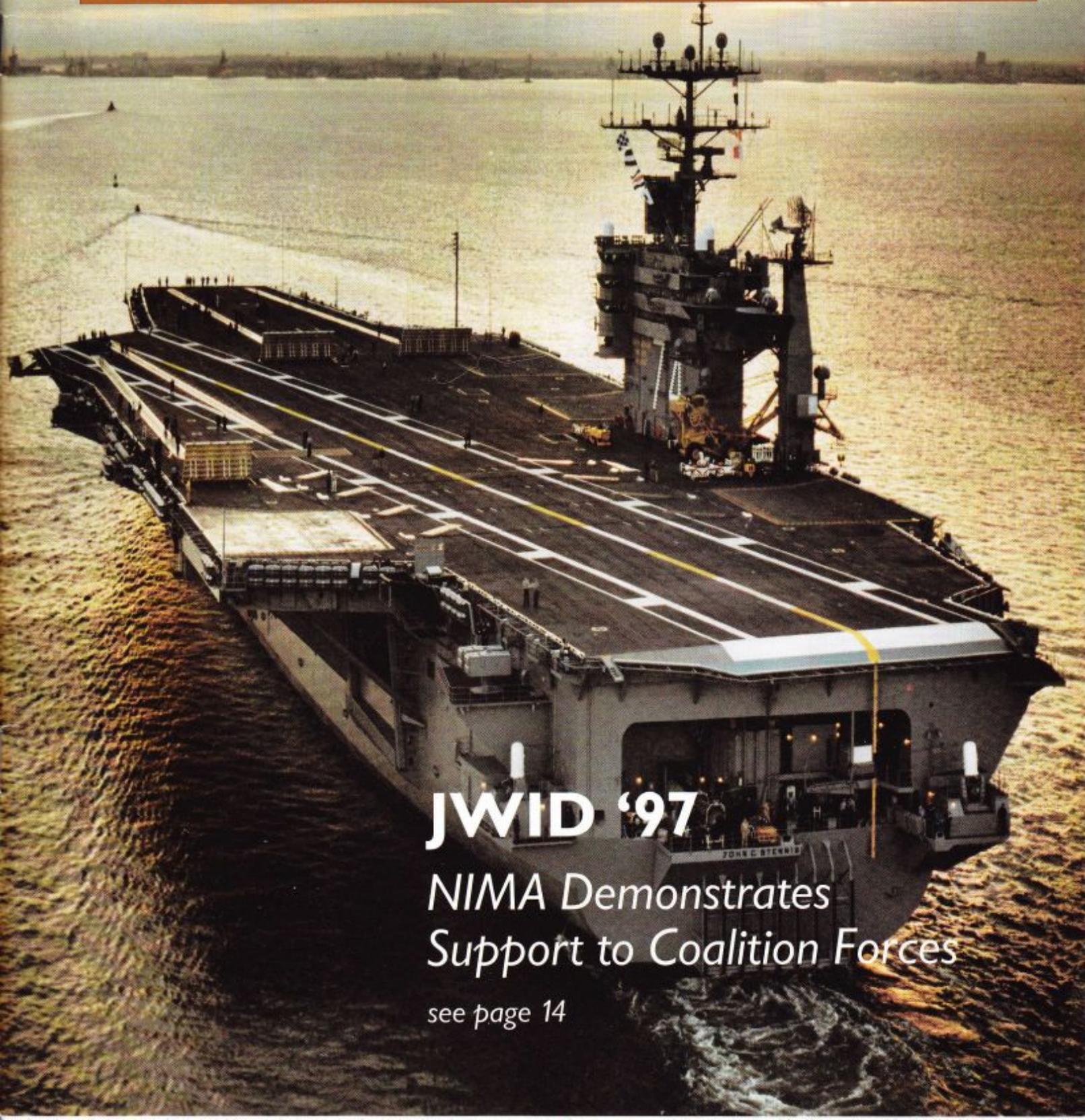


The Edge

1997

National Imagery
and Mapping
Agency

Guaranteeing the Information Edge



JWID '97

*NIMA Demonstrates
Support to Coalition Forces*

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On the cover: USS John C. Stennis (CVN 74) was the principal NIMA platform during JWID '97, as well as coalition task force headquarters for JWID. Photo courtesy U.S. Navy.

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As I See It

Where has the summer gone? Or the last year for that matter? We've done so much but much remains ahead.

We had two very distinguished visitors last month. General Shalikashvili, the Chairman of the Joint Chiefs of Staff, and The Honorable George Tenet, the Director of Central Intelligence. I must say that they were impressed with NIMA and the people they talked to.

We continue to learn and grow.

"If the mast goes, we go with it."

Midshipman Jarvis
USS CONSTELLATION 1800

J.J.Dantone Jr.

The key components of WORKFORCE21 are being developed by the 70 members of eight highly diverse design teams from NIMA directorates and offices. These teams are defining the features of WORKFORCE21, scheduled for full implementation by Oct. 1, 1998.

After the teams' kickoff session at the Tyson's Marriott in Northern Virginia, team members met to create planning blueprints for WORKFORCE21. The blueprints were approved by the Senior

Leaders' Project Steering Team. Following are the eight design teams' objectives, preliminary design features and tough unresolved issues:

Design Teams Tackle Tough Issues

NIMA Designs Its Future Human Resources System

by Tim May
Communications Design Team



Listening to the opening briefings at the July 29 kickoff are Todd Veisl(l) and Don White.

Communications

Team Leader Laura Snow indicated her team's communications vision for internal audiences as ensuring "You know what we know."

"We plan to continue to share information with managers and employees," she said, "even the sensitive subjects."

Her team also is responsible for communicating with external audiences about the progress and specifics of WORKFORCE21. The greatest challenge, she said, is developing effective employee feedback mechanisms. "Want to ensure that Workforce21 information consistently reaches all NIMA employees in a timely, accurate manner," said Snow. "Equally important, we want employees to have effective communications channels."

Technology

Team Leader Jimmy Boyd said his team compared the DoD Civilian Personnel Modernized System with the commercial off-the-shelf PeopleSoft Human Resources Management System (HRMS) to determine which best delivers and supports the requirements of NIMA's new human resources system.

"We are assessing software, security and connectivity

considerations," he reported.

Rear Adm. J.J. Dantone Jr. made the decision to acquire the federalized version of PeopleSoft HRMS. The decision was based on the technology team's analysis of product functionality, the availability of a federalized version, the availability of the software purchased from the GSA Federal Supply Schedule and current government use.

Pilots will translate the design teams' plans and processes into test procedures. Design teams will then refine and modify procedures based on test results.

Boyd identified as especially tough issues the validation of design teams' requirements, development of the best connectivity strategy to reach all managers and employees and achievement of full operational capability on Oct. 1, 1998.

Strategic Workforce Planning

Team Leader Robert Cardillo stated that the key deliverable of the design team is the development of a process/methodology by which NIMA can project future personnel skills and develop a long-term strategy to acquire them. "We are not developing a Plan that will be given to NIMA decision makers for execution, but providing the tools to allow them to see the workforce factors in their current and planned activities, and to forecast the outcomes of alternative courses of action," reported Cardillo.

The challenge facing the team is the alignment of this process with agency strategic and business planning. To ensure relevancy, Workforce Planning will be tied to the broader NIMA resource allocation process and the Program Objectives Memorandum (POM) build.

Competency Analysis

Team leader Jack Hild indicated that his team's objectives are to consolidate



Promotion and Assignment Design Team, l-r, David Kraus, Marilyn Merry, Sandra Wood, Mike Price, and Charlie Hughes working at their Erskine Hall office.

After the teams' kickoff session at the Tyson's Marriott in Northern Virginia, team members met to create planning blueprints for WORKFORCE21.

NIMA's approximately 630 position titles into 25-35 broad career occupations to define general and job-specific skills needed by each occupation and to develop an employee skills database.

Working with industrial psychologists from the American Institutes for Research, Hild's team will be reviewing similar efforts currently underway at CIA and the National Security Agency.

"We want to take advantage of the work that's already been done in the Intelligence Community, especially in our non-core occupations," Hild said.

"That, and the related work initiated by some NIMA offices are the keys to collapsing our occupations and building the database."

Tough issues being addressed

are how to incorporate initiatives such as NIMA Career Inventory System (NCIS) and several pilot projects into the analysis process; where or whether to separate supervisory and management occupations; and whether technical, intern and student positions should be included in a specific occupation or grouped together in an administrative occupation.

Career Development

This team's objective is to promote employee career satisfaction while improving organizational effectiveness. Training and education will focus on the skills needed for specific occupations and will be offered by the NIMA College, through professional and academic programs, and on-the-job training.

"The idea," said Team Leader Dave Broadhurst, "is to link the training and development required for all NIMA occupations very closely with the employee skills that the Agency needs now and in the not-too-distant future."

Employee development will include a program of lateral and rotational assignments and may include assignments to other government agencies, public or private organizations. Career development services will emphasize career counseling, mentoring and coaching;

continued on next page

NIMA Designs Its Future Human Resources System

continued from page 5

transitioning across occupations; and job placement. Career planning will closely tie the skills that employees need with their personal development plans.

Broadhurst added that the really tough issues are how to create a system where employees' personal development plans influence managers' decisions on assignments and training; and how to plan career transitions through the various stages of employees' careers.

Performance Management

"We see Strategic Workforce Planning as the brains of the new human resources system, but Performance Management is the heart of the system," said Team Leader Barbara Ivery. "The other components, such as pay and promotion, are the arteries."

Her team members see managers reviewing clear job expectations and outcomes with employees, discussing employees' plans for personal development including desired rotations and training, and providing regular informal feedback so that annual performance appraisals are extensions of earlier discussions.

Key features include multiple rating levels instead of the current pass/fail, a method to evaluate teams, built-in accountability

and 360-degree input as an integral part of the process.

Ivery indicated that one of the toughest issues is defining how 360-degree input will be used in the performance management process. The second issue is how performance appraisal will tie into performance-based pay increases within a pay band and how appraisals will factor into promotion decisions.

Pay and Awards

The team hopes to create a system that will allow for local tailoring while maintaining Agency-wide consistency.

"Our present pay and awards system doesn't effectively reward employees for their contributions to the mission," said Team Leader Katy Smith. "So we are designing a pay and awards system that is as closely linked to performance as we can make it."

She elaborated that permanent pay increases within bands will be performance (contribution) based. Movement to the next higher band in an occupational career path will be a promotion with performance playing a key role in promotion decisions.

To help understand the new pay band system, employees will see a direct relationship between their present general schedule or wage grade levels and the pay bands that they will "map" to without a change in pay.

Employees will map to one of NIMA's newly created broad occupations. Awards will be both monetary and honorary. Smith said her team is reviewing all current NIMA awards plus affiliate options and that they are seeking ideas for totally new awards.

The toughest issues are: defining how performance-based pay band increases and awards will link to the POM and strategic planning processes, designing a pay and awards system that is budget-neutral and identifying how within-grade (step) increases will



Members of the Technology Team confer with members of the Promotion and Assignment Team on the Agency's connectivity strategy.

“We see Strategic Workforce Planning as the brains of the new human resources system, but Performance Management is the heart of the system....”

factor into the new performance-based pay system.

Promotion and Assignment

Team Leader Rick Harris indicated his team is looking at options for handling promotions and assignments that differ from today's practices.

Promotion-related options being reviewed include Agency-wide occupation promotion panels; promotion eligibility primarily based on demonstrated competencies; and promotion decisions based on factors in addition to competen-

cies, such as performance, work styles, interpersonal skills and commitment to NIMA.

Assignment-related options under consideration include assignment decisions within occupations made by supervisors or panels; assignments between occupations made by panels; and a balancing of directed assignments versus an open assignments process.

Concepts being discussed relating to both promotion and assignment processes include providing meaningful feedback to employees at all decision points and non-manager participation in panel processes.

Tough issues include designing all facets of the panel processes; balancing management and employee responsibility for making promotion and assignments processes work; educating the workforce on pay bands, rank in person, and panels; and determining who certifies employees eligible for promotion and who makes the promotion decisions. The team hopes to create a system that will allow for local tailoring while maintaining Agency-wide consistency. •

**WORKFORCE
21**

NIMA's Future HR Management System Named

So what does it mean?

WORKFORCE21, the name, is meant to focus attention on people first, both now and in the 21st century. Bobbi Lenczowski, project steering team co-chair said: "WORKFORCE21 will enable managers and employees to have the necessary tools to assess the adequacy of skills needed for Agency mission and strategic objectives." It also will allow NIMA to hire, develop and assign people with the right skills; and compensate those who contribute to those objectives.

Why WORKFORCE21? "Simply put, we do not currently have an integrated human resources system for NIMA," Lenczowski said. "We are living with a conglomerate of interim procedures and they are not responsive to our current or future needs." Compatibility with the other Intelligence Community

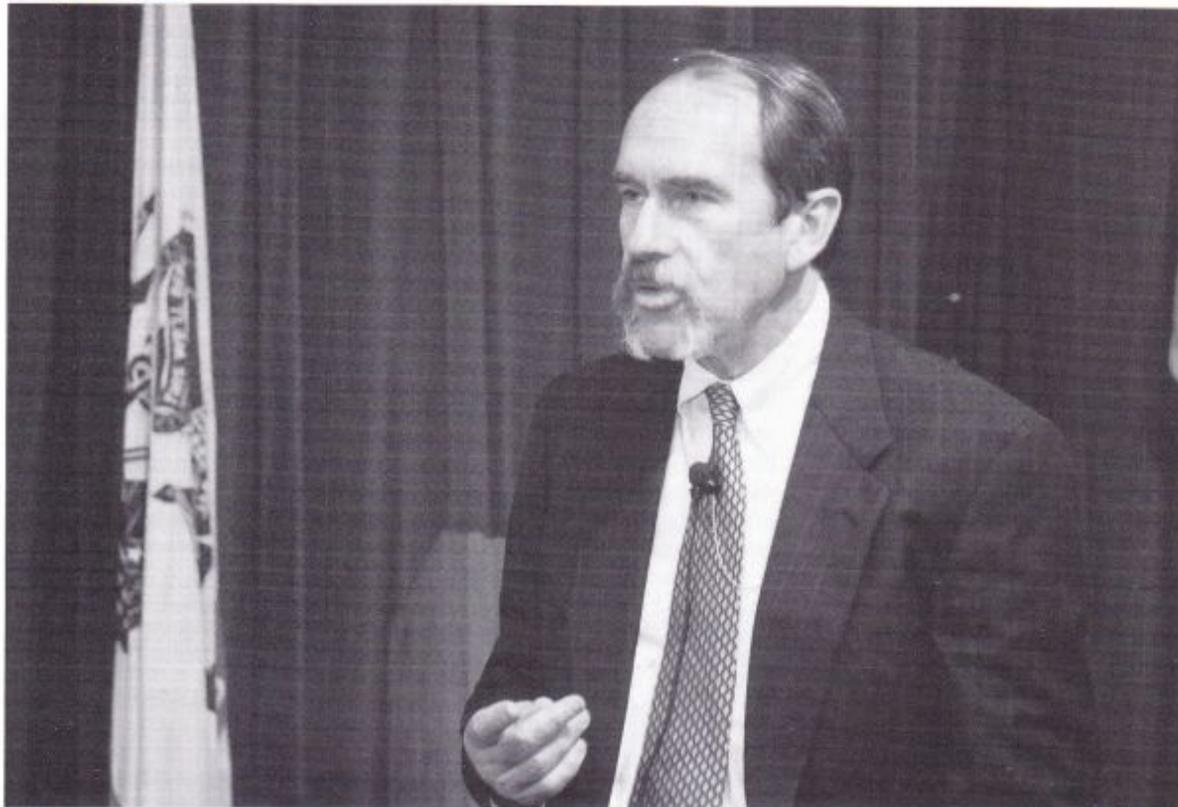
agencies' human resources systems is also a critical consideration during the development of WORKFORCE21.

"This is an advantage to employees who seek to move from one job to another within or outside NIMA and within the IC," Lenczowski said. "And to managers who should not be spending inordinate time with multiple bureaucratic systems." Although NIMA's CIA affiliates will continue to operate under CIA procedures as required by the enabling legislation, WORKFORCE21 will bring NIMA's affiliate and DoD human resources systems into close alignment. •

See related article, page 4, for more details on the tough tasks being tackled by these teams.

WORKFORCE21 was recently approved as the official name for NIMA's future civilian human resources management system, and you'll be seeing much more of it as information continues to develop.

How was this name chosen? readers may be asking. Individual members of the eight design teams working on the new system suggested 24 names and narrowed those down to a top three, with WORKFORCE21 the winner on a second ballot (other top suggestions were HR21 and CAREERS). The director and deputy directors endorsed the recommendation of WORKFORCE21.



Hazlewood

NIMA to Work Towards New Identity

by John Iler

Building a streamlined, efficient agency with a strong customer base and a sense of its own identity are the primary goals that Leo Hazlewood, newly appointed NIMA deputy director, is bringing to his position.

Speaking at a series of recent town hall meetings at NIMA sites in the Washington, D.C., area, Hazlewood outlined five priorities he is pursuing. They include improved internal connectivity, a single Human Resources system that meets the needs of employees and the Agency, better processes and production tools and a closer working relationship with customers. He is also working towards establishing a cohesive NIMA identity that would eradicate previous organizational boundaries and unite the Agency's resources.

Connectivity

Addressing connectivity, Hazlewood described communications between many Agency organizations as "problematic."

"What we did in the creation of NIMA is merge multiple organizations, each of which was an integrated stovepipe, and then ask them to talk to each other." In some cases, he added, NIMA personnel were receiving faxes of e-mail.

"Improved connectivity across the board," he said, "is absolutely essential if we're to operate effectively in this day and age as an information organization."

Human Resources

Not only is improved communication necessary to removing old barriers, Human Resources must be revamped to accommodate all

NIMA employees equitably, regardless of previous affiliation. Calling the initial system at NIMA's establishment an "organizational Tower of Babel," Hazlewood promised to put "meat on the bones" of a new system already being developed by the WORKFORCE21 teams [see story, page 4].

"We'll use talents with minimal bureaucratic drag," he said. "And we'll put the best people into the best jobs, regardless of whether those jobs are on the East Coast, in St. Louis, on the West Coast or anywhere else on the globe." The emphasis, he added, will be on skills rather than length of service. "It will be easier to move across NIMA," he said, "and it will be easier for me to move you across NIMA."

New Processes and New Technology

Hazlewood said that although the Agency should be quick to take advantage of new technology, it also needs to emphasize efficiency by improving processes. "It doesn't matter how things were done in the past," he said. "We need to continually scrub the processes while getting the best technology to help people do their jobs."

Customer Ties

Regardless of the work and products the Agency provides, it must actively work to foster strong ties with its customers. "There is no substitute for personal contact," he said. "People in production and support need to have direct access because only by interaction with our customers can we improve our focus. Every customer needs a contact within the Agency."

To do this, he wants to increase the number of people from NIMA production centers who visit customers and improve technical support.

Establishing a NIMA Identity

As the Agency makes the necessary changes to pursue these goals, Hazlewood said it's necessary for NIMA to acquire a strong sense of its own identity.

"We must think of ourselves as a separate organization rather than as the ones we were before NIMA was established," he said. "Some corporations take years to develop this type of an identity and it may not happen for us overnight—but we won't get it done at all if we don't start." He added that with this sense of identity will come a unique sense of pride as well.

The Operations Directorate will continue to survey Agency employees, 25 percent each quarter, and the Senior Management Team, he said, will monitor responses and report findings. •

Tenet Sworn in as DCI

George J. Tenet was sworn in as the new Director of Central Intelligence (DCI) July 31 by Vice President Al Gore. The ceremony took place at the Old Executive Office Building in Washington, D.C.

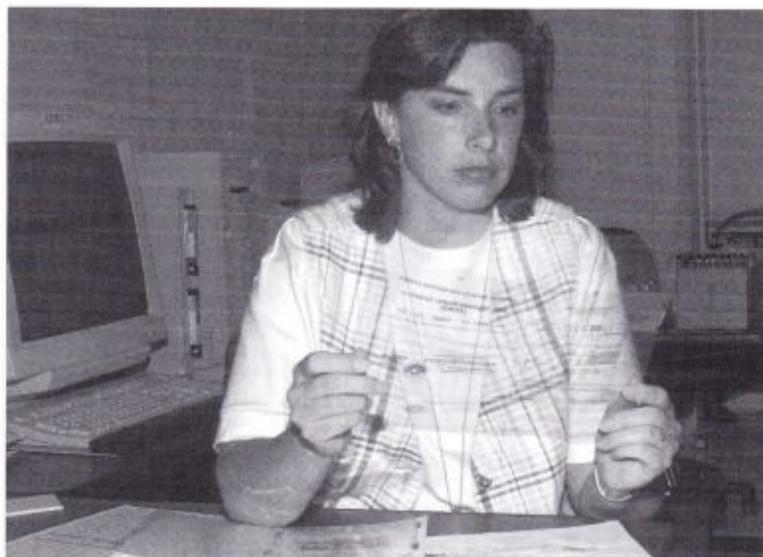
Following the swearing in, Tenet declared that in the ensuing years, he and the people he will lead "will be partners" in defending the nation. "Together we will ensure that American intelligence is the nation's first line of defense in a world that still holds plenty of surprises and danger."

An employee reception preceded the ceremony at CIA Headquarters, Langley, Va. During the reception, Tenet and his wife personally greeted and were photographed with more than 1,000 employees. He also autographed several official posters that announced the event.

As DCI, Tenet leads the Intelligence Community, of which NIMA is a part. He visited NIMA Bethesda and Building 213, Washington Navy Yard, Aug. 18, meeting with senior leaders and addressing employees. Video tapes of his remarks are being made available for employees by NIMA's Mission Support and Congressional and Public Liaison offices. •



Tenet



Kim Boone inspects ADRG CD-ROM cover artwork.

ADRG and CADRG

Products With the Customer in Mind

by Don Kusturin

From Bosnia to Peru to Ecuador, from commercial flight simulators to the Department of Defense's newest fighter, the V-22 Osprey, all use ARC Digitized Raster Graphics or Compressed ADRG.

ADRG is one of the most versatile products in the NIMA inventory. Simply put, it is digital scans of NIMA's paper maps or charts. ADRG transforms a variety of traditional hard-copy products into digital graphics that can be electronically utilized in countless ways that paper maps or charts can't, such as by computers in flight simulators and fighter cockpits.

Products available on ADRG include global navigational charts, jet navigational charts, operational navigational charts, tactical pilotage charts, joint operational graphics, topographic line maps and city graphics. ADRG also maintains all current editions of navigational planning charts.

ADRG data are collected from a single series and scale, maintained as a worldwide seamless database and shipped on CD-ROMs. Up to nine charts can be stored on one CD; however, the average CD contains four.

CADRG is the same product stored at a 55:1 compression rate with little or no degradation in accuracy.

"Where, with ADRG, you would carry 110 CDs, now all you need are two," said CADRG team member Paul Penning.

CADRG is derived from ADRG and both products are based on the World Geodetic System 84 and use ARC projection. No data transformation occurs in the compression process. Since this is a straight compression process, no conversion program is needed.

Both teams agree that CADRG is not a replacement for ADRG—it simply is another product built from ADRG.

As team leader Dick Iverson points out, "there is no CADRG without ADRG." The two can be used as complements to one another or alone.

During the Bosnian Peace Talks held in Dayton, as with the discussions over the Peruvian-Ecuadorian border, ADRG products

continued on page 11

were used to display the proposed border lines down to the significant details.

ADRG is relatively new compared to some of the product lines that it reproduces. The first year of production was in 1989. CADRG is even younger. The first run of CDs came in late 1994 and early 1995.

There has been little doubt of the worthiness of either product. In letter after letter of appreciation, the teams have been told how important both products are to the success of a command's mission.

In a recent briefing from Mapping, Charting and Geodesy Officer, Air Force 1st Lt. Scott Tucker, the teams were commended on their support to the U.S. Air Forces in Europe.

"The command could not function without ADRG and CADRG data," Tucker noted.

Both products are used extensively in his command for mission planning, mission folders and briefings. Tucker is quick to point out that a job that would normally take seven to eight people using conventional products could be accomplished by one with the digital information.

Older mission plans could be messy, according to CADRG team leader Chuck Baker. "Paper products were cut, copied and then physically pasted together," he explained. "We can provide the same information digitally, which can be produced easier."

"All ADRG and CADRG are on the same datum," said ADRG team member John Greenlund.

The teams agree that this is a very important point. When using paper products, a number of datums, or reference points, could be involved. This means not all of the information would match up properly. Once a product is scanned and put into the ADRG environment, the output is converted to the WGS 84.

Besides the superior products, team responsiveness has received numerous accolades from its customer base. "Critically urgent" jobs could seem to be the routine in these areas. And those requiring a global turnaround time of 72 hours and a continental delivery of 48 hours are nothing new. Nor are jobs with such dire warnings as, "exercise will fail without these data."

"Increasingly, many of our jobs are special products," said ADRG team member Mike Gourley. "And we're able to turn them out in time, some of them within hours."

"I have a team of people who are really customer-oriented," said Branch Chief J.H. Hodges. "They get the right products to the customers and they do it in a timely manner."

The teams are continuing to find out what their customers want and are delivering. The ADRG and CADRG teams have new ways of serving customers better and more efficiently.

Plans are in the works for providing monthly supplements to dated information for CADRG. And they are working with the digital-to-plate team on converting the products they are scanning for archival and reproduction purposes into ADRG, in keeping with "scan once, use many" philosophy. •



Darryl Holman loads CADRG CD-ROMs into his system.

Photo by Dan Baker

In letter after letter of appreciation, the teams have been told how important both products are to the success of a command's mission.

The Red Team briefed the director and business unit chiefs on the following nine processes at a recent senior staff meeting. Findings and results include:

Training: Employees and training coordinators are very dissatisfied with the process for documenting training requests. The process is complicated, takes too long and has many duplicative reviews. The team recommended that the form be automated and multiple steps be eliminated. Specific process improvement actions will be identified in concert with the process owner.

Submitting Air Force Form 9: Even though the team found that affiliates lack knowledge of the process, submitting an Air Force Form 9 for a fund cite through the Comptroller's office is expedient and straightforward. However, the cycle time for acquisition of the goods and services through PC has suffered due to installation of the new PRISM system. PC is working to reinstate the 5-day delivery of goods by the end of FY97.

Couriering SCI Documents: Currently there is limited knowledge of how to courier SCI documents between NIMA sites. All sites reported that the registry staff provides an outstanding job of educating users and facilitating the process. One area of improvement noted was to implement a courier badge similar to CIA that is easily recognizable rather than use of courier letter.

Transporting Laptops:

The team found no formal process in place to transport laptops or import computer discs into NIMA facilities. It was determined that an AIS Material Accountability Record is still required for both laptops and

Red Team Update

by Mary Ellen Seale

discs. Mission Support plans to disseminate policy to ensure employees are aware of the procedures.

Employee Relocation:

Westfields and the Washington Navy Yard have detailed indoctrination procedures for employees relocating to these sites. The team recommended that a Welcome Abroad Package be developed for each NIMA site that facilitates employee transition.

Office Space Reconfiguration:

Employees surveyed had little information about how this process worked; they felt that it took too long for routine projects and they were uncertain which projects took priority. The team in combination with the process owner recommended to leadership that regional space boards be established to set priorities and that office space standards be developed to minimize reconfiguration.

Computers:

Employees were very dissatisfied with the process for ordering a PC, installing a PC and ensuring a PC is operational. Multiple statements of needs are required; cycle time is greater than six months; and multiple visits are required for installation. CN has initiated many recent improvements to this process: 1) PC template ordering; 2) vendor installation

software; 3) common hardware/software platform; and 4) direct vendor delivery to customer. Additional improvements are planned pending completion of the consolidated site support pilot at Fairfax.

Software Installation:

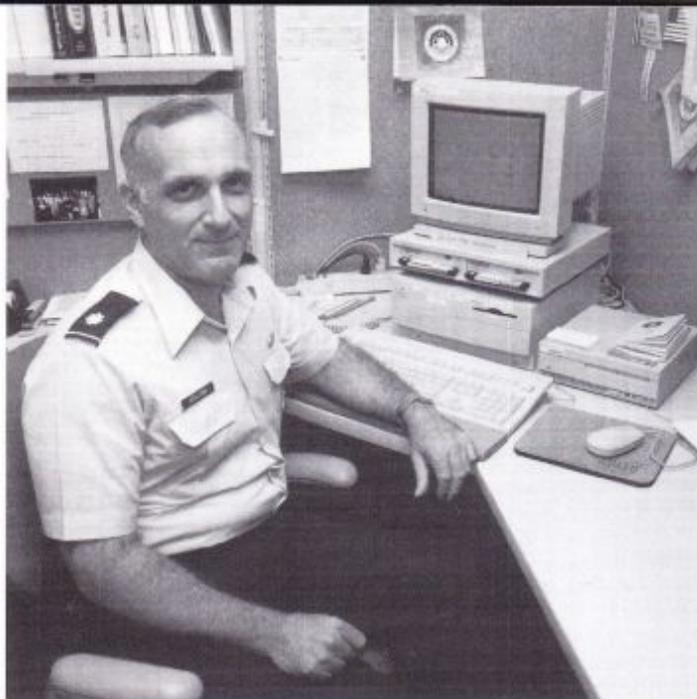
Employees currently install software themselves bypassing the CN process. Different processes exist at the various NIMA sites, and customers are required to complete a statement of need. Improvements noted for this process include installation of the Systems Management System (SMS) which will automatically upgrade all software via servers. Installation of SMS is to occur in December 1997. Business Units should continue to coordinate installation of unique business application software with CN.

Completing a Statement of Need:

Employees were very dissatisfied with the documentation requirement for purchases over \$500,000. (Offices currently complete it for most hardware and software installation requirements.) CN is reevaluating the documentation requirements for all work requests.

Other improvement actions were identified at the Senior Staff Meeting that include reengineering of CN business processes and the migration to a common Agency hardware and software platform in the next two years. A preliminary estimate also has been inserted in the POM development for FY98 and FY99 to ensure all NIMA employees have access to e-mail, Internet and the SBU.

If there is a process or suggestion you would like the Red Team to consider, call 1-888-NEW-NIMA or e-mail Mary Ellen Seale, (CA/PA) at SEALEme@NIMA.mil. •



Apollonio

photos by John Iler

NIMA Outreach Team Scores High With Customers

by Monica L. Conroy

“They’re one of the greatest NIMA teams I’ve worked with. They’re friendly and upbeat.” It was Richard Hardwick, a Bethesda visual information specialist who was speaking. And he was talking about NIMA’s Outreach Office.

“They enjoy working with each other and, in turn, you enjoy working with them. They have a great way about them!”

Headed by Air Force Lt. Col. Tom Apollonio, the Outreach Office is the Agency’s connection to the outside world. Its mission is to provide a “flexible, robust and highly visible” service. The team also serves as a focal point for Agency, military and federal service executives to view and discuss emerging digital geospatial information and image exploitation products, services and techniques.

The performance of the Outreach team has led to NIMA imagery working not just for military personnel, but federal agencies as well. The Federal Emergency Management Team relied on NIMA for maps of the Great Plains during the 1997 floods.

The team of six travels all over the world to serve its customers. It visits foreign delegations with the hope of developing mapping and imagery agreements and represents the Agency during

public service exhibitions, introducing NIMA to the general public.

It also keeps the senior staff up-to-date on the latest program technologies. But, as Apollonio explains, “the greatest satisfaction for the group comes from doing internal briefings. It’s gratifying to brief people within the Agency who have never seen the fruit of their labors and show them the technologies that they have helped create. Our reward is seeing the smiles on their faces.”

The Outreach office is equipped with the latest technology and recently received a multimedia presentation system allowing the group to intermix different presentations during their briefings.

“The team’s main function is to put NIMA’s best foot forward, while entertaining VIP guests,” Apollonio said. The newly devised Full Utility Navigation Demonstration (FUND) and CD Photomap program presentations allow it

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“Our goal is to...let people know this is what NIMA is. This is what we do. You need to know we exist.”



Outreach Team members, from left, Maj. Tom Ryan, Kathy Buono, Kevin Drabozal, Lt. Col. Tom Apollonio, Jim Sapp, John Roa, and Lt. Drew Barnett.

JWID '97



photo by Paul Hurlburt

Beyond the gate to Pier 12 in Norfolk, the USS John C. Stennis serves as the operations center for JWID.

NIMA Key Partner in Coalition Task Force Demonstration

by Paul Hurlburt

NIMA emerged as a key partner in the Joint Warrior Interoperability Demonstration (JWID '97) held in July by the Joint Chiefs of Staff with the U.S. Atlantic Command (USACOM) as the host and the U.S. Navy as the lead service.

JWID 97 was conducted at multiple U.S. and coalition sites worldwide with NIMA participation principally onboard the aircraft carrier USS John C. Stennis (CVN 74) and at the Joint Battle Center, Suffolk, Va.

This year's demonstration "broke new ground with a

coalition task force in a command-and-control structure," said Army Gen. John Shalikashvili, chairman of the Joint Chiefs of Staff, in a video produced for JWID '97. "The objective is to identify capabilities to demonstrate seamless information exchange in a coalition environment."

NIMA broke new ground supporting the task force with not only imagery, imagery intelligence and geospatial information, but the command-and-control infrastructure to exploit and share it.

"I wish we had this kind of support three years ago in Haiti," said Lee Owney, an imagery analyst operator assigned to NIMA's demonstration at the Joint Battle Center. The JBC is charged by the Joint Staff with bringing technology and the warfighter together to assess the utility of new systems for joint operations.

During Operation Restore Democracy, getting imagery to coalition forces from more than 20 countries was delayed by lack of an infrastructure, Owney said.

"We had imagery of Port au Prince, but it was not releasable. So we sent up a U-2 to get new imagery. Then we had to stitch the images together by hand to produce a releasable mosaic."

At JWID '97, NIMA cooperated with the Defense Information Systems Agency (DISA) and Defense Advance Research Projects Agency Joint Program Office (JPO) to implement a command-and-control guard (C2G). The C2G supported electronic connectivity between NIMA servers operating at the U.S. secret level and the JWID coalition network.

The Guard provides "trusted connectivity" between a network used only by U.S. forces and one used by coalition forces, said Harold Bussey, principal engineer for electronics design at the Charles Stark Draper Laboratory, Inc., in Cambridge, Mass. An earlier version is being used for command and control in Bosnia.

Besides the C2G, NIMA provided an Information Dissemination Manager (IDM Server), which gave U.S. and coalition partners "one stop shopping" using a commercial Internet web-based interface. With its links to different servers, the IDM Server provided seamless access to all the imagery, imagery intelligence and geospatial information the players needed to execute actions triggered by JWID's notional scenario.

Dissemination was managed through the IDM Server's catalog, available in different versions on the Internet and the Secret Internet Protocol Routing Network (SIPRNET). The IDM Server also sent files to the C2 Guard at the Joint Battle Center and the Pentagon over SIPRNET, Global Broadcast Services (GBS) and DISA's Leading Edge Services Asynchronous Transfer Mode (ATM) Network.

"On the face of what we've seen, it's a pretty capable system," said JWID assessor Karl Liebert of the Atlantic Intelligence Command, speaking of both the C2G and IDM Server.

"Of course we expect to find some bugs."

Information & Infrastructure

To NIMA's JWID '97 leader, Tony Szalkowski, this year's participants saw an agency they could rely on for comprehensive support.

"When you look at the monitors of the other demonstrations, you see NIMA information," Szalkowski said. "Informally, NIMA has become part of the JWID infrastructure. We've brought a mechanism that

"The objective is to identify capabilities to demonstrate seamless information exchange in a coalition environment."

supports using NIMA information online with PC-based applications. In doing so, we have provided an initial proof of concept for the U.S. Imagery and Geospatial System (USIGS)."

"Another important advancement for NIMA is our active role in coalition operations," said Army Lt. Col. Steve Kilcullen, NIMA's JWID '97 co-leader. Government and commercial developers from the United States, Australia, Canada, the United Kingdom, New Zealand, and NATO teamed up to demonstrate new systems in JWID '97.

While eyeing an Australian demonstration dealing with transglobal Internet access, NIMA's Australian Army exchange officer, Maj. Steve Hledik, applauded NIMA's use of Web technology.

"The coalition partners brought along their own systems, so being able to interact through Web technology is important. It provides a familiar environment for the partners to access some fairly complicated databases and handle large volumes of data."

"Now People Have a Place to Go"

As the coalition task force headquarters for JWID, USS *John C. Stennis* maintained information used in all the demonstrations. The carrier spent July 16-18 at sea and the rest of the month pierside in Norfolk. Information from the carrier was shared with the Pentagon and used for command and control as well as operations.

Imagery gathered by the attack submarine USS *Atlanta* (SSN 712) from simulated flights

of an unmanned aerial vehicle was broadcast to the carrier to support JWID operations. With NIMA providing IDM aboard *Stennis*, the new simulated imagery and imagery intelligence could be shared with the Joint Staff and passed through the C2G to coalition forces in near real time.

"If the imagery's good, we put it on the IDM," said Darma Ness, NIMA's JWID manager aboard the carrier. "We're sending imagery back and forth and all over!"

Besides its updating capability, the IDM gave *Stennis* unprecedented storage capacity, Ness added. Geospatial Foundation data like Digital Terrain Elevation Data (DTED®) and Controlled Image Base (CIB) was loaded before JWID to save limited bandwidth for new imagery.

Whether aboard carrier, at JBC or at NIMA St. Louis, each IDM mirrored the other, providing a dedicated JWID server to all the players.

"NIMA has become an information broker," said Ness, who is also NIMA technical liaison to the Air Combat Command at Langley Air Force

continued on next page



The latest imagery from the JWID scenario, beamed to the *Stennis* by a submarine, gets a look in hard copy from NIMA's shipboard demonstration manager Darma Ness (left) and Navy intelligence specialists Brandon Brooks (center) and Lee Redenbo.

Base, Va. "Now people have one place to go. That's the difference between this year and last."

Sailors Add Value

Several newly updated computer systems were used in NIMA's first-time demonstration exploiting the JWID imagery, intelligence and geospatial information.

At one of the workstations, Navy Petty Officer 2nd Class Pierre Peterson, of Miami, demonstrated the Tactical Aircraft Mission Planning System (TAMPS).

"TAMPS enables the pilot or intel specialist to retrieve maps and imagery to plan a flight," he said. "You can also get aeronautical data to go with the maps. This version lets you go into Netscape and pull the information from the IDM. It's at least twice as fast as loading charts via tape and CD-ROM, so I'd give it a thumbs up."

At another workstation, Navy Petty Officer 2nd Class Brandon Brooks, of Rome, Ga., pointed to the JWID scenario chart as he worked with the Fly Away Contingency Package

(FAC PAC). This system lets users exploit imagery and create maps online using off-the-shelf applications.

"The highlighted boxes [on the monitor] are DTED® [cells of elevation data]," Brooks said. "By clicking on a box, I can pull CIB or raster [feature data] for that area directly from NIMA [via the IDM catalog]."

"We're helping the coalition partners plan a noncombatant evacuation by adding value to the images," he added. "We take intel messages about road blocks and the like and annotate the imagery so the Marines will know spots to avoid."

Also part of NIMA's demonstration, an updated version of the Special Warfare Automated Mission Planning System (SWAMPS) was used aboard the submarine to capture periscope video on a laptop and beam it to *Stennis*.

Integrating the Data

At JBC, NIMA demonstrated the Enhanced Digital Geospatial Environment (EDGE) software package and a 3D display known as the Immersive Workbench.

The system was used to demonstrate the utility of NIMA data passed through the C2G and IDM for coalition planning.

EDGE software allows users to drag and drop imagery and geospatial information at multiple scales and from multiple sources and formats. The software integrates the data and creates static or moving two- or three-dimensional displays. Hourly weather patterns, satellite tracks and sensor data are a few examples of spatial information the software can integrate.

By manipulating the controls, JWID operators were able to blend map data with an image; zoom in to plan a beach landing or zoom out for an Earth view.

"The EDGE software brings together intelligence, imagery and geospatial information the commander needs to provide a clear picture of a situation and plan a successful mission," said Lawrence Winkler, chief analyst for Autometric, Inc., Alexandria, Va., the software developer.

"If the data concerns the Earth, the EDGE can use it," agreed Navy Ensign Jennifer Wong of Los Angeles, an intelligence officer assigned to NIMA's JWID demonstration. "Now, if you have Mars data, I don't know where it would put that."

After JWID, NIMA left several systems behind for continued operational evaluation and use. Among them was the IDM and FACPAC workstation aboard *Stennis*. These and other JWID residuals will provide immediate tools for operational use and coalition training.

Meanwhile, the JBC, Joint Staff and DISA, working with the service battle labs, have begun their assessment of the JWID demonstrations.

For more information, visit the JWID '97 Home Page at <http://www.jwid97.bmpcoe.org/>.

A list of "critical tasks" the Agency needs to accomplish during the coming fiscal year has been approved by Rear Adm. J. J. Dantone Jr. Developed by the Corporate Affairs Directorate, it is a long-term proactive plan developed at a day-long off-site held July 28.

importance that if CA does not accomplish it, the NIMA mission (or the mission of NIMA customers) will fail or be seriously degraded.

CA will facilitate and integrate how and when the critical activities will be addressed, and it will provide whatever support is necessary.

resolving issues related to their pay and staffing.

To achieve essential connectivity, CA will define what that is and prepare an implementation schedule with defined standards by October. Associated issues include providing online access to HR tools and payroll interface, ensuring connectivity is in place

Director Approves 'Critical Tasks' for Fiscal '98

by Paul Hurlburt

The need for such a plan followed the implementation of NIMA. CA solicited input from customers and developed selection criteria for the list prior to the off-site.

The critical tasks making up the list are:

- Develop and implement a new Human Resources System.
- Renovate software by the end of calendar year 1998 to address the "Year 2000" problem.
- Address workforce transition issues.
- Achieve essential connectivity.
- Expand imagery and geospatial integration as defined in the Directorate of Operations "Vision."
- Integrate the development programs of NIMA and the U.S. Imagery and Geospatial System community.
- Select future imagery architecture, including airborne, commercial and national.
- Plan and execute facility consolidation and relocation.
- Further extend the NIMA identity.

Focus on Customers

To be selected for the list, each task—or activity—had to be critically important to CA's customers and consistent with decisions reflected in NIMA's Program Objective Memorandum (POM). Each had to demand additional action, resources or attention by CA in fiscal 1998 and be of such

importance that if CA does not accomplish it, the NIMA mission (or the mission of NIMA customers) will fail or be seriously degraded.

Besides the nine critical activities, CA adopted broad goals for itself: promote intra-agency communication; market what it does, how it does it and what its plans are; spend more time on strategic/corporate planning and discussion; and focus on customers.

Human Resources and Connectivity

Milestones for development and implementation of the new Human Resources system are:

- Call for detailed design of each system component by Oct. 15, with test pilots to follow.
- By Oct. 1, 1998, the system is to be implemented throughout NIMA. The new HR system will be automated with NIMA-wide connectivity. NIMA management will be trained in using the system and steps will be taken to ensure its compatibility with the payroll system.

To address workforce transition issues, CA will lead the development of a NIMA-wide manpower/staffing strategic plan. It also will take steps to achieve the fiscal '98 end-strength target, while addressing workforce diversity impacts. And it will begin working legislative issues associated with CIA affiliates,

to support the relocation of NIMA headquarters and the opening of the Arnold, Mo., facility, coordinating with the Systems and Technology Directorate to ensure consistency with the USIGS migration and providing expanded services from centralized software management.

Other Activities

CA will ensure that the integration of NIMA and USIGS community development programs is incorporated into budget documents and solicit community and Congressional support.

Regarding the selection of future imagery architecture, CA will complete front-end requirements; define, capture and document remaining end-to-end requirements (processing, exploitation and dissemination); and harmonize the airborne, commercial and national imagery architectures.

The facility consolidation and relocation activity includes executing a plan that will accomplish not only the potential headquarters move and the opening of the Arnold facility, but also the closing of the Philadelphia facility; and the closing of the North and South Annexes and Globe facilities in St. Louis.

To further extend the NIMA identity, CA will take the following steps:

continued on page 21

OFF HOURS

In a League of Her Own

by Monica L. Conroy



Smith

"I like the excitement of the competition. It's really encouraging to see women in their 60s and 70s still being active and having such a great time."

"You don't stop playing because you grow old; you grow old because you stop playing."

Those are words to live by, according to Lynn Smith, a policy officer at NIMA headquarters, whose women's softball team won a gold medal at the Senior Olympics held from May 21-28 in Tucson, Ariz. Smith's Golden Girls beat the 16 other teams in their bracket, teams hailing from the United States and Canada.

For Smith, the victory was sweet but getting there was more than 40 years in coming. She was part of the generation of female athletes where opportunities to participate in sports were few and far between.

"Softball wasn't offered at my high school or college. Besides playing with the boys, I spent my time playing in intramural and church leagues," she said. "Throughout my life, I could never find an organization with structure, where the women actually took playing seriously. Then I heard about the Golden Girls through the local news."

"The Golden Girls Women's Softball Association was founded in 1989 to field a senior women's softball team to play in a tournament in Michigan," said Toni Letaw, the organization's publicity and communication relations chair. "Since then, it has formed its own intramural league and established a national reputation with its traveling tournament teams."

In 1991, the Golden Girls began supporting Olympic teams. Since then, including the 1997 teams, the organization has won four gold and four silver medals among the four respective age groups (50+, 55+, 60+, 65+).

As for Smith, she's been part of the league since 1993.

"I like the excitement of the competition," she said. "It's really encouraging to see women in their 60s and 70s still being active and having such a great time."

Smith's victory coincides with the 25th anniversary of Title IX and the birth of the WNBA, the first women's professional basketball league.

"The world of women's athletics has come so far," Smith mused. "Every time I see young women playing I yell for them to keep playing! The world is just filled with opportunity for them."

For more information on the Golden Girls Softball League, contact Hazel Parker, (703)534-8116. •



Photo by Jim Stipanovich

NIMA's Calvin Tillman receives help setting up donated computers at Turner Middle School.

Volunteers Help Bring Technology to the Classroom

by Joan Mears

Questions

about the Computer Donation Program

Q: How does a school obtain computers through NIMA's computer donation program?

A: In Washington, the school must submit a written request to NIMA, 4600 Sangamore Road, ATTN: Charles Henley, MSMAS (Mail Stop D-36), Bethesda, Md., 20816-5003. In St. Louis, schools should forward their requests to NIMA, 3200 S 2nd Street, ATTN: John Johnson, MSMC (mail stop L-44), St. Louis, Mo. 63118-3399.

Q: How are schools selected to receive these computers?

A: Schools are chosen on a first-come, first-served basis, except in St. Louis, where a lottery system is used.

Q: Is there a limit to the number of computers that can go to a single school?

A: No; however, NIMA can't always provide the number of computers requested. It does try to give as many as it can.

Q: What kind of computers are donated — PCs or Macs?

A: It's a mix. Both PCs and Macs become available.

Q: What schools have participated in NIMA's computer donation program?

A: Washington has received 13 requests for computers. Since October 1996, DISA has approved release to the following: Wheaton Christian School, Wheaton, Md.; Stephen Decatur Middle School, Clinton, Md.; Kettering Middle School, Kettering, Md.; and Cedar Grove Elementary School, Gaithersburg, Md. St. Louis currently has received 50 requests for computers. Following approval by DISA, computers will be prepared for donation to the Ford Middle School. In addition, computers have been previously donated to the following schools: Mary Queen of the Universe, St. Louis; Sigel Elementary, St. Louis; Turner Middle School, St. Louis; St. John High, St. Louis; Lutheran High, St. Louis; and Sacred Heart, Florissant, Mo.

Drop by NIMA's Riverdale, Md., facility any Monday or Thursday, from 4:30 to 7:00 p.m. Chances are there's a small group of employees transforming excess computer parts and equipment into solid operating systems for release to local schools through NIMA's computer donation program.

Executive Order 12999, *Education Technology: Ensuring Opportunities for All Children in the Next Century* enables agencies to contribute excess computers to local schools if the equipment is no longer needed by the federal government.

NIMA supports this program and volunteer employees like inventory management specialist Charles Henley of Mission Support, computer scientist Andrew Sellman from System Engineering and Program Integration Office and motor vehicle operator Charles Rose, MS, ensure the donated equipment is clean and in good working order. These employees have been meeting since October 1996 — on their own time — and have 'retrofitted' 90 systems into complete, ready-to-use computer systems.

Before volunteers prepare the computers for donation, NIMA ensures there is no longer a need for them within the Agency. Then, a request for authorization is submitted to the Defense Information Services Agency. DISA canvasses other agencies to see if the equipment can be used elsewhere in the federal government. If there are no "takers," DISA authorizes NIMA to donate the computers to local schools. This process takes about four to six weeks. In the past, usable excess equipment no longer needed by the government was shipped to the Defense Reutilization and Marketing Office for public auction or disposal.

Mission Support has overall responsibility for the computer donation program at NIMA. Employees who like tinkering with computers or just want to help in some way, should contact Charles Henley in Bethesda at 301-227-2185 or J. J. Johnson in St. Louis at 314-263-4654. •

25th Anniversary

Mixed in with historical facts and DMS milestones were anecdotes and reminiscences about when air-conditioning was first installed and manual typewriters packed away.



Charter members Cathy McCloskey, Bob Urban, Don Roberts and Wayne Batts cut a cake during the DMA celebration.

It was a gathering of old friends who proudly celebrated the 25th anniversary of the Defense Mapping School at its Ft. Belvoir, Va., facility last month.

Army Col. Mark Vincent, commandant, greeted an enthusiastic audience that included three former Army commandants: Col. David Maune, Col. Daniel Clark and

conditioning was first installed and manual typewriters packed away. Audience members were caught by surprise as pictures of themselves with full heads of hair and wearing bell-bottomed pants occasionally popped up on the video screen.

The photos were collected by Batt, DMS's unofficial historian.

four years and again in 1981 for another tour. In 1988, he began his first civilian job at the school as a training instructor on the offset press.

Fellow instructors McCloskey and Urban worked with each other off and on during their careers and each has been the other's supervisor at one time or another. Although Urban has had both military and civilian jobs at the school, McCloskey is the only charter member who has worked continuously at the school. She's also the first female printing instructor.

Defense Mapping School Celebrates Silver Anniversary

A Stroll Down Memory Lane for NIMA's Defense Mapping School

by Jennifer Lafley

Col. James Nichols. Also present were the four charter members who still work at the school: Bob Urban, Don Roberts, Cathy McCloskey and Wayne Batts.

Laughs erupted when instructors Urban and Jack Batt presented an "as-it-was" history of the school's past. Mixed in with historical facts and DMS milestones were anecdotes and reminiscences about when air-

"It was a labor of love, really" said Batt, who had meticulously saved copies of DMS's now defunct newspaper, *The Clarion*. But much of DMS's history is his own.

His Army career began at the DMS predecessor school [Department of Topography, U.S. Army Engineer School] in 1968. He returned as a staff sergeant instructor in 1975 for

"This isn't just a place of work," Batt said. "We're like a family!"

After a cake cutting ceremony, tours of the facility and classroom demonstrations were given by staff members.

Over the past 25 years, DMS has awarded 30,900 diplomas, with 1988 being its peak year, when 1,893 students received instruction. •

NIMA Outreach Team Scores High With Customers

continued from page 13

to do just that. FUND was "created for the Navy to support the paperless bridge environment on ships using the vector, as opposed to the raster, format," said Lt. Drew Barnett, the team's Navy Liaison. "FUND allows NIMA to take the latest in geospatial and imagery technology to the war fighter."

CD Photomap, which can be demonstrated in a classified or unclassified manner, was created for presentations to foreign diplomats and dignitaries who request information on a specific city in the world. The one CD-ROM incorporates all the information found in a 40-pound four volume set of books. The program makes accessing the needed information easier, and destroying the same vital information in a time of crisis is quicker as well.

The unclassified demonstration can take one on a tour through Washington D.C., and is detailed enough to read the Gettysburg Address at the Lincoln Memorial.

Customer satisfaction is the team's highest priority. "We want to know exactly what the customer is looking for and how we, to the best of our ability, can help them," said Apollonio. "We want to provide our customers with tailored products that are exactly the right blend of geospatial and imagery technology. Ultimately, that's what the entire agency is looking for."

As for the future, he said, "We're going to strike forward. Our goal is to get out there and let people know this is what NIMA is. This is what we do. You need to know we exist."

Team members include: Kathy Bouno, deputy; Maj Tom Ryan, Army liaison; Kevin Drahozal, product service specialist (East); Bill Bartles, product service specialist (West), Jim Sapp; Betsy True, systems manager; and John Roa, systems manager. •

Retirements Retirements Retirements

Dennis Rooney, an imagery scientist, retired Aug. 8 from NIMA with 32 years of federal service.

Rooney conducted research and development of imagery exploitation systems and worked on numerous related initiatives for NIMA and one of its legacy organizations, the National Photographic Interpretation Center.

Army Lt. Col. Ron Preuit, Comptroller's office, retired after more than 20 years of military service. He is now residing in West Virginia.

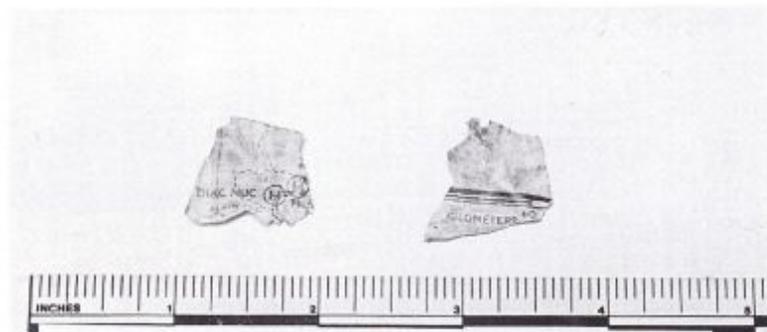


"If he's the bait, what are we after?"

Director Approves 'Critical Tasks' for Fiscal '98, *continued from page 17*

- help bring people together within and between directorates and offices, within and between sites, and within and between levels of staff;
- continually reinforce the NIMA identity through internal communications, including the *Edge* magazine, NIMA News and video productions; and
- support the Executive Development Program and NIMA orientation program.

Steps toward achieving other critical activities will be announced as they are determined. •



The only remaining pieces of the EVC recovered at the Vietnam War combat crash site.

Pieces Complete Puzzle in Vietnam Artifact Search

by Denise Vermuelen

When do age and experience finally pay off? If you're Bill Herring, a researcher with the Air Force Life Sciences Equipment Laboratory's Artifact Section, it begins with a phone call to Gloria Shank.

Shank, NIMA St. Louis, admits she has "been around a long time," with 27 years of service, to be exact. When she received the call from Herring, at Kelly Air Force Base, San Antonio, Tx., she knew just whom to contact.

Herring was searching for copies of Vietnam era charts and seasoned employees, hoping to find someone involved with the production of the Escape and Evasion Chart (EVC) or someone familiar with the product.

His organization analyzes artifacts recovered from Vietnam War combat loss-sites, in hopes of accounting for personnel listed as Missing In Action (MIA).

"I was attempting to identify two one-inch square artifacts recovered from a crash site uncovered in 1994," he said. "The artifacts appear to be remnants of a chart we were trying to identify and catalog."

Herring hoped the pieces would help him establish a pilot/crew, an aircraft or at least a time frame to place the crash.

These particular EVCs, he said, were printed on a rubberized sheet to withstand the heat and humidity of Southeast Asia. Even after 25 years in the jungle, it would be possible to match up the pieces with an existing chart because the information on them was clearly legible.

The EVCs were issued to crew members upon specific mission assignments and generally included the combat region where the mission targets were located. When issued, the map was typically placed in the crew member's survival vest or within a flight suit pocket.

"What we try to do is reconstruct military loss-site equipment, concentrating on clothing, ejection seats, protective equipment, parachutes, personal effects and anything else to aid in determining the fate of MIAs," Herring noted. "Because of the amount of energy expended at a crash by a performance aircraft loaded with fuel and ordnance, we're lucky to find only 20 artifacts for every single item of human remains."

Add to that 25 years of exposure to the jungle, and artifact identification becomes crucial in determining the fate of the crew.

Shank contacted Sharon Taylor, a Supply System Analyst for the Dissemination Division, Bethesda, and a Vietnam era veteran herself. Because Taylor had been in customer service, worked with the maps and catalogs and had been a dissemination manager, Shank immediately thought of her. She relayed the request and Taylor began her search.

The task should have been simple: find a couple of EVCs on file and ship them out. That is not what happened.

"Not finding any at my facility, I targeted the larger repositories with calls to the Library of Congress, the National Archives and the Military History Museum," Taylor said. None provided charts.

Research into old Defense Mapping Agency catalogs and inquiries to the Vietnam Center at Texas Tech University, also were fruitless, though she was able to locate an EVC 250 over Laos, Thailand and North and South Vietnam (around the old Demilitarized Zone) at the Army

"Because of the amount of energy expended at a crash by a performance aircraft loaded with fuel and ordnance, we're lucky to find only 20 artifacts for every single item of human remains."

Aviation
Museum at Ft.
Rucker, Ala.

Only two
of the eight-
sheet series
were available
and they were
sent to
Herring. But
her search did
not end there.
She contacted
Information
Services
Library,

Riverdale, Md., and learned that
a database at NIMA's repositories in Gila Bend, Ariz., showed
two sets of charts on file—a full
set of repromat (film for printing
lithos) and a litho set. A
repromat was sent directly to
Taylor.

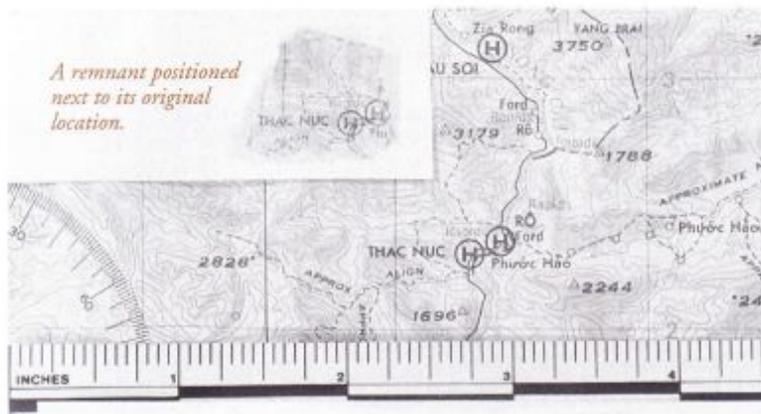
"My problem still was not
solved," she said. "I had the *film*
for the charts, but not an actual
chart." She then contacted Eric
Dohrmann, a NIMA distribution
liaison at Fort Bragg, N.C. He
explained the department's
"packrat" reputation and felt he
would be able to help. Although
there were no copies on file,
Dohrmann came through.

He got a copy of the two-
sided chart, scanned it, created a
TIFF file and sent the software
to print the 40 X 50-inch maps.

Herring was grateful for the
data, but the estimated \$12,000
to print the chart was beyond
his organization's budget.

Taylor again contacted
Dohrmann, who works with the
Remote Replication System. He
made the copies for Herring
thinking nothing of the request.
"We can work a lot of nonstand-
ard projects."

Herring was able to corre-
late the chart artifacts from the
combat loss-site with an EVC
250, five and six, printed at
ACIC in January 1968. There
were similarities: both were
printed on front and back sides,
villages, river locations, helicop-
ter landing areas, and chart
symbols all matched. However,
subtle differences in color
shadings were evident and
could not be attributed to

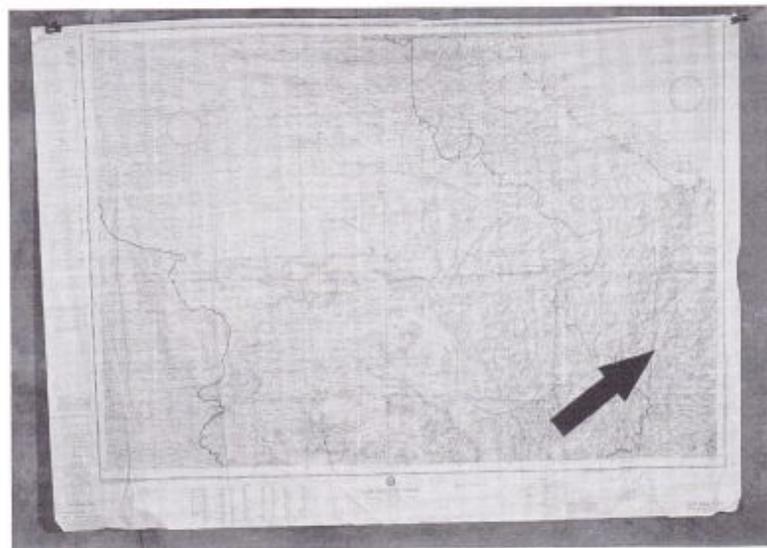


exposure to the jungle environ-
ment.

These differences prompted
further inquiries into earlier
versions of these charts. A first
edition, January 1966 version,
that exactly matched the
artifacts, was found.

Although the map remnants
did not have the MIA's name on
them, they did provide impor-
tant information to solve the
puzzle. The remnants were part
of an EVC published in 1966
and would have been carried by
a crew member with targets
around the DMZ. This edition
was replaced by the February
1968 edition. Herring now had a
time frame to work with.

"Solving a 30 year-old
puzzle is a great accomplish-
ment," Herring said, adding that
he finds comfort in knowing that
his work does bring closure to
those families who have waited
three decades for some sort of
answer.



The black arrow points out the original location of one of the remnants found.

The entire
search criss-
crossed the
United States
and involved
several NIMA
sites. It took
nearly six
months to finally
match up the
artifacts with the
correct chart and
to determine the
crash had
occurred in
1967. As

Dohrmann pointed out, "the
timing was right."

Taylor also expressed her
satisfaction in finding the charts
because of the importance of
Herring's work. Her determina-
tion paid off and because of it,
some family will now know the
fate of their missing relative.

Herring now has a full set of
Vietnam EVCs that Taylor had
copied. The laboratory's area of
MIA accountability coverage has
been expanded to include Korea,
so Taylor is currently searching
for charts/maps in this area as
well. •

*The actual artifact was a one-
inch square section of a 40x50-
inch map that showed a river
crossing, approximately 50
miles southwest of Da Nang,
South Vietnam.*

Editors Note: Last month, we ran a feature story on NIMA's Incident Management Team and its role in providing computer security. Unfortunately, the story did not jump to the page indicated and, in fact, did not jump at all. We apologize for the inconvenience this caused and are republishing the article here in its entirety.

Mobile Team Investigates Computer Security Incidents

by Paul Hurlburt

They're known by many names—such as “virus busters” and “computer police”—but these monikers don't capture what the NIMA Incident Management Team does.

Improving computer security is what the NIMA Incident Management Team aims for, says David Williams, leader of a four-person team of computer specialists operating out of Reston. Other members are Darryl Johnson, Greg Sadler and Darris Wynn.

“We investigate incidents involving automated information systems (AIS),” Williams said, “and make recommendations to improve computer security.”

NIMA's IMT was formed in response to legislation mandating that every agency have a computer security incident handling capability. The team works closely with counterparts in the CIA, Department of Justice, FBI, National Reconnaissance Office and other agencies.

In designing their concept of operations, the IMT emphasized education as a preventive measure. Team members have been traveling from site to site to train fellow employees and will soon transition their curriculum into NIMA College. The team is also responsible for the training and certification of computer security officers.

An AIS incident is officially defined as “an adverse event associated with a computer or network system such as (1) an attempted, suspected or actual compromise of sensitive information; (2) waste, fraud, abuse, damage or loss of government information assets; (3) disruption of mission support systems; or (4) the discovery of a vulnerability that may affect other NIMA systems.”

Among the types of incidents the IMT investigates are computer viruses, misuse of computers and inadvertent disclosures of sensitive unclassified or classified information involving an AIS.

“Basically, we investigate anything involving AIS security that needs further review,” said Sadler, the lone contractor on the team.

An incident, such as using a PC to prepare a tax return, may involve only one person, while another incident may involve hundreds, as in the case of a computer virus. Since the team's standup in January, members have responded to more than 360 incidents involving some 1,000 people throughout NIMA.

“Some incidents take 35 to 40 days to investigate,” Williams said. “Some take an hour.”

Recovery time also varies, depending on the extent of the damage, he added.

The IMT investigates incidents in the metro Washington area on site and relies on matrixed support from the Networks and Enterprise Systems Office (CN) in St. Louis and elsewhere.

Site visits are generally necessary to gather facts and data.

“You have to visit an office to understand their predicament, who they interact with and the topology of their system,” Williams said.

“Often we find others were involved when we get there,” added Darryl Johnson.

“We carry laptops with all the network connections, so we can sit down and conduct our investigations with whatever system was involved,” Johnson added.

Besides DOS and Mac laptops, the team carries cabling, hard drives, Zip drives, software packages and a collection of viruses in their “bag of goodies.”

The virus library consists of pieces of malicious computer code pulled off of computers, Johnson said.

“We can do detailed analyses of a code to determine what's embedded and how it executes,” Williams said. A bank of computers in Reston supplements their on-site

investigations.

Malicious code found in the course of their investigations is saved and analyzed, Sadler said.

“It gives us more information for the next incident we investigate.”

Careful detective work has enabled the team to trace a virus back to its point of entry on a NIMA desktop.

“In some cases we can detect the location of the computer, what drive the virus is on, where it is on the drive, and in what folder and subdirectory,” Johnson said.

“That takes a lot of work, but it pays off.”

The IMT makes a special effort to protect the integrity of its investigations and the confidentiality of the people involved, Sadler said.

“We don't want to call attention to individuals,” Williams said.

Improving computer security is what the NIMA Incident Management Team aims for.

continued on next page

NIAC Revitalization Well Underway as Class 86 Graduates

by Sharon Alexander

The 20 imagery analysts in Class 86 of the National Imagery and Analysis Course (NIAC) graduated Aug. 8 at NIMA Washington Navy Yard.

Leo Hazlewood, deputy director of NIMA, and Rick Stakem, director, NIMA Imagery Analysis, were the guest speakers. Both emphasized that the course reflects the daily working environment of imagery analysts within the Agency and that the curriculum is taught by those who have distinguished themselves as imagery analysts.

According to course director Diane Stewart, the goals of the NIAC revitalization include a constant update of the materials presented in the course, standardization in the blocks of instruction and streamlining the course administration.

"All the blocks of instruction have been revised; however, the block on industries has yet to be fully piloted," Stewart said. "In addition, the NIAC continues to be fine-tuned with each new class, avoiding major overhauls in the future."

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Stewart said that based on NIAC 85 evaluations from students, instructors, the Imagery Analysts Advisory Panel and the IA Corporate Board, NIAC 86 was shortened and some changes made in field trips. She estimates it will be another six months—two years

after the revitalization effort began—before the NIAC overhaul will be complete and all the blocks are piloted and adjusted.

Class 86 is the first class to graduate since William Hopkins, dean of the National Imagery and Analysis School came aboard in May.

"I am gratified by the hard work and effort that goes into the NIAC," he said, speaking of both the students and instructors.

Just before Stakem handed out the diplomas, he urged the graduates, as they go to their assignments, to be ready each day to learn and teach simultaneously.

The NIAC will be running overlapping courses for the next year to accommodate the backlog of new employees. Class 87 graduates Sept. 5, Class 88 began Aug. 25, Class 89 starts Sept. 15 and Class 90 starts Jan. 5, 1998. •

Mobile Team Investigates Computer Security Incidents

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"We don't get involved in punishment or recommendations for punishment," Sadler added.

"We report on incidents from a third-party standpoint," Williams said. "We explain the technical ramifications. It's up to the supervisory chain of command, in association with Human Resources, General Counsel and Personnel Security to determine a course of action resulting from one of our investigations."

Results of an investigation are added to a metric database the team uses in its efforts to

improve AIS security, Williams said.

"We measure things like 'What caused the incident?' 'Were countermeasures in place?' 'Was the user trained in the proper use of the equipment?' and a number of other indicators," he added.

The data forms the basis for recommendations the team makes to senior management.

Incidents and potential incidents should be reported on the IMT Hotline at (703) 264-3000 or via SBU e-mail to the NIMA IMT global mailbox. Any information regarding the

incident or potential incident will be appreciated and confidentiality will be safeguarded. If the caller has gotten a virus, he or she may be asked to forward a copy to the IMT.

In the near future, employees will be able to access an IMT home page on the NIMA Intranet. The home page will contain security alerts, newsworthy developments in computer security and points of contact. •

NEWS NEWS NEWS in Brief

NIMA Celebrates One Year Anniversary Oct 1

It's been a year of change and hard work. Since standup on Oct. 1, 1996, NIMA has provided customers quickly and efficiently with access to the world's most versatile, timely and accurate imagery and geospatial information. It is an accomplishment of which all employees can be proud. Commemorative town halls at site are being planned to recognize the agency's one year anniversary. *Congratulations!*

Survey Asks Employees to Tell It Like It Is

With one year gone by, it's time for employees to provide feedback on how well they think the Agency has done in its first year. The NIMA Office of Plans and Analysis will conduct an

employee survey in early October to identify significant strengths and weaknesses, with the overall objective of building on the strengths and taking action to correct the weaknesses. Employee participation is vital to success.

Policy Directives Provide Guidances

Two policy guidances were signed by Rear Adm. J. J. Dantone Jr.

PD 1000, *Workforce and Personnel*, emphasizes the importance of a highly capable and focused workforce to achieve the Agency mission. The directive assures that appropriate steps are taken to attract, support, manage and develop a diverse, dedicated and well trained cadre of personnel. Instructions to implement this policy directive will be developed. Questions about the directive should be addressed to John Doty, (703) 275-8539.

PD 5000, *Acquisition*, establishes acquisition oversight in a disciplined and flexible process to enable affordable, effective solutions to capability needs. Instructions to implement the directive are being

developed. Questions about this directive should be addressed to Pam Krause, (703) 275-8539.

Invitation to Membership

Current and former members of NIMA and predecessor mapping organizations are invited to join the Association of Mapping Seniors (AMS).

AMS is a social organization whose purpose is to provide continuing fellowship for its members and their families. AMS maintains the only ongoing address list for retirees.

AMS was founded in 1974 by employees approaching retirement age who realized they would soon lose contact with each other without such an organization. AMS has grown to a membership of more than 625 across the United States. A newsletter is published regularly and there are frequent luncheons, parties, trips and other events. Lifetime membership is \$20.

For further information, or an application, contact Paul Hayduk, president, at (301) 869-0697, or Jack Garrett, membership, at (703) 671-3518, (e-mail: jakgaret@erols.com).



ON THE MOVE

John M. Greene Jr. was selected to fill the Defense Intelligence Senior Executive Services (DISES) position of chief, Integration and Assessments Division, Customer Support Office, Operations Directorate (DO). Greene assumed his new position Aug. 3.

Jan S. Schneider was reassigned to fill the DISES position of deputy director, Geospatial Information and Services

Office, Operations Directorate. He previously served as chief, Technical Assistance Office, Systems and Technology Directorate. Schneider assumed the position Aug. 10.

Mark E. Schultz was reassigned to the DISES position of associate director, Source Management Division, Geospatial Information and Services Office, DO. Prior to his reassignment, Schultz served as associate director,

Process Support, DO. He assumed this position Aug. 10.

Debra Mountcastle-Cameron, Information Systems and **Jay Harden**, Customer Support, have been selected for one year developmental assignments with office of the secretary of defense, Quality Management Office, assisting DoD organizations in quality management.



Bud Higgins assists as a scout constructs a bat house.

NIMA Employees Who Spend Their Vacations Volunteering

by Sharon Smith

It's not what many would call the ideal vacation—spending hours outdoors in sweltering 100 degree heat with more than 350 rambunctious youngsters milling about. But that's how 15 NIMA St. Louis employees spent their summer vacations this year, working as volunteers at the Greater St. Louis Cub Scout Day Camp.

They were recruited by Nancy Ramey, a NIMA St. Louis cartographer and program director of this year's camp. Her duties included setting up schedules, coordinating activities, obtaining supplies and, she said, "snaring volunteers." Ramey has participated in the camp for the last six years.

Two hundred Cubs (ages 7-8) and 165 Webelos (ages 9-10) attended the camp, held in Clydesdale Park in South St. Louis County. Ramey's primary objectives as program director are to expose the scouts to a wide variety of topics, to

encourage and stimulate their curiosity in the world around them.

Ramey praised her coworkers, who braved the high temperatures to educate and entertain the young scouts.

"I'm grateful these individuals were so willing to donate their vacation time and skills," Ramey said.

Taking part in this year's camp were: Brian Hackworth, Henry Taber, Bud Higgins, Kerry Antoniewicz, Scott Gum, Mary Anne Moses-Farley,

Susan Chambless, Bill Bartels, Ray Poninski, Marv Staloch, Laura Moore, David Herman, Greg Anderson and Sara Christian. They taught the kids everything from aerodynamics to whittling.

NIMA employees Carolyn Dean, Bernie Kolo, Pat Corkery, Jim Bartlett and Wanda Weber worked behind the scenes, collecting materials and providing support.

Sharing his expertise on poisonous plants, venomous snakes and bird identification was no problem for naturalist Marv Staloch, who also volunteered at the Busch Wildlife Conservation Area in Weldon Spring.

Building habitats for bats was another popular activity at the camp. The Webelo scouts, with assistance from Bud Higgins and Kerry Antoniewicz, assembled 160 new bat homes.

Sara Christian served as the camp's crafts director. It was her

task to design a program keeping all those young hands busy on a limited budget. "We only had 10 cents per child, per hour, so creativity was the key," Ramey explained.

Why did Christian volunteer?

"It lets me be a kid again through the boys' smiles and silliness," she said. "It allows me to give something back to scouting, since both my boys have gained so much from their years in the program. I'm really looking forward to next year!"

Even though the sunburns have barely healed, and the energy level is just now returning to normal, she added, many of the volunteers are already making plans for next year's camp.

"We're actively seeking skilled NIMA employees to help with next year's program," Ramey said. "Many of the current volunteers plan to volunteer again and I have already had other employees express an interest in the program. Maybe we can help them discover some of their many hidden talents!" •

For further information, St. Louis employees may call Mary Ramey at 263-4835.



Kerry Antoniewicz helps a scout assemble a bat house.



Coming in October...

NIMA's

First Anniversary