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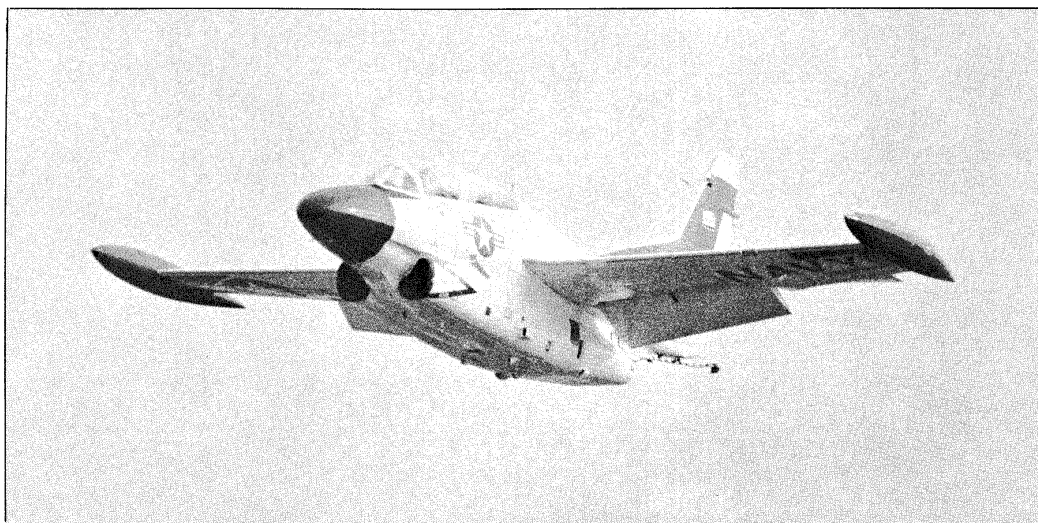
NADC Navy pilots have flown the first fluidically controlled formation flight in T-2C aircraft, accompanied by one of the Center's A-7 aircraft.

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.

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.

MAY:

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

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."

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

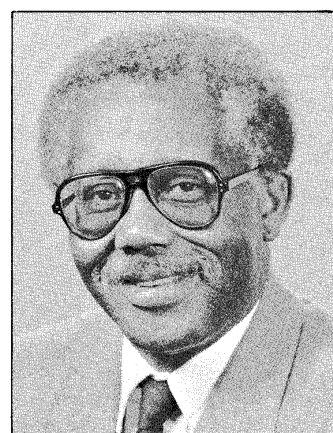
and the impact they have had . . . on the engineering profession, their communities and their university."

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

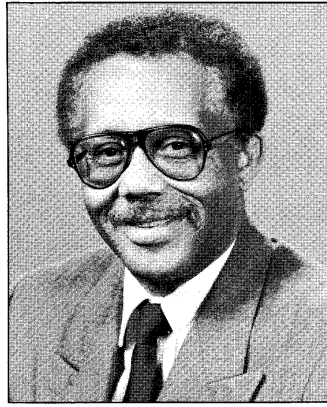


Guy C. Dilworth

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 crashworthiness, 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

REFRESHMENTS AVAILABLE

COME ONE, COME ALL

MAIN ATTRACTION
UNVEILING OF THE
BREWSTER BUCCANEER

- AIRCRAFT STATIC DISPLAY OF MODERN AND VINTAGE AIRCRAFT
- TOURS OF P-3 AND CH-53 HELO
- EXHIBITS AND DISPLAYS BY TECHNICAL DEPARTMENTS
- LOCATION: AIRFIELD AND HANGAR BAY #1, BUILDING 4

OPEN TO ALL NADC CIVILIAN AND MILITARY EMPLOYEES AND THEIR FAMILIES - ALSO CONTRACTORS WITH PERMANENT BADGES

FOR INFORMATION CALL THE PUBLIC AFFAIRS OFFICE - 3067

NADC Reflector

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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**

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.

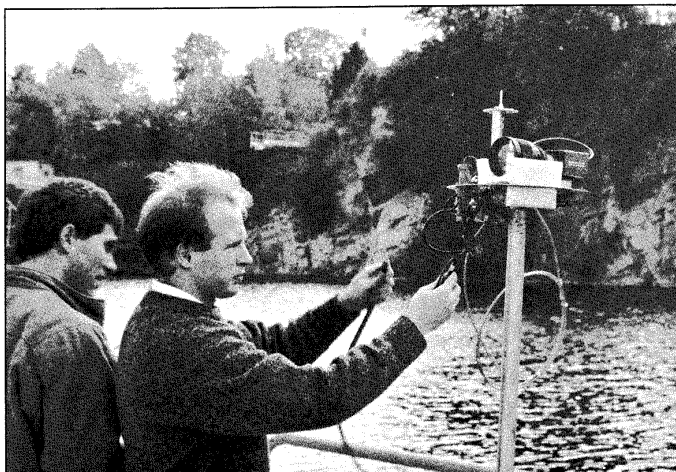
The Navy needs a system capable of assessing real-time pre- and post-strike battle damage for long range missiles, as well as collecting information without risking manned vehicles.

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

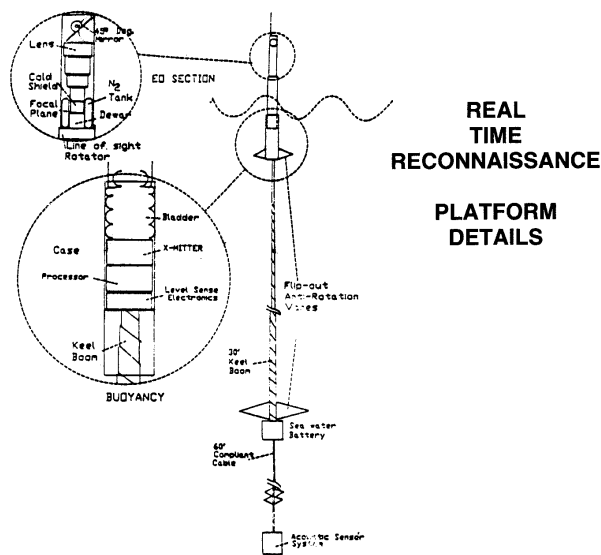
link. Its sonobuoy-shaped canister self-deploys into a spar buoy and contains electro-optical (EO) and other types of sensors, direction sensing, and a video data link.

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.



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

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 co-operation. Your ideas and support are greatly appreciated.

Mary Ann Brett
Editor

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.

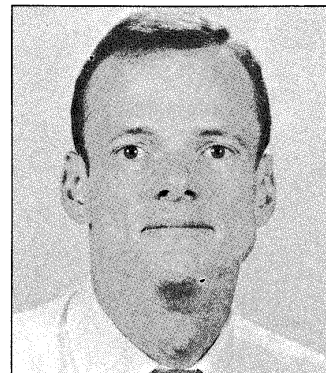
Participating in the Fleet Assistant Program (FAP), Cannon will work on operational anti-submarine warfare (ASW) problems. He will be a link between the operational organization, deployed P-3 squadrons, and NADC's technical resources.

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

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 a 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?

