NATIONAL IMAGERY AND MAPPING AGENCY

GUARANTEEING THE INFORMATION EDGE JANUARY 1999



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JANUARY 1999

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- Crew Selected for NIMA Joint Shuttle Radar Topography Mission
- 5 Ouest for Excellence
- 6 Ecuador-Peru: A Historic Peace Accord
- 8 NIMA Surveyors Scramble to Complete GPS Airfield Project
- 10 Springing Into Fitness
- П New Year's Resolution? Fitness Centers Are Ready
- Mission Support Staff Develops Changes to Increase Savings, Efficiencies
- 13 Keeping Hope Afloat
- 14 NIMA's Role in Operation Desert Fox

On the Cover

Bomb damage assessment photos of the Baghdad Directorate of Military Intelligence Headquarters, Iraq, used by the Chairman of the Joint Chiefs of Staff Army Gen. Henry H. Shelton, in a Pentagon press briefing Dec. 17, 1998. DoD photo

Published by National Imagery and Mapping Agency Director * Lt. Gen. James C. King Office of Congressional and Public Liaison Director * Laura B. Snow Deputy Director * Terence S. Meehan Chief, Public Liaison * Eric Berryman Editor: John Iler Managing Editor: Muridith Winder Staff Writers: Don Kusturin, Jennifer Lafley Designer: Richard Hardwick

The Edge is an authorized command information publication published monthly in the interest of National Imagery and Mapping Agency personnel. Contents of this publication are not necessarily the official view, or endorsed by the U.S. Government, Department of Defense or the National Imagery and Mapping Agency. Copy deadlines are the second Friday of each month. Articles are edited for style, content, and length. Correspondence should be addressed to:

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COMMAND POST

n mid-December,
President Clinton
ordered military
action against Iraq.
That nation had repeatedly violated United
Nations-ordered weapons inspections. During four days of operations, U.S. and British
military forces conducted military operations using NIMAprovided imagery,
imagery intelligence



and geospatial information. We can be proud of our contribution in GUARANTEEING THE INFORMATION EDGE to our nation's leaders.

Since Desert Storm, we have worked to improve on our strengths and fix our weaknesses. We've invested in the best people, technology, and tools. We certainly were ready—and you were the reason.

Thank you for your outstanding professionalism and dedication to mission. Our nation is grateful for your efforts.

James C. King \(\)
Lieutenant General, USA

EDITOR'S NOTE: For a more detailed view of NIMA's part in Operation Desert Fox, look for the special classified Edge edition, coming later this month. Crew Selected for NIMA Joint Shuttle

Radar Topography Mission

Editor's note: An article on NIMA's role will be published in February's EDGE.

by Don Kusturin

The crew slated to man NIMA's Joint Shuttle Radar Topography Mission (SRTM) when it lifts off in September has been announced.

NASA released the names of Kevin Kregel, commander; Dom Gorie, pilot; and mission specialists, Janet Kavandi, Janice Voss, Mamoru Mohri, and Gerhard P. J. Thiele.

The Mission

During the SRTM mission, the crew will use specialized radar equipment and other electronics to map 80 percent of the Earth's land mass, extending from the southern tip of Greenland to the northern edge of the Antarctic Circle.

This mission will help NIMA fulfill a multi-service requirement endorsed by the joint Requirements Oversight Committee (JROC for global digital terrain elevation data (DTED), with 30-meter elevation post spacing, by the end of fiscal 2000.

The JROC requirement has been a driver of the Agency's efforts to find a cost-effective and technically superior means to collect near-global DTED2-like data. This elevation data is a critical component in the information dominance strategy of joint Vision 2010.

The SRTM mission is being conducted by NIMA in a joint venture with NASA and the Jet Propulsion Laboratory.

The Crew

Kregel, an astronaut since 1992, has logged more than 41 days in space during three missions. He received a bachelor of science degree in astronautical engineering from the U.S. Air Force Academy in 1978 and a master's in public administration from Troy State University in 1988.

Gorie served as pilot on the final Shuttle-Mir mission. He has a bachelor of science degree in ocean engineering from the U.S. Naval Academy in 1979 and a 1990 master of science degree in aviation systems from the University of Tennessee. Gorie was enroute to his command tour of Strike Fighter Squadron 37 when selected as an astronaut candidate in 1994.

Kavandi was selected as an astronaut in 1994 and flew aboard Discovery earlier this year. She received a bachelor of science degree in chemistry from Missouri Southern State College in 1980; a master of science degree in chemistry from the University of Missouri in 1982; and a doctorate in analytical chemistry from the University of Washington in 1990.

Kavandi worked for Boeing before becoming an astronaut. Her doctoral dissertation involved the development of a pressure-indicating coating to provide continuous surface pressure maps of aerodynamic test models in wind tunnels. Commercial imaging technology was used for data collection and analysis.

Voss has flown on four previous missions. She received a bachelor of science degree in engineering science from Purdue University in 1975, a master of science degree in electrical engineering and a doctorate in aeronautics/astronautics from the Massachusetts Institute of Technology in 1977 and 1987, respectively.

A co-op student at the NASA Johnson Space Center from 1973 to 1975. Voss created computer simulations in the Engineering and Development Directorate. In 1977 she returned to the Johnson Space Center and, for a year, worked as a crew trainer teaching entry guidance and navigation. At Orbital Sciences Corporation, she worked in mission integration and flight operations support for an upper stage called the Transfer Orbit Stage (TOS), TOS launched the Advanced Communications Technology Satellite (ACTS) from the space shuttle in September 1993, and the Mars Observer from a Titan in 1992.

Selected by NASA in January 1990, Voss became an astronaut in July 1991. She is qualified for assignment as a mission specialist on future space shuttle flight crews. Her technical assignments include working Spacelab/Spacehab issues for the Astronaut Office Mission Development Branch, and robotics issues for the EVA/Robotics Branch.

Two of the astronauts represent the international community. Mamoru Mohri of the Japanese Space Agency is a member of the 1996 astronaut class. The SRTM mission will be his second space flight.

Gerhard Thiele of the European Space Agency is also a member of the 1996 astronaut class. This will be his first flight.

QUEST FOR EXCELLENCE

by Duval Crist

This month's column describes the Vice President's Hammer Award, replete with its infamous \$600 hammer.

Hammer Awards are presented to teams of federal employees making significant contributions supporting government reinvention principles: placing customers first, cutting through red tape and getting back to basics. The National Partnership for Reinventing Government (NPR) administers the award.

Several NIMA organizations have received Hammer Awards. The Mission Support Office (Material Management and Security Services Divisions) received the Hammer Award for reengineering the process for shipping collateral classified material. The previous shipping process using the Defense Courier Service (DCS) was inefficient, expensive and less than customer-focused. The DCS shipping procedure contained numerous handoffs resulting in untimely deliveries, impacts to material integrity, and multiple security violation opportunities. Better transportation alternatives were studied with commercial carrier shipping identified as the solution. Special permissions were obtained from several DoD elements in order to ship commercially. Commercial carrier shipments save NIMA approximately \$364,000 per year, corresponding to a 92 percent yearly shipping costs reduction. The Intelligence Community is examining this process for adoption.

The Inspector General (IG) received a Hammer Award for its Quality Assistance Visit (QAV) process. The former IG process centered on periodic, compliance-oriented inspections that discouraged openness and trust. The QAV, using the Malcolm Baldrige National Quality Award criteria, reoriented thinking towards problem prevention and built capacities within organizations for continuous improvement. The Defense Information Systems Agency and Naval Sea Systems Command have adopted this methodology.

Revised Hammer Award nomination guidance was recently distributed. Submit nominations to the PA Performance Metrics and Improvement Team (the NIMA NPR component office), mail stop D-137. The Performance Metrics and Improvement Team also provides Hammer Award preparation assistance on an as-requested basis. Contact Duval Crist, PAP, 301-227-7557, mail stop D-137. Additional information regarding the Hammer and other National Partnership for Reinventing Government awards may be found at their homepage, www.npr.gov/awards.

Deputy Director's Briefings Available Online

The NIMA Secretariat Homepage now has a link to a website featuring the Deputy Director's previously presented briefings. This 'NIMA Only' website is located at:

http://osis.nima.mil/NS/DD-Brief

Ofstedal Receives Outstanding Employee With Disabilities Award

by Don Kusturin

Lisa Ofstedal, a recent recipient of the Outstanding Employee with Disabilities Award by the St. Louis area Federal Executive Board, is pleased by the recognition, but says she really doesn't think of herself as being disabled.

"There are many NIMA employees with disabilities like mine," she said. "Hearing impairment is a non-visible disability often unnoticed because it's not like being profoundly deaf, but there are still hurdles that have to be overcome. Although I don't personally consider myself disabled, I am proud to represent anyone at NIMA who is hearing impaired."

Ofstedal embarked on a mapping career in 1984 in Digital Terrain Elevation Data and TERCOM products at the Defense Mapping Agency. She currently performs quality control checks on a variety of charting products in Manual Contract Review.

Overcoming barriers caused by disabilities has become easier with technology and awareness, she said. Although she relies on lip reading during face-to-face meetings, newer phones with volume controls have improved communications for those who suffer from partial hearing loss. Even so, she sees a bigger hurdle to successful communications.

"The biggest barrier to overcome is one of assumptions," she said. "People tend to assume that anyone with normal speech also has normal hearing." And this can lead to numerous types of misinformation and misunderstandings. "I think it's important to keep in mind that there are many types of disabilities, such as hearing impairment, dyslexia, mental illness, etc., that may not be immediately discernable. And we need to be sensitive to these in dealing with others."

She said that all her NIMA coworkers and management have done their best to assist her. NIMA, she added, is almost like family, with her husband, Marc, and brother-in-law, Peter Ofstedal-both NIMA employees-and her father, Louis Decker, a retired DMA employee.

Ecuador-Peru: NIMA Plays Major Role in Historic Peace Accord

ignitaries representing South American nations, the United States, the Vatican and Spain witnessed the long-awaited signing of the peace agreement between Ecuador and Peru on Oct. 26 in Brasilia, Brazil.

Without NIMA, this historic agreement might not have been possible. The Agency and its predecessor organizations used the latest technologies to peer through the clouds shrouding the jungle terrain.

"The images, topographic maps and visualization systems were important contributions to the diplomatic process," said John Gates, NIMA's liaison to the U.S. Southern Command. Products used in the negotiations and to support Military Observer Mission Ecuador Peru (MOMEP) include new 1:100,000 scale Topographic Line Maps, LANDSAT image maps, Radarsat image maps, a 3-1) flythrough, and scores of customized map and image products made on the Geospatial Information workstation and Remote Replication System in Panama.

The process of arriving at a lasting peace between Ecuador and Peru began at a similar ceremony in Rio de Janeiro almost 57 years ago. It was just a few of the many ongoing disputes over territory, maritime access and natural resources that are taking place across the globe.

Historic Differences... and Similarities

According to Gates, a few historians believe that the territorial dispute between Ecuador and Peru can be traced back to warring factions within the pre-Colombian Incas. "The more probable cause was the poor definition of the geo-political boundary between the two countries following the Spanish colonial period," he said.

After the Spanish conquests in the 1530s, this part of South America was under control of the viceroyalty of Peru. In the early 1700s, what is now Ecuador was passed to the control of the viceroy in Colombia. All told, Ecuadorians and Peruvians share a common Inca and Spanish heritage, including language, religion and customs.

The squabbles over the border began shortly after Peru and Ecuador broke from Spain in the early 1800s. Since that time, there have been frequent conflicts and attempts to negotiate a solution. In 1941, an uneasy truce broke down and Peru invaded Ecuador in a short but bloody war. An ad hoc coalition of interested nations, known as the Guarantor Nations, was made up of Argentina, Brazil, Chile and the United States. They helped the two settle the conflict.

Given the world politics at the time, the Guarantors missions were to bring about a lasting peace and stabilize the region—and in a hurry. Gearing up for World War II, the United States depended on the rubber, minerals, and quinine that came from this part of the world. In January 1942, with Guarantor oversight, Ecuador and Peru signed the Rio de Janeiro Protocol for Peace, Friendship, and Borders. "It is only now that this process is coming to closure," Gates said.

The Controversy

The Rio Protocol is a short document taken up in large measure with delineation of the border. There are no annexed maps to the Protocol, so everything depended on an accurate description of the border.

For several years following 1942, a commission from Ecuador and Peru carried out geodetic surveys and placed more than 150 border monu-

The two presidents - Jamil Mahuad of Ecuador and Alberto Fujimori of Peru



ments, effectively demarcatingalmost 90 percent of the 1,420 kilometer border.

"All went relatively well until they came upon the area known as the Cordillera del Condor (Condor Mountain Range)," Gates said. An extremely isolated area on the eastern flank of the Andes, it was poorly mapped due to its rugged jungle terrain, almost permanent cloud cover, and sparse population.

In this area of the frontier, the border runs along a watershed line between two major river systems. Because of the lack of accurate maps, this watershed line was poorly described in the Protocol.

In 1960, Ecuador abandoned the Protocol process because it felt that the Protocol was not executable due to a perceived fatal error in the description of the watershed line in the Cordillera del Condor. Since then, Ecuador and Peru have had years of uneasy peace and periods of outright hostilities. Two major outbreaks occurred in 1981 and 1995.

"The solution we have today came as a result of diplomatic negotiations begun after signing a peace declaration in February 1995," Gates said. "The final solution of the border controversy depended on arriving at a delicate balance between the spirit and letter of the Protocol, and some innovative thinking by the negotiators."

The U.S. Mapping Effort

Seeing the urgent need for better maps over the Cordillera del Condor and other areas of the frontier, Dr. George McBride, the U.S. technical advisor to the Guarantors in the 1940s, sought the help of the U.S. Army Air Force to photograph and map the border.

From 1943 to 1946, numerous sorties were flown and the first accurate topographic map of the Cordillera del Condor was compiled. However, that effort had a tragic price. Two aircraft crashed in separate incidents killing 14 U.S. airmen. The new map was a significant contribution to knowledge of the region, but did not end the controversy.

More and better maps were made in the intervening years through the efforts of the Ecuadorian and Peruvian



NIMA's team that provided support to the peace effort include, from left: John Gates, U.S. Southern Command Liaison - Panama; John Armocida, Remote Replication System operator; and Don Wiley Jr., technical representative.

geographic institutes in collaboration with the Inter American Geodetic Survey (IAGS). IAGS was formed in 1946 in response to Department of Defense and the Pan America Institute of Geography desires to assist Latin American mapping efforts.

Brokering a Solution

The overall peace agreement includes treaties on Commerce and Navigation, Border Integration, and Mutual Confidence. After numerous rounds of technical and juridical presentations by both sides, the Guarantors gave their recommendations as to where the border should run in May 1998.

"It was accepted by both sides except in a small area on the Peruvian side of the Cordillera del Condor surrounding a small border post named Tiwintza," Gates said.

Tiwintza had been abandoned after the 1995 conflict under terms of the separation of forces. However, Tiwintza holds special significance to Ecuador because Ecuadorian soldiers defended it and had buried their dead within its perimeter.

"Both sides were intransigent over this section of the border and the talks soon stalled," Gates said, "Tensions grew during a period last summer, and it was feared that armed conflict was imminent."

The Guarantors and the two presidents — Jamil Mahuad of Ecuador and Alberto Fujimori of Peru — overcame the impasse. In a flurry of shuttle diplomacy, Peru and Ecuador agreed to accept a final Guarantor solution that includes adjacent peace parks straddling the border along the Cordillera del Condor and a Peruvian secession of a onesquare kilometer area encompassing Tiwintza, not as sovereign territory, but a private property transfer.

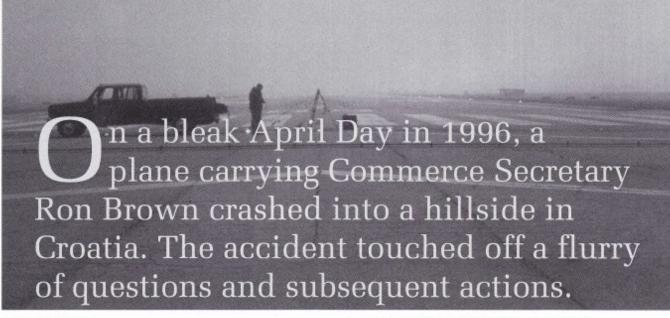
What's Next

The treaties are not final until the last monument has been placed and surveyed. NIMA may be asked to assist the two countries in further defining the watershed and take part in higher order Global Positioning Satellite (GPS) surveys.

"The hard part is done," Gates said, "but we must be ready to lend a hand in order to bring this last phase to a speedy conclusion."

continued on page 13

NIMA Surveyors Scramble to Complete GPS Airfield Project



by Don Kusturin

One action following the crash that killed Commerce Secretary Brown was the slated development of Global Positioning System (GPS) approach procedures for approximately 930 airfields by 2003. And Secretary of Defense William Cohen has made it clear he looks to NIMA to complete this project.

Surveys of all airfields used by DoD are currently underway throughout the world. During 1998, NIMA surveyors traveled to Peru, Guam, Japan, Korea, and Honduras, as well as many stateside locations, to gather

And, said Army Maj. Steve Strang, visiting many of these remote locations has resulted in some "unique challenges."

"Surveyors are expected to brave the rugged terrain and bracing cold of Iceland, the steamy jungles of Peru, fighting off snakes, the heat and mosquitoes, encountering local terrorist groups and transporting equipment over rugged terrain," he said.

Small teams of surveyors conduct "country airfield campaigns." They ship equipment into foreign countries and survey and move from airfield to airfield until they are done. Sometimes, Strang said, this requires them to be away for months at a time.

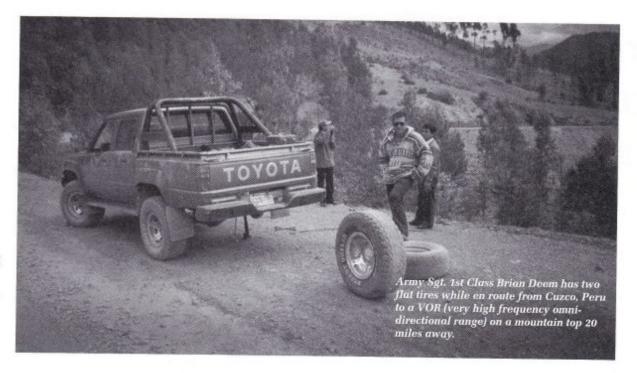
Surveyors set up global positioning receivers to provide an absolute control position. This is a measure specifically relative to the center of the earth. Once absolute control is achieved, they use both GPS and conventional methods to locate runway points, as well as all navigation aids and obstructions within five miles of the airfield.

"Accuracy with GPS is getting pretty good," said Strang. "We can get to within a quarter meter relative to the Earth's center and can locate local airfield navigation aids and obstacles within 10 centimeters of our control points."

Since this project began in December 1996, teams of geodesists have surveyed approximately 30 airfields around the world.

NIMA geodesist prepares to take a runway reading.







"Typically, an airfield survey will take from three days to two weeks to complete, depending on the number of obstructions to navigation that need to be surveyed," said Peruvian team lead Pete Rakowsky. "Ten days is probably a good average time estimate."

Rakowsky said learning about new cultures and a new language was difficult, but necessary, in fulfilling this mission. It helped facilitate the relationship between NIMA workers and the host country.

"The Peruvian CORPAC (Peruvian FAA equivalent) personnel were very supportive. They provided transportation of our equipment within Peru and survey vehicle rental at each airfield. CORPAC personnel were very pleased that we selected Peru as one of the first countries in South America to begin the airfield surveys program." Several CORPAC engineers, he said, worked side-by-side with NIMA surveyors in the field. "There's a camaraderie that goes with field surveying under sometimes difficult conditions."

Partnering is of great benefit to NIMA in accomplishing this task. NIMA continues to work with foreign governments to help in their collection effort. NIMA surveyors even train local surveyors to use GPS equipment and use their help in collecting information.

Not only is NIMA teaming with various countries, it is partnering with other DoD agencies. The Army has provided surveyors for stateside surveys.

This mission involves a large number of NIMA geodesists and will have a worldwide effect. The information collected under NIMA's supervision will be available to all flyers. And, by using GPS, pilots can find the airfield even in bad weather. The final aim is safer air travel for all.

St. Louis Employees

Springing Into Fitness

by Don Kusturin

St. Louis employees recently took part in a 10-week goal-oriented pilot program called "Spring Into Fitness."

Conducted by the Centers for Disease Control and the National Coalition for Promoting Physical Activity, 189 participants took part with 77 percent meeting or exceeding personal goals. Points were earned by completing physical activities that spanned the gamut from house cleaning to running. As long as the activity was maintained for a set period of time, it counted towards the goal.

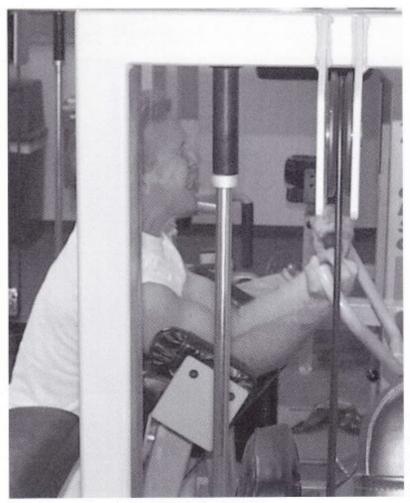
A key support in keeping people focused were the teams made up of program participants. Each week, team leaders would contact members to see how they were doing. Many claimed that being part of a team kept them faithful to their goals.

To keep their goals in mind, the program asked participants to track their progress with the use of a daily log, detailing what they had done for the day.

"I found that keeping track of the amount of time we spent was a motivating factor," said Ruth Ann Portell, a management program assistant.

The program received many positive comments on a survey conducted at completion.

"The final survey forms were overwhelmingly positive and enthusiastic," said the program's manager Mary Zander. "Many commented that they had become more conscious of the amount of daily physical activity they performed and didn't find it as difficult as they thought to sustain or increase their current levels."



Chris Nixon works out at the St. Louis fitness Center.

Even those used to being active found the program to be of help.

"It was an easy way to motivate yourself to get back into the exercise mode after the winter months," said Elaine Schlueter, Human Resources customer service advisor. "I know — I slack off on my exercise routine during the holidays and winter. And this was a fun way to get back into a routine."

Although the program was personalized by and for each participant, team members and leaders took pride in how their teams progressed.

"I was very pleased with the outcome for my team," said cartographer Mike Earl. "Everyone achieved their goals."

Schlueter said her team went a step further and challenged another HR office to see how many would achieve their goals.

"I thought there was a real team spirit within our offices that kept everyone motivated," she said. "It also was a way to have some fun as an office, too."

Many others in the program reported they also had fun. However, others concentrated on the benefits.

"I enjoyed the fitness program," said aeronautical information specialist Sandra Meade. "I try to exercise as often as I can because I have diabetes and it helps control my blood sugars. I also want to keep my weight down and stay in shape. I liked the fitness program because it gave me a goal to work toward and gave me more incentive to keep track of my progress."

Zander said she hopes individuals will participate in other programs hosted by NIMA, and many St. Louis employees have expressed interest in when the next will begin. "In fact," Zander said, "the most-repeated comment I received as I awarded t-shirts was, 'That was a lot of fun, when does the next program start?...'"

New Year's Resolution to Shape Up? Fitness Centers Are Ready

There's room for exercisers at Headquarters, Bethesda

by Jennifer Lafley

hen Howard Cohen of Marine Navigation walked into NIMA's remodeled gymnasium in Bethesda on a Sunday morning, he was surprised to find that he had the whole place to himself.

"It was great!" he said. "I got a good workout and watched all the Sunday talk shows at the same time."

But an empty facility is not exactly what the wellness staff had in mind. And with the holidays over and New Year's resolutions on many minds, the fitness rooms at all of NIMA's locations are ready.

In Bethesda, wellness program manager John Turner of Human Resources is hoping the new equipment will entice employees during the winter months to spend time in the gym. "We have 24-hour-a-day access to the wellness facility for NIMA employees."

Currently, the remodeled Bethesda site averages 30 users a day. "We anticipate that winter will bring more folks in," said Andrea Lupi, fitness coordinator. "After the holidays, exercise programs usually pick up in attendance."

Begining last fall in both Reston and Bethesda, walking groups were organized. Now that the weather is cold, Lupi is developing other options for employees.

"I want to try a variety of different classes and exercise options to keep people interested," she said.

Weight-Watchers, cooking classes, smoking cessation

Another popular program that started in October in Bethesda is Weight Watchers. Employees keep records of their weight loss and learn diet tips. St. Louis also has one, and a class is starting in Reston.

"It's nice having people that you see every day give you moral support and keep you honest when you overdo," said one employee who's lost 10 pounds. The current class, as of press time, has lost more than 130 pounds.

And in time for the holidays, registered dietitian Mindy Facenda gave cooking demonstrations at NIMA's Reston, Bethesda, Navy Yard and Ft. Belvoir sites. Facenda demonstrated how to re-create dishes popular for the holidays and offered suggestions for reducing the fat, but not the flavor.

Lupi also wants to start smoking cessation programs at many of the locations, depending on interest.

"We are open to suggestions, and willing to look into various programs at all the sites to help the workforce lead healthier lives," Turner said. "We just need to know there is enough interest."

To contact John Turner, please call 301-227-1980.

Step-Aerobics, Tai Chi

One popular class Lupi started in Bethesda is step-aerobics on Tuesday and Thurs-

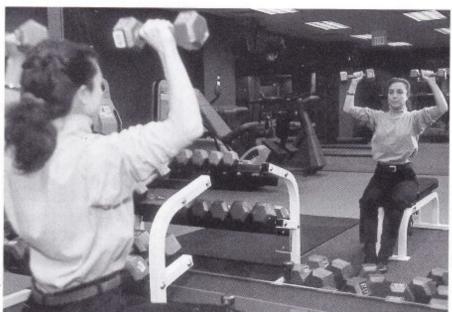
days, with more than 15 men and women who show up faithfully.

"It was hard at first, but I'm definitely more flexible," said Monica Wilkes of Information Services and Training, a regular in the class.

Lupi also is investigating the possibility of starting a Tai Chi class and/or a stretching and toning class. Tai Chi, a series of stretches and relaxation techniques, can be done in street clothes.

"This is in response to a request from several employees who want something they can do once a week to help with stress," said Lupi, who is also available by appointment to help employees set up a strength training program using weights and equipment.

"The machines can be intimidating," said Lupi, who is available to meet with employees individually and in groups to show them how to decide on what machines would benefit them the most.



Andrea Lupi, fitness coordinator, is ready to help employees learn how to use the available equipment.

Mission Support Develops Ways to Increase Savings, Efficiencies

by L. J. Roberts Missions Support Office

Since NIMA's standup, the Mission Support Office has developed and implemented several innovative changes that have achieved dramatic savings.

Some changes have also increased efficiencies resulting in a higher quality of service to customers.

MS came up with a cost efficient way of transporting classified material between NIMA facilities. Historically, classified materials were transported via government courier service that proved expensive and time-consuming. MS switched from government courier to a commercial firm.

On an annual basis, projected savings equate to a 92 percent reduction in shipping costs and earned NIMA a National Performance Review Hammer Award.

Another innovation involves several initiatives that substantially reduced the logistical infrastructure at NIMA.

Warehousing functions were eliminated at NIMA Riverdale leading to the closure of that facility. General freight operations involving packing, crating and transportation were transferred to the CIA. And, instead of stockpiling huge quantities of map paper and other material for internal delivery to NIMA customers, MS now requires commercial vendors to ship products in staggered quantities directly to NIMA customers.

These practices have returned immediate cost and efficiency benefits to NIMA.

Finally, a cooperative effort between MS and the CIA establishes a "virtual supply room (VSR)" as an option for obtaining administrative supplies. VSR is expected to provide a paperless process for obtaining administrative supplies at a lower cost. The concept will allow customers, using desktop computers, to contact approved vendors and receive items within a single workday.

A three-month pilot at a selected site began in October. MS will examine the results and is researching a similar program for obtaining production supplies.

MS encourages all employees to participate in its innovation program. Just submit an idea to improve any phase of the office's support to the Agency. For each idea submitted, recognition and earned awards are presented.

Chester C. Amicone, a navigational scientist who retired from DMA in 1989 after 39 years of federal service, died Dec. 4 from respiratory ailments.

Amicone graduated from the U.S. Merchant Marine Academy and served in the Merchant Marines. He then went to work with the Naval Oceanographic Office (NAVOCEANO) in Suitland, Md., and used his expertise to enhance many navigation publications in use today, including Bowditch.

Computer Network Defense Joint Task Force Now Operational

The Department of Defense officially stood up its Joint Task Force on Computer Network Defense (JTF-CND) under the command of Air Force Maj. Gen. John H. Campbell on Dec. 30.

Secretary of Defense William S. Cohen approved the formation of the joint task force on Dec. 4.

Working in conjunction with the unified military commands, the military services and other Department of Defense agencies, the joint task force will be responsible for the defense of DoD networks and systems from intruders and other attacks.

The JTF-CND will serve as the focal point with the Department of Defense to organize a united effort to defend its computer networks and systems. It will monitor incidents and potential threats to DoD systems; it will also establish links with other federal agencies through the National Infrastructure Protection Center to share information on activities across the information infrastructure. When attacks are detected, the JTF will be responsible for directing DoD-wide recovery actions to stop or contain damage and restore network functions to DoD operations.

Defense exercises and real world events in 1997 and in early 1998 demonstrated the need for an organization within the DoD to coordinate its defensive activities and to have the authority to direct the necessary actions for that defense. Cohen directed the creation of a joint task force to provide the necessary operational authority consistent with accepted joint doctrine.

The JTF-CND will report through the chairman of the joint Chiefs of Staff to Cohen since the joint task force is not currently assigned to a unified command.

The JTF-CND will be located at and supported by the Defense Information Systems Agency (DISA) to take full advantage of the existing operational computer network capabilities of DISA's Global Operations and Security Center, the Military Services, and DoD agencies.

Peace Accord

continued from page 7



A Collective Effort

Gates said many people from differing organizations and backgrounds contributed to this effort. "Of all the Guarantors' representatives, our own presidential envoy, Ambassador Luigi Einaudi, demonstrated incredible poise, intelligence, and self-sacrifice during the many years he has participated in this process," he said.

Gates also praised the Military Observer Mission Ecuador Peru. "This international mission, run from a small base in the Ecuadorian jungle, will continue to support the peace until the border is closed," Gates said.

NIMA's contributors to this effort cut across the Agency in all phases of expertise. "My hat is off to cartographers in St. Louis, computer experts in Bethesda, and the imagery analysts in the Navy Yard," he said. I hope those of you who have participated realize what a great job you all did." He gave a special thanks goes to the Customer Support Team in Reston and Gates' coworkers in Panama. "No other agency or organization in the world could have done what we have accomplished," Gates said.

Keeping Hope Afloat

The sails are packed away and the boat sits on the trailer awaiting the coming of spring 1999, but the effects of this year's participation of *Dad's Toy* in the 1998 Leukemia Cup Regatta are still visible.

Dad's Toy, which belongs to Pat Williams of NIMA's Research and Development Plans and Program Office, set an all-time personal record for contributions for the 1998 Leukemia Cup Regatta held in the Potomac River Sept. 12.

Williams, along with crew members Mike Craig and Hank Messick, combined with more than 115 NIMA "Honorary Crewmen" to raise over \$1250 for leukemia research. This total was three times what Williams and his crew raised in 1997, and made Dad's Toy the third highest contributor.

"The great feat of raising over \$20,000 could never have been done without the generous and wonderful participation of all the 'Honorary Crewmen' from NIMA," Williams said. "NIMA employees from all segments of the organization became 'crewmen' by making donations to the Leukemia Society of America."



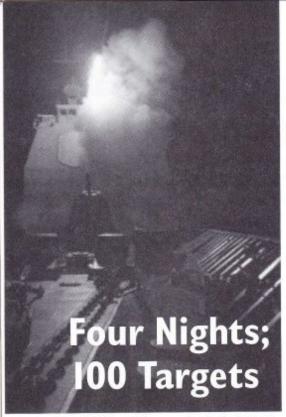
Pat Williams, with crew members Mike Craig and Hank Messick.

According to Williams, this is the third time that he has sailed in the Leukemia Cup Regatta, and every year the number of honorary crewmen gets bigger. All monies raised by Dad's Toy are donated to the American Leukemia Society in the honor of Jennifer Marshall, of Blacksburg, Va. Marshall, now 13 years old, is in her second year of remission from leukemia.

"She is a spunky teenager who has fought this dreaded disease, and so far, is winning!" Williams said.

A promising future for leukemia victims comes from the American Leukemia Society. Thirty years ago a child diagnosed with leukemia was given a 4 percent chance of living. Today, the survival rate is over 78 percent.

"The need to keep up the fight for a cure is very high because leukemia is the number one fatal disease of children," Williams said. "By participating with *Dad's Toy* in the 1998 Leukemia Cup Regatta, all of the NIMA honorary crewmen have helped raise much-needed funds to support additional research and treatment for people who suffer from this disease."



A U.S. Navy ship operating in the Persian Gulf launches a Tomahawk Land Attack Missile on Dec. 17, in support of Operation Desert Fox. DoD photo by Navy Petty Officer 1st Class Todd Cichonowicz.

uring Dec. 16-19, American and British bombs and missiles struck 100 Iraqi military targets. The attacks came at the direction of national authority, and were in response to the Iraqi leadership's violation of UN-ordered weapons inspec-

Defense leaders praised U.S. service members for the success of Operation Desert Fox. They also praised the intelligence community for its support.

The United States achieved its goals, Defense Secretary William S. Cohen said at the Pentagon Dec. 19. "We've degraded Saddam Hussein's ability to deliver chemical and biological weapons," he said. "We've diminished his ability to wage war against his neighbors."

Army Gen. Hugh Shelton, chairman of the Joint Chiefs of Staff, echoed Cohen's assessment. "I am confident that the carefully planned and superbly executed combat operations of the past four days have degraded Saddam Hussein's weapons of mass destruction program, his ability to deliver weapons and his ability to militarily threaten the security of this strategically important Persian Gulf region."

During the 70-hour operation, Shelton reported, American and British planes flew more than 650 strike and strike support sorties. U.S. ships launched more than 325 Tomahawk cruise missiles. Air Force B-52 bombers dropped more than 90 cruise missiles.

And intelligence support played its part in getting the weapons on target.

"I think I had tremendous intelligence support, and I think I can say that in several respects," said Marine Corps Gen. Anthony C. Zinni, commander-in-chief U.S. Central Command (CENTCOM). "One is the integration of all the intelligence effort. All the agencies were truly one in this operation."

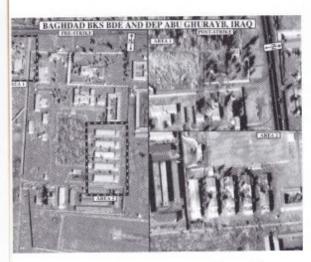
Zinni added that cooperation has been superb, "and as a commander I could not have asked for better. I think the ongoing intelligence effort we have out there over Iraq obviously has been very significant, so this day-today gathering of intelligence from all our sources has paid off in this targeting."

Cartographers worked long hours - and with exacting precision - to complete the job of providing the warfighters with vital geospatial support, including digital terrain elevation data over Iraq.

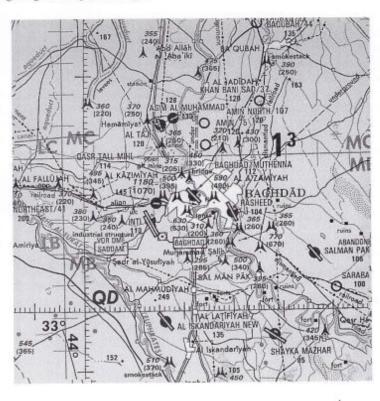
Cohen said military officials developed and refined the plan for Desert Fox over the last year. "We concentrated on military targets and we worked very hard to keep civilian casualties as low as possible," he said. "Our goal was to weaken Iraq's military power, not to hurt Iraq's people."

Since the Gulf War, Saddam has chosen "confrontation over cooperation," Cohen said. "To the extent that there are civilian casualties, only Saddam and his brutally destructive regime are to blame."

Throughout the air campaign, Cohen said, American forces performed with great speed and skill.



Bomb damage assessment photos of the Baghdad Barracks Brigade and Depot, Abu Ghurayb, Iraq, used by Chairman of the Joint Chiefs of Staff Army Gen. Henry H. Shelton, in a Pentagon press briefing on Dec. 17. DoD photo.



Portion of a NIMAOperational Navigation Chart (ONC) showing Baghdad. The 1:1,000,000scale chart is used for mission planning.



Watch for a special **Operation Desert Fox** classified Edge, coming later this month.

Chairman of the Joint Chiefs of Staff Army Gen. Henry H. Shelton briefs reporters in the Pentagon on the bomb damage assessment of strikes in Iraq during Operation Desert Fox. DoD photo by Helene C. Stikkel.

There were no U.S. or British casualties. He stressed, however, that service members face risks every day in the course of their duties. He recalled four naval officers who died when their aircraft collided on the USS Enterprise in early November.

"That night Lt. Cmdr. Kurt Barich, Lt. Cmdr. Meredith Loughran, Lt. Brendan Duffy and Lt. Charles Woodard gave their lives in defense of their country," the secretary said. "Our condolences and sympathies continue to go to their families and loved ones."

Shelton commended the military men and women who conducted Desert Fox for their professionalism, dedication and courage. "This was truly a team effort," he said.

"Soldiers, Sailors, Airmen and Marines of our total force, active, Reserve and National Guard, together with our great British allies, all contributed to the success achieved during the operation. It was one team and one fight."

The chairman addressed his thanks to the families of service members. "I know it's been difficult, especially during the holiday season, to watch your husband, wife, son or daughter, mom or dad, pick up that rucksack one more time to answer our nation's call. America is very proud of you all."



The end of Desert Fox does not mean the end of the U.S. presence in the region, Shelton said. Defense officials intend to evaluate the size of the force needed to "keep an eye on Saddam," he said. "Make no mistake about it, we will maintain a significant capability there to defend our national interests and the security of the region as we have for many years."

Compiled from American Forces Press Service Releases

Aviation ordnancemen load an F/A-18 Hornet with a GBU-1 6 laser guided bomb on the flight deck of the aircraft carrier USS Enterprise on Dec. 17, 1998, in preparation for a second wave of attacks against Iraq during Operation Desert Fox. DoD photo by Navy Airman Jacob L. Hollinsgworth.

