 60):** For efforts to make Air Marshal Mills visit on Center informative and interesting.

**Dr. Vinod Agarwala (Code 60):** For development of the Barnacle Electrode.

**Dr. W. Roan, Dr. R. DeChico, Dr. J. Davis (Code 50); Dr. E. Lee, R. Sands, T. Donnellan, L. Gause, A. Scotese, Dr. J. Sheehy (Code 60):** For presentation and participation in the Second Annual IR/IED Symposium at the Naval Surface Warfare Center 6-9 June '89.

**Jack Eyth (Code 60); Carl Pierce (Code 80):** For noteworthy participation in the '88-'89 Bucks County High School Science Seminar Program.

**Joseph Laska (Code 50):** For time and support contributed toward the Gen-X and active expendable decoy development programs.

**Richard Pariseau (Code 10):** For significant contributions as software Systems Engineer on the P-3 Update IV Navy On-Site Team.

## Technical Highlights

### Initial Development Complete For NADC AIS Facility

Initial development of a new laboratory facility at the NADC was completed. This new facility will provide an environment in which to evaluate alternative Acoustic Intercept Sonobuoy (AIS) concepts and to develop Pre-Planned Product Improvements (P<sup>2</sup>I) to the proposed AIS preprocessor. The facility features an airborne AIS processor to analyze signals of interest.

#### V-22

The V-22 test article was successfully tested to 150% design limit load for the 2.6g abrupt pitch condition critical for the forward wing-to-fuselage attach fittings. Seven of the planned 28 primary tests have been successfully completed to date. E. Kautz of the Aero Structures Division is the NAVAIR-designated agent for the monitoring and approval of the test program.

### Marine Squadron Brief

George Gillespie of the Crash Safety and Survival Branch travelled to the Naval Air Systems Command (NAVAIR) the week of 7 July to brief the USMC Helicopter Experimental Squadron (HMX-1; CAPT S. Stedfelt) on the Aircrew Survival and Armor Protection (ASAP) Program. HMX agreed to support flight testing of the new system to expedite USMC evaluation and review, and direct liaison was authorized by NAVAIR (CAPT T. Cooper (AIR-5311)).

### UNICOAT

A T-34 aircraft from NAS, Corpus Christi and two F-14s from NAS,

Oceana have been painted with UNICOAT this month. A P-3 (BUNO 14889) from NADC will be painted with UNICOAT in August. These demonstrations of the new NADC paint system are all part of a transition plan agreed to with NAVAIR (AIR-5304).

### Laser Eye Protection OPEVAL Approved

Brandon-Johnson, In-Flight Safety Systems, attended the Spectacle Laser Eye Protection Program Review at NAVAIR on 12 July. Approval for OPEVAL start was granted by NAVAIR. Training for OPEVAL start is scheduled for the week of 7 August.

continued on page 6

## Planned your vacation yet?

To help with all of your personal travel arrangements, call SATO Travel, ext. 2729, Mon. thru Fri., 8 AM to 4 PM.



# Gottry drags for anti-drug program

By JO2 Michael Delledonne

AW1 Ray Gottry drives a 1970 Ford Maverick. It isn't the car he drives to work or to run local errands. As a matter of fact, the farthest he drives the car at any one time is a quarter of a mile down a straight two lane track . . . at 115 miles an hour in 11.66 seconds. This Maverick is a 'dragster' and Ray Gottry is the driver.

"Originally the Maverick was your average grocery getter," said Gottry, who modified the car and began drag racing about 13 years ago. "In 1979, while stationed at Whidbey Island, Wa., I would drive 130 miles to the track, race all day, then drive 130 miles home. In 1981 I decided to race full time so I rebuilt the car making it no longer 'street legal.'"

Gottry, 31, originally from Pico Rivera, Ca., became interested in racing at a very early age. "Racing was all I cared about. My father was a big race fan and every year we looked forward to the Indianapolis 500 and

attending races at local tracks throughout the Los Angeles area. He always encouraged me to pursue my interest by allowing me to use his car as a learning tool.

In explaining his sport, Gottry said he races approximately twice a month from March through November as long as the weather holds up. "There are 4 race classes or eliminators, (super pro, pro, heavy, and street) determined by an elapsed time the car runs in the quarter mile," he said. "I'm in 'Pro eliminator' a class that normally runs between 11 and 11.99 seconds."

A 13 year Navy veteran, Gottry uses his love of racing to get a very important message across. "In 1987 I met a representative of the Valvoline Oil Company who said they were starting an anti-drug program that they wanted local drivers and race tracks to become involved in," he said. "As a Navy Drug and Alcohol Program Advisor (DAPA) I felt I was a natural choice for their program. I contacted the

program coordinator and told her of my racing activities and Navy duties and she immediately selected me for the program."

As a two year member of Team Valvoline, Gottry also displays his car at local shows and gives presentations on driving safety and substance abuse

at area schools. "I talk to kids about why I wear a helmet, fireproof jacket, gloves and a five seat belt harness instead of one like their parents and they should wear," said Gottry. "I also try to encourage them to say NO to drugs. That's the most important message to get across."

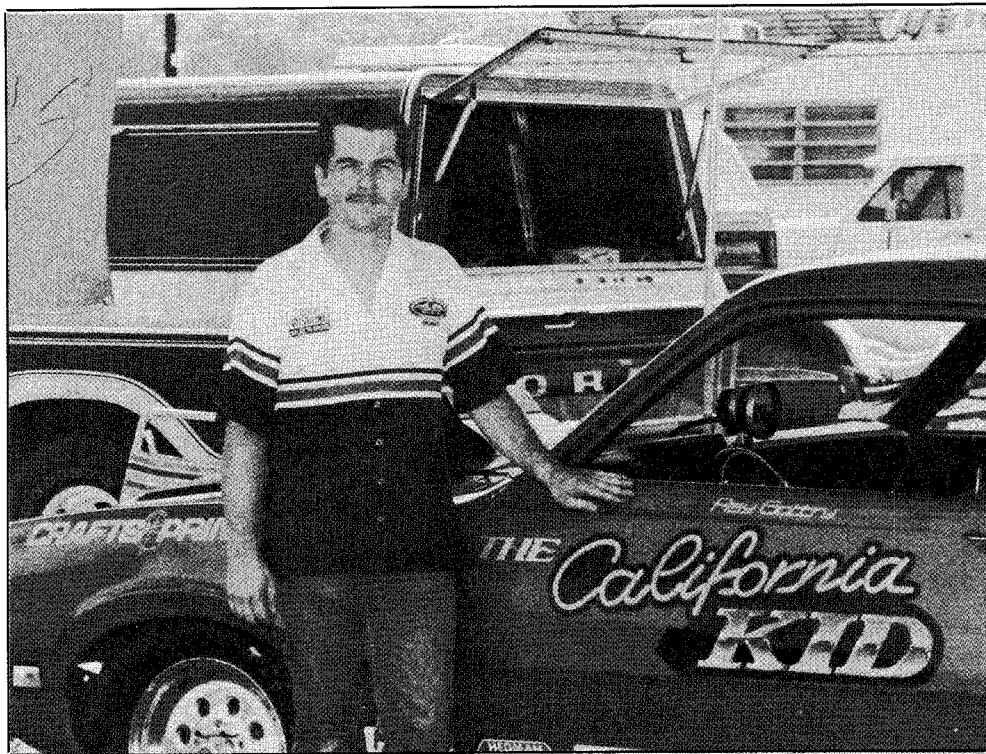


Photo by NADC Photo Lab

AW1 Roy Gottry with his Maverick dragster devoted to anti-drug and alcohol campaign.

## Sailor and Blue Jacket of 2nd Quarter named

By JO2 Michael Delledonne

"It's nice to get recognition for a good job," said AMS1 Barry Case on being selected NADC Sailor of the Quarter (Second Quarter) for 1989.

Case, 31, works as an airframe shop supervisor. "I'm responsible for about six people at any one time," he said. "I've been flip-flopping back and forth between night and day shifts."

An 11-year Navy veteran, Case knew the competition was tough. "There were a lot of quality individuals. I kept comparing them to myself," said Case. "I was having a terrible day when they told me I received the award. It made my day!"

Case, who has been with the Center for two years, said detachments are one of his favorite parts of the job. "I love the road trips. You learn new information which will carry over when I get back to the fleet. You understand why they do certain things. That's great experience."

PR3 Terry Johnson was named NADC Bluejacket of the Quarter (second quarter) 1989. "It was the second time I was nominated for the award so I wasn't sure if I would win or not," said Johnson.

A five-year Navy veteran from Waterloo, S.C., Johnson works on survival gear. "We work on parachutes and life rafts. We repair anything that's wrong with them and make sure they're ready for use," said Johnson. "We inspect all the gear for damage and then repack it."

This 24-year old sailor who has been at NADC for a year and a half, said he was very happy and surprised on learning of his selection. "I was really excited. It's always nice to get recognition."

"We see things here at the Center that I would not ordinarily see," said Johnson. "We see the results of different crashes and take that information and learn from it. The lessons will help me in everyday life back in the fleet."

## Who they are; what they do

By JO2 Michael Delledonne



Photo by NADC Photo Lab

AT1 Granville Pennypacker

"I tried outside work for a while and got totally fed up with it," said Aviation Electronics Technician (AT) First Class Granville Pennypacker. "I felt like I had to make a change. I talked to the Navy recruiter and decided electronics was the way to go. I liked airplanes so the AT rating was perfect for me."

"An AT is an in-flight technician on P-3 aircraft," said Pennypacker, 31. "We do preflights, repair any discrepancies that might arise during flights along with our ground responsibilities."

Originally from Newark, Delaware, Pennypacker, a 10-year Navy veteran, feels his assignment to NADC is a great opportunity. "To become involved in the research and development of P-3 software is unique. Seeing the programs grow from the very beginning stages to their implementation into the fleet is very rewarding. It definitely gives me a better perspective for when I go back to the fleet."

## And the nominees are . . .

There are nearly one hundred honorary awards available throughout each year for which NADC's outstanding employees might qualify. However, unless deserving individuals are nominated, these awards will surely elude us. The nominations themselves are a way to recognize dedicated and diligent employees. Those awards accepting nominations through Oct. 1, 1989 are:

- Alan T. Waterman Award (Honorary)
- DON Action Excellence Award (Honorary)
- Arthur S. Flemming Awards (Honorary)
- John E. Fogarty Award (Honorary)

For specific information about these and any awards, contact Bettie Simpson-Lawrence, Code 031, extension 3079.

- Roger W. Jones Award (Honorary)



Photo by James Moore

AMS1 Barry Case

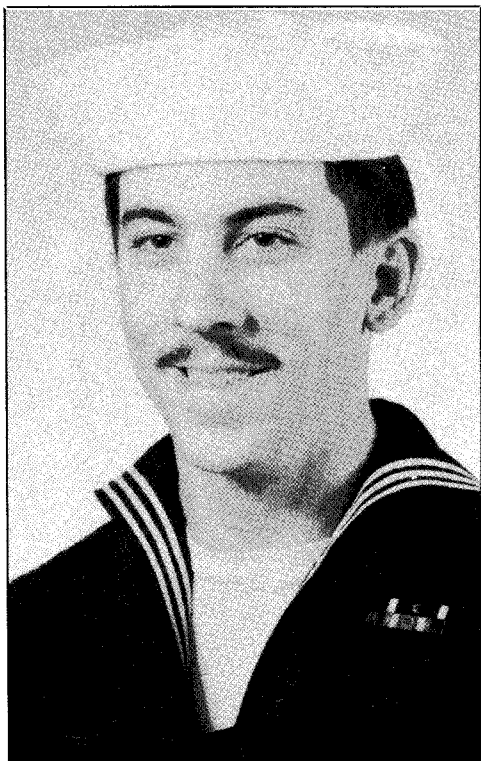


Photo by James Moore

PR3 Terry Johnson

# Technical Highlights

continued from page 4

## New System Test Program For P-3C in TECHEVAL

The VP Program Fleet Software Support Project delivered S4.6 to the Naval Air Test Center to begin Navy testing. The S4.6 System Test Program will support the planned CMOS and Bubble Memory modifications of the CP-901, along with ISAR Radar and E<sup>2</sup> Prom-equipped MLU configured aircraft. P-3C flight crews on all the existing baseline P-3C aircraft will also use S4.6 for preflight testing.

## Advanced Tactical Surveillance (ATS) System

The ATS Design Team was assembled by and has been functioning under the direction of the Tactical Air Systems Department, the Advanced Tactical Systems Division. The ATS Team delivered the first draft of the Top Level Performance Requirements (TLPR) on July 25, 1989. The TLPR presents, in report format, an expansion of the draft Operational Requirement. It incorporates the results of dedicated Center analysis, the results of various related Navy study groups, technology assessments, etc.

While a true NADC product, the TLPR will be undergoing extensive review by a team of fleet representatives and selected contacts within the Space and Naval Warfare Systems Command, the Naval Air Systems Command, and other Navy laboratories and field activities. It is the intention of the ATS Advanced Development Project Officer (ADPO-53) that the TLPR will be appended to the ATS Concept Formulation Request for Proposals, in order to focus industry's responses. It will also form the basis for a technical presentation to be given during an all-industry ATS informational briefing, to be conducted at NADC on 24 August, 1989.

## Small bond deductions end

continued from page 3

must buy \$100, \$200, \$500 or \$1,000 bonds.

Comptroller representaives from the military services met at the Pentagon in early June to discuss ways to make purchases of savings bonds through the payroll deduction system affordable for everybody. "Navy proposed adopting a standard payroll deduction policy and a new form for use by the services and DoD employees," said the DoD spokeswoman. "The Marine Corps and DoD civilians are using the Treasury Department form. The Navy, Army

## T-AGS Proposal Accepted

A proposal to provide design and engineering support for the T-AGS (MR) bathymetric, navigation, chart production and systems interface was accepted and funding received from the Space and Naval Warfare Systems Command. The T-AGS (MR) is a new oceanographic vessel to support ocean surveillance and survey missions.

## RF Technology

A unique design for PIN diode switching of RF local oscillators was successfully implemented and tested. This design will be a key element in the development of multichannel UHF receivers and transmitters for the Marine Corps Tactical Remote Sensor System.

## Tactical Air Reconnaissance Pod System (TARPS) Enhancement

The NADC in-house integrated KS-153 reconnaissance sensor was successfully flight tested aboard an F-14 aircraft at NAS, Miramar, CA. Follow-on in-house enhancement efforts have also been initiated.

## TOSS Laser Receiver (TOLAR) Project

The Reconnaissance/Surveillance Branch in-house designed and developed prototype laser receiver for the Tactical Optical Surveillance System (TOSS) was successfully integrated and tested at Wright-Patterson AFB, OH. The prototype Toss Laser Receiver is now deployed by the Office of Naval Intelligence.

## Updated ASWM Software Delivered To CV-60 and CVN-69

The Carrier ASW Module Branch successfully delivered 4.2.1A CV-ASWM software to the USS SARATOGA (CV-60) and the USS DWIGHT D. EISENHOWER (CVN-69). This version of CV ASWM software provide compatibility with the

and Air Force have their own forms—all different.

"Service members can have as little as \$5 per month deducted toward a savings bond under the Army and Air Force systems," she explained. "As of now, sailors have to have the full \$50 deducted each month for \$100 bonds. We're trying to get a single issuing agent outside of DoD to handle savings bonds for military and civilian personnel. If we get it, the agency would determine what the allotment will be. It could be as low as \$2.50. If not, service will modify their existing systems."

S-3B and was developed by NADC under a tight schedule to meet S-3B (FI 4.2.1) fleet introduction.

## ALR-67 Radar Warning Receiver System

Completed antenna calibration measurements on the ALR-67 Radar Warning Receiver System. Measurements were conducted at

## If the SOC fits

continued from page 2

- Impeding Government efficiency or economy,
- Losing complete independence or impartiality,
- Making a Government decision outside official channels, or
- Adversely affecting the confidence of the public in the integrity of the Government;

2. Do not engage in any activity, or acquire or retain any financial or associational interest, that conflicts or appears to conflict with the public interests of the United States related to your duties;

3. Do not accept gratuities from Department of Defense contractors unless specifically authorized by law or regulation;

4. Do not use your official position to improperly influence any person to provide any private benefit;

5. Do not use inside information to further a private gain;

6. Do not wrongfully use rank, title, or position for commercial purposes;

7. Avoid outside employment or activities incompatible with your duties or which may discredit the Navy;

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

9. Do not give gifts to your superiors or accept them from your subordinates when it is not appropriate to do so;

fourteen frequencies and for all azimuth angles at thirteen elevation angles using the F/A-18A at the full scale antenna facility. The results of these measurements will be utilized by the equipment manufacturer to improve the direction finding performance of the system as part of the ECP-510 program.

10. Do not conduct official business with persons whose participation in the transaction would violate law or regulation;

11. Seek ways to promote efficiency and economy in Government operations;

12. Preserve the public's confidence in the Navy and its personnel by exercising public office as a public trust;

13. Put loyalty to the highest moral principles and to country above loyalty to persons, party, or Government department;

14. Uphold the Constitution, laws, and regulations of the United States and never be a party to their evasion;

15. Give a full day's labor for a full day's pay, providing earnest effort to the performance of duties;

16. Never discriminate unfairly by the dispensing of special favors or privileges to anyone, whether for remuneration or not, and never accept for yourself or for family members, favors or benefits under circumstances which might be construed by reasonable persons as influencing the performance of Government duties;

17. Make no private promises of any kind binding upon the duties of office;

18. Do not engage in business with the Government, either directly or indirectly, inconsistent with the conscientious performance of Governmental duties; and

19. Expose corruption wherever discovered.

## Watch water waste

By Michael Blank, P.E.

Awareness is the first step in water conservation. Statistics shows that nearly 40 percent of all water used in the standard 1500 square foot home is the toilet. Toilets use from three to five gallons of water with every flush.

The following table published by the Water Conservation Pennsylvania Department of Environmental Resources indicates the average daily water use for a family of four.

USE	GALLONS PER DAY	% OF TOTAL DAILY USE
Toilet	100	39
Bathing and Hygiene	88	34
Laundry	35	14
Kitchen	27	11
Housekeeping	5	2
TOTAL	255	100

Leaks inside the toilet can waste up to 100 gallons of water a day. These leaks can be detected by adding a few drops of food coloring to water in the toilet tank. And if the colored water appears in the bowl the toilet is leaking. Leaking faucets are another waste of water. A slow dripping faucet can waste up to 14 gallons of water a day, and slow stream, up to 80 gallons.

If you have a leaking faucet or toilet do not waste water and money; repair it or call a reputable plumber. Water saving devices such as low-flow shower heads, flow restrictors, toilet tank displacement devices and faucet flow control aerators are inexpensive, easy to install and money savers. These devices save from 20 to 30 percent of water usage each year without changes to personal life and habits.

"BE A "WATER WATCHER" AND NOT A "WATER WASTER."



# Fund Drive Complete

The 1989 Navy Relief Society Fund Drive raised a total of \$9,853.73 an increase of more than \$4,400 over 1988.

Commander Richard Cox, chairman of the fund drive, credited the volunteers for making the difference. "My committee deserves all the credit for this outstanding fund raising effort. We exceeded our goal, thanks to the generosity of the Center's employees, surpassed last year's contributions by 66% and had a lot of fun."

This year's big money maker was the dunking booth which brought in \$1,300.

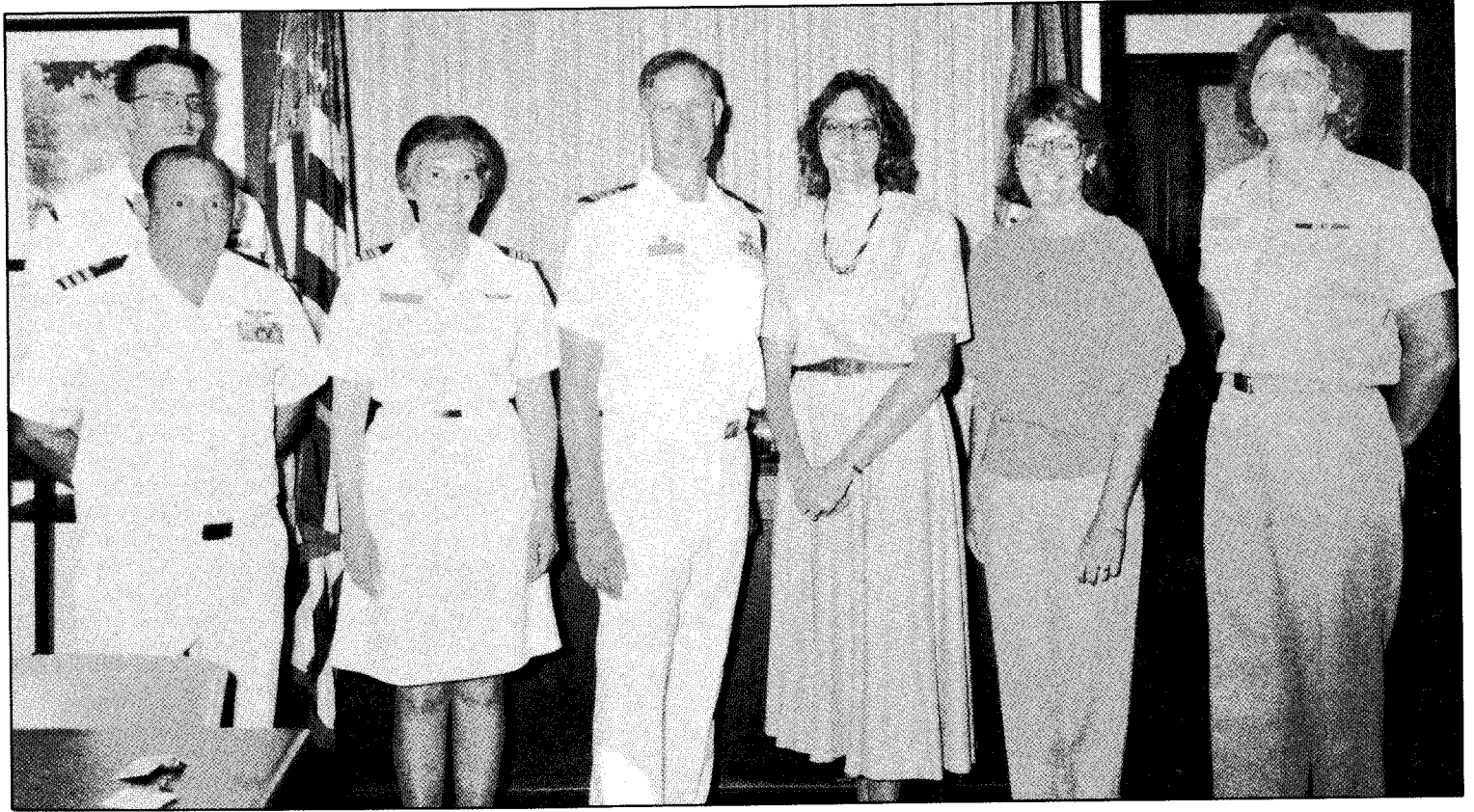


Photo by NADC Photo Lab

Various group representatives on Center gathered to present Navy Relief donations to CDR R. Cox, Navy Relief Chairman, and Center Commander, CAPT Curtis J. Winters. Pictured left to right are AT1 J. Nuyen, First Class Petty Officers Assn., CDR Cox, LCDR M. Eyraud, Deputy Chairman, Susan Sestak and Kathleen Hansen, Officers Wives Club, and DPC T. Darnell, Chief Petty Officer Assn.

## Diners Club travellers see advantages

By Tom Joyce  
American Forces Information Service

Individuals who have not traveled on temporary duty recently should be aware of a new policy concerning travel advances when using the Diners Club government travel card. Under new rules already in force throughout the military services and the Department of Defense, travel advances with that card are limited to the estimated out-of-pocket expenses travelers expect to incur other than hotel, motel or rental car costs.

Army Col. Richard W. Lind, staff director of DoD's Per Diem Travel and Transportation Allowance Committee, said the current policy is a result of an effort by the Office of Management and Budget to get federal agencies to better account for their travel dollars.

"OMB found that many government travelers were not filling out travel vouchers expeditiously," said Lind. "That represented a big liability for the government."

For example, if a traveler draws a \$400 travel advance and total official expenses amount to only \$300, the traveler is, in effect, getting an interest-free government loan of \$100 until the voucher is submitted.

With the new policy, travelers will not receive advance money for any expense that they can charge to the

Diners Club travel card, Lind said. "Advances will be restricted to the meal and individual expense portion of the per diem rate for the area the traveler is going," he said. "Out-of-pocket expenses such as meals, tolls, parking, taxis and such will continue to be advanced."

One complaint about the new policy is that the Diners Club travel card is not as readily accepted as Visa, American Express or Master Card. "But remember," cautioned Lind, "the Diners Club card is not a charge card. It is an employee travel card to be used only for travel expenses. It is not to be used to buy gifts. Diners Club promotes their card as an executive travel card, not a charge card."

However, Lind said using the card has several advantages. Chief among them is the ability to make large purchases immediately. "For instance, if someone is TDY and loses their airline ticket, they can purchase a new one on the spot. They don't have to come up with their own money."

"In addition, we have found that the Diners Club card is readily accepted in hotels and motels for meals and lodging throughout the United States."

These are some problems with using the card overseas. For example, some military transient quarters do not accept the Diners Club travel card for lodging.

"It is incumbent on the traveler to tell their finance office when they are traveling to a site where the Diners Club travel card will not be accepted for lodging," said Lind.

Lind said the Diners Club travel card program is very attractive for federal travelers for these reasons:

- There is no interest charge or late payment penalties. "However," said

Lind, "Charges are due 30 days from the billing date in full."

- If a member loses a card, neither the government nor the individual is liable for any illegal charges. Other cards carry a liability of about \$50.
- No credit check is performed on individuals who apply for the card. "That also means Diners Club will not provide a credit history to any agency requesting it," said Lind.



Photo by Marti Malin

**NADC firefighters on parade**—Fire Chief Donald Meadows waves to the crowd during the 4th of July parade in Southampton.

**Give Blood.  
It's a Class Act.**



RED CROSS BLOODMOBILE VISIT — The Red Cross Bloodmobile will visit the Center on Wed., 6 Sep. and Thurs., 7 Sep. from 0800-1600 and will be located in the Public Works Lunchroom. Help us reach our goal of 300 units. The W&R Association will give a \$2.00 coupon towards a cafeteria lunch to each blood donor.



# Five ponds swallows golf balls

By Peter Brown

W&R golfers struggled through fast greens, big lakes and high winds to barely survive the 5th W&R golf outing of 1989!

Rudy Virga showed his style with a net 65, followed by Steve "hole-in-one" Kochanski in 2nd. Tony Madera shot a season low 67, as did "Bagger" Finch with a 69. Even par 71 and one-over 72 by Ken Stingel and Ed Boscola, respectively, finished up the prize winners in the net division.

Closest to the pins were captured by Finch (#3, 20 ft), and C. Bigley (#7, 9 ft 5 in), Melby (#11, 13 ft) and C. Bigley (#17, 21 ft). A new "Baby-Boomer", Andy Baker, won longest drive on #18 with a 282-yard blast. ("I hit it off the toe!")

Low gross went to P. Brown (75), while Bob Lehman scrambled to beat out-of-control "Boomer" Perry for 2nd Low Gross (83).

In better-ball, Kochanski kept up the winning with F. Vaow, scoring a team low net 58. One stroke behind at 59 were two teams, D. Coughlan and Madera, and Lehman and Brown. A tie-breaker gave Coughlan & Madera 2nd place winnings.

# Regular softball season ends

By Jack Eyth

After a slow start due to an unprecedented number of rainouts, the intramural softball season ended quickly when the league started scheduling doubleheaders. The final standings are shown below.

The Intimidators, a team which opened eyes early by going 9-0, wound



up on top with a 12-2 record. They also lead the league by scoring 116 more runs than they allowed (176 to 60). The Misfits and 8th Inning finished with identical 12-2 records, but wound up 2nd and 3rd respectively as a result of tiebreakers. Rounding out the top five were the Bandits and Granfalloon. The next five teams, as predicted, all finished within one game of each other. Since only the top ten teams made the playoffs, the Rumlbers were hard luck losers at 5-9 followed by four teams who never quite got started.

After the regular season ended, single game playoffs between the 7th and 10th place teams, and the 8th and 9th place teams were held to determine which two teams would go forward into the second playoff round as wildcard entries. The wildcard games pitted the suddenly vulnerable Rebels (7-6-1) against the unpredictable Bearcats (7-7) and the new and improved Herassers (7-6-1) against the resurgent Guzzlers (7-7).

The Bearcats dispatched the Rebels easily 13-5, while the Herassers sent the Guzzlers into "permanent retirement" with a 10-5 victory. As a final farewell to the league after 15 memorable seasons, John Bowes, the spiritual leader of the Guzzlers was quoted as saying, "GEEEE-EMMMMM!"

### FINAL 1989 STANDINGS

Place	Team	Wins	Loss	Ties
1	Intimidators	12	2	0
2	Misfits	12	2	0
3	8th Inning	12	2	0
4	Bandits	10	4	0
5	Granfalloon	9	5	0
6	Renegades	8	6	0
7	Rebels	7	6	1
8	Herassers	7	6	1
9	Guzzlers	7	7	0
10	Bearcats	7	7	0
11	Rumlbers	5	9	0
12	Phantoms	3	11	0
13	Orange Crush	3	11	0
14	Dynatigers	1	13	0
15	Life Supporters	1	13	0

## NADC

in the

## NEWS

The big news is...



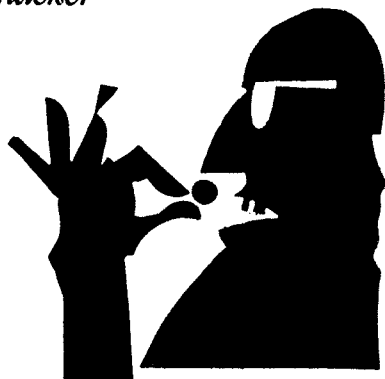
News items about NADC appear frequently in the *Intelligencer/Record*, *Bucks County Courier Times*, *Today's Spirit*, and the regional edition of the *Philadelphia Inquirer*. However, more often news items about the Center are regularly found in trade publications such as *Aviation Week and Space Technology*, *Naval Aviation News*, *Defense News*, *Aerospace Daily* and the like.

As a means of assuring that NADC is, indeed, in the news, we will be listing here the kinds of news we have released and some of those publications where stories appeared.

The most recent news clippings include:

- The *Intelligencer/Record*, June 1989, "Court Street Crushers gain ground with win in Battle of Businesses"
- *Times Chronicle*, June 7, 1989, "For Sale: Paterno's Football, Whoopi's sneakers"
- *Today's Spirit*, June 8, 1989, "Veterans Memorial dedicated at NADC"
- *Aerospace Engineering*, June 1989, "Fluidically Controlled Formation Flight"
- *Spawarrior*, June 1989, "Military Awards and Accolades"
- *Spawarrior*, June 1989, "Activities honor outstanding handicapped employees"
- The *Intelligencer/Record*, June 1989, "Warminster blaze forces evacuations of 90 elderly"
- *Aerospace Daily*, June 20, 1989, "NADC eyes advanced aerial target"
- *Navy Times*, July 3, 1989, "Sonobuoy sensor being researched to better detect Soviet subs"

### For the Calorie-Conscious Snacker



#### Almost No Calories Per Serving

- Celery sticks
- Lettuce
- Cucumbers
- Green peppers
- Mushrooms
- Cauliflower
- Broccoli

#### 25-30 Calories

- 1 small tangerine
- 1/2 cup watermelon
- 1/4 cantaloupe
- 1 small tomato
- 1 medium carrot
- 1 cup popcorn
- 12 pretzel sticks

#### 35-40 Calories

- 1 medium peach
- 1 medium nectarine
- 1/2 grapefruit
- 1/2 cup skim milk
- 1/4 cup plain yogurt
- 3 saltine crackers
- 1/2 small banana

#### 50-60 Calories

- 1 small apple
- 1 small orange
- 15 grapes
- 12 cherries
- 1 cup strawberries
- 1/4 cup cottage cheese
- 4 small shrimp

## Ski club season to start

By Jim Macaulay

The NADC Ski Club will hold its first meeting of the season on Monday, September 18th, at Lu Lu Wellington's restaurant. Located on the East side of York Road about halfway between Street and County Line Roads, it offers a nice atmosphere for a casual dinner meeting, with a varied and reasonable menu.

This will be a happy hour meeting at 1730 — lots of incentive to come! There will be a video presentation on the Telluride, Colorado week trip, but the BIG reason to come is *trip sign-ups*. This could be your only chance to get on the week trip! The trip leader has been holding people back, not permitting any sign-ups until the 18th, so there will be many eager customers. Membership sign-ups will also be taken.

The other trips will also open, and we anticipate a rush! Summarizing the trips: Eastern or Western weekend, around 11-15 Jan, Jim Macaulay 441-1721 (see September Ski Bee for final plans); KILLINGTON, Vermont, 12-15 Feb, \$175, Roland Bender 441-1176; TELLURIDE, 3-10 Mar, \$729 Double, \$673 Triple, Charlie Falchetti 441-1272.

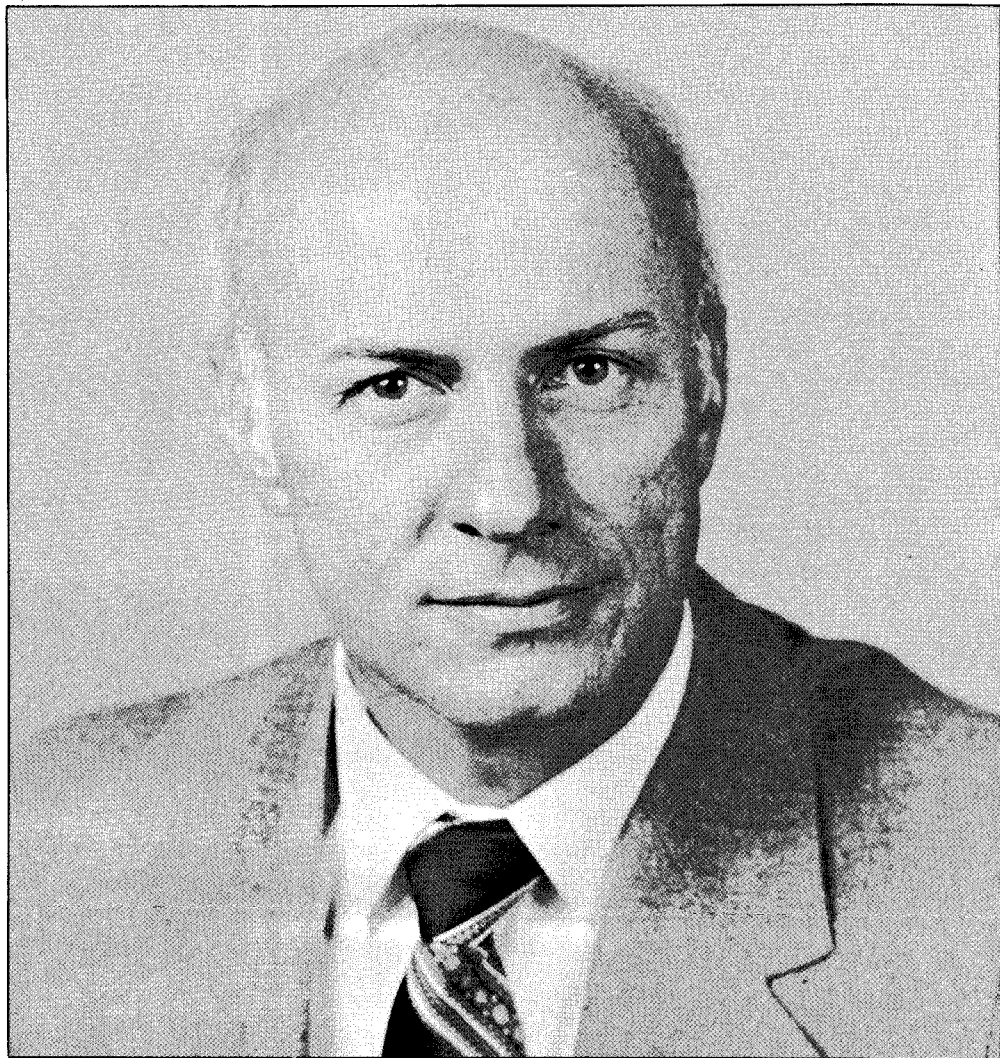
Come on out and join the fun!  
CORRECTION: In last month's Reflector, the destination of the week trip was mistakenly spelled "Tulleride" instead of "Telluride."




**In This Issue:**

- SECDEF on POW/MIA's
- NADC takes the helm
- Women's excellence award
- New cooling technique
- Day camp a success
- Reserve Change of Command set

## Castaldi receives Presidential award



Thomas W. Castaldi, Head of the Mission Avionics Technology Department

By Jim Kingston

Thomas W. Castaldi, head of the Mission Avionics Technology Department has received one of the highest and most prestigious civilian awards given by the federal government — the Presidential rank of Meritorious Executive. Following his meeting with President George Bush at Constitution Hall, the honor was bestowed upon Castaldi on September 14th by Secretary of the Navy, H. Lawrence Garrett, during ceremonies at the Pentagon.

Castaldi was signaled out and nominated for this high honor jointly by Center Commander, Captain Curtis J. Winters, and Technical Director, Guy C. Dilworth. According to the two, Castaldi was nominated because he has "... demonstrated superb technical and executive leadership and accomplishments over a sustained period of time. He has held a variety of technical and executive positions and has had a profound impact on the scope and direction of airborne anti-submarine warfare within the Department of the Navy. He has consistently demonstrated qualities of leadership, integrity, and industry."

Reacting to the nomination and selection, Castaldi said, "This award is a tribute not only to me, personally, but to NADC as a whole and also to my family. I believe it truly reflects the outstanding caliber of work performed by the people of the Center and represents one of the finest honors that can be bestowed in recognition of this superb work."

Castaldi holds a BS in physics from St. Joseph's University and an MS in Electronics Engineering from Penn State University. He also graduated with distinction from the Naval War College and attended the Federal Executive Institute. In 1978, Castaldi received the Navy Superior Civilian Service Award.

The Presidential rank of Meritorious Executive recognizes prolonged, high quality accomplishments of career members of the Senior Executive Service (SES). It affords the President the opportunity to acknowledge members who have demonstrated sustained accomplishment over a period of at least three years.

## Iavecchia authors 'best' human factors paper

By Mary Ann Brett

Joyce Iavecchia, Operations Research Analyst in the Tactical Air Systems Department was recently named the recipient of the Human Factors Society (HFS) 1989 Jerome H. Ely Award for the best paper published in the Society's journal in 1988. Iavecchia the principal author, and contributors Helene Iavecchia and Stanley Roscoe, wrote the winning article entitled "Eye Accommodation to Head-up Virtual Images," published in *Human Factors* Volume 30, Number 6, pp. 689-702.

The paper discusses the problem of



Joyce Iavecchia

visual distortion resulting from head-up aircraft cockpit displays designed to provide a means for Naval aviators to simultaneously focus on the real world and on displayed symbology.

Iavecchia has worked at NADC for ten years. She has a BA in Psychology from Temple University, 1976 and an MA in Engineering Psychology from

## Frazier awarded patent for alloy

By Mary Ann Brett

The Air Vehicle and Crew Systems Technology Department's Dr. William Frazier was recently awarded a patent entitled "Elevated Temperature Aluminum/Titanium Alloy by Powder Metallurgy Process."

Frazier, who works in the Materials Engineering Division, explained that his work addresses not only the alloy's composition but the processing technology as well. This processing technology involves a combination of rapid solidification plus mechanical alloy processes. The alloy itself retains structural strength 100 degrees C greater than current aluminum alloys.

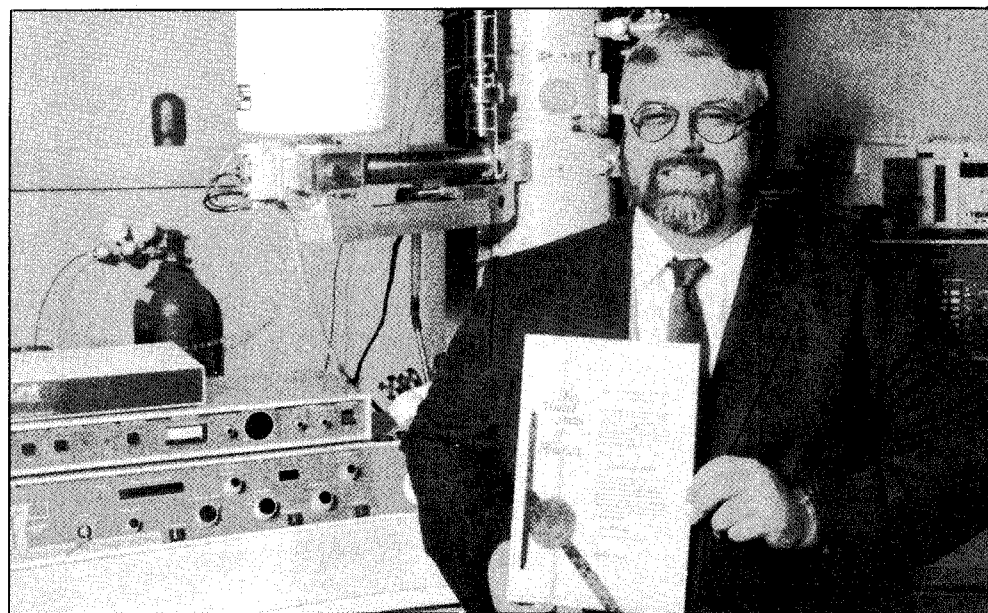
Although developed primarily with Naval tactical aircraft in mind, this

Continued on page 7

the University of Illinois, 1979. She has had at least one other technical paper published which was so popular she received hundreds of requests for reprints from around the world. That paper entitled, "The Moon Illusion Revisited," appeared in *Aviation, Space, and Environment Medicine* in 1983.

According to Earl Wiener, President of the HFS, "Your (Iavecchia's) work has contributed much to human factors, and your name deservedly belongs among the leaders of our field."

"I'm thrilled as well as surprised," said Iavecchia of her selection, "It's a very prestigious award and it's hard to believe it's mine."



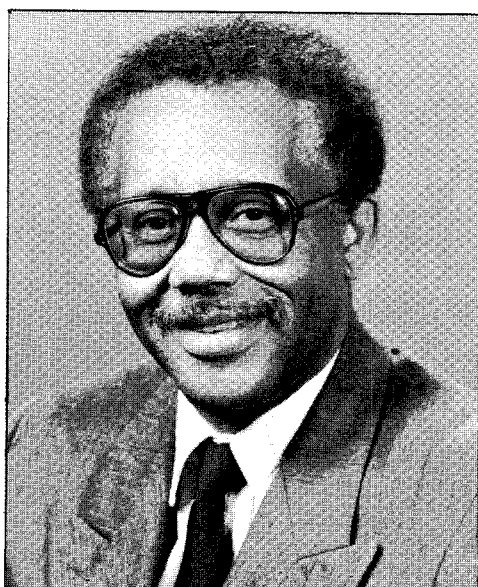
Dr. William Frazier displays patent award for elevated temperature alloy work.

Photo by NADC Photo Lab

# Command Corner



**Captain Curtis J. Winters**  
Center Commander



**Guy C. Dilworth, Jr.**  
Technical Director

## To all hands:

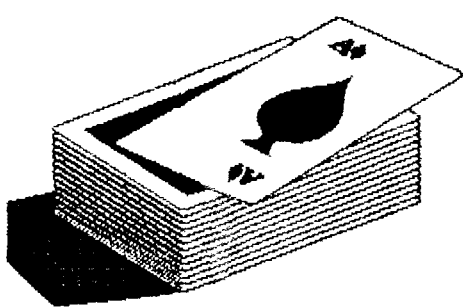
### Warfare Systems Analysis Department Head Selected

CAPT Winters and I are pleased to announce the selection of Andrew J. Atkinson to the SES position of Head of the Warfare Systems Analysis Department. Atkinson will continue until June 1990 to attend the Sloan School of Management at MIT. Starting 25 September 1989, Robert N. Becker

will be full-time Head of Code 30 while Atkinson is away. I will assume, with staff support, Becker's O1A functions. Otto Kessler will assume Centerwide responsibilities for sensor/platform data fusion products.

GUY C. DILWORTH

**DEAL YOURSELF A WINNING HAND**



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THE GREAT AMERICAN INVESTMENT

## If the SOC Fits

By Robert Janes

In the next few weeks several hundred of you will sit down to fill out a DD Form 1555, Confidential Statement of Affiliations and Financial Interests. This annual exercise is a hallmark of the Navy's Standards of conduct (SOC) program, and despite some criticism of it, the filing requirement just keeps growing. Up until now, NADC required forms from GS-12s and above in the Contracts Division, and GM-13s, Navy Commanders and above virtually everywhere else. This year, as a result of recommendations from two different outside audit teams, we are extending the filing requirement to include all COTRs regardless of grade.

purpose of filing is simply self-assessment. It is directed at the overwhelming majority of employees, who are honest, but susceptible to inadvertent mistakes.

For those of you who will be filing a 1555 this fall — please be sure to complete all three blocks in Part 1. If appropriate, put "None" in the block, rather than leaving it blank or writing "Not Applicable." Timely filing is also important. The forms are to be completed no earlier than 30 September and no later than 31 October. As many of you know, we are required to keep the forms for six years after filing. Thus, we have your prior 1555s in our locked files, and if it would help you in completing this year's form, please feel free to contact the Office of Counsel for a copy of what you filed last year.

## Letter to the Editor

Is NADC cafeteria exempted from Warminster recycling law? It seems that providing extra bins for juice bottles and aluminum cans is not too much of an inconvenience.

Use of biodegradable containers and trays instead of polystyrene products is

*Continued on page 7*

## SECDEF speaks

# POW/MIA recovery supported

By Master Sgt. Mary A. Peterson, USA  
American Forces Information Service

Sept. 15 is National POW/MIA Recognition Day — a time to honor America's returned prisoners of war and to rekindle the resolve to account for American servicemen still missing.

Since some 590 American prisoners of the Vietnam War were released from North Vietnam in March 1973, the Department of Defense and the U.S. government have strived to account for 2,344 Americans still listed as prisoners or unaccounted for.

Since 1974, 391 sets of remains have been returned to the United States from Vietnam, of which 209 have been determined to be those of missing Americans. Since the mission of retired Army Gen. John W. Vessey, special presidential emissary, to Hanoi in August 1987, the Vietnamese government has repatriated 227 remains. Of those, the Central Identification Laboratory in Hawaii has positively identified 65 as American servicemen listed on the Missing in Action and Prisoner of War rosters.

The most recent identification was on Aug. 1 when the Department of Defense released the names of the remains of three service members.

Identified were Air Force Col. Bobby Kirby of Atlanta, pilot of a B-52 that crashed in 1972 in North Vietnam; Army Maj. Robert G. Cozart Jr. of Hammond, La., pilot of an O-1G

helicopter shot down in 1970 over South Vietnam; and Army CW2 Michael B. Varnado of Ferriday, La., who was piloting a UH-1H helicopter when it crashed along the Cambodian/South Vietnamese border in 1970. Varnado was reported to have survived the crash and died in captivity.

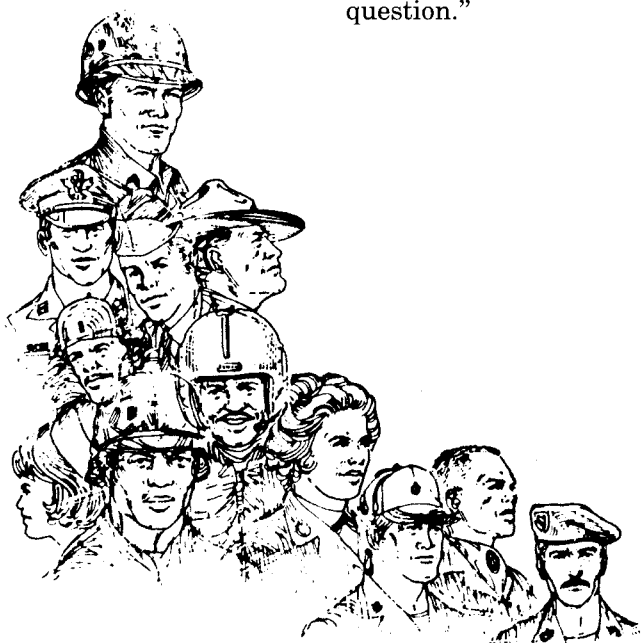
The most recent repatriation occurred July 31 when 15 sets of remains believed to be those of U.S. servicemen were turned over to U.S. military officials. As in previous actions, the Central Identification Laboratory will examine the remains to establish positive identification.


The United States is also making efforts to gain access to North Korea where an estimated 6,000 Americans are still unaccounted for — including 389 who were listed as prisoners of war.

In his address to the members of the National League of Families of Prisoners of War and Missing in Action in July, Secretary of Defense Dick Cheney reinforced DoD's strong support for the recovery effort.

"We have an enormous task before us made more difficult by the political realities of Southeast Asia. No matter how difficult, our dedication to this search must not wane," Cheney said.

"We continue to take very seriously all reports of live prisoners. The answers to this most vexing issue lie with the Indochinese governments, not here in Washington," Cheney said. "The burden is on them to supply satisfactory answers to this sensitive question."





# Reflector

NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA

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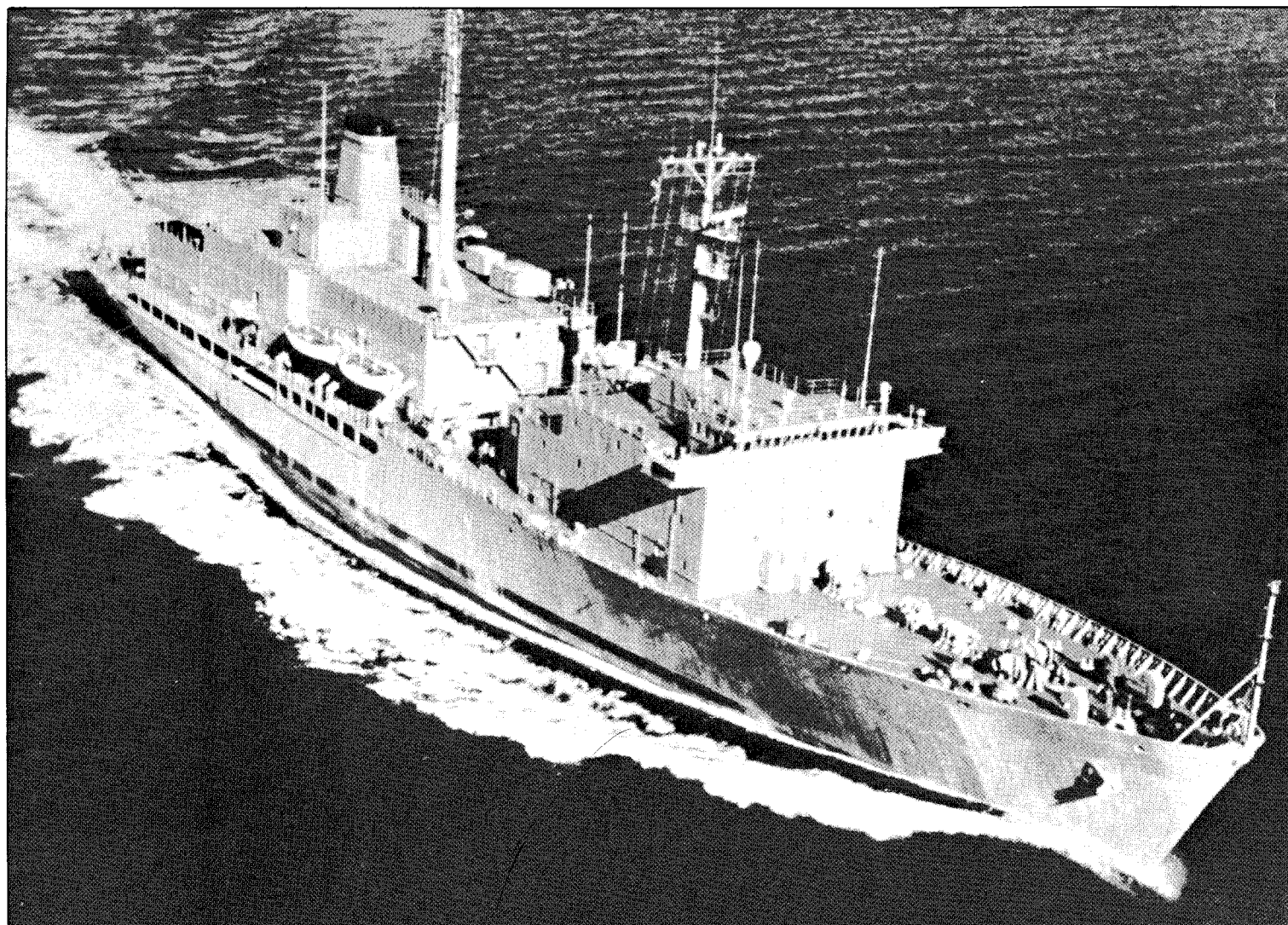
All correspondence should be addressed to Editor, REFLECTOR, Code 041, Naval Air Development Center, Warminster, PA 18974-5000 (441-3067).

Commander, NADC	CAPT Curtis J. Winters
Technical Director	Guy C. Dilworth, Jr.
Public Affairs Officer	James S. Kingston
Editor	Mary Ann Brett
Assistant Editor	JO2 Michael Delledonne
Assistant Editor	Margaret Vigelis



# NADC takes the helm in auto ship steering

By Jules Kreigsmann



USNS Maury equipped with NADC-developed real time computer controlled track keeping system.

Photo provided by Thernacore

The Center's Precision Navigation System Development Division has developed a real-time computer controlled track-keeping system that very accurately steers an ocean survey ship along a prescribed track of constant heading.

Prior to this, a less accurate track control was used. The ship's autopilot automatically steered a constant ship heading while someone manually checked that ocean currents and/or wind hadn't induced the ship to drift off the track.

This new system consists of an Integrated Navigation System, a track-keeping interface and the ship's autopilot. The navigation system computer integrates position data from NADC-developed satellite navigation receivers, Inertial Navigation System and various instruments which measure velocity. It then develops the best present position (BPP) for the ship. The navigation computer also receives a manual input on the Desired Ground Track and the coordinates of a point along the track. Together, these define the track-line to be steered. At prescribed, equally spaced times, the BPP is compared to the closest track line position through an algorithm which determines the distance that the ship is off-track. The off-track distance is used to develop proportional and integral corrections which are fed via the track-keeping interface to the autopilot. The autopilot accepts the correction signal as a bias to the desired heading, resulting in the ship being steered back to the desired ground track.

This new tracking system is currently in use aboard the USNS DUTTON, the USNS HESS, the USNS MAURY, and the USNS WYMAN.

## Women's Equality Luncheon held; excellence award presented

By Mary Ann Brett

"Give 110% and you'll get 110%," said former Philadelphia Eagles linebacker Bill Bergey. "You will be rewarded proportionately to the amount of hard work you put into anything," stressed the famous football player who went from nearly quitting his career in 1972 to becoming the highest paid defensive player in 1978.

Bergey offered these and other words of motivation during his keynote address to attendees of the Women's Equality Day luncheon. His sentiments were echoed by Technical Director Guy Dilworth who said he would continue to strive to create an environment at NADC where hard work is justly rewarded.

Sponsored by the Federal Women's Program (FWP) Committee, the luncheon is held each year as one of its many activities aimed toward career development, day care, and other pertinent concerns. The luncheon is also used as the staging place for presenting the NADC Federal Women's Program Award for Excellence (formerly Woman of the Year). This award was established to recognize and honor an employee who has made an outstanding contribution to the enhancement of female employees at the Center and/or the local community, and to encourage high standards of achievement by others in these areas.

This year's award was presented to Regina Gasuk of the Tactical Air Systems Department. Gasuk was recognized for advancing from a GS-3

Clerk Typist to the Program Analyst position she presently holds. She was also cited for her work in the Center's Federal Junior Fellow recruitment effort, the Career Enhancement Series for Secretarial, Clerical and Administrative Personnel, and for community involvement with the Girl Scouts, Cub Scouts and Centennial Charities.

Other nominees for the award included: Jocelyn Alston, Christine Biscardi, Laurie Bryner, Mary Donnellan, Dianne Granata, Maureen Hanna, Phyllis Morway, Judy Scott, Marge Steenhoff and Marleen Weaver.

For more information on the Federal Women's Program, call Robin Halperin on extension 1366.



Photo by Drew Schmith  
Bill Bergey speaks on motivation.



Excellence award winner Regina Gasuk with Anne Marie Burke, also of the Tactical Air Systems Department.  
Photo by Drew Schmith



Award nominees included: Phyllis Morway, Dianne Granata, Marge Steenhoff, Mary Donnellan, Christine Biscardi, Marleen Weaver, Regina Gasuk, Maureen Hanna, Judy Scott, and Jocelyn Alston.



## National Night Out Against Crime

# Crime dog visits Navy housing

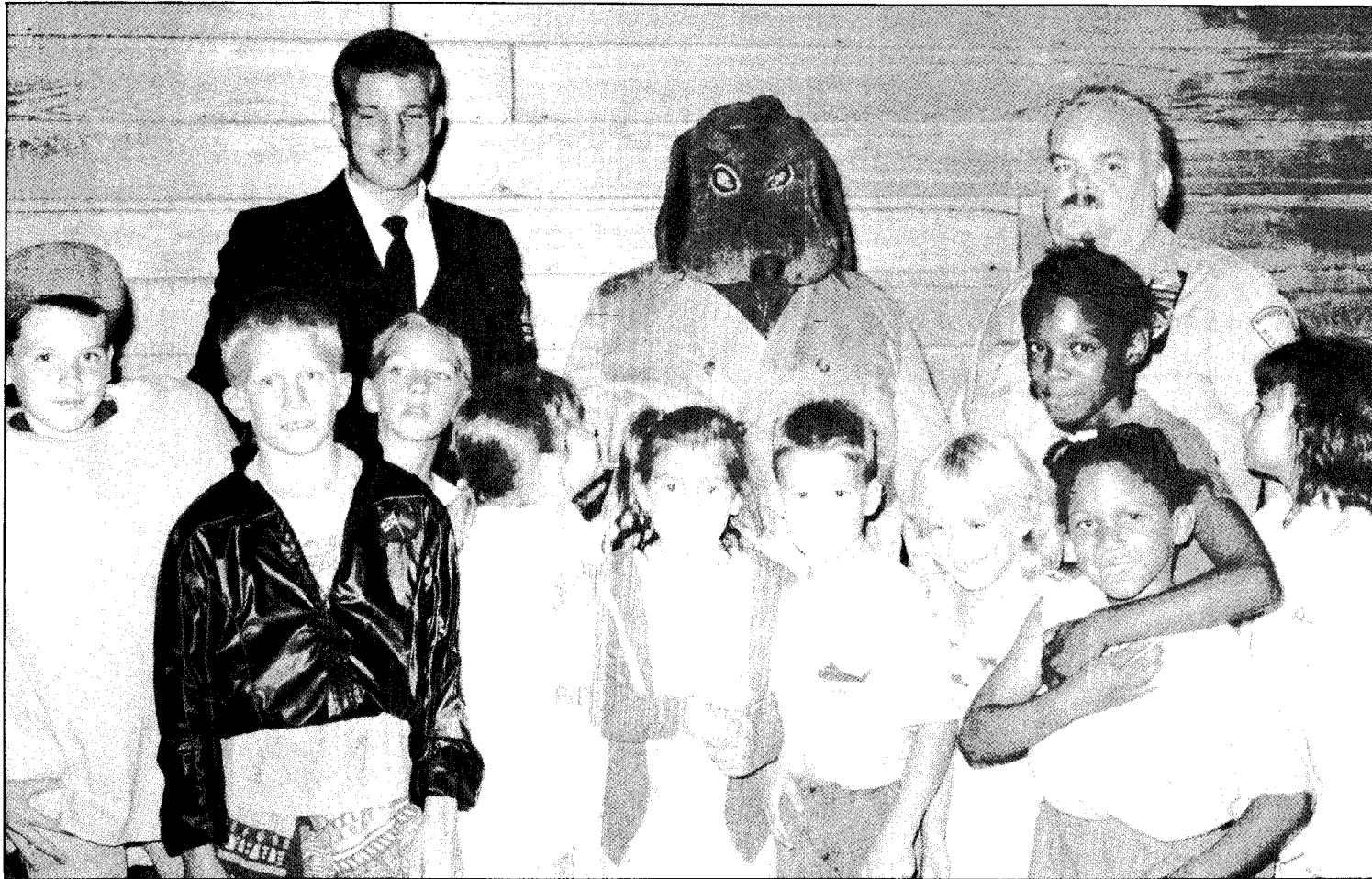


Photo by JO2 Michael DelleDonne

Children from Navy housing gather with some of the Night Out Against Crime's adult participants: ATC Daniel Ader, Crime dog "McGruff", and Head of the Crime Prevention Unit for Warminster, Officer John C. Sparks, Jr.

By JO2 Michael DelleDonne

"Take a bite out of crime." That's the message McGruff, the crime fighting dog said, when he visited Shenandoah Woods Housing Complex to promote National Night Out Against Crime.

National Night Out was a nationwide operation in which all residents were encouraged to sit outside with their neighbors, and to keep outside lights on between 8p.m.-10p.m. This was done to discourage criminals from practicing their trade.

Participating in the project were a variety of individuals including Housing Manager Nancy Fahringer and her staff, JoAnn West, Jim Kingston, Dave Ritho and ATC Daniel Ader. Dave Ritho elaborated on the project on a pamphlet that was distributed. "We told the kids there would be a suspicious looking 'character' who didn't know the Navy dress code walking around the housing area." "If they saw him they were to report it to me to claim a free prize. We had over 30 calls; it was outstanding. Chief Ader, our suspicious "character," deserves a lot of the credit."

At a future date, parents may bring their children to the Youth Center to be fingerprinted and photographed for identification.

## Energy sources, conservation for 21st century

By Michael Blank, P.E.

Very soon we will be moving into the 21st century. America has the same dynamism and intelligence, democracy and strength, productivity and capability that made it a world leader after the Second World War and will ensure our leadership into the 21st century.

One of the most important resources which will make AMERICA WORK is energy.

Energy is used in construction and transportation, agriculture and industrial equipment and consumer appliances. We hope the next century brings new inventions for energy sources and the United States will not have to depend on oil imports.

According to U.S. Department of Energy the following energy sources

exist: natural gas, water power (hydropower) nuclear energy, solar energy, wind power, geothermal power, petroleum and coal.

*Natural Gas* accounts for about 35% of that used in the United States. Natural gas is the cleanest and most convenient fossil fuel. It can be transported through underground and above ground pipelines.

*Water Power* (Or Hydropower) is produced by water in rivers and streams passing through a turbine. It supplies approximately 10% of the nation's electricity.

*Nuclear Energy* is the second largest source of electricity in the United States. It produces approximately 20% of the nation's electricity needs. By the year 2000 nuclear energy may furnish 25-30% of the power in the United States.

*Solar Energy* is one of the cleanest sources of energy produced from an environmental point of view. There are several ways to use energy produced from the sun: (i.e.: storing and using solar heat, such as solar salt ponds and photovoltaics.) Other solar technologies involve using light, as well as solar heat to produce electricity. Projections of solar energy use by the year 2000 ranges from 7 to 23%.

*Wind Power* is actually a form of solar energy. Wind is caused by variations in the temperature of the air heated by the sun. There are more than 15,000 wind turbines in operation in the United States. Projections are that wind power would provide 8% of total U.S. electricity by year 2000.

*Geothermal Power* plants are generated by hot water or steam which comes from the earth. Geothermal power plants produce electricity less expensively than any other power plants.

*Petroleum* provides the largest contribution of any energy resources to total U.S. energy needs. About 40% of the energy used in U.S. comes from petroleum. According to various sources the United States only has about 40 to 50 years (at current consumption rates) of proven oil reserves. That is not a long period of time. Energy conservation will have an important impact on U.S. economy and national security.

*Coal* The U.S. has the largest recoverable coal reserve, 28% of the world's total coal accounts for 55% of the primary energy used by electric

utilities.

According to the "Report of the Energy Project" at The Harvard Business School, if the U.S. were to make a serious commitment to conservation, it might well consume perhaps 30% less energy than it now does, and still enjoy the same or an even higher standard of living. That saving would not hinge on a major technological breakthrough, and it would require only modest adjustments in the way people live.

Moreover, the cost of conservation energy is very competitive with other energy sources. The possible energy savings would be the equivalent of the elimination of all imported oil — and then some.

NADC's total energy usage consists of averages of 84% electricity, 12% fuel oil, 3% natural gas and 1% propane gas. Electrical use is heaviest in summer due to air conditioning. For example, in June 1989 NADC paid \$279,075 for electricity and \$3,464 for oil, and in December 1989 NADC paid \$230,736 for electricity and \$72,685 for oil.

As you can see fuel oil use is heaviest December through March due to the heating season.

Our experience shows that employee involvement at all levels Energy Coordinators, Publications, and Beneficial Suggestions is a very important part of Energy Conservation.

Numerous beneficial suggestions are submitted each year concerning Energy Conservation, and we should continue our efforts to improve energy efficiency at work and at home.

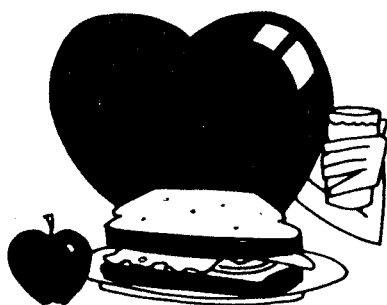
### CHOLESTEROL FACTS

High blood cholesterol is one of the three major controllable risk factors for heart disease. Cigarette smoking and high blood pressure are the other two. A risk factor is a habit, trait or condition that increases the chance of getting a disease.

Cholesterol is an odorless, fat-like substance. The body uses it to make cell walls and for other functions. The amount of cholesterol in the blood is affected by the amount of cholesterol the body makes as well as the saturated fat and cholesterol in the foods consumed. The body makes all the cholesterol it needs.

The desirable level of total cholesterol is less than 200 mg/dL (milligrams of cholesterol per deciliter) of blood. Borderline

high blood cholesterol is 200-239 mg/dL, and high blood cholesterol is above 240 mg/dL. Levels above the desirable range should be treated after consultation with a physician. Most treatments begin with changes in the diet that stress lowering the consumption of fats and cholesterol.





# New cooling technique developed, demonstrated

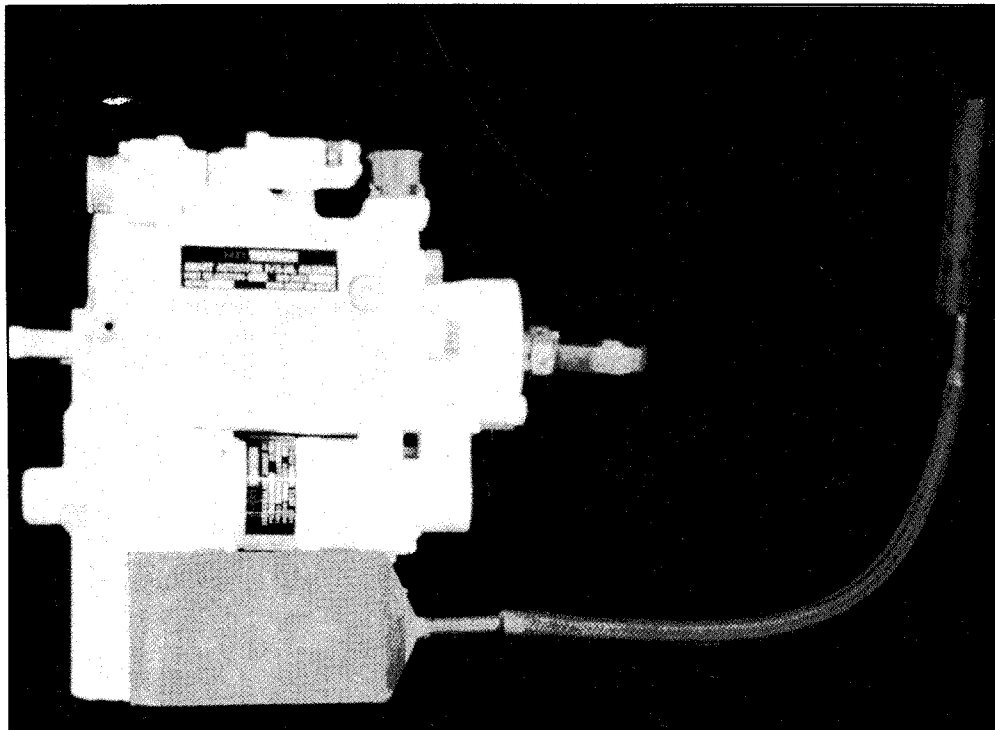


Photo provided by Thermacore

Flexible heat pipe and cold plate connected to flight control actuator.

By Dale Uyeda

The Aero Engineering Division of the Air Vehicle and Crew Systems Technology Department has successfully demonstrated heat pipe technology that can be used to thermally protect flight critical actuator electronics.

NADC scientists and engineers are taking action to improve the reliability of aircraft flight control actuator electronics. Navy aircraft use hydraulic actuators to position control surfaces on the wing, tail, rudder, etc. The feedback and position indication signals for one flight control actuator require dozens of electrical wires between the actuator and the flight control computer. This wire count can be reduced by using loop closures and redundancy management electronics on or near the flight control actuator. Since the actuator's case

temperature routinely exceeds 100 degrees C, the electronic components need to be cooled. If not, their failure rate increases with the temperature. A highly reliable cooling method is necessary to ensure that these flight critical electronics will operate. The heat pipes require only thermal energy to operate and can also be used to cool radars, sensors and other avionics.

This cooling method uses a heat pipe cold plate that interfaces with an integrally connected flexible hose to a nearby heat sink. The flexible section accommodates relative motion between the actuator and the heat sink. The cold plate transferred the 44.5 watt requirement with less than a 5 degree C cold plate-to-condensor wall temperature drop. This power carrying capability exceeded the requirement by as much as 15 watts.

## Technical Highlights

### Upgraded FTAS Operational on CVN-71

The Carrier Based ASW Module Branch successfully completed delivery and systems integration of an Upgraded Fast Time Analyzer System (FTAS), designated AN/UQX-5, to the USS ROOSEVELT (CVN-71). The AN/UQX-5 includes an upgraded acoustic processor with eight electrographic recorders, two CRT displays, two 28-track tape recorders (USH-31's), and the SKR-6 Multi-Channel Acoustic Relay (MCAR) and ARR-75 Sonobuoy Receivers. The system performs fast time (up to 16 times real time) analysis of S-3 acoustic tapes as well as real time analysis of MCAR and sonobuoy data simultaneously.

### Concepts Document Completed For SH-2G MDPS

A Final Development Options Paper for the SH-2G Mission Data Playback System (MDPS) has been delivered to PMA-274. This enhancement to the SH-2G will provide a mission reconstruction capability similar to the Sh-60 capability previously implemented by the Center. This delivery completes the concepts formulation phase of this effort.

### Fat Report Completed on Acoustic Processor for SH-26

A First Article Test (FAT) report for the SH-2G AN/UYS-503 Acoustic Processor has been delivered to PMA-274. It is planned to incorporate the new Acoustic Processor in all SH-2G aircraft after a full systems integration. The AN/UYS-503 is currently undergoing software integration at the software developers integration test facility.

### ETSS Concepts Documentation

The ASW Sensor Integration Program completed a preliminary System Specification for the Enhanced Tactical Surveillance Sonobuoy (ETSS) for PMA-264. A straw-man systems concept document for the ETSS, consisting of a series of white papers, has also been completed and is in review by the PMA. The ETSS is a FAD

II priority effort which will be specified to provide the Navy with an expendable air deployable passive acoustic sensor that will function as a force multiplier in airborne surveillance and large area rapid search operations.

### Technical Report Completed

The NADC technical report on the "Multisensor VHSIC Signal Processor (MVSP) Requirements Analysis" has

been completed. This report is the first of its kind that covers the following sensor areas: air-to-air and air-to-ground radars, electro-optics, EW, CNI and ASW oriented acoustic sensors. This analysis, forms the basis for follow-on MVSP architecture analysis, algorithm simulation and benchmarking, processing element design evolution, evaluation and specification. This is the culmination of

more than two years effort to identify the signal processing requirements for the MVSP that serves as a highly integrated and reconfigurable signal processing resource for all platform sensor applications in a Next Generation Tactical Aircraft for the years of mid-1990's and beyond.

### Navy Combat Identification Program

The Tactical Radar Branch, Microwave Technology Division, MATD developed the Navy Combat Identification Master Plan, and it was presented to OPNAV-352R. The plan for Non-Cooperative Target Recognition (NCTR) addressed both the Shipborne Advanced Radar Target Identification System (SARTIS) and Airborne Advance Radar Target Identification System (ARTIS). Program management office and program element/project numbers were also provided in the OPNAV plan for the next generation electro-optics/fiber systems.

### UHF Relay Radio

In the Communication Technology Division components and modules have been designed and a laboratory model completed of a single channel version of a UHF relay radio for fleet task force communications. Wideband design techniques to allow transition to an eight channel system have been developed.

### USNS MAURY Techeval Completed

The USNS MAURY (T-AGS 39) has successfully completed TECHEVAL of the mission survey system and is now capable of supporting the Ocean Survey Program (OSP) mission requirements. The mission survey system was designed, developed and integrated by Center personnel. The Ocean Survey Program has a BRICKBAT DX priority, the highest priority in the Navy, and develops the navigation, bathymetry, gravity and magnetic data base necessary to provide high accuracy bathymetric and gravimetric navigation charts and other survey

## SECNAV Antisubmarine Warfare Director visits NADC

By Margaret Vigelis

Rear Admiral Daniel J. Wolkensdorfer, Director Antisubmarine Warfare (ASW) Development, from the office of the Assistant

Secretary of the Navy visited the Center in August for a briefing on AIR/ASW future capabilities. This included a review of technical programs, exploratory development and advanced development related to AIR-ASW.



Photo by NADC Photo Lab

L to R: Rear Admiral Wolkensdorfer, Captain Curtis Winters and TD Guy Dilworth pay close attention during a briefing at NADC.

Continued on Page 7

Parents and children report

# Summer camp gets great grades

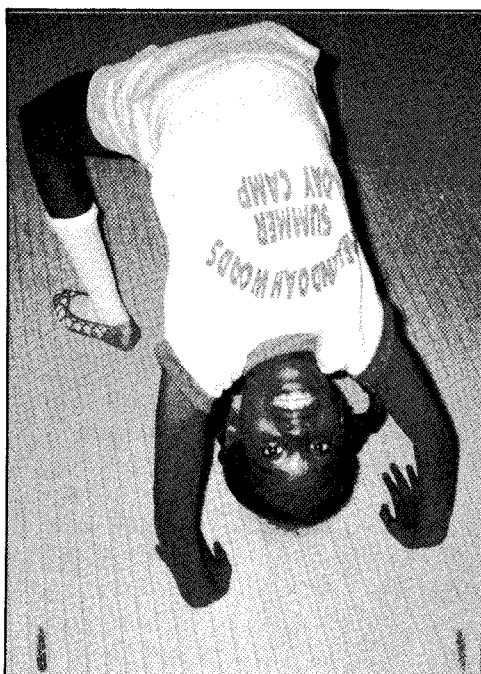
By JoAnn West

Shenandoah Woods Day Camp was the place to be this summer. Nearly 70 kids between the ages of 5-12, military and civilian dependants whose parents work at NADC shared fun-filled days throughout the summer.

Eileen Griffin, whose daughter, Tamika, participated in the Youth Center program, said her little girl is already looking forward to next year. "She really enjoyed it. The counselors really teach the kids and spend quality time with them rather than just letting them run wild. One day when I wasn't going to take her she cried she wanted to go so bad."

The camp's staff outdid themselves this year, creating events, games, programs, field trips and team competitions just to name a few. Swimming, arts, crafts and cooking helped to develop many hidden talents. The staff is hard at work preparing for "Summer Day Camp 1990." Don't miss out . . . look for information coming soon in the Reflector or call 441-7233.

For the first time this year you will be able to contribute to Youth Center activities like the Day Camp through the Combined Federal Campaign.



Tamika Griffin flips over NADC's Youth Center Day Camp.



A budding superstar, perhaps . . . and a captive audience. (Any talent scouts out there?)

(Bottom right and left) Children sit on the new deck area while taking a break from scheduled activities.



## Recreational services highlights

October 20 — Hayride & Barb-b-q  
For an old fashion good time! Bring the whole family, bring a date or just bring yourself! We will be throwing some hay on a cool October evening! After the ride, a bon fire and cookout!

Time: 7:30 to 11pm

Cost: \$5/Age 12 & under  
\$7/Age 13 - 16  
\$8/Age 16 & above

Registration Deadline: Wednesday 18 October 1989

October 22 - Wine Tasting Tour

A wine tasting tour of three local winerys and shopping in New Hope, PA. Join us on an autumn colorful drive and enjoy the fruits of nature! Transportation will be provided along with cheese & crackers. Space is limited, so sign up now!

Time: 11:30am to 6pm

Cost: \$5/MIL & DEP  
Registration Deadline: Wednesday 18 October 1989

Holiday Parties & Banquets at the Crews Rest

Start planning your holiday parties now! The newly renovated Banquet room at the Crews Rest is now taking reservations for the upcoming holiday season. Whether your party is large or small, we can accomodate to your needs. The Crews Rest facilities can include the bar area or close off part of the dining room for your private function or party. The Crews Rest has a variety of menu and beverage selections available to choose from. For more information please call the Crews Rest at 441-7651 and ask for the manager.

## And the nominees are . . .

There are nearly one hundred honorary awards available throughout each year for which NADC's outstanding employees might qualify. However, unless deserving individuals are nominated, these awards will surely elude us. The nominations themselves are a way to recognize dedicated and diligent employees. Those awards accepting nominations through November 1, 1989 are:

- Commander-in-Chief's Installation Excellence Award (Honorary)
- President's Volunteer Action Award (Honorary)
- American Society of Naval Engineers Award (Honorary)
- Women in Science and Engineering Award (Honorary)
- Wise Achievement Award (Lifetime Achievement) (Honorary)

- Captain Robert Dexter Conrad Award for Scientific Achievement (Honorary)
- Common Cause Public Service Achievement Award (Honorary)

For specific information about these are any awards, contact Bettie Simpson Lawrence, Code 031, extension 3079.

## Security Reminder

**HOUSEKEEPING HINTS** — Keep material off the tops of security containers, desk tops, shelves, etc. When there is an accumulation of papers, books and magazines, classified material could easily be intermingled and over looked when locking up at the end of the day.



## Who they are; what they do

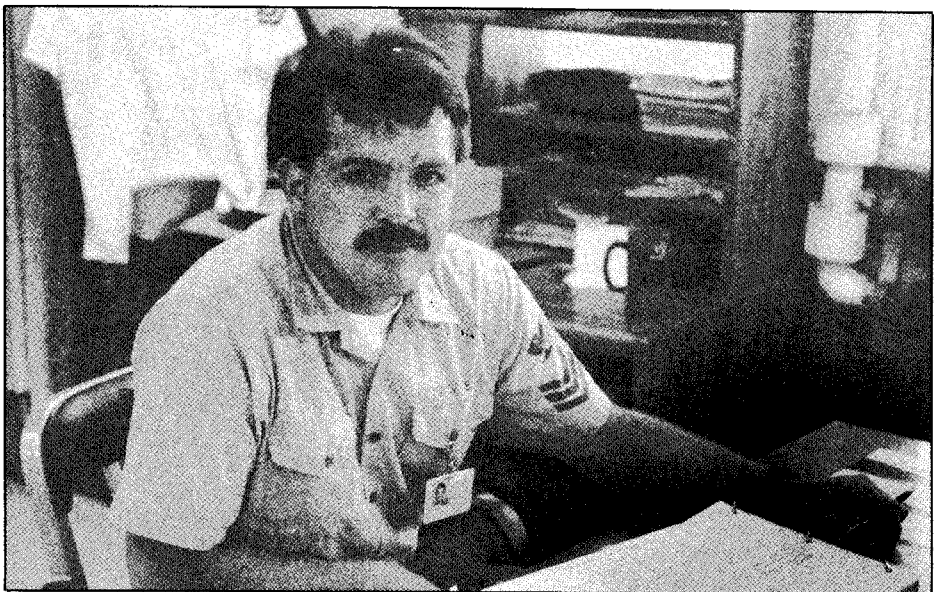
By JO2 Michael A. Delledonne

The Navy enlisted rating Aviation Ordnanceman appealed to AO1 Kurtis Sawyer. "It really sounded good," said Sawyer. "The idea of working with ordnance around different aircraft just seemed very challenging work."

Originally from Piqua, Ohio, the 29-year-old wears several different hats. I'm the Intermediate Maintenance Supervisor, air crew ordnanceman, range master, armory petty officer and augment security force team leader.

"That's what makes this duty station different than a lot of others," said Sawyer. "You get to work outside your rating quite a bit."

The 11-year Navy veteran, who has been stationed here for over two years thinks highly of the Center. "You get to travel a lot more than you would at a normal squadron but the trips are shorter," he said. "With all the duties I have I get a chance to do so many different things. We get to shoot a lot of weapons. You're just able to do things you wouldn't normally get to do."



AO1 Curtis Sawyer

Photo by JO2 Michael Delledonne

## Technical Highlights

Continued from page 5

products in support of fleet requirements. The OSP survey system includes the following major subsystems:

— The Integrated Navigation System which provides ship's position as a function of time for correlation with depth data and other recorded survey data to produce specialized charts.

— The new Phase IV version of the SONARRY System develops and records high resolution swath sonar depth data as a function of time to map the ocean bottom. This time correlated depth data is combined with post-time refined navigational data to produce Bathymetric Navigation Charts, which constitutes the principal survey product.

— The Sound Velocity System provides water temperature versus depth data which is used with historical data to compute ray bending corrections for the SONARRAY System.

— The Narrow Beam Sonar Digitizer System develops and records single beam sonar depth data to monitor and to serve as a backup for the SONARRY center beam depth data.

— The Bathymetric Refinement System refines the raw navigational data utilizing unique Center developed post-time data processing techniques.

— The Current Profiling System is used to collect and record profile data for water currents beneath the ship.

The efficiency of the USNS MAURY, designed and built from the keel up as an oceanographic survey ship,

combined with the latest state-of-the-art mission survey system will provide for enhanced accuracy and a 75 percent increase in survey productivity. Admiral Pittenger, the Oceanographer of the Navy, and Captain Martinek, Commanding Officer of the Naval Oceanographic Office, accompanied the USNS MAURY on her maiden mission survey operations.

### USNS HESS Techeval Issued

Issued the USNS HESS (T-AGS 38) OSP System FY-89 TECHEVAL Report. Major updates included the integration of a new Survey Control Display System, Beltbed Plotters, Frequency Time System updates, and a new computer in the Narrow Beam Sonar Digitizer System to upgrade system capabilities.

### USNS WYMAN Techeval Issued

Issued the USNS WYMAN (T-AGS 34) FY-89 TECHEVAL in port and at sea OSP System TECHEVAL Plan. Major mission equipment upgrades include the replacement of the BOTOSS Sonar System with the SASS Phase IV Sonar Array Survey System, integration of a MK-29 gyrocompass and Ship's Attitude Data Converter and new computers in the Narrow Beam Sonar Digitizer and Current Profiler Systems. New computer programs and firmware were developed to provide new OSP System functional capabilities.

## Commander Salutes

**Kathleen Gause, Lois Savage, Michael Markle** (Code 03): For exceptional assistance at the 8th annual Philadelphia Area Navy Equal Employment Opportunity Council (PANEC) Manager's Training Forum.

**Brad Cope, Sigmund Rafalik** (Code 60): For assistance to the Naval Air Systems Command during the Modular Stores Management System evaluation.

**Paul Bumgardner, Albert Knobloch, Vince Sieracki** (Code 30): For outstanding support of the CNO Master Plan for Battle Force Command, Control, Communications and Intelligence (C3I).

**Andrew Schwartz, Richard Cline, Russell Donahue, Svend Bernsten** (Code 80): For outstanding performance in support of the Advance development Model demo program for the Airborne Low Frequency Sonar.

**Brian Gale** (Code 50): For professional support to the Anti-submarine Warfare Training Group.

**Scott Perry** (Code 20): For outstanding support to the CNO Tactical Readiness Division target portion of the Navy Training Appraisal.

**Brian Brady, Albert Cavaliere, Robert Swierczynski** (Code 20): For extraordinary efforts on the AQM-127 Guidance and Control and Systems Engineering Support Teams.

**Steven Kern, Paul Poore, Pascual Spensier** (Code 30): For outstanding participation in the AAW Working Group for the Space and Naval Warfare Systems Command.

**Al Kaniss, Hank McCloskey, Otis Johnson** (Code 05): For significant contribution to the recent Naval Surface Warfare Center back-up tests conducted at NADC.

**Joseph Klicka** (Code 50): For assistance to the New Hope-Solebury School District Career Day Program.

## Center Naval Reserves to hold change of command

The two Air Systems Program Naval Reserve Units which mobilize to the Center held their change of command ceremonies at their home station, NAS Willow Grove, on Saturday, 21 October. Captain William Herron relieved Captain Hugh Dyer and Captain James Walker relieved Captain Samuel Greenberg as CO's of NADC 0193 and NADC 0293, respectively. None of these officers are strangers to the Center: Captain Herron was previously the Executive Officer of NADC 0193; Captain Walker was Commanding Officer of VTU 0493 and had previously been assigned to NADC 0193.

In the event of mobilization, these two units would augment the Center with a trained and ready force of managers, engineers, and flight crews. NADC 0193 has 15 officer and 21 enlisted billets, while NADC 0293 has 15 officers. During their regular training, the units drill one weekend a month and perform two weeks of active duty for training each year, normally in their mobilization billets here at the Center. Several members of the units are Center employees or

**Lawrence Johnston** (Code 10): For exemplary performance as a member of the Source Selection Evaluation Board for the Navy's Standard Desk-top Tactical-Support Computer (DTC-II).

**Anthony Madera, Miriam Laykin, Nina Mullik, Anne McLaughlin, Mary Reingruber, Janice Stribling** (Code 50) and **Margaret Vigelis** (Code 04): For coordinating and assisting with the NSIA Aircraft and Detection/Classification ASW Technical Seminar which resulted in a huge success.

**AW2 Christopher Henderson** (Code 10): For invaluable assistance rendered to Patrol Squadron 45 (VP-45) during their deployment to the Bermuda antisubmarine warfare sector.

**LCDR Neal Hesser** (Code 40): For your exemplary guidance of the P-3 SAR Team which performed admirably under stringent flight requirements.

**Kevin Birney** (Code 40): For your professional direction of the P-3 SAR Team, testing performed was highly successful.

**AOC Julian Bodie** (Code 40): For your critical performance under stringent flight requirements imposed during SAR Testing.

**James Kingston, JO2 Michael Delledonne, Nancy Szamborski, ATC David Ader, David Ritho, Joanne West**, (Code 04): For active participation in the Navy's "Night Out Against Crime" program in our military housing area.

## Patent . . .

Continued from page 1

alloy, in Frazier's opinion, is applicable to hot components such as wings and fuselage on virtually any jet engine.

Frazier has worked at the Center for nearly ten years. He began working here in 1980 as a co-op from Drexel University. By 1987 he received his Ph.D. in Materials Engineering from Drexel.

contractors, and there presently are billets available for qualified personnel. The recruiting office at NAS Willow Grove has the details.

Captain Dyer will be assigned to VTU 0493, while Captain Greenberg has assumed command of the reserve unit augmenting the Naval Air Test Center, Patuxent River, MD.

## Letter to the Editor

Continued from page 2

another suggestion I have submitted to Service America. I did not receive any response from the company.

Can you help?

Irene Simmons

Dear Irene:

Your letter has been forwarded to the Food Services Board. We will print the Board's response as soon as it is available.

The Editor



## All star game a success

By Jack Eyth

The NADC Softball League ended with a few playoff surprises and a resoundingly successful All-Star game. First the playoffs.

In the Quarterfinals, the Misfits dispatched the Herassers two games to none. The Eighth Inning had a tough time with the Renegades but finally won two games to one. The Granfalloon, after winning a close opener from the Bandits, eventually bowed out by losing the next two games. But the big story was the topsy-turvy matchup between the first place intimidators and the eighth place Bearcats.

The first game was a blow-out won by the Intimidators 15-0. The next game was close all the way but the Bearcats held on for a 6-5 win. The third game had the Bearcats "a'whoopin' 'n a'hollerin" their way to an amazing 9-0 upset victory which knocked the Intimidators out of the playoffs.

The two Semifinal matches ended in sweeps with the Misfits subduing the

Bearcats 16-11 and 18-1, and the Eighth Inning cruising over the Bandits 4-1 and 19-8.

The Finals, traditionally the highlight of the softball season, got off to an ignominious start when the Eighth Inning could find only 7 players for the first game and wound up forfeiting to the Misfits under "damp and gloomy" skies. For the second game, the Eighth Inning brought in some veteran players off-the-shelf (including Ralph Collins and previously "retired" Fred Kuster) and made the game respectable, though still losing 17-7. The third game of the best-of-five series saw the Eighth Inning, again without pitchers John Bechtel and Bob Larr, take the Misfits into extra innings before losing 11-10. Thus, the Misfits were crowned League Champs, winning their third Championship since 1982.

The real finale of the softball season turned out to be the rejuvenated

Annual All-Star Game. After being rained out once during mid-season, the game attracted nearly a hundred people to see two games for the price of one and to take advantage of complimentary free food and beverages. The opening game pitted a team of NADC's Women's All-Stars managed by Maria Cusanelli (Renegades) and Donna Morgan (Black Russians), against a Men's team made up of League Officials and Team Managers coached by Jack Eyth (Guzzlers). Each team wound up winning one-half of the game. After the women recovered from a shaky start,

they played tough and outscored the Managers over the last four innings of the seven inning game.

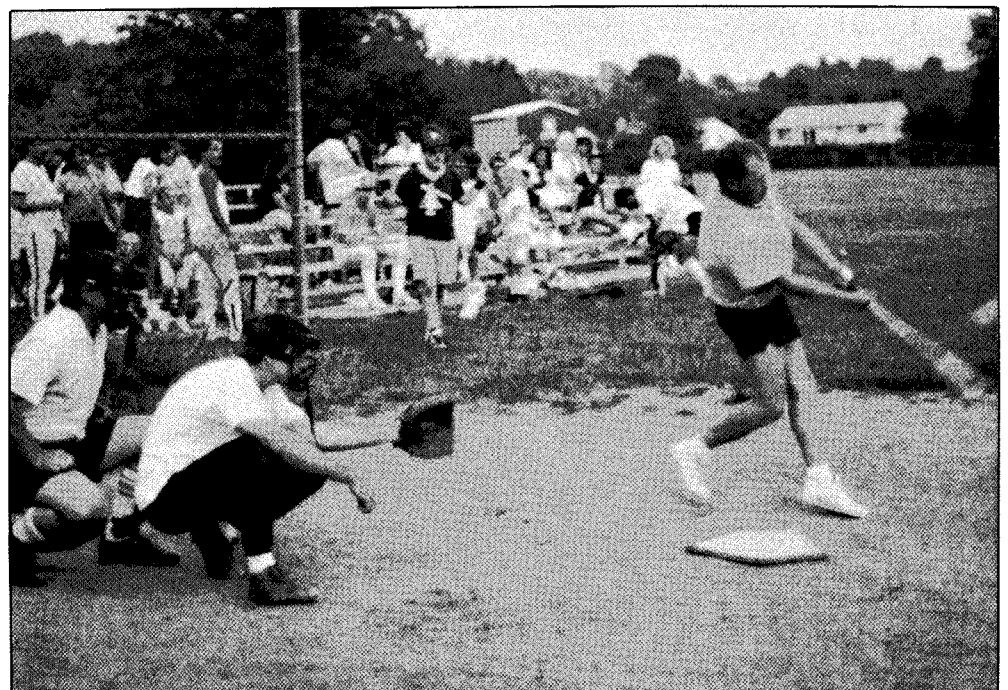
The Regular All-Star game followed in which an "ODDS" team managed by Sharon McKay (Intimidators) challenged an "EVENS" team coached by Dave Whitenack (Bandits). The game was close until the eighth inning when the EVENS pulled away, coasting to a nine-inning 14-7 victory. The game was highlighted by 5 home runs, two by Stan Zajdel (Bandits). Joel Wexler (Misfits) was the winning pitcher for the EVENS.



Fans line up for free hot dogs and hamburgers which attracted as much attention as the two all-star games.



Mark Lilly (Code 6052), who organized the annual all-star extravaganza, gets ready to stroke a single in the women's all-stars vs. league managers opening game. The catcher is Angela Lawson.



Scott Rice (Dyna Corp) bats during the regular all-star game with catcher Jack Connors (Code 6013) and Umpire Bob Bello (Code 1022) looking on.

## Golfers invade Limekiln at 'high noon.'

By Pete Brown

On September 12th, another "High Noon" crush by 68 W&R golfers at Limekiln G.C. sent Curt Simmons to the 19th hole for good! A 1989 season low net record was set by J. Orr, as J "Double-Figures" Bowes "calmed him down" throughout the round. A three-way tie for second at 64 was shared by J. Scott, B. "Too Hot" Wiggs, and R. "8?" Yeager. F. Vaow took gross honors with a solid 75, followed by B. "Mr. Consistent" Harvey, "Relax"

Muller, and Curt "Publinks" Swatchick at 80. Closest to the pin awards went to M. "9-Iron" Mirabella, D. Vrabe, F. Vaow, and J. Orr. John "69" Nottage captured the longest drive with a 278 yard poke on #4.

This tournament concluded the W&R individual and better-ball play for the summer, while the scramble at Locust Valley G.C. in October wraps up the W&R golf calendar for the year. Get out the wool hats and gloves for winter golf!

### Planned your vacation yet?

To help with all of your personal travel arrangements, call SATO Travel, ext. 2729, Mon. thru Fri., 8 AM to 4 PM.





**In This Issue:**

- Non-smoker fumes
- Female aircrew gear developed
- 3rd Qtr. SOQ/BJQ named
- Mission Analysis explored

## Twelfth Annual CO/TD awards presented



**Color guard parades to full house in Hangar 3 during the awards day ceremony.**

Photo by NADC Photo.

**By Mary Ann Brett**

Hundreds of employees and friends witnessed the twelfth annual CO/TD awards presentation in Hangar 3 on October 4. The color guard paraded ceremoniously, CDR Wayne Vanderslice sang the national anthem

and Associate Technical Director Robert Becker along with Center Commander Curtis Winters and Technical Director Guy Dilworth offered opening remarks to the audience and twelve unsuspecting winners. (See story /photos on pages 5 and 6.)

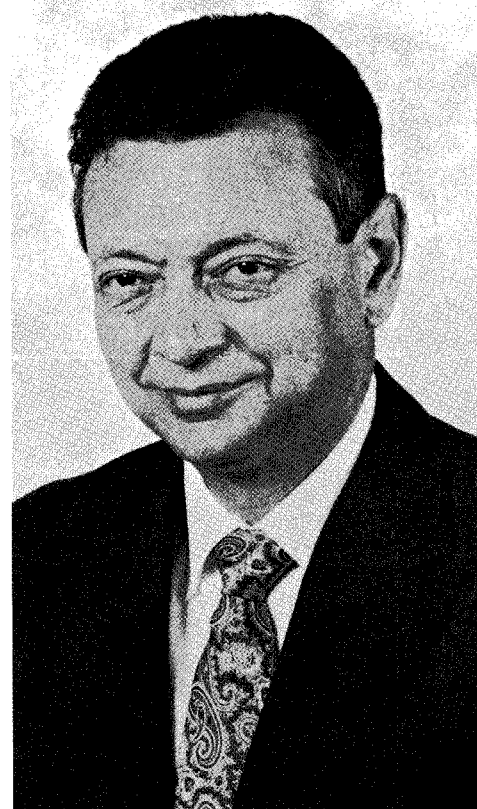
## Metersky elected Vice President, Naval Operations Research Society

**By Mary Ann Brett**

NADC's Dr. Morton L. Metersky was elected Vice President of the Military Operations Research Society (MORS). Sponsored by the Army, Navy, Air Force and Assistant Secretary of Defense through a contract with the Office of Naval Research, MORS is a professional society whose purpose is to enhance the quality and effectiveness of military operations research by conducting classified symposia. According to MORS, its annual symposia are attended by as many as 900 civilians and military.

Metersky, presently head of Fleet Interface in the Warfare Systems Analysis Department, has worked at the Center for 29 years. He has an undergraduate degree in Aeronautical Engineering, Master degrees in Applied Statistics and Management Science and a Ph.D. in Business Administration.

Additional information on MORS is available from Metersky, Code 30D, extension 1817.



**Morton Metersky**

Photo by NADC Photo Lab

### Hugo reeks havoc

## NADC harbors St. Croix hurricane victims

NADC had three research vessels and 17 contract employees in the St. Croix, VI area when hurricane Hugo developed in the latter part of September. All the crews were manned by General Offshore Corporation (GOC) contract personnel. The three vessels survived with no significant damage and none of the contract employees were injured although the majority of these employees who lived on the island were left without homes, food or water.

Fortunately, the vessels were preparing for upcoming operations and had received full provisions and fuel just prior to the hurricane alert. They were able to provide food and shelter for as many as 200 government related personnel and families per day with many remaining overnight. They also provided search and rescue support for the St. Croix public.



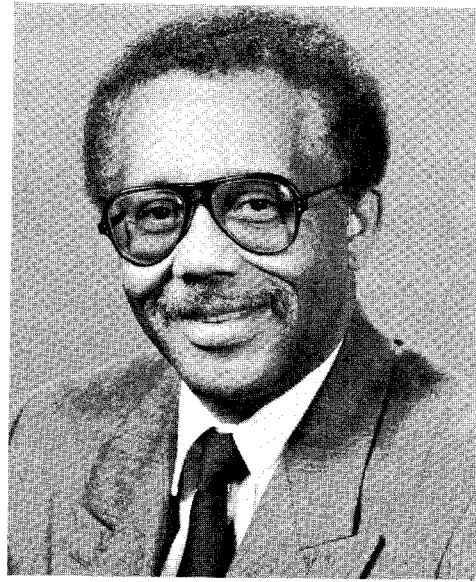
**Front view of the Naval Avionics Center (NAC) Ham's Bluff test facility at St. Croix. The facility was used to test production sonobuoys (see add'l photos page 4).**

Photo provided by General Offshore Corp.

# Command Corner



**Captain Curtis J. Winters**  
Center Commander



**Guy C. Dilworth, Jr.**  
Technical Director

## To all hands:

### Shoppie to act as Associate TD

CAPT Winters and I are assigning Mr. Thomas J. Shoppie the additional duty of Acting Associate Technical

Director for an indefinite period. This assignment is effective 11 October 1989.

*C.J. Winters*  
CAPT Curtis J. Winters  
Center Commander

*Guy Dilworth*  
Guy Dilworth  
Technical Director

## If the SOC Fits

By Robert Janes

The big news this year throughout the government in the Standards of Conduct (SOC) arena has been the Procurement Integrity Law. Most of you have undergone the training and signed the requisite certificate since you are, on at least an occasional basis, procurement officials. Many questions still persist concerning the law. I addressed some of the most common questions in a 14 August memo that went out to each department. If you have not seen that memo and would like to, please call the Office of Counsel on extension 3000 and we can provide a copy for you.

This column will touch on some of those recurring issues regarding this law. There is still some confusion concerning the post-government employment prohibition on people who serve as procurement officials. The law does not prohibit all employment with a contractor with whom you had been involved as a procurement official on a government contract. You are prohibited merely from working on that contract for two years after your procurement official's duties ended. Service on other contracts is permissible. Although this is very clear in the law, there have been some misleading articles about it, and some resulting confusion among federal employees.

Another common area of questions concerns who is covered by the law.

COTR's performing post-award COTR functions are not covered except when involved in a modification adding work to the contract, since the law only covers the period up until award of a contract (or applicable contract modification). People involved in the issuance of task orders are not covered, for those are post-award actions taken within the scope of an existing contract. In addition, the regulations provide that people who review a procurement solely for compliance with budgetary or administrative procedures are not substantially involved in that procurement and thus are not procurement officials.

One other big area of inquiry concerns the consequences of a failure to certify. If someone does not sign the certificate, what can happen? First, if the position does not involve duties as a procurement official, there is no need for the incumbent to sign the certificate. If, however, the position requires performance as a procurement official as an occasional part of the job (as is the case with most jobs at the Center), then signing the certificate may amount to a condition of employment, much like possession of a security clearance. In such a case, a person who refuses to sign is no longer capable of performing the job, and would need to be reassigned to another position where performance as a procurement official is not necessary. If no other such position exists, then removal from employment is the logical result.

# Letter to the Editor

Dear Editor

This letter is written in protest to the current smoking restrictions at NADC. I am for total restriction of smoking at NADC. Although many companies in the area have enacted such a policy, NADC has not yet done so, but hopefully NADC will soon be smoke free.

The current regulations unfortunately have moved the smokers from the immediate workplace into the general population (hallways). In my division of about 75 persons few or none smoke. I was not exposed to smoke before the regulation, but now I am constantly exposed in the hallways. The areas that were selected for smoking, especially in building 2, are main hallways adjacent to heavily used entrances. I come into work in the morning and the first thing I am exposed to upon entering the building is smoke and smell. I feel it is not a very good image to present to visitors. As well, it is a health concern. We have

people walking in hallways smoking, cigarette butts thrown on floors and congregations of smokers in main areas.

I have made an informal complaint about this and I was told to file a grievance. I really do not want to do this. I have talked to many others with similar complaints. A petition was started about this but I do not think it was ever carried through.

The answer is simple! Smoking kills and causes immeasurable illness. I am not asking that those who want to do it stop. I am just asking that we set aside areas that do not cause the non-smokers to breathe the secondhand smoke. Common sense demands this. NADC's solution to the Washington mandated regulation was not, in my opinion, carried out properly. I wish that those who feel the way I do would speak up and be counted. It's your life and you have the right to breathe clean air!

Doug Crompton  
Code 5051

## Commander Salutes

**Donald Furmanski (Code 20):** For your superior performance in support of the V-22 OSPREY program.

**Nicholas Coggia (Code 50):** For "extraordinary and unsolicited support" in restoring failed ASW Recording Equipment to operational status.

**LCDR Michael Messick, Edgar Reed, III (Code 20); William Bogdan (Code 30):** For outstanding contribution to the Advanced Tactical Surveillance briefing to aerospace industry representatives and military personnel.

**LCDR Michael Messick, Donald Gluter, Walter Beamer (Code 20); James Brindle, Lewis Lippel, William Mulley, Dr. Norman Warner (Code 60); Ralph Lachenmaier (Code 50):** For participation in briefings to Lockheed Aeronautical Systems and Sanders.

**Stephan Bazow (Code 20):** For invaluable assistance as the Acting Deputy Program Manager, Fleet Liaison and Logistics Manager for the Tactical Aircraft Mission Planning System Program.

**GREAT AMERICAN** AMERICAN CANCER SOCIETY

**SMOKEOUT**

★

**TAKE A BREATH**

Join the Great American Smokeout on Thursday, November 16. Millions of smokers across the country will take a break and try not to smoke for 24 hours. How about you? Or, if you don't smoke, adopt a smoker for the day and promise to help that friend get through the day without a cigarette!

85-7MM-Rev. 4/87-No. 5680-LE

**A FEW QUIT TIPS**

Hide all ashtrays, matches, etc.  
Lay in a supply of sugarless gum, carrot sticks, etc.  
Drink lots of liquids, but pass up coffee & alcohol.  
Tell everyone you're quitting for the day.  
When the urge to smoke hits, take a deep breath, hold it for 10 seconds, & release it slowly.  
Exercise to relieve the tension.  
Try the "buddy system," and ask a friend to quit too.

**Reflector**

NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA

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<b>Assistant Editor</b> .....	<b>JO2 Michael Delledonne</b>
<b>Assistant Editor</b> .....	<b>Margaret Vigelis</b>



## Executive Leadership Development Program

# Gause graduates; Alston begins

By Mary Ann Brett

Deputy EEO Officer Kathleen Gause was the first from NADC to participate in the DoD Executive Leadership Development Program (ELDP). The second is Jocelyn Alston of the Air Vehicle and Crew Systems Technology Department.

ELDP was designed to develop broad DoD leadership and management skills for selected civilian and military personnel by providing intensive exposure to and first-hand experience in state-of-the-art DoD management processes.

Gause discussed some of her experiences during the program. "We learned to work as team members," she said, "and that team results are greater than the sum of individual efforts." She added, "We learned to make mistakes, to take risks, not to take "no" for an answer, to delegate, and to remember there will always be fewer resources and time than we might like." Gause also said her 'hands-on' experience during the program gave her an appreciation for the dedication of men and women in the military.

Based on discussions with Gause, Alston said of her decision to



**Kathleen Gause**

Photo by NADC Photo Lab

participate in ELDP, "I was apprehensive initially, but I really expect it to be a wonderful experience. It will be very beneficial to have my strengths and weaknesses identified and to improve not only as an individual but also as a contributor to NADC."

Alston, a mechanical engineer, has worked at NADC for nine years. For



**Jocelyn Alston**

Photo by NADC Photo Lab

three of those years she participated in the Navy Civilian Logistic Intern Program which enables select participants to work at various government facilities across the country. Alston has a BS in Mechanical Engineering from Widener University, Chester, PA.

The five-phase Executive Leadership Development Program addresses

subjects including communications skills, problem solving, interaction as team members, management techniques and understanding the DoD organization, operations and procedures. Phase I consists of completing reading assignments and self testing on the participant's personal time. Phase II requires about three days away from the office so current skills can be assessed through diagnostic instruments. Phase III is an extensive, on-site two-week training experience based on the Army's mandatory program that trains Captains to become staff officers. Phase IV covers essential areas such as the DoD structure, the national perspective, a Capitol Hill seminar, operational or corporate politics, and hands-on exposure to the operations of the Army, Navy, Air Force, Marines and Coast Guard. Phase V may be a first-hand look at how NATO operates in Europe, or it may be a case study briefed at high levels of DoD. For the past three classes, it was eight days, via a C130 aircraft, to military bases in Belgium, Germany and Italy.

If you would like additional information on the program, call the EEO Office, extension 3061.

## Center develops aircrew gear for females

### Air Vehicle and Crew Systems

By Suzanne Reeps

The number of United States Navy and Marine Corps aviation designated women has increased substantially over the past twenty years. Along with this increase has come the ever pressing requirement to provide these female aircrewmembers with safe and effective protective clothing and life support equipment.

Here at the Naval Air Development Center, engineers and scientists in the Human Factors and Protective Systems Division address the variety of problems which arise in trying to accommodate these female aircrew with clothing and equipment designed for men.

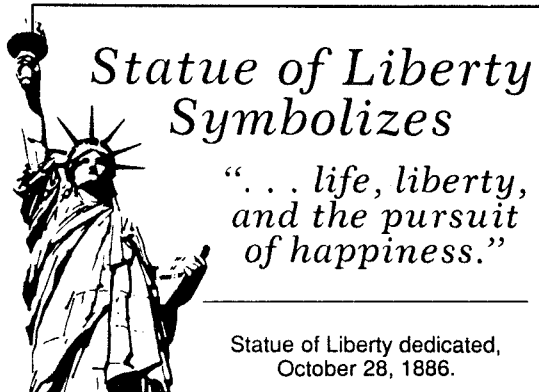
The Center has applied various methods and solutions that have been successful in addressing both the particular needs of individuals and the specific items of clothing and equipment.

Depending on the item of equipment or clothing, accommodation has been accomplished by the addition of smaller sizes, by Fleet installed modifications to improve fit and reduce size of standard issue items, by procurement of custom-made items based on individual body measurements, or by customized modifications developed jointly by NADC and Fleet maintenance personnel.

Based on reports and personal interviews with currently qualified female air crew personnel, problem areas remain such as the need for redesign of some critical performance items, such as anti-exposure suits to reflect female anthropometry. Also needed is the redesign of all aircrew clothing items to accommodate body waste elimination by females. These areas will provide the basis for work in this continuing effort.

*(Editor's note; Suzanne Reeps is the team leader for aircrew protective clothing in the Human Factors Protective Systems Division, Air*

*Vehicle and Crew Systems Technology Department.)*



## NADC hosts ATS briefing to industry

On 25 August 89, NADC hosted a briefing to over 300 industry personnel on the Advanced Tactical Surveillance system (ATS), a multimission system planned to replace the E-2C/EA-6B/S-3B/ES-3A aircraft. The briefing included acquisition strategy and system operational requirements and was highlighted by presentations from both RADM Friichtenicht (AIR-01) and RADM Taylor (OP-50). NADC presented the Top Level Performance Requirements document which was written by members of the Center's ATS design team. NADC has taken the lead in the definition and development of this new system which has been identified by OP-05 as a high priority for the future of carrier aviation.

### January 1990 General Schedule Pay Chart

	1	2	3	4	5	6	7	8	9	10
GS-1	\$10,581	\$10,935	\$11,286	\$11,637	\$11,990	\$12,197	\$12,544	\$12,893	\$12,910	\$13,232
2	11,897	12,180	12,574	12,910	13,053	13,437	13,821	14,205	14,509	14,973
3	12,982	13,415	13,848	14,281	14,714	15,147	15,580	16,013	16,446	16,879
4	14,573	15,059	15,545	16,031	16,517	17,003	17,489	17,975	18,461	18,947
5	16,305	16,849	17,393	17,937	18,481	19,025	19,569	20,113	20,657	21,201
6	18,174	18,780	19,386	19,992	20,598	21,204	21,810	22,416	23,022	23,628
7	20,195	20,868	21,541	22,214	22,887	23,560	24,233	24,906	25,579	26,252
8	22,367	23,113	23,859	24,605	25,351	26,097	26,843	27,589	28,335	29,081
9	24,705	25,529	26,353	27,177	28,001	28,825	29,649	30,473	31,297	32,121
10	27,208	28,113	29,020	29,927	30,834	31,741	32,648	33,555	34,462	35,369
11	29,891	30,887	31,883	32,879	33,875	34,871	35,867	36,863	37,859	38,855
12	35,825	37,019	38,213	39,407	40,601	41,795	42,989	44,183	45,377	46,571
13	42,601	44,021	45,441	46,861	48,281	49,701	51,121	52,541	53,961	55,381
14	50,342	52,020	53,698	55,376	57,054	58,732	60,410	62,088	63,766	65,444
15	58,216	61,190	63,164	65,138	67,112	69,086	71,060	73,034	75,008	76,982
16	69,451	71,766	74,081	76,396	78,190	79,438*	81,708*	83,978*	85,470*	
17	79,762*	82,420*	85,078*	85,470*	85,500*					
18	86,682*									

\* The rate of basic pay payable to employees at these rates is limited to the rate for Level V of the Executive Schedule, which will be \$78,200.



**Captain Curtis J. Winters**  
Center Commander

## Scientific Achievement

Dr. Leonard J. Buckley of the Aerospace Materials Division, Air Vehicle and Crew Systems Technology Department received the award for Scientific Achievement. This award is for bringing significant recognition to the Center for major scientific achievements.

Buckley was recognized for his investigation of conductive polymers resulting in materials possessing many unique physical properties leading to a wide variety of applicators for Naval aircraft. His efforts in this area generated several patents for the Navy. Buckley also led the development of a temperature stable epoxy resin system suitable for Naval aircraft composite repair. Repair techniques using his system are now in use at Naval Air Depots throughout the country. Buckley was cited for work vital to the continued safety and mission performance of Naval aircraft.

Commenting on his career and award, Buckley said, "I have enjoyed the freedom to pursue specific research projects, and the atmosphere, responsibility and people at NADC have provided me the vehicle for a successful career."

Buckley has worked at NADC for twelve years. He has a BS in Materials Engineering from Drexel University, an MS in Polymer Science and a Ph.D. in Materials Science and Engineering, both from the Massachusetts Institute of Technology.

## Engineering Achievement

The Award for Engineering Achievement was shared by Thomas R. Polaneczky and David C. Miller. This award is for bringing significant recognition to the Center for major engineering achievements.

Thomas Polaneczky of the Acoustics Development Division, Mission Avionics Technology Department was credited for 24 years

"It is with great pleasure that we present to you the 1989 Naval Air Development Center Awards

..."

dedicated service in acoustic antisubmarine warfare. Polaneczky has served as the Navy's Senior Acoustics Engineer on most of the helicopter sonars presently or being introduced into the Fleet. Some of his significant engineering accomplishments are associated with the AN/AQS-13F helicopter sonar. Polaneczky personally conducted comprehensive engineering analyses to define all system requirements. His efforts convinced headquarters to reverse their decision and seek competitive development of the sonar with NADC serving as the lead laboratory. Polaneczky was recognized for his role in the Center's designation as prime laboratory for CV Helicopter Preplanned Product Improvement Program and his current role as Project Engineer for the Airborne Low Frequency Sonar.

David Miller of the Systems Technology Division, Systems and Software Technology Department was recognized for his efforts as a System Avionics Design and Development Engineer. He was one of the original ANEW P-3C designers and has continued to make contributors directly supporting the Navy's airborne antisubmarine warfare squadrons. The design and development of an Acoustic Generation System was touted as Miller's most significant engineering accomplishment. This system and Miller's efforts were acclaimed as resulting in providing the LAMPS, S-3A, P-3C, ADAPT, ASP and ASWEL labs with an acoustic simulator capable of supporting advanced development and Fleet support missions.

Miller's other accomplishments include designing and developing a microprocessor-based calibration unit for the BEARTRAP project resulting in a 20-to-1 time savings in mission pre-flight procedures as well as technology transfer development work on hearing and sight devices for severely brain-damaged children.

# Twelfth Annual Comm Achievement A



Winners of the 12th annual Commander/Technical Director Achievement Awards display their plaques, certificates and checks for \$3,000 on the stage after the ceremony. L. to R.: Dr. James Sheehy (Junior Professional Achievement), Charles Haney (Project Leadership), Barbara Ward (Administrative Support), Joan Bilodeau (Administrative Support), Joseph Kaszupski (Equal Employment Opportunity), Thomas Polaneczky

## Aviation Support

The award for Aviation Support was shared by CDR David (Tim) Cudia, USN and AT1 Kevin S. Landis, USN. This award is for making an outstanding contribution to the technical research, development or evaluations mission through personal endeavor in the maintenance, modification, installation or logistic support of aircraft assigned to this Center.

CDR David Cudia was recognized for comprehensive knowledge of aircraft maintenance and supply procedures, coupled with a keen ability to obtain formal and informal support for Center projects and aircraft. His leadership was responsible for an unprecedented aircraft availability rate of 95% while the Navy-wide goal is 72%. Cudia was also credited for superbly managing the technical aspects of matching and installing NADC research and development projects with complex aircraft systems resulting in the timely completion of many highly technical projects.

A 34-year Navy veteran, Cudia will be assigned as Maintenance Officer at the Naval Air Station Brunswick, Maine late October 1989.

AT1 Kevin Landis was credited for his superior knowledge as an Electronics Quality Assurance Representative. He has conducted quality assurance inspections, provided technical assistance for project installations and conducted project tests as an In-Flight Electronics Technician. Landis was recognized for engineering of communications update

for two UP-3A aircraft and the first AN/ARC 182 YHF/VHF radio installation in a P-3C aircraft.

## Project Leadership

The Project Leadership Award was shared by Charles Haney of the Microwave Technology Division, Mission Avionics Technology Department and Squadron Leader John E. Coote, RAF. This award is for bringing significant recognition to the Center for major achievement through project leadership.

Charles Haney, who has been an NADC employee for 26 years, was credited for outstanding contributions to the Navy's Reconnaissance and Intelligence Systems including the P-3 Synthetic Aperture Radar (SAR) testbed. He was involved in virtually every phase from initial feasibility investigations, through assembly and integration of the state-of-the-art system into the P-3 aircraft, to eventual delivery and operation in several major test exercises. His accomplishments in these efforts proved critical to successfully resolving oceanographic uncertainties crucial to the Navy's over all mission.

Haney was cited for his professional attitude, management qualities and personal standards which raised morale, improved agency communications and cultivated excellent relationships with Center sponsors. He attributed his award to "excellent teamwork."

Squadron Leader John Coote, was cited for his efforts in the Antisubmarine Warfare Systems

★ ★ ★

Congra



# Award/Technical Director Awards Presented

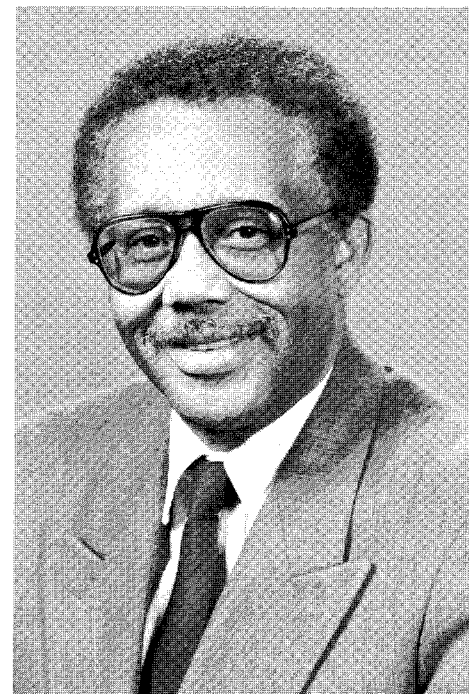


(Engineering Achievement), LCDR David Cudia (Aviation Support), Dr. Leonard Buckley (Scientific Achievement), AT1 Kevin Landis (Aviation Support), Frank Scheetz (Analysis/Analytical Achievement), LCDR Brian Gritte for Squadron Leader John Coote, RAF (Project Leadership), David Miller (Engineering Achievement) not shown.

**“We are proud to recognize you as an important and valuable member of the NADC team ...”**

*C. J. Winters*  
**CAPT Curtis J. Winters**  
 Center Commander

*Guy Dilworth*  
**Guy Dilworth**  
 Technical Director



**Guy C. Dilworth, Jr.**  
 Technical Director

Bilodeau, who has worked at the Center for 16 years said, “This award is the highlight of my career I’m proud for my department, for the other secretaries and for myself. It will make retiring anticlimactic!”

**Barbara Ward** was credited for her accomplishments in managing the Center’s recruitment program including meeting annual hiring goals for scientists and engineers (S&E) and exceeding goals for minority and female hires. Ward also conceived and implemented the Networks and Subsidy Plus programs and co-authored the Center’s S&E Acquisition Plan.

Ward has worked at NADC for 16 years and is currently the Chairperson of the Chief of Naval Operations Cooperative Education Council. Earlier this year she received the Philadelphia Area Staffing Society First Excellence in Staffing Award.

## Equal Employment Opportunity

**Joseph Kaszupski** of the Microwave Technology Division, Mission Avionics Technology Department (MATD) received the Equal Employment Opportunity Award. This award is for bringing significant recognition to the Center for major achievement in promoting Equal Employment Opportunity.

Among other accomplishments, Kaszupski was credited for serving on the Center EEO Committee and chairing both the MATD EEO Committee and the Center Handicapped Outreach Committee which encourages physically handicapped pre-college age students to pursue higher education in science and engineering. He was also instrumental in hiring a physically disabled college student majoring in engineering as a Center summer aid and organizing an aggressive campaign to recruit Hispanic scientists and engineers which resulted in hiring two engineering candidates.

In reaction to the award Kaszupski said, “It reflects on all those who helped me. When you work with good people, you can accomplish a lot.”

Superiority Study Circa 2000, the on-going Carrier Air Wing Study 2010, the Strike/Anti-Surface Warfare (ASUW) Architecture project, and the A-12 medium attack aircraft development program.

As a key participant in the SPAWAR Strike/ASUW architecture project, Scheetz conceived and developed a highly innovative TACAIR intensive concept of operations employing hypersonic vehicles of various sizes, configurations, and capabilities to perform the various Strike/ASUW tasks.

In his role as Manager for Advanced Support Aircraft Systems, Scheetz was cited for his efforts as the technical specialist, advisor, and program manager in support of NAVAIR pre-milestone zero technology base studies for all Navy and Marine Corps support aircraft.

## Administrative Support

The Administrative Support Achievement Award was shared by Joan M. Bilodeau of the Communication Navigation Technology Department (CNTD) and Barbara Ward of the Civilian Personnel Department. The award is for significant and identifiable contributions to the smooth and efficient operation of the Center.

**Joan Bilodeau** was recognized for her capabilities and years of dedication and outstanding service as secretary to the Head of CNTD. She was credited for her assistance to the Institute of Navigation, expert interpretation of Center instructions, quality control of letters and documents, and expertise in the foreign travel field.

(NVG) performance and the interaction of laser eye protection with NVG resolution.

Recognized as an exceptional scientist and scholar whose work is essential in maintaining aircrew performance under conditions of degraded visual capability or optical threat. Sheehy said of his five years at NADC, “I enjoy what I do.” Sheehy has a Masters degree in Human Factors Engineering from Rensselaer Polytechnic University and a Ph.D. in Visual Psychophysics from Pennsylvania State University, 1984.

## Analysis/Analytical Achievement

**Frank L. Scheetz**, of the Tactical Air (TACAIR) Analysis Division, TACAIR Systems Department, was presented the Analysis/Analytical Achievement Award. This award is for bringing significant recognition on the Center for major achievements through the application of engineering and scientific analysis.

Scheetz, an aerospace engineer who has worked at NADC for 21 years, was credited for gaining recognition at the Chief of Naval Operations, the Center for Naval Analysis, the Space and Naval Warfare Operations, the Center for Naval Analysis, the Space and Naval Warfare Systems Command (SPAWAR), and the Naval Air Systems Command (NAVAIR) for his development of analysis methods and for approaches to resolving complex analysis problems in the Tactical Air Warfare Mission area. These tools have been used successfully on the Naval Air

Department during the Channel Expansion (CHEX) software development and delivery from 1985 to 1989, the term of his assignment to NADC. He was credited for being the stabilizing influence and motivating force in getting the CHEX program into final Technical and Operations Evaluations. Coote set up a strategy to have CHEX independently evaluated by active Fleet units. These users confirmed the superiority of the product and elected to use CHEX software.

## Junior Professional Achievement

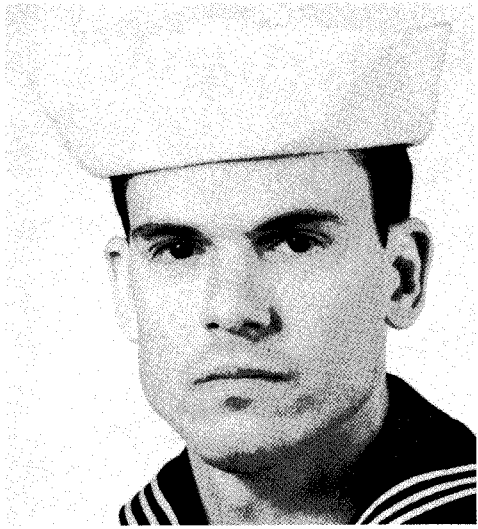
**Dr. James B. Sheehy** of the Air Vehicle and Crew Systems Technology Department received the award for Junior Professional Achievement. This award is for bringing significant recognition on the Center and for significant professional achievements during the early portion of his/her career.

Sheehy was cited for accomplishments in visual performance and protection of aircrew personnel. His efforts have been instrumental in assuring that the design requirements for the new generation of night vision devices are based on enhanced rather than degraded visual performance. Sheehy also designed and implemented the Night Imaging and Threat Evaluation laboratory for the Marine Corps. This facility is now used to train all Marine Air personnel in the use of night imaging devices, the effects of laser irradiation on night vision goggle

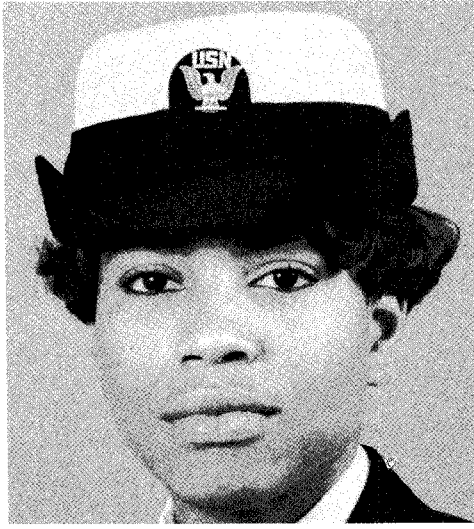
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# 3rd quarter sailor and blue jacket named



AW2 Chris Henderson



AC3 Deidre Wilkerson

By JO2 Michael Delledonne

## SOQ

"I was convinced the selection board wasn't going to choose me." That was the feeling of AW2 Chris Henderson on being selected as NADC's Sailor of the Quarter.

"They asked me if I wanted to be nominated, but I was a little apprehensive," said the 26-year-old from New York. "I decided to give it a shot. I knew the other nominees were going to be tough to beat."

A Navy veteran of five years, Henderson wasn't expecting anything. "Senior Chief Petty officer Markum called me into his office and told me I did a good job at the board, but he never mentioned anything about winning the

award. Chief Hooper accidentally told me at his going away party. I wondered if he had his facts straight."

Assigned to VP Projects, Henderson works on test and evaluation schedules. He also is a technical advisor to engineers on what might or might not work in the Fleet. "Basically my job is to let them know if what their planning will be practical or not."

I like NADC a lot," said Henderson, who has been stationed here for more than a year. "I enjoy working with the people, both military and civilian. The Center offers you the chance to get involved with different projects. You are unlimited in what you can do."

## BJQ

One for one. AC3 Deidre Wilkerson is batting a thousand on being selected NADC Bluejacket of the Quarter on her first nomination.

The 22-year-old Detroit native was extremely happy on being nominated. "I was very excited, but I didn't know what to expect," said Wilkerson. "I wasn't sure what the board would ask, but I was told that my chances were pretty good."

Wilkerson, a Navy veteran of almost three years, said winning the award was bittersweet. "I felt really good when I won, but when I found out nobody else ran I was a little disappointed. I wanted to compete and test myself against somebody. No matter who it would have been I would have felt very confident of winning."

Stationed at NADC for over two years, Wilkerson described her job as a jack-of-all-trades. "I go to Philadelphia to pick up different charts, put NOTAMS (Notices to airman) on the board. Just a little bit of everything."

Wilkerson felt what helped her win the nomination was her being a people person. "If I see somebody not getting treated right I speak up and try to get things right. I just like to try to help out."

## Volunteer gets chilled to the bone

By JO2 Michael A. Delledonne

You're on a helicopter when it goes down in Alaskan waters. The water temperature is 35 degrees F and the air temperature in 32 degrees. How long could you survive in this harsh environment? Not long! Here at the

Center, human test subjects who participated in the Cold Water Evaluation of Passenger Anti-Exposure Survival System (PAESS) actually volunteered to endure these conditions in the cold water chamber. One of them is HM2 Brian Brown.

The goal of the study was to develop a constant wear passenger anti-exposure survival system which could provide an individual with up to two hours of thermal protection. The system was to keep the individual's body temperature above 95 degrees and requires a minimal amount of training. The stages ranged from wearing just a flightsuit and winter flight jacket to a waterproof coverall worn over the standard flight gear. The individual entered the water where he would float for one minute then climb into a canopied raft.

"The first thought in somebody's mind is why would anyone go through this?" said Brown. "I asked myself that when I went into the water. I did this because the work they do here is fascinating and I wanted to be as much a part of the project as I could. This way, I could see the testing from the subject's point of view rather than just watching monitors."

The 24-year-old sailor, who has been stationed at NADC for almost a year, was still a bit apprehensive.

Brown noted the coldness of the air is what surprised him the most. "I knew

the water would be cold, but the numbing chill in the air caught me off guard."

The six-year Navy veteran then experienced the brutally cold water for the first time. "I tried to walk into the water as normally as possible," he said. "For about a minute I was hyperventilating. I just couldn't seem to catch my breath. I could feel the heat leave my body. It--was--cold!"

The test ends when the person's core temperature reaches 95 degrees or at the two-hour time limit. The test subject can also request at any time to stop the run.

Brown lasted 30 minutes this particular run before his core temperature dropped to 95 degrees. "The first 15 minutes wasn't that bad once I got into the raft and sealed it up. But you're shivering so much that eventually your muscles give out. The last five or ten minutes was really tough."

After extraction from the water, which, as Brown put it, made him "way happy," the rewarming process began. "The medical personnel put you in 104 degree water in a bathtub and begin to pour water over the center of your body. It took about 45 minutes to rewarm me."

LT Richard Hamilton, NADC Flight Surgeon, said the subjects can't have a

*Continued on page 7*



Photo by JO2 Michael Delledonne

HM2 Brian Brown enters the cold water chamber.

## Hugo reeks havoc at NADC St. Croix, VI

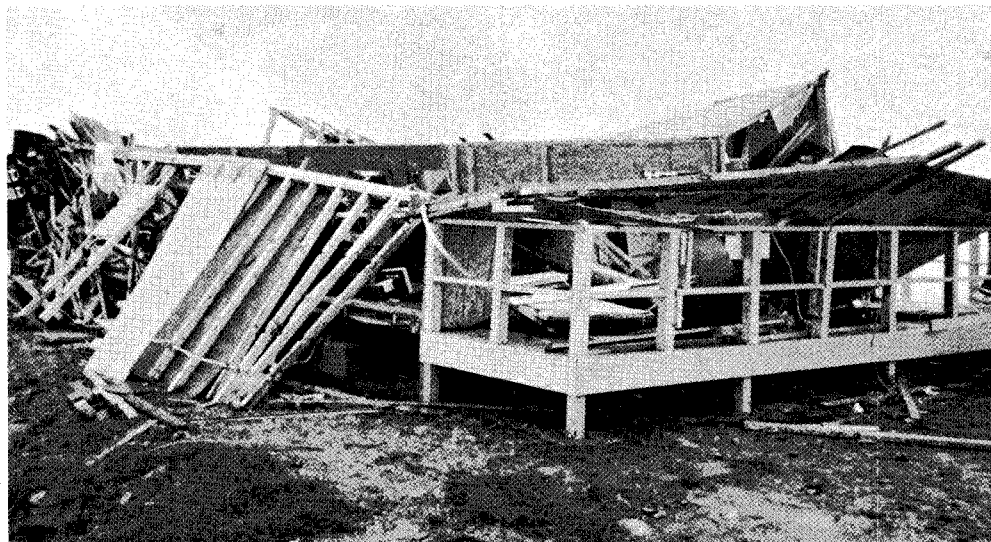


Photo by General Offshore Corp.

NAC southeast test range building (or what's left of it) where NADC engineers tested sonobuoys.

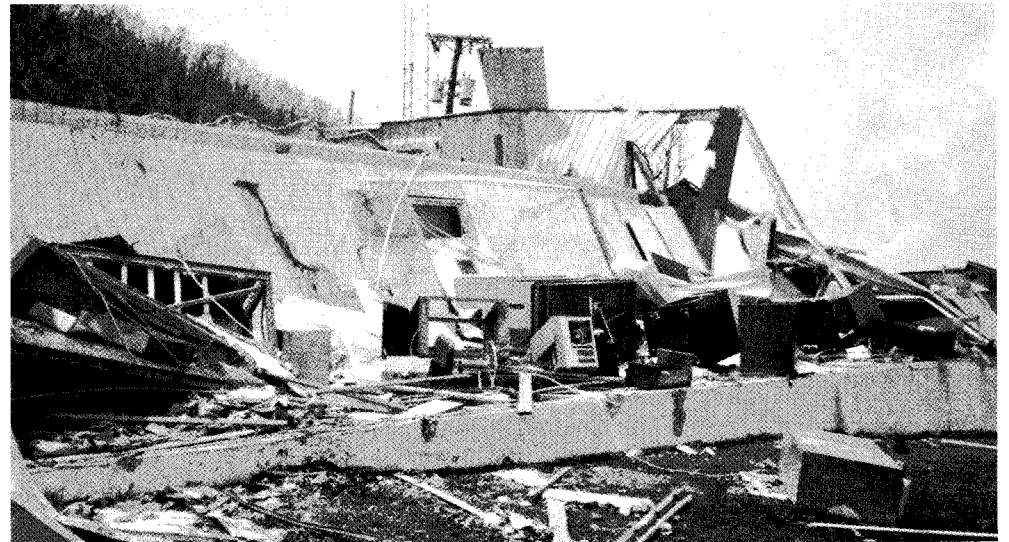


Photo by General Offshore Corp.

Rear view of front page photo shows in detail the devastation hurricane Hugo left as a calling card.



## Integrated Tactical Training

# NADC explores advanced mission analysis

## Air Vehicle & Crew Systems TACAIR

By Norman Melling

The Air Vehicle and Crew Systems Technology Department with the Tactical Air Systems Department are assessing the potential implementation, demonstration and evaluation of the Advanced Weapon System Information Management Mission Analysis (AWSIMMA). This is a joint effort with the Naval Air Test Center to expand the role of the Tactical Training Mission Analysis (TTMA) capability being developed by the University of Maryland. TTMA is a concept to record all the information transmitted over the data bus of military aircraft for post flight analysis as feedback to improve mission effectiveness.

For the battle force to gain significant

benefits from post time analysis, the entire sortie reconstruction needs to be performed in near real time. The problem of analyzing tactical aircraft performance on a sortie is compounded by the enormous amount of on-board real-time data being processed.

The AWSIMMA which uses state-of-the-art technology would significantly benefit training and provide operational deployment feedback.

Demonstrations on specific aircraft such as the F-18 leads to establishing interoperability, compatibility, and performance evaluation standards capabilities with our Tri-Service and NATO partners. As interoperability issues are identified and evaluated, it

also lays the ground work for the Integrated Strike Planning System, performance requirements and deployed battle force model performance evaluations. This evaluation need not be limited to specific canned test ranges, but can allow fleet pilots, while deployed in distant areas such as the Indian Ocean or the South Pacific, to perform advanced tactical training and evaluations without test range restrictions.

"Train like you fight; fight like you train" aspects are operational benefits of AWSIMMA incremental developmental approach. They evaluate pilot and system proficiency and establish data base requirements

as well as provide total awareness of the situation at hand. In addition, the AWSIMMA tactical fusion processor can provide the key element for post time analysis of fleet exercises drawing close ties with the laboratory community.

Other Navy mission areas will be explored at the AWSIMMA capability is demonstrated. These include antisubmarine warfare, mine warfare, amphibious, arctic and survey operations.

*(Editor's note: Norman Melling is a Navigation Systems Engineer in the Signal Processor/Computer Systems Technology Division, Mission Avions Technology Department).*

## Technical Highlights

### Mission Planning

The NADC Tactical Aircraft Mission Planning System (TAMPS) is now operational in the Mission Planning Lab. This system will be used for IV&V of new TAMPS system enables a strike pilot to plan his mission for enhanced survivability by using digital terrain elevation data and intell data on threat locations and capabilities to plan a mission profile which minimizes threat exposure. The TAMPS system is currently deployed on all CV's in support of fleet ops and is used at a number of shore facilities for training.

The F/A-18 Data Transfer Equipment (DTE) has been installed in the Mission Planning Lab. The DTE

provides mission planning and maintenance data download functions for the F/A-18. The DTE will be interfaced with TAMPS for loading mission planning data into the F/A-18 via the Data Storage Unit (DSU).

### Medium Range UAV Initial Design Review

A NAVAIRDEVCCEN contingent of 13 engineers and scientists, lead by Carl Reitz and John Metzger supported the Medium Range UAV initial design review at Teledyne Ryan Aeronautical, the prime contractor. The Joint Service Medium Range UAV employs the ATARS sensor suite and is a jet powered UAV with a gross weight of 1865 pounds and an operating range of 350 nautical miles. CAPT Olmstead, PMA-263 stated that the review met his highest expectations.

### Improved S-3B System Test Software to TECHEVAL

The VS Branch has completed testing of the S-3B Fleet Issue B4.2.2 software. This program will provide greatly increased system test capability beyond the testing improvements included in B4.2.1. The program has been submitted to NATC for TECHEVAL.

Fleet introduction is estimated for January 1990.

### Testing Complete on LAMPS Mark III F.I. 19.0

The Vertical Flight LAMPS Mark III Branch has completed Computer Program Configuration Item testing along with functional, system and stress tests for F.I. 19.0. This issue of the LAMPS software includes a Deployable Proficiency Trainer for the acoustics operator, the LAMPS Mobile Tactical Trainer for the ESM and tactics operator, and corrections to the mid depth selection software in the Air Operational Program. The F.I. 19.0 software has been forwarded to NATC for pre TECHEVAL testing.

### K4.6.C Program Delivered to TECHEVAL

The VP Program Office has delivered the K4.6.C software product to NAVAIRTESTCEN for TECHEVAL. This software is functionally equivalent to the L4.6.C, P-3C Channel Expansion Program, but is designed to run in an AnASQ114(v)6 Digital Computer Set which includes a major memory upgrade. The upgrade incorporates CMOS technology which provides an increase of total random access memory from 64K to 1024K words. The physical size reduction, resulting from the use of CMOS technology, provides sufficient space for a 3 Mega-word bubble mass storage unit to be incorporated within the CP-901 mainframe.

## Bone chilling

Continued from page 6

'tough-it-out' attitude. "These men represent the fleet. They need to ask themselves 'would I let my buddies wear this piece of gear.' Their reactions to this harsh environment are natural reactions but we wouldn't do anything that hurts them." He also noted that of all the programs, the cold water testing demands the most out of its subjects. "It's the most painful project they can go through. It requires the most discipline."

As with all the testing, subject safety is paramount. "The medical personnel here are very knowledgeable and very cautious," said Brown. "The equipment is checked, rechecked and checked again to ensure there's no risk to the subject. If I didn't have confidence in them I wouldn't have gone in."

After rewarming, Brown said fatigue sets in. "As the day goes on you start to wear down. You just feel tired." Maybe just a little bit cold too.



## New Penn State graduate acoustics program to begin

By John Markow

Recently, the Center has collaborated with Penn State University to bring on-board their well-known Graduate Program in Acoustics. It is a complete Masters Degree of thirty credits.

This unique program is a combination of classroom training with a visiting professor from The University Park Campus, as well as live satellite instructional television (ITV) broadcasts from the University. The courses are offered one night a week for three hours plus study

sessions. For the students' convenience, the technical classes are videotaped and can be viewed later should a participant miss a class or would just like to review a class.

The first course that is being offered this Fall is "Fundamentals of Acoustics." In the Spring 1990, Penn State will be offering two courses: "Analysis of Engineering Science" and "Structural Analysis."

If you would like to obtain additional information about the program, please contact John Markow of the Employee Development Division, extension 1026.

DAYLIGHT-SAVING TIME ENDS

**FALL BACK**

1 HOUR - OCTOBER 29TH  
2 a.m.



# W&R golfers scramble in final outing

By Pete Brown

The final W&R outing for 1989 took place in October at Locust Valley Golf Club in Coopersburg, PA. Perfect

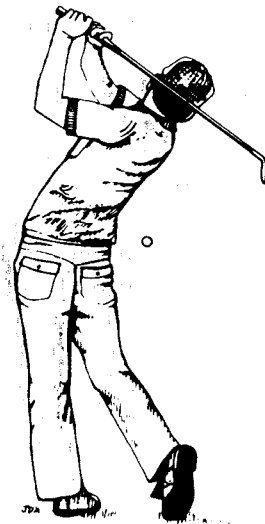
weather (but no food or beer!) brought out a record 84 golfers to search the woods for lost balls.

First place was captured by R. Muller, B. Harvey, L. Thompson and R.

Turzanski with a 12 under par 60 (net 53.875). Second went to B. Hines, B. Zarkowski, W. Miller and E. Boscola with a net 55.125. Five other teams shot under 60 with only 4 strokes difference between second and seventh place. (These scores prove that beer was not available!)

Closest to the pins went to R. Virga on #6, 9 ft; C. Swatchick on #9, 49 in.; P. Brown on #13, 40 in.; and L. Thompson on #17, 14ft. Longest drive went to Chuck "Iron-man" Bigley for a 300 yard—smash on #18.

That's it for '89—see you in March of 90 for the first W&R outing next season.



# Mixed league bowling news New look for new season

By Tom Reiter

Welcome to another season. Again, the Mixed League starts the year with a new look. One and a half teams couldn't stand all the fun and had decided to take the season off. After some selective begging, we coerced new captains to enter the fray. Our military have decided to challenge the civilians and entered a team called the Ten Pinners. Good luck and welcome to Chief Dave Ader. Our other one-half of a new team has been taken over by co-captains Mary Williamson and Bob Smiler. After a shaky first week of searching for enough people to fill out their team, several of last year's renegades decided to return and compete again as the Bullshooters. The 24 team Division alignment drawing had a strange outcome. Seven of the ten top pinfall teams from last season drew positions in the A Division. Included are the League Champion Gutter Dusters and the Division champion Red Winos, two teams who, last season, won both halves and rolled off for the 88/89 top prize. The Goofers and the Alley Cats are the top seeds in the B Division. On the first night of interdivisional play the B

people cleaned house. The results of the twelve matches - A Division 12 wins - B Division 36 wins. Bob Geyer's Alley Cats humbled Wes Gleason's League Champs 4-0.

After one month's action, some of our best results were:

A Division			
High Single	Mike Dent		267
	Caroline Tierney		216
High Series	Mike Dent		649
	Lorrie Dunn		548
High Average	Mike Dent		191.8
	Wes Gleason		191.4
	Lorrie Dunn		165
B Division			
High Single	Jack Eyth		235
	Barb DiLemmo		488
High Series	Jack Eyth		574
	Barb DiLemo		488
High Average	Rick Eppright		185
	Lorraine Reidinger		153



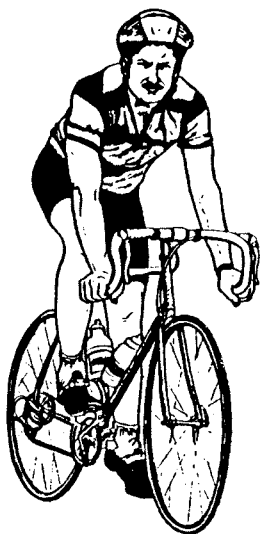
SIGN UP FOR BOWLING

# NADC personnel complete Philadelphia distance run

By Fred Pappalardi

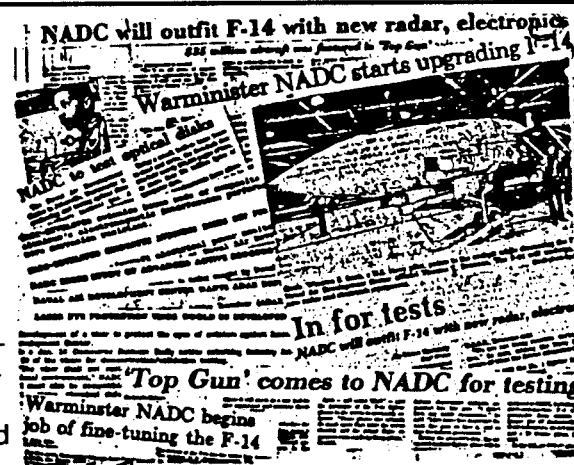
Among the approximately 6800 entrants in this year's Philadelphia

Distance Run, held on 17 September, were nine NADC personnel and one on site contractor. The Philadelphia Distance Run is a half marathon, covering a distance of 13.1 miles. First time entrants in the race were Dorothy Gramlich (2022), Sue Coyle (20/02), Marge Steenhoff (4001P), Vida Komer (201), and Fred Pappalardi (4031). The remaining participants are all veterans of this competition. Larry Hart (5051) and Bob Polaneczky (1032) have each run in all twelve distance runs. Bob Richey (6041) and Roger Furlin (054) have run in eleven and eight of the runs respectively. Pat Insley, an employee of DSG, has participated in six distance runs. All of the NADC entrants and Ms. Insley were finishers and plan to compete again next year.



## NADC in the NEWS

The big news is...



News items about NADC appear frequently in the *Intelligence/Record*, *Bucks County Courier Times*, *Today's Spirit*, and the regional edition of the *Philadelphia Inquirer*. However, more often news items about the Center are regularly found in trade publications such as *Aviation Week and Space Technology*, *Naval Aviation News*, *Defense News*, *Aerospace Daily* and the like.

As a means of assuring that NADC is, indeed, in the news, we will be listing here the kinds of news we have released and some of those publications where stories appeared.

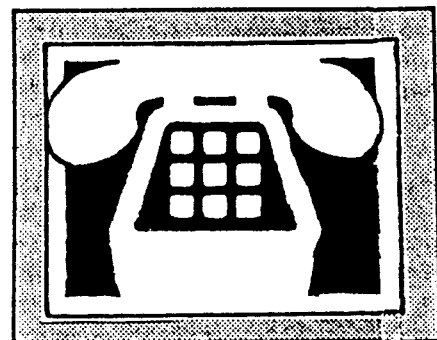
The most recent news clippings include:

- *Aerospace Daily*, July 7, 1989, "Navy slates briefing on Advanced Tactical Surveillance (ATS) Plane."
- *The Eagle*, Naval Civilian Managers Association, Summer '89 Issue, "Standing Committee 'C' diligently at work;" "Convention Scenes."
- *Inquirer*, July 23, 1989 "Heads above the crowd - LCDR Tim Singer."
- *Aerospace America*, July 1989, "Aging Aircraft."
- *Aviation Week and Space Technology*, July 24, 1989, "The Naval Air Systems Command..."
- *Today's Spirit*, July 26, "Warminster honors firefighters."
- *Defense News*, July 31, 1989, "Navy Awards Contract for Helicopter Software."

# Heard it on the grapevine?

In any organization the size of NADC, a lot of things are heard "on the grapevine". Some are true; others false. At best, most are of questionable parentage or origin. Til now, there has been no quick and easy way to verify the fact or fiction of what you heard "on the grapevine".

The "Grapevine Hotline" is now in operation. Call X3088 with your questions or comments and someone will get back to you with the facts.





# **Reflector**

Volume 34 Number 11

NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PA.

November 1989

- In This Issue:**
- Non smokers still fuming
  - NADC sponsors Corrosion Conference
  - UNICOAT paint scores high
  - Acoustic source development successful
  - T&E keeps them flying

## Inventions pay off

# Dilemno rewarded for new acoustic simulator



Photo by NADC Photo Lab.

**Center Commander CAPT Curtis Winters presents initial \$5,000 check to Marc Dilemno for his multi-channel acoustic simulator.**

*By Mary Ann Brett*

"I knew it was important," said Marc Dilemno of his invention. "But, it's nice that others agree with me," he added. Dilemno, of the Precision Navigation Systems Development Division, was awarded an initial \$5,000 for his invention entitled, "Multi-Channel Acoustic Simulator (MCAS)." Pending approval by authorities at the Space and Naval Warfare Systems Command, Dilemno could be awarded an additional \$6,700.

According to Division Head Jules Drelick, the MCAS significantly improves the simulating of signals by hydrophones in multi-transducer sonar sounding systems. Prior to the MCAS, it was not possible to provide acoustic signals generated by a large array of hydrophones accurately representing the ocean bottom and, in real time, apply the signals to an array sounding system for development, testing and troubleshooting.

*Continued on page 7*

# NADC-developed tactical helmets tested

*By Daniel Schmidt and Mary Ann Brett*

Innovations of lighter, more durable materials have made cumbersome tactical aircrew helmet assemblies outdated if not obsolete. Previously constructed of fiberglass, helmet shells can now be made of commercially developed products such as Kevlar and

nylon with graphite epoxy which are significantly lighter while still providing equal or greater protection.

In FY-88, the Center was funded by the Naval Air Systems Command to develop a Tactical Air Helmet Replacement (THR). After evaluating

*Continued on page 6*

# New processing and tooling method developed

*By Ed Rosenzweig*

In a cooperative effort, the Aero Materials and Aero Structures Division have successfully consolidated a void-free composite panel from APC-2 polyether-etherketone thermoplastic by applying a unique NAVAIR-DEVCEN developed vacuum pressure processing method and

tooling. This is the first time a thermoplastic panel has been successfully consolidated under vacuum pressure only (less than 15 psi pressure) without the use of an autoclave where pressures of 200 psi are normally required. This approach offers promise for low cost fabrication and repair of thermoplastic composite structures.

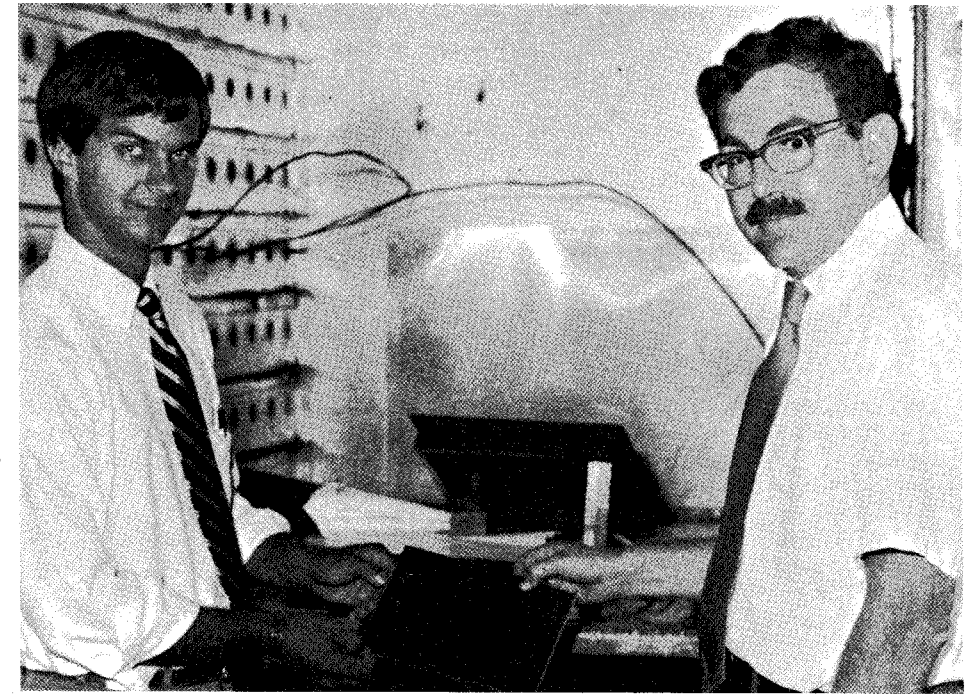


Photo by NADC Photo Lab.

**Roland Cochran and Edwin Rosenzweig with void free composite resulting from NADC developed processing and tooling method.**



Photo by NADC Photo Lab.

**CDR Winston Scott, Deputy of the Tactical Air Systems Department evaluates NADC-developed tactical helmet and visor.**



# Mixed League Bowling News

By Tom Reiter

The season is now two months old, and as usual we are having fun but this year we're drinking less (I think) since Thunderbird Lanes opened their own bar. Now that coolers and brown bags are no longer admitted, the league has dropped its testing policy. The next step, and only a revolution away, could be banning smoking on the lanes.

Interdivisional knockdowns again humbled the A Division 34-14. Wes Gleason's League Champion Gutter Duster's were dusted this time by Al Knobloch's Goofers 3-1. I'm not picking on Wes, It's just that everybody likes to go after the champs, just like at Notre Dame.

Standings and high individual scores so far are:

<b>"A"</b>		
22-14	Gutter Dusters	Wes Gleason 256
20-16	Eleventh Frame	Chuck Halko 194
19-17	Dynamic Duos	Larry Sicher 212
19-17	Magic Markers	Nick Doto 214
18-18	Red Winos	Mike Dent 267
17-19	Nine Pins	Jim Campana 217
17-19	Warvey Hallbangers	Jack Figgles 209
15-21	Steve's Side Show	Steve Jerdan 230
15-21	Destroyers	Karen Thomas 193
13-23	Big Spenders	Neal Polin 208
9-27	Neiners	Lester Smith 186
7-29	Lucky Strikes	Art Duhaime 214
<b>"B"</b>		
32-4	Goofers	Leo Markushewski 213
23-13	Spare Us	Dick Coughlan 193
21-15	From The Gutter	Rick Yeager 199
21-15	Bullshooters	Bob Smiler 184
20-16	Les Champignons	Dave Oliver 209
20-16	Alley Cats	Jack Eyth 235
19-17	Rolling Thunder	Mike D'Aulerio 223
19-17	Blue Lite Special	Scott Kee 198
18-18	Screwballs	Jack Horning 181
16-20	Ten Piners	Bob Scaropp/Joe Emperly 204
16-20	White Winos	Rick Eppright 205
16-20	Who Cares	John Bowes 220
		Mary Vaughn 186
		Helen Catto 177
		Lois Savage 192
		Jane Gifford 171
		Elaine Granieri 181
		Linda Stickney 221
		Caroline Tierney 216
		Judy Jerdan 159
		Mike Robinson 180
		Helen Catto 195
		Anne Reichert 178
		Cathy Burian 154
		Lorraine Reidlinger 200
		Donna Morgan 184
		Char Pohle 179
		Eileen Cunnane 199
		Betty Beans 178
		Kathy Barnes 201
		Sharon Robinson 200
		Barb Dilemno 204
		Elsie Apple 178
		Jacque Emperly 193
		Terese Wells 170
		Denise Eck 182

## Summer faculty recruiting to begin

Carol VanWyk and Maryann Brett

NADC can use the resources of academic institutions to help expand and strengthen their in-house research capabilities and open the way for dramatic new advances in technology. Sponsoring a professor for a ten week on-Center task through the Office of Naval Research (ONR) Summer Faculty Program (SFP) taps his/her expertise while providing exposure to Navy research interests.

The SFP facilitates this process and eliminates most of the usual red-tape hassles. The American Society for Engineering Education (ASEE) has a grant from ONR to do the administrative work of the program. They do the advertising, actual hiring, and send the paychecks. Translated, that means the professors are not employed by the Center and do not count towards management-to-payroll.

Professors like the opportunity to work at the Center because they can see applications for their research. Most of them are local and are amazed they could live so close to the Center and not know about the nature of the on-going work. Our research is of a much higher caliber than expected and the equipment much better than available at the university. Exit interviews reveal that after exposure to the Center's needs the professors change their curriculum to better prepare their students.

Our scientists and engineers (S&E's) are pleased with the program. In particular, they report significant accomplishments for those professors returning for their second summer. The majority of the FY-89 SFP professors are continuing their

research on an Inter-governmental Personnel Act contract.

Often our best recruiters are those S&E's working on their advanced degrees. They know the best faculty members and can encourage them to apply to the program.

Some new initiatives proposed by the Center to ONR for the expansion of the program have been approved. One will permit graduate students, working on our Navy research, to accompany the professor during the summer appointment. The second permits professors on sabbatical to participate in the program. This will allow for more extended research projects at the cost of about a half worker-year.

Brochures for the FY-90 SFP have been sent to the universities. In late January, around 80-90 applications should start arriving at the Science and Technology Office (Code 01B). In turn, the applications will be sent to our technical departments for evaluation. Any scientist or engineer who could use help with a research task can stop by the Code 01B Office to peruse the applications as well. Carol Van Wyk, the program manager reports, "January is the most important time for the Center's S&E's to contact the applicants, assess the professor's capabilities, define the research, and begin ordering library materials and equipment. Those who do, report the greatest satisfaction with the program. Once the fellow arrives, he is independent and works well with little supervision."

Brochures and application forms are now available from the Code 01B Office. Anyone wishing details of the program should call Carol Van Wyk, x2375.

## A lesson in sign

Mary Ann Brett

Sign language, a means of communication for the hearing impaired, is as foreign to many of us as any obscure European or Asian tongue. Since the Center employs at least seven

people, with varying degrees of hearing impairments who use sign, the Reflector in cooperation with the Equal Employment Opportunity Office, will present an introduction to signing. The American Manual Alphabet is the first item in a series to appear monthly.

**The American Manual Alphabet**

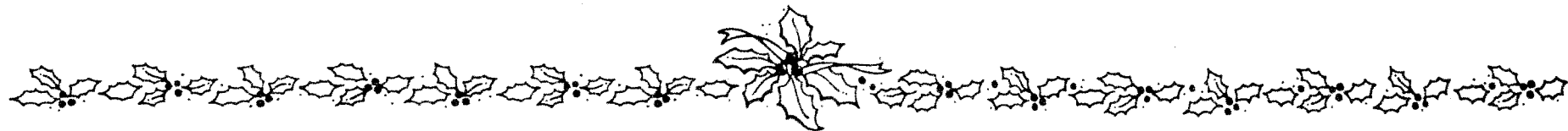
Drawings show a side view. In actual practice the letters should face the persons with whom you are communicating.





**In This Issue:**

- Patent lawyers at work
- New officers for NCMA
- Community cooperation
- Reward your best
- Profitless blood



## Fleet Assistant gives mid-term update

By Mary Ann Brett

"It seems like only yesterday . . ." said Michael Cannon of his departure for the Fleet Assistant Program. He is assigned to a one-year assignment which began six months ago. "Soon the Center will be opening the advertisement to replace me in June 1990," he said.

The experience of working at an operational command consisting primarily of military personnel is very interesting and rewarding to Cannon. "They're also a real fine group of people

*Continued on page 7*

## Meritorious medal for Meadows



Photo by NADC Photo Lab

NADC's Fire Chief Donald Meadows recently received the Navy Meritorious Civilian Service Award. Meadows, who has led the department for approximately five years was cited for maintaining an outstanding Structure and Aircraft Fire Branch, in the Test and Evaluation Group.

He was credited for developing new ideas to train personnel and creating a unique corps of highly qualified professional firefighters. According to Meadows department head, CDR Richard Cox, "Meadows expertise and innovation is recognized throughout the Navy. Fire Marshals and Fire Chiefs from all over the U.S. have visited this Center to learn the administration and techniques he has implemented."

## Navy relief fund raises nearly \$10K

By Margaret Vigelis

NADC's 1989 Navy Relief Fund Drive topped 1988 by 9.1%. The Center raised a total of \$9,831 as compared to \$9,008 raised last year. Of the total, \$4,476 was donated by allotment and \$5,355 in cash, including money collected through a raffle. A grand total of \$226,824 was collected by all the various activities under the regional coordinator, COMNAVBASE, Philadelphia. NADC's successful campaign can be attributed to the outstanding efforts by the many military and civilian employees who worked so diligently and contributed so generously.

RADM Richard C. Ustick, Commander, Naval Base, Philadelphia, said "Each military and civilian member who contributed his time and effort in conducting this year's record drive has earned the thanks of a grateful Navy. We can take great pride in the fact that the Navy and Marine Corps family takes care of its own. To those who have contributed, you have the personal satisfaction in knowing your contributions will be helping Navy/Marine Corps men and women in time of need. Those personnel who actively worked to raise funds can be very proud of the success of the campaign and should be appropriately recognized by their commands. Well Done!"

## 50 smokers adopted for GAS day

By Lynne Edwards

This year, approximately 390,000 people will die from smoking and smoking-related diseases in addition to an estimated 155,000 new cases of lung cancer. Smoking is responsible for 87 percent of lung cancer cases, and while the overall 5-year survival rate for cancer is about 40 percent, it is only 10 percent for lung cancer. To stem the rising fatality rate from smoking-related causes, the American Cancer Society sponsored the 13th annual Great American Smokeout on Thursday, November 16, 1989.

In recognition of this commendable effort, NADC celebrated the Great American Smokeout by launching an intense advertising effort, by offering classes designed to help smokers kick the habit, and by sponsoring a Center-wide Adopt-A-Smoker program. A total of 16 Center employees signed up for the smoke-cessation classes and approximately 50 employees participated in the Adopt-A-Smoker program. Of the 50 participants, 2 names were selected in a drawing for prizes donated by the W & R. The two lucky winners, Patricia Riley (Code 0213) and Cariess Babb (Code 0213) were presented with NADC sweatshirts by Captain

*Continued on page 7*



### Holiday Message from the President

During this holiday season -- which includes the festive celebrations of Christmas, Hanukkah, and New Year's Day -- we are mindful of the many blessings God has bestowed upon us. It is during this season of goodwill, when we reaffirm our greatest hopes for mankind, that our appreciation for the blessings of peace and freedom is most profound. As we gather with loved ones for this year's holidays, we do so with the singular joy of a Nation at peace.

We know that, for many people around the world, these holidays will be diminished by the dark threat of religious persecution and political oppression -- or even the terror of armed conflict. We also know that the tranquility and security we enjoy would not be possible without the selfless efforts of the brave men and women who wear our Nation's uniform. That is why, on behalf of all Americans, I express heartfelt gratitude and warm holiday wishes to all the members of the United States Armed Forces. Each of you -- as a faithful guardian of liberty -- plays an important role in the struggle to build a true and lasting world peace.

Barbara joins me in sending our best wishes to you and your families for a wonderful holiday season and for a new year filled with health, happiness, and prosperity. Our warmest greetings go out to all of you whose duty assignments find you far from home at this time. You are in our thoughts and prayers. God bless you, and God bless America.

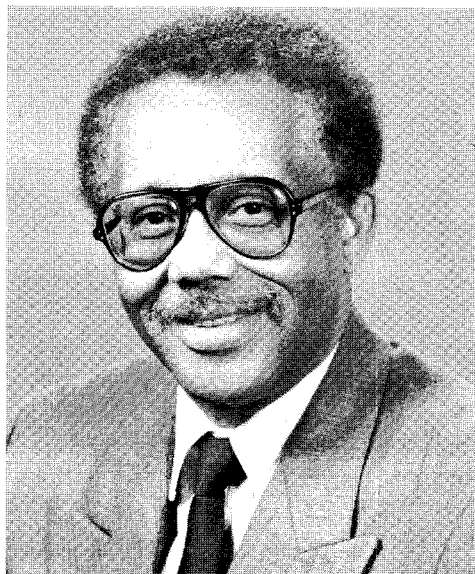
*George Bush*  
George Bush  
President



# Commander Salutes



**Captain Curtis J. Winters**  
Center Commander



**Guy C. Dilworth, Jr.**  
Technical Director

**Robert Lutz (Code 20):** For outstanding efforts, good management and technical and engineering expertise on the PHOENIX Weapon System and the AIM-54C Phoenix Missile Programs.

**John Satriano (Code 40):** For an effective briefing at the Naval Oceanography Forum.

**Pasqual Spensiere, Frank Scheetz, Nicholas Onorato, Carol Newman, Carla Mackey, Edward Lesoravage, Steven Kern, Edward Kenkelen, Jeanne-Marie Kita, Michael**

**Grossman, Jean Boyes, Aaron Burstein, Lauren Brake (Code 30):** For contributions and dedication to the Anti-Air Warfare analysis for Carrier Air Wing Study 2010.

**Shawn Donley (Code 60):** For technical and administrative support to the Naval Air Systems Command as Section Head for their Aerodynamics and Flight Controls Branch.

**Dr. Vinod Agarwala (Code 60):** For outstanding efforts in chairing the Tri-Service Corrosion Conference.



## To all hands:

### Safety . . . "a primary concern"

It is time to critically review the Center's safety and health performance, and to establish some new objectives for FY90. We would like to address some of our accomplishments, point out areas needing additional effort, and most of all, to encourage each of you to do what you can to make NADC a safer place to work.

Of course, the primary concern of any safety and health program is the reduction of injuries. Last year we set a goal of reducing all types of injuries and the number of lost workdays by 10%. Unfortunately, we failed to reach this milestone. In fact, our total number of mishaps and lost time injuries increased by 8% and 10% respectively, while we realized only a 4% reduction in lost workdays. While this setback is certainly disappointing, we should not be discouraged, we will double our efforts in the upcoming year. We are, therefore repeating last year's goal of a 10% overall mishap reduction.

While our injury rate has not gotten better, we have made improvements in specific areas. This time last year, we noted that slips and falls were responsible for 24% of all our injuries and 31% of our lost time accidents. Due to the efforts of Public Works and many individuals, in FY89 these levels dropped to 18% of all injuries and 16% of lost time mishaps. While we will continue to pursue improvements in this area, we must now turn our priorities toward another primary injury cause. Recently, we have experienced a resurgence of back injuries throughout the Center. In order to combat this problem, we have directed our safety office to establish training programs geared to various levels of potential exposure, and to make these programs available to all personnel. I strongly urge all supervisors to have their people take

advantage of this training when offered. With your help, we should see back injuries decrease by 25% in FY 89.

Another goal we set for ourselves last year was a further 10% decrease in our chemical holdings, and our August inventory of fifty-four workcenters showed that most succeeded in attaining significant reductions. Of particular note in this regard were the efforts of Jim Katilaus, Dick Wiczorek, and others from Code 606 who disposed of over fourteen pallets of excess chemicals. On the other hand however, eleven workcenters showed no change in their inventories and six actually registered increases in their chemical holdings. We cannot emphasize enough the high visibility safe chemical usage and proper disposal are now receiving throughout the Navy. We want to personally encourage every supervisor who uses chemicals to: order only what is needed, request only the amount required, and procure the least hazardous item possible to do the job. With this in mind, we hope to see next year's inventory reduced by another 10%, and will take a personal interest where this goal is not achieved.

In 1989, we were also concerned about the prompt abatement of safety deficiencies. With few exceptions, our supervisors are now correcting reported hazards and ensuring that accurate documentation is provided in a timely manner. While we no longer see the need to establish a goal in this regard, we will continue to review all correspondence involving delinquent responses to safety inspections.

Our final goal last year dealt with our campaign to curb smoking in the workplace. As much as possible, we tried to keep this effort in a positive vein, and we hope we can continue to do so. This year, we again supported the

A special thanks to all those whose assistance makes our tours, events and visits successful--from the engineers, scientists and technicians who share their expertise to those who work behind the scenes to make things run smoothly!

Civilian and military, we wish you a happy holiday season and a great new year.

The PUBLIC AFFAIRS STAFF

*Mary Ann Brett*  
*Margaret Vigelis*

*C.J. Winters*  
CAPT Curtis J. Winters  
Center Commander

*Guy Dilworth*  
Guy Dilworth  
Technical Director

NAVAL AIR DEVELOPMENT CENTER, WARRINSTER, PA

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 Assistant Editor ..... Margaret Vigelis



# Patent lawyers excited about technology prospects at NADC

By Mary Ann Brett

In a world of fast-paced advances in technology, inventions may become obsolete, virtually, in the time it takes to process them. This, among other reasons, makes it extremely necessary to maintain a staff of patent attorneys who will protect and exploit state-of-the-art technology developed here at NADC.

Jim Tura and Jim Bechtel are the Center's two newest patent attorneys. They join NADC's existing patent attorney, Susan Verona, in the Office of General Counsel. Both are determined to give technology developed at NADC the high caliber treatment it deserves.

According to Tura, who also serves as Deputy Counsel under Robert Janes, nearly 75 invention disclosures have been stock piled during the two years since the retirement of NADC's former Patent Counsel, Hank Hansen.

"This kind of back-up," said Tura, "not only makes inefficient use of our technology but creates morale problems as well." Both Bechtel and Tura agree this is especially true since the Technology Transfer Act (TTA) of 1986 directs that where possible, technology should be licensed to the private sector, thus allowing royalties for inventors with a proportionate amount of compensation for the Center. This in itself should be an incentive to patent and license NADC's technology.

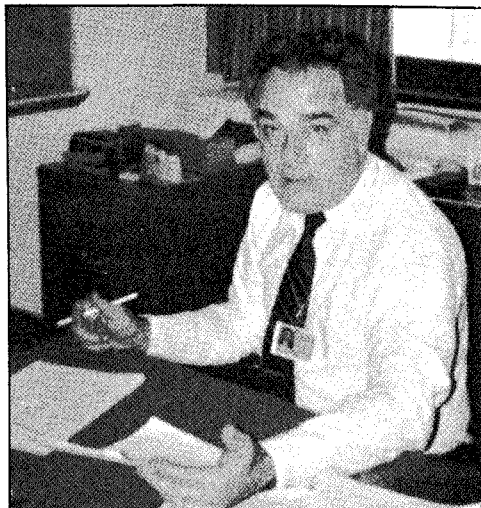


Photo by Mary Ann Brett

**James Tura**

According to Bechtel, Associate Counsel for Patents, the TTA was long overdue. "NADC is producing a lot of high technology by very bright people. We have the potential to make substantial amounts of money for the inventors and for the Center."

Tura's bottom-line-manner is a product of his career in private industry. With a Bachelor degree in chemical engineering and graduate study in organic chemistry for background, his career centered on practicing patent law for an oil company for several years and as Patent Counsel and Assistant General Counsel at Sherwin-Williams Co. for the past 15 years.

Bechtel's background, on the other

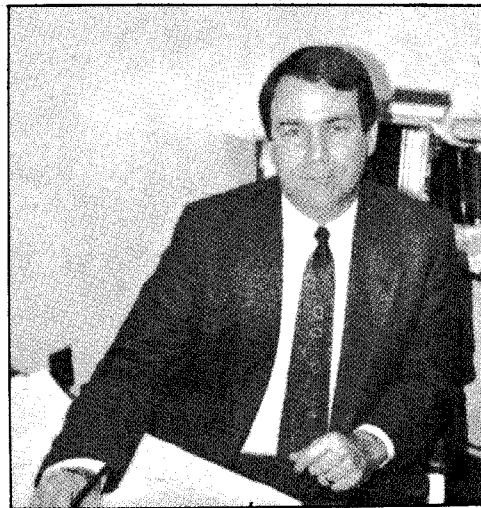


Photo by Mary Ann Brett

**James Bechtel**

hand, is a military/government one. He has an aeronautical engineering degree from the Air Force Academy and decided to practice law after an injury disqualified him from Air Force pilot training. He has served as a patent examiner for the U.S. Patent Office, and practiced as Patent Attorney at the Naval Weapons Center, China Lake, at the Army's Natick Laboratories in Massachusetts and most recently, for the past seven years, at a private law firm in Philadelphia.

Invention disclosures, in general, will be prioritized by the Invention Evaluation Board based on their technical content, and then assigned to each patent attorney in accordance

with their technical backgrounds.

Tura estimates, based on the backlog and the filing of new invention disclosures. "It could take nearly two years to catch up and it will take 6 months to 3 years to process the patent applications through the U.S. Patent Office; but at least we will have started the ball rolling," he said.

Bechtel hopes all this activity will create some momentum. "We're hoping for, and encouraging, a domino effect — the more patents we process and royalty opportunities we create, the more interested we hope scientists and engineers become in producing and patenting their inventions."

The entire staff of the Office of Counsel, as well as Jerome Bortman, the Center's Technology Transfer Manager, are available for more information.

## NCMA installs new officers

By Jim Kingston

At its December breakfast meeting, the NADC Chapter of the Navy Civilian Managers Association (NCMA) announced its new slate of officers for 1990.

President is Dr. Don McErlean, Code 60 Department head; vice president is Kathy Gause, the Center Deputy EEO Officer; Al Kaniss, Deputy Department Head, Computer Department, will serve as secretary; and Jack Eythe, Crew Systems Program Office (Code 60B), is treasurer.

Addressing the membership, McErlean highlighted three goals for 1990. He saw NCMA serving an educational function, to address

management issues at future meetings by discussing relevant topics in management science. He also felt the need for the organization (in concert with Public Affairs) to perform a public/community relations role having interaction with the community at large and serving as a bridge between the Center and the community. This could be done through inviting community leaders to address NCMA meetings.

The group's third goal, McErlean said, should be a social or networking function to promote interchanges between groups and departments on Center and to serve as a vehicle for mentoring.



Photo by Drew Schmith

**New NCMA officers: Al Kaniss, Secretary, Dr. Donald McErlean, President, and Jack Eythe, Treasurer. Kathy Gause (not present) will serve as Vice-President**

## If the SOC fits

By Robert Janes

The Navy's Standards of Conduct (SOC) have long forbidden the acceptance of gratuities from defense contractors. This prohibition generally applies in a personal context, so to prevent the acceptance of personal gifts or benefits from government contractors. In a recent memo, the Secretary of the Navy placed limitations on what might be termed a job-related gratuity, i.e., gratuitous vendor training.

This SecNav memo defines gratuitous vendor training as "training provided by a defense contractor which is not provided pursuant to an express contractual undertaking with the government." (An example might be a computer company with which we do business offering a number of our employees free "training" on its hardware. This sort of thing has come under recent attack in Congress. For one thing, it is viewed as bestowing an advantage on that company in future avoided (for example, the memo

procurements, for it can tend to create a market for its equipment with the government people who have undergone training.) The SecNav memo provides that from now on, gratuitous vendor training may only be accepted when each of the following five conditions is met:

1. Selection of attendees must be made by the government, and not the vendor;
2. Attendance must clearly be in the best interest of the government, and any appearance of impropriety must be

prescribes particular caution when the training lasts more than one day at a non-government site);

3. All travel expenses must be paid by the government and not the vendor;
4. The vendor must waive all claims against the government for providing the training; and
5. Acceptance of the training must be approved by the employee's supervisor and may only be granted after consultation with Counsel (Code 095).



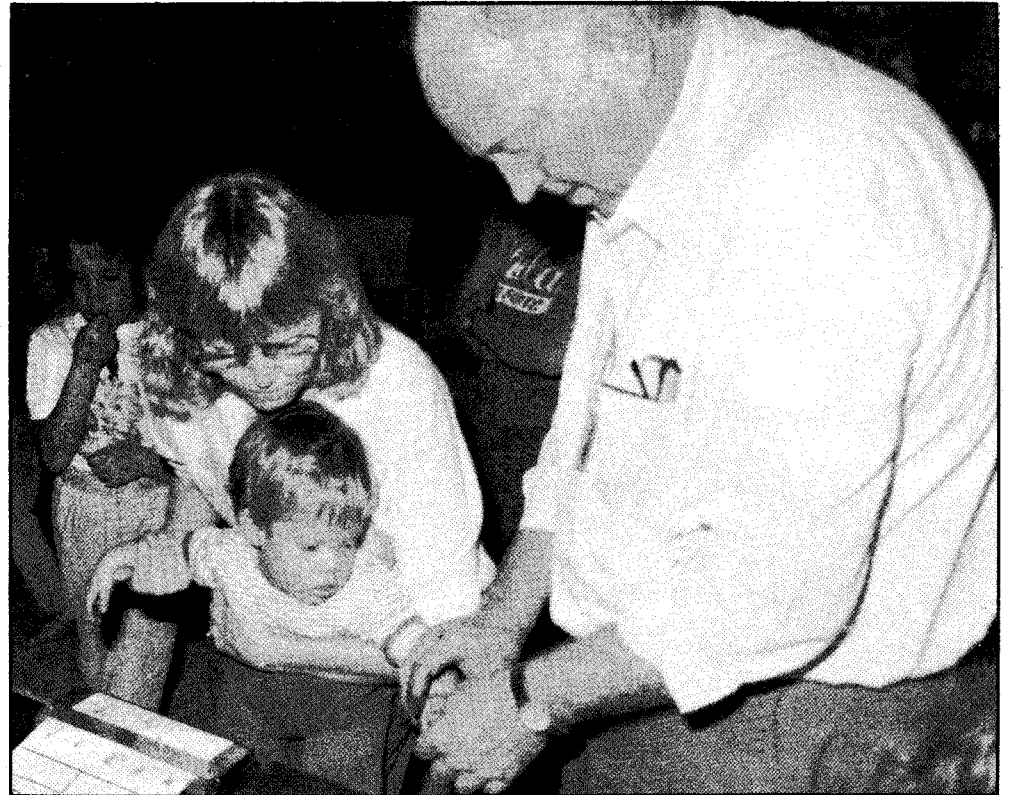
## A BIG 'thanks'



Lt. Alan K. Byrd accepted, on behalf of the members of his flight crew, a giant thank you card signed by Honeywell employees. In July, Byrd and his fellow crew members flew a P-3 to Buckley Air National Guard Airfield, CO as part of a static display that enabled Honeywell's employees to tour the P-3 and learn first hand how the Honeywell-made recorders are used.

## Children fingerprinted for safety

The second in a series of programs to be held as part of NADC's Neighborhood Crime Watch, the Center hosted a "finger-printing for safety and drug awareness program" for the children in Shenandoah Woods. The first program was entitled "Night Out Against Crime" in conjunction with a national crime prevention effort. Command Investigator David Ritho was instrumental in the success of these programs.



With nerves of steel, David Ritho manipulates little fingers to get prints from this young man.

## Energy Conservation Quiz

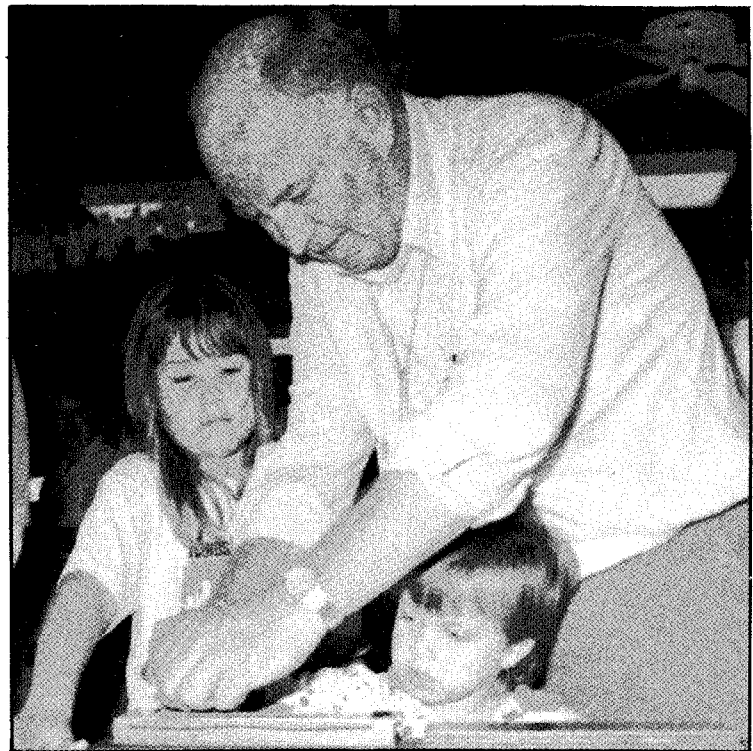
The United States has made considerable progress in using energy more efficiently. Test your knowledge on the questions below to see how we're doing and how we can continue to improve.

- 1 Air infiltration and leakage are responsible for much of the energy wasted in the home. The most cost-effective way to control this problem is \_\_\_\_\_  
a) adding attic insulation b) adding storm windows  
c) caulking and weatherstripping windows, doors, and baseboards.
- 2 If you set your thermostat back 10 degrees for an 8-hour period at night, you may reduce your heating bill by \_\_\_\_\_  
a) 5-10 percent b) 10-15 percent c) 20-25 percent.
- 3 Today, what percent of all energy consumed in the U.S. is wasted as heat loss through windows?  
a) 2 percent b) 5 percent c) 10 percent.
- 4 How much of the energy for heating hot water can be saved by reducing the water temperature on the hot water heater from 140° F to 120° F?  
a) 3-5 percent b) 5-10 percent c) 18 percent or more.
- 5 By driving in an energy-conserving manner (for example, making smooth starts and stops), the average auto driver can save \_\_\_\_\_ percent of the normal amount of gasoline used.  
a) 2 percent b) 5 percent c) 10 percent.
- 6 It takes less gasoline to stop and restart your car than to let the motor idle for more than \_\_\_\_\_ minute(s).  
a) 1 minute b) 3 minutes c) 5 minutes.
- 7 The difference between inadequate and proper home insulation can be what percentage of your fuel bill?  
a) 10 percent b) 25 percent c) 40 percent.
- 8 The average dishwasher uses 14 gallons of hot water per load. How much hot water does the optional "rinse hold" feature use?  
a) 2 gallons b) 3-7 gallons c) 10 gallons.



■ Answers below

1. (c) caulking and weatherstripping windows, doors, and baseboards.  
2. (b) 10-15 percent. 3. (b) 5 percent. 4. (c) 18 percent or more.  
5. (c) 10 percent. 6. (a) 1 minute. 7. (c) 40 percent. 8. (b) 3-7 gallons.



A young participant watches intently as Command Investigator David Ritho takes his hand.

### It All Adds Up!

Competitive rates, Federal income tax deferral, exemption from state and local income taxes and a regular method of saving through a payroll saving plan for U.S. Savings Bonds = financial security. Sign up for your payroll savings program now!



*Competitive Rates  
Tax deferral  
+ Easy to Save  
U.S. Savings Bonds  
(= financial security)*





# Community cooperation at work

The annual Mutual Aid Drill was recently held at the NADC. Participating were volunteer fire companies from Ivyland, Warminster, Hartsville, Southampton, Northampton, Montgomery County and Willow Grove. Also, assisting in the drill were NADC's Security Department and Auxiliary Police.

The mutual aid agreement enables the Center's Fire Department and the volunteer fire companies from the surrounding communities to ensure their readiness in the event of an emergency — we support them — they support us. Community cooperation at its best.



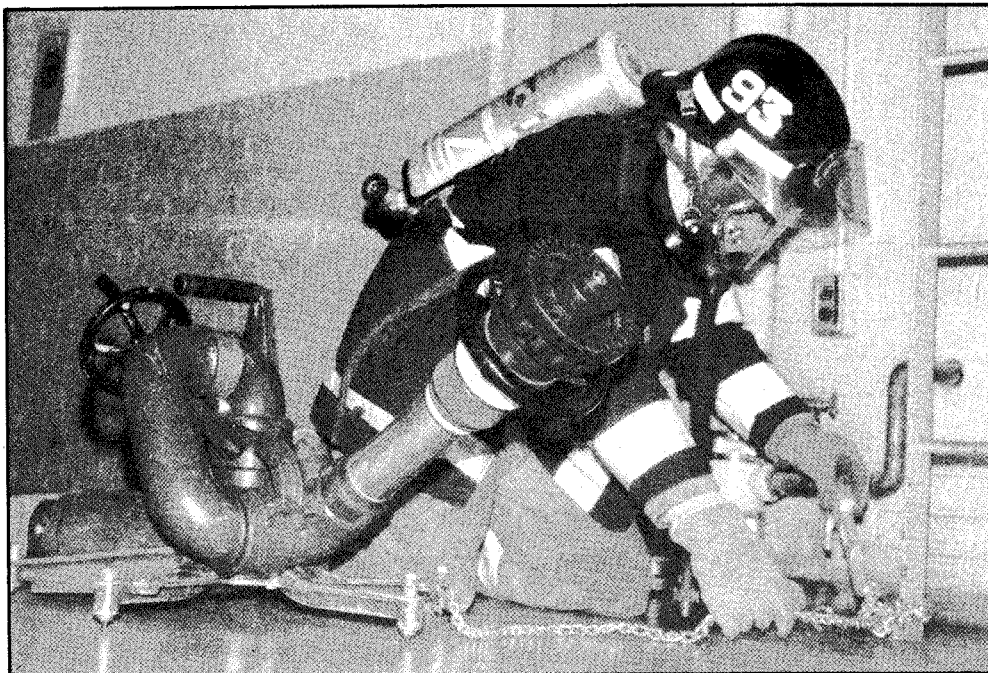
Line up of fire equipment involved with the Mutual Aid Drill.



NADC Fire Department personnel operating in Building No. 1 with self-contained breathing apparatus.



Firefighter from Warminster Engine Company 91 in service



Personnel from Hartsville Fire Company placing a deluge gun in service inside Building No. 1.



Deputy Chief, Warminster Fire Station 90, commanding the interior sector.



A member of the Center's Fire Department adjusts his self-contained breathing apparatus during NADC's Mutual Aid Drill.





## Who they are; what they do

By JO2 Michael A. Delledonne

"Employment wasn't so good," said AMS2 Mark Fossesca of the situation in his hometown of Youngstown, OH. "I had applied twice to attend college, but I didn't go either time. School just wasn't for me."

Fossesca, 25, decided to become an Aviation Structural Mechanic (AMS). "I thought about it all through high school," explained Fossesca. "I felt I could visit more places if I joined the Navy. I liked working with my hands. The rating really fit me."

Maintenance upkeep on the P-3 aircraft's structure is the five-year veteran's main responsibility. "I work on the hydraulic system and flight controls to make sure they fall within acceptable limits."

Stationed at the Center for more than a year, Fossesca finds his work intriguing. "With all the different projects there's always something to be done to the airplanes. Watching the crew work inside the planes is interesting. The detachments make it a lot of fun also; you get to see so many different places."

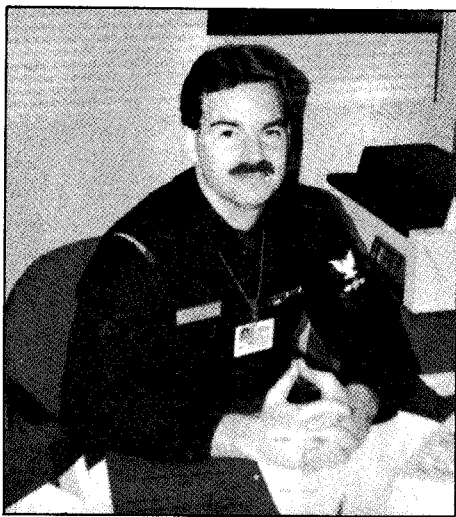


Photo by JO2 Michael Delledonne

**AMS2 Mark Fossesca**

## Plan to reward your best

By Bettie Simpson-Lawrence  
Incentive Awards Administrator

The Supervisors' and Managers' Awards Planning Guide was distributed in July 1988. This Planning Guide contains criteria and due dates for award nominations which assist Center supervisors in submitting award nominations in time to meet SPAWAR's deadlines. In addition to the Planning Guide the NAVAIRDEVCCEN Incentive Awards Program Instruction, NAVAIRDEVCCENINST 12451.1H was distributed to Center employees in June, 1989. The following are some important features contained in the Incentive Awards Program:

**Special Act** — The new On-The-Spot Award is a Special Act Award and is now an active part of the Incentive Awards Program. (See related article below.) Supervisors have received Voucher Books with instructions on processing On-The-Spot Awards.

By Jim Kingston

The Center is now into instant gratification . . . at least, from an award point of view. It comes in the form of the newly established "On-the-Spot Award" which allows a supervisor to virtually "write a check" to an employee for immediate recognition of special effort. The awards range from \$25 to \$100 . . . and there's no limit to the number of awards any one employee can receive.

The "check" is really a voucher which is processed through Civilian Personnel and Payroll, then the actual cash award is made by check to the employee on the next pay day.

The establishment of this instant award system was precipitated by the fact that supervisors and employees alike face increasing demands to get more work done with fewer people or fewer assets. As a result, they are called upon to take on more of a workload, be more creative, and

submitting employees for honorary awards, especially outside honorary awards. The Center submitted 17 individual, two group, and three activity nominations for outside awards. Out of the 17 individuals nominated, twelve received awards and the Center itself received all three outside awards. The Commander presented Navy Meritorious Civilian Service Awards to five employees. On 4 October 1989, Captain Winters and Mr. Guy Dilworth presented Commander/Technical Director Awards to twelve individuals for outstanding contributions and achievements in Scientific, Engineering, Project Leadership, Administrative Support, EEO Program Support, Junior Professional, Aviation Support and Analysis/Analytical Achievement. Supervisors are urged to continue to use the Supervisors' and Managers' Awards Planning Guide in submitting nominations for honorary awards.

**The Suggestion Program** — The new item in the Suggestion Program is that up to an initial \$100 may be presented to the suggester if the reviewer of the suggestion determines that the suggestion should be adopted locally and has monetary savings to the government. After the evaluation of the suggestion is completed, the full amount of the award, if warranted, will be paid to the suggester. Thanks to all who submitted suggestions, the number of suggestions this fiscal year increased from 118 to 138. (Please note coffee cups are still given to employees for submitting a suggestion.) Thirty suggestions were adopted in FY 1989, and \$10,232 was paid to the suggesters.

**Honorary Awards** — This past year greater emphasis was placed on

## -Money-on-the-spot-

develop new or better ways of doing things. In order to recognize special initiative, the "On-the-Spot Award" was developed and is a variant of a Special Act Award.

Making an "On-the-Spot Award" is easy: a supervisor simply meets with the employee within a couple of days of the achievement event and informs him/her of the award. The supervisor

then presents the employee with a voucher and explains that a check for the amount will be forthcoming in the next pay period.

Vouchers have already been distributed to supervisors, but if you run out, more blanks are available from Employee Relations Division, Code 031.

NAVAL AIR DEVELOPMENT CENTER	
VOUCHER AND JUSTIFICATION FOR ON-THE-SPOT AWARD	
	19__
	Code _____
I am pleased to inform you that an On-The-Spot Award for the amount of _____ is granted to you for _____	
You should receive your check the next pay period.	
NADC-5305/1 (5-89)	Congratulations! Immediate Supervisor

## Take a break at the Crews Rest

Join us at the Crews Rest for the holiday season. After those long hours of work, shopping and wrapping gifts, treat yourself to a pleasant evening at the club. Enjoy viewing TV from one of our several screens or chat with a friend. We offer social hour, Monday through Friday, from 3:30 p.m. until 5:30 p.m. We have beverages, hors d'oeuvres for your enjoyment.

**Monday-Monday Night** Football taco fiesta. \$1.75 per taco and limited discount beverage specials during the game and on Mexican brands.

**Tuesdays-Spaghetti** by the bowl or all you can eat. Cost is \$1.45 a bowl or \$6.60 for all you can eat.

**Thursdays-Lite Night!** Buy the first mug for \$1.75 and keep the mug. Refills are \$1.50. Entertainment and door prizes throughout the night.

**Fridays-Social hour** beverage prices and free hors d'oeuvres beginning at 3:30 p.m. Live entertainment begins at 6 p.m.

**Sunday-Football** and hot dogs. Get two hot dogs free with a purchase of a large beverage and one free hot dog with a small beverage. Social hour prices.

## Commander Corner

### Safety . . . "a primary concern"

Continued from page 2

"Great American Smokeout" on 16 November, and strongly urged our smokers to take advantage of the various programs and support groups available to help them quit. Also, you will have noticed a more substantive change to our local smoking policy. We greatly reduced the amount of area in which smoking is permitted. Smoking in all but private offices in Bldg 3 is banned. On the first floors of Buildings 1, 2 as well as other areas, it will be

limited to a few, very restricted locations thereby eliminating smoking in most hallways. To avoid confusion, just keep in mind that smoking is permitted only in areas specifically posted for that purpose. As always, enforcement of these rules will only be possible with everyone's cooperation. If you must smoke, consider your non-smoking co-workers by lighting up only in designated areas. If you notice someone smoking in an unauthorized area, don't be reluctant to give them a friendly reminder.



# Drinking and driving don't mix — not even during the holidays

By JO2 Michael A. Delledonne

The holiday season is always an exciting time of the year. Families are traveling from every corner of the country to visit during Christmas and New Years. Unfortunately, some people don't survive this time of the year. The reason is a sad and needless one, a drunk driver.

Outgoing command Drug and Alcohol Program Advisor (DAPA) AW1 Ray Gottry and incoming DAPA's AWC Dwight Myllenbeck, ATC David Spyker and AX1 Paul Yuknis discussed the issues of driving while intoxicated.

"You can have individuals read an instruction on what will happen to them if they drink and drive, but that just doesn't sink in," said Yuknis. "People have to use common sense and

realize that they're a loaded gun waiting to go off if they do this."

Gottry, who transfers from NADC in December, said the holiday season unfortunately always picks up for DAPA's. "Sailors come back off leave with a Driving Under the Influence (DUI) or Driving While Intoxicated (DWI) and don't know what to do. I've been really lucky because the last two years have been pretty quiet."

The alcohol trap is an easy one to fall into according to Gottry. Separation from friends and relatives during the holidays depresses people. To help them cope with these situations, they drink.

What are the consequences if convicted of DUI or DWI?

"The police give you a field sobriety test which you can refuse to take,"

explained Gottry. "They can also give you a blood test. If you decline to take that, you are automatically charged with DUI."

If charged with DUI an individual can receive up to \$1,000 fine and up to 30 days in jail. A suspension of your driver's license from the civilian community and an automatic suspension for one year from the Navy will be handed out. Court costs run near \$300 and car insurance could jump into the thousands.

A DUI charge is nothing compared to vehicular homicide or maybe . . . murder. "At Christmas time it could be very cold, wet and snowy," said Gottry. "If you attempt to drive in these conditions after drinking, you're just asking for trouble. If a person does fatally injure another, there's not much anybody can do for you after that, except find an expensive lawyer."

"Your life will be changed forever," said Yuknis, shaking his head.

What are some other options available?

"A designated driver is always a good idea anytime you go out," said Myllenbeck. "Stay over at a friend's house. Anything so you won't go out and drive after a night of celebrating. For the people throwing parties, take car keys at the door. A person can be held responsible if he lets somebody get behind the wheel of any form of transportation."

Yuknis added, "friends watch out for friends, and sailors watch out for sailors. Whatever form, take care of people. The DAPA team is here for the command's needs."

Myllenbeck described the situation best. "Holidays are for happiness, not tragedy. Don't booze and cruise or you will lose."

## No profit on ARC blood

The American Red Cross recently wrote the following letter to Captain Curtis J. Winters, Center Commander, in light of recent allegations that some blood banks were profiting from blood donations.

Dear Captain Winters:

We considered it important to make you aware that much of what was written in the recent series of articles in The Philadelphia Inquirer, critical of blood banking, does not pertain to the American Red Cross, Penn-Jersey Region.

These articles portray the blood banking system as "profit" oriented, exporting blood for financial gain, and with a high degree of self interest, to the neglect of patient care. Nothing could be further from the truth regarding the Red Cross.

Today, blood banking is a humanitarian endeavor interwoven with critical medical and technical requirements that carry significant costs.

Although the volunteer blood donor freely donates blood, the cost for donor recruitment, blood collection, laboratory testing, component production, storage and distribution to hospitals have significantly increased. We believe that our management of

these costs, and our recovery of them have been most responsible.

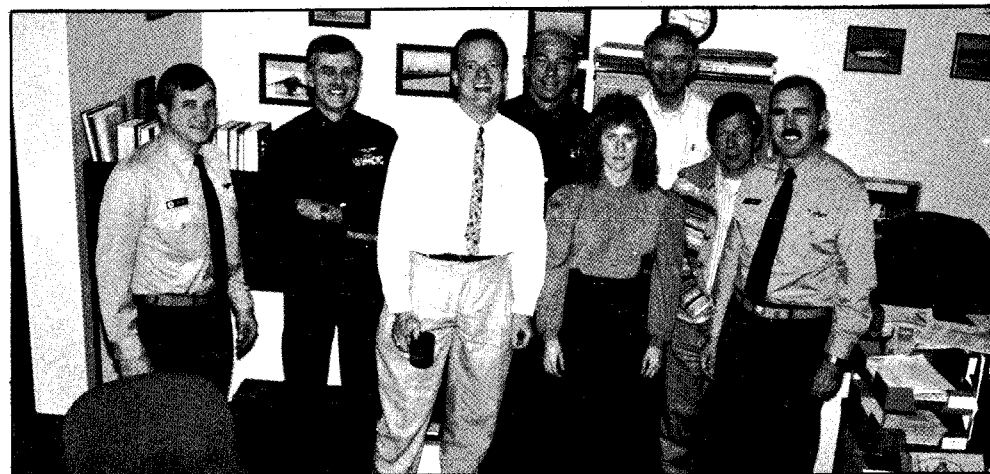
Our fees charged to hospitals remain separate from all other Red Cross funds and are used only to support this service to patients in the Penn-Jersey Region. Our volunteer governing body is comprised of hospital blood bank, hospital administration, Blue Cross and patient representatives. They review our expenses and revenue on a periodic basis and approve our annual budget.

Our regional program exports blood to other parts of the country only for urgent patient needs. An example of this is the recent need for blood in Charleston, South Carolina, because of the damage to the Red Cross blood center by Hurricane Hugo.

The people of this region are most indebted to you for your strong support of the American Red Cross Blood Program, Disaster Relief Services, and many other programs. Please accept our sincere thanks for your continued support and for your understanding of this matter.

Sincerely,  
William C. Sherwood, M.D.  
Director, Blood Services  
Penn-Jersey Region

## Fleet assistant update



Commander, Patrol Wings Atlantic staff I to r: CDR Kallin, CDR Brainerd, Michael Cannon, CDR Lewis, Tammy Lane, Ed Avis, Steve Winter and CWO2 Clapp.

Continued from page 1

who offer a whole lot of friendship." "They also have a lot of practical experience in the P-3 community and, in turn, provide the Fleet with this valuable experience to assist in the current ASW effort," he said.

Cannon was assigned to the Tactics Department headed by CDR Kallin, who will soon be assigned to NADC. Their primary mission is to develop tactical and training readiness for all Atlantic P-3 squadrons. Since the staff is involved with aircraft resource application it is important to integrate NADC research and development with CPWL applications.

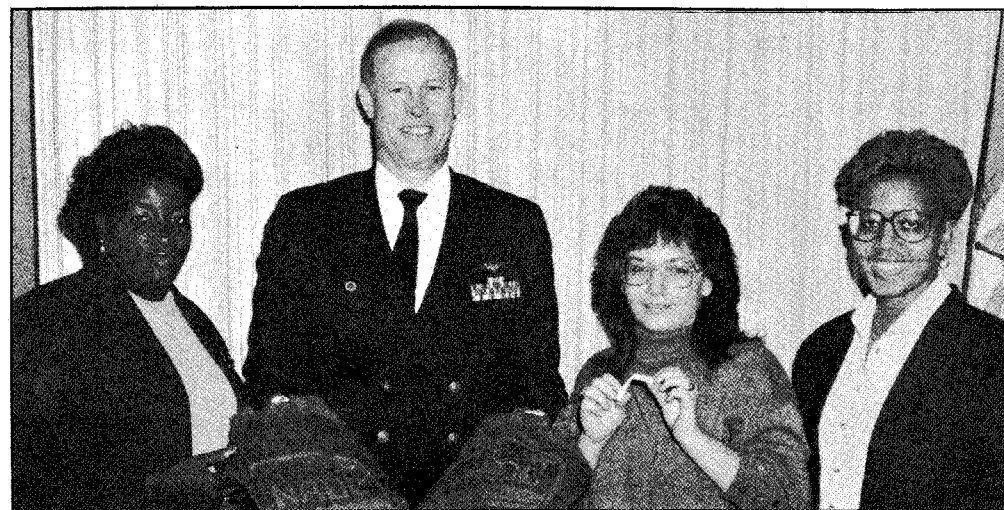
Cannon has visited several government facilities on at least two programs of primary interest to NADC. The first program involves assisting the ASWOCs with better systems to evaluate and plan the P-3 patrol mission. The second involves providing the P-3 crew with the best life support systems to combat the extreme cold patrol environment.

His future travel plans include visiting military bases in Jacksonville, Florida; Keflavik, Iceland; Bermuda; Rota, Spain; and Sigonella, Italy, and flying with P-3 crews to observe the ASW mission. "I am really looking forward to this experience," said Cannon.

According to Cannon, Admiral Tobin supports the Fleet Assistant Program and likes the idea that young engineers get exposure in the operational environment. "There's no replacement for a personal meeting"; said Cannon, "it can create friendship, promote business and show we are interested in the mission of the Fleet. I thank NADC for supporting my efforts and allowing me to participate in this program."

Interested candidates should consult Mort Metersky, Code 30C, extension 1817 for additional information about the Fleet Assistant Program.

## Fifty smokers adopted for GAS



GAS Continued from page 1

Curtis J. Winters, Center Commander.

If you would like more information on smoking and its related dangers, contact Lynne Edwards, Employee/Labor Management Relations Division, ext. 3847.

Great American Smokeout sweatshirt winners Carriess Babb and Patricia Riley with CAPT Curtis Winters and coordinator Lynne Edwards (far right).




## Mixed Bowling League News

By Tom Reiter

Congratulations to our Thanksgiving Turkey Shoot winners. With all 120 bowlers competing, the highest two game handicap male winner was Smoking **Jack Horning** (450 pins). Pretty Patti Aspinall rolled two solid games for a 452 series. Both winners took home a Genuardi's gift certificate.

### VS 'flips' over victory

By JO2 Michael A. Delledonne

It came down to a flip of the coin — a 50-50 chance. After playing four quarters and an overtime, the fifth annual VP/VS Turkey Bowl was deadlocked at 21. With both teams holding their collective breaths the coin landed. VS won.

AWC Dwight Myllenbeck, a VS team member, said the sides were very

An opinion of what each of our captains will be asking for this Christmas. **Neal Polin** wants his Big Spenders to be the spoilers and would like a few more 200 games. **Helene Goldstein** wants her husband **Al** to get some new material, we all love it, but she must hear it a thousand times. **Ben Polin** could use some more help for **Nick Doto**. **Steve Jerdan** is looking for the latest in wrist contraptions.

evenly matched. "You couldn't have gotten a closer game. It all came down to the flip of the coin and we won."

That wasn't, however, how the VP side saw it.

"They won the right to hold the trophy, not the game," explained AW1 Christopher Braniff. "It was really a lot of fun which is what it's all about anyway. It really brings out the camaraderie between the two sides."

**Jim Campana** likes what he has but would take a couple of boxes of candy. **Tom Reiter** needs a more subdued **Mike Dent**, continued help from **Claire Bayer** and **Miriam Lentz**, and last season's record. **Karen Thomas** wants to keep watching **Lorrie Dunn** throw strikes. **Cathy Burian** asks Santa for a new hat for **Art Duhaime**. **Lester Smith** needs to get five bowlers out each week. **Larry Sicher** would like everybody to be as serious as **Lois Savage**. Say it's not true Santa, that **Granny** and **Cliff Tierney** will not be bowling in our second half. **Wes Gleason** asks for some of his teammates' charm. Since **Jack Horning** got **Elsie Apple** back on his team, he doesn't need anything. **Frank Yelinek** hopes **Rick Eppright's** scores and **Melissa Honert's** spirit continues. Smiling **Lorraine Williams** hopes that **Rick Yeager** can carry From The Gutter to the top. **Bill Bradley** wants **Sol Fink** to quiet down, be more reserved, like **Debbie Wood**. With **John Bowes** on your

team what more could **Dee Gramlich** ask for? **Mary Williamson** has **Bob Smiler** to help her co-captain the Bullshooters but could still use some "cheer" to keep **Eileen Cunnane** and **Bill Halpern** happy. **Bob Bollard** needs to schedule himself to bowl more, even though at last look, his team was in second place. The Ten Pinners, our new Military entry, want a White Christmas, continued smiles from **Diane Pfeil**, and more bowling nights from **Al Sheppard**. The Goofers appear to be running away with the first half but **Al Knobloch** still wants to hear the fat lady sing. The Rolling Thunder has three captains, **Mike D'Aulerio**, **Sharon Robinson**, and **Vicky Schwartz**; no wonder **George Delisi** looks confused and is asking Santa for direction. **Dave Oliver's** Les Champignons want some steak to go with their mushrooms. The Alley Cats are using **Jack Eyth**, **Kathy Barnes**, and **Patti Aspinall** to turn up the heat on the Goofers. They are asking for a stronger heater.

We wish to extend sincere holiday greetings to all our bowlers and readers. May you all have a safe and a happy holiday season.



Photo by JO2 Michael Delledonne

**LCDR Brian Gritte, Darren Fields and Joe Camaioni congratulate Wes Gleason on his first touchdown reception during the annual VP-VS Turkey Bowl.**



Welcome, 1990

## NADC

in the

## NEWS

The big news is...

News items about NADC appear frequently in the *Intelligencer/Record*, *Bucks County Courier Times*, *Today's Spirit*, and the regional edition of the *Philadelphia Inquirer*. However, more often news items about the Center are regularly found in trade publications such as *Aviation Week and Space Technology*, *Naval Aviation News*, *Defense News*, *Aerospace Daily* and the like.

As a means of assuring that NADC is, indeed, in the news, we will be listing here the kinds of news we have released and some of those publications where stories appeared.

The most recent news clippings include:

- *Courier Times*, October 5, 1989, "Airport hazard area studied."
- *Intelligencer/Record*, October 10, 1989, "NADC- Airplane corridor cleared."
- *Courier Times*, October 10, 1989 "Restrictions on building height are considered."
- *Intelligencer/Record*, October 17, 1989, "President Bush gives honor to NADC worker."
- *Courier Times*, October 18, 1989, "Base personnel hunt deer there."
- *Intelligencer/Record*, October 18, 1989, "Deer being hunted on NADC grounds."
- *Intelligencer/Record* October 25, 1989, "NADC lands Navy's new jet fighter."
- *Courier Times*, October 25, 1989, "Navy's new jet lands at NADC."
- *Navy Technology Transfer Fact Sheet*—"Laboratory Scientists Awarded for R&D excellence."
- *Defense News*, October 16, 1989, "PACER Systems wins two Navy wargaming awards."
- *Defense News*, October 23, 1989, "Navy Center builds ship steering system."