National Imagery and Mapping Agency Guaranteeing the Information Edge November 1997 Compared to the Information Edge

The Word is Out!

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About the Cover: Dave Kanavel, a member of NIMA's Geodetic and Geometric Branch, California Office, prepares to do a survey on a T3 theodolite. NIMA geodetic surveys are in demand by customers because of their high rate of accuracy. See story, page 12.

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Director . Rear Adm. I. L. Dantone

Office of Congressional and Public Liaison Director . Laura B. Snow

Deputy Director . Terence S. Meehan Chief, Public Liaison • Eric Berryman

Associate Editor: Muridith Winder Staff Writers: Don Kusturin, Jennifer Lafley

Designer: Lisa Gillogly Circulation: Debbie Kusturio

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Correspondence should be addressed to:

The Edge, Public Liaison Office, 4600 Sangamore Road, Mail Stop D-39. Bethesda, MD 20816-5003

Telephone: (301)227-3069, DSN 287-3069, or in St. Louis: (314) 263-4142 or DSN 693-4142, or e-mail to The Edge.



As I See It

ere we are on the eve of NIMA's Second Annual Customer Conference. What an opportunity this is for us to sharpen our customer focus and hone in on customer requirements by simply listening to them!

Responding to customer needs, the NIMA-led Geospatial Information Integrated Product Team (GI IPT) has just wrapped up 18 months of intense work, which included collaboration with customers, industry and academia. Their work resulted in a master plan for achieving a near-global set of interoperable, digital geospatial information that will be available electronically, on demand to customers around the world. Already we are beginning to execute the recommendations contained in the plan. NIMA's FY 98 program includes the first Integrated Production Cell of cartographers and imagery analysts and five geospatial production cells, organized around flexible, COTS workstations. These cells will help focus our efforts to build foundation feature data and provide rapid production of mission-specific data for customers, while helping to improve and migrate our production process to COTS solutions.

We have embarked and are well underway toward achieving information superiority. Let's continue to build our winning team.

J. J. Dantone, Jr.

Dantone Honored at TechNet '97

Rear Adm. J. J. Dantone Jr. was honored by the Armed Forces Communications and Electronics Association during TechNet '97, held at the Washington Convention Center in June.

One of five individuals receiving the AFCEA Chairman's Superior Performance Award, Dantone was honored for his "creative, pragmatic leadership in implementing the plan for NIMA and for his determined use of the AFCEA forum to address the issues facing NIMA."

Addressing the opening plenary session, Dantone called for the United States to keep technological pace with the revolution underway in military affairs. He stressed the need for a two-way global network of databases and highbandwidth information exchange.

Some 25,000 people viewed six acres of exhibits and demonstrations, including a 400square-foot NIMA exhibit of an end-to-end geospatial information generation process likely to meet many of NIMA's future production needs.

Various types of commercial imagery were used on commercial platforms to demonstrate data extraction, finishing and dissemination in an Internet-like environment. ❖



Dantone

Employee Completes New Leader Program



Cohen

A NIMA employee recently graduated from the U.S. Department of Agriculture Graduate School's 1997 New Leader Program.

Elizabeth Cohen, administrative assistant with the Information Services Training Office, completed the six-month program which targets federal employees at the GS-7/ 11 level who are entering leadership positions or who have a strong potential for

leadership skills. She is the first NIMA employee to complete the program.

As part of the program, Cohen served in various developmental assignments in NIMA. She shadowed Paula Roberts, associate director for the Production Integration Division, Geospatial Information and Services Office, and assisted with the first quarter resource analysis for fiscal 1997 briefing to GI's senior staff. She worked in the Network and Enterprise Systems Office and gained an insight into the Video Telecommunications Center operations.

She also served in various assignments in NIMA College at the Washington Navy Yard; McLean, Va.; Fort Belvoir, Va. and St. Louis.

Fundamentally, this program is designed around a model of effective leadership competencies, the Leadership Effectiveness Framework (LEF), a solid training and development foundation of team leadership skills enhanced by agency developmental experiences. Acceptance into the program is very competitive.

"The experience was valuable and encourages others to apply for the program," she said. "It helped me focus on my career and my goal is to become an imagery analyst or intelligence officer."

Cohen has 10 years of federal service, eight with NIMA and its legacy agencies. ❖

Maj. Bryan Fortson, deputy program manager, Advanced Sensors, gives introductory remarks at the change of command. Seated (l-r) are: Col. David Tarbox, Rear Adm. J. J. Dantone Jr. and Col. James Bryan.

Photo by Land Hall



A rmy Col. David G. Tarbox relinquished command of the Mission Support Eastern Region to Army Col. James L. Bryan on Oct. 17. Rear Adm. J. J. Dantone Jr. officiated at the early morning ceremony held in Bethesda, Md.

Bryan will manage NIMA's 13 sites located in the east, providing critical infrastructure to the Agency and leading a civilian and military workforce of more than 400 people.

"Colonel Bryan brings a strong background in engineering and human resources to NIMA," Dantone remarked at the ceremony. "He spent 15 months forward-deployed in Turkey as the chief of staff for operations to Provide Comfort and Northern Watch and had a couple of other important operational assignments in Saudi Arabia, Korea, and elsewhere."

Accepting the responsibilities of his new command, Bryan said, "I look forward to working with all of you and getting to know each of you personally."

Dantone praised Tarbox for his many contributions to NIMA and the former DMA over the past three years.

"What Colonel Tarbox has really done is be a commander responsible for the activities of a large bunch of wonderful people who, frankly, in all of NIMA stand out in terms of competence and excellence. The Mission Support folks are always there when you need them. You don't have to ask twice," Dantone said.

Tarbox paid tribute to the members of his MS staff for their dedication, hard work and support,

attributing many of Mission Support's successes to them.

"As the support personnel of the National Imagery and Mapping Agency, it is our job to be the silent heroes of the day," he said. "We exist to relieve the burdens of the cartographers and imagery analysts. We must take for granted — even take pride—in the fact that few customers say anything or take notice when we are doing our job properly."

Guests included Tarbox's wife, Barbara; retired Army Col. Peter G. O'Neill, former director, DMA Hydrographic/Topographic Center; Army Col. James Stordahl, commander, Mission Support Western Region; members of the workforce and representatives of NIMA's senior leadership. Tony Johnson, Dale Robinson, Wanda Powell and Sharon Johnson, of "The Sounds of NIMA," performed for the occasion.

Tarbox was born at Fort Belvoir, Va. He completed the curriculum at the Citadel, the Military College of South Carolina, and was designated a Distinguished Military Graduate. He was commissioned a regular Army second lieutenant in 1971 in the U.S. Army Corps of Engineers. Awards include the Defense Meritorious Service Medal (with oak leaf cluster), the Army Defense Meritorious Service Medal (with oak leaf cluster), the Army Meritorious Service Medal (three oak leaf clusters), the Defense Commendation Medal and the Army Commendation Medal.

Bryan has 24 years of service as a commissioned officer in the Army.

continued on page 21

Face-to-Face Solutions

by Tim May Human Resources

anet Betts is someone you can trust. The head of the Facilitation and Mediation Program for Human Resources—she's been finding solutions to tough people-problems in the workplace for more than seven years.

Betts, who works at the Washington Navy Yard, speaks with authority about the principles of conflict resolution which are especially important to her. Creating a "safe environment and maintaining a strictly confidential process without repercussions" (for having sought her or her staff's help), are at the top of her list. And she says it's critical for the staff to provide a "sounding board" and create an environment where NIMA employees—whom she calls "clients"—can "vent safely."

"When we meet with clients at one of our Facilitation and Mediation Centers, they can count on being heard and the information going no further without their permission," Betts said. Regardless of whether clients drop in or arrange an appointment, they're all treated as customers. The "staff," as Betts calls mediation counselors, also meet clients at other locations where it's more convenient.

What sorts of conflicts needs resolving? Any workplace issue involving a difference in expectations or values which may affect employees and managers alike. It may relate to holding fast to positions rather than seeking areas of common interests.

"When a conflict is unresolved, feelings intensify and positions harden," Betts noted. "These situations are very real to the people involved." Employees are likely to take work problems home, where they can erupt or otherwise adversely affect the employee or his or her family. "There is no doubt that the conflict hurts and impacts their productivity at work," Betts added. The Facilitation and Mediation Centers (FMCs), open to all NIMA employees, are the first stop to finding solutions to workplace issues.

Employees or managers may contact mediation counselors for assistance and advice with work-place issues. Counselors can then discuss how they assist in resolving workplace issues by helping to promote resolution of an issue. Many times this is done by providing clarification; encouraging the flow of communication so the parties might



"Our jobs," says Betts (above), "are a huge part of our lives—for our mental health, we need to deal with our problems here."

independently solve the problem, or by using more structured mediation sessions in which a third party neutral intervenes.

The key to successful cooperative problem solving, Betts said, is face-to-face meetings and a willingness to find mutually acceptable solutions. "Our jobs are a huge part of our lives—for our mental health, we need to deal with our problems here."

Discussing a problem with a counselor gets an impartial third party involved and gives a perspective that may help define and limit conflicts before they escalate.

NIMA DoD and CIA-affiliated employees may contact the Facilitation and Mediation Centers at:

Washington Navy Yard

Bob Shefner, 202-863-3007/3008, Room 1N365

Bethesda

Bea Vicks, 301-227-4750, Room 526

St. Louis

Margy Spezia or Helen Brown, 314-263-4276, Bldg. 22

Employees at other locations may contact the most convenient office. 🌣

Editor's Note: Look for regular updates on assistance available to resolve workplace conflicts in future Edge articles, e-mail and NIMA News releases, NIMA Intranet-HR Homepage, and other media. 6 6 When the have confidence we'll do great," says Mike Kelley, the Defense Logistics Agency's program manager for the transfer to DLA of NIMA's hardcopy supply management and distribution.

"We know how to do supply management and distribution. It's what we do every day."

The transfer of NIMA's hardcopy supply management and distribution grew out of decisions to concentrate on agency core functions, said Cleveland Wooley, NIMA program manager for the transfer. Supply management and distribution are core functions of DLA and long-term efficiencies and savings are expected to result from the transfer.

"It is a good match," Wooley said. "NIMA brings the experience, competence and total commitment of furnishing mapping products to customers, while DLA brings the experience and commitment of furnishing a to the NIMA system, which is based on the geographic area covered by the map.

"National stock numbers and military standard requisitioning and issuing procedures (MILSTRIP) will enable us to provide total asset visibility," Kelley said. "This concept came out of the Persian Gulf War. With national stock numbers, shipments can be tracked electronically, and commanders will know at a glance which shipments are maps." NIMA was implementing the new system before the transfer began.

The relocation in Richmond will bring the supply management and distribution functions together in one location, which Kelley believes will facilitate communication.

DLA plans to take possession of maps in Arnold and ship them to Richmond for further distribution initially. Eventually, the maps could be shipped directly from Arnold, Kelley said.



Introducing NIMA at the Defense Logistics Agency's annual "customer expo" are, from left, Jan Watkins, DLA program manager for inventory control in Richmond, Va.; Bella Brown, NIMA operations action officer for the DLA transfer; and Sam Meyers, NIMA system analyst for customer support.

broad range of supplies and services to these same customers."

Despite the advantages, Kelley said the April 1 transfer will be complicated, involving the relocation of the supply management function from Bethesda to Richmond, Va., distribution from Philadelphia to Richmond, and distribution in Germany from Zweibrucken to Germerscheim. A related development will be the opening of NIMA's consolidated printing and softcopy dissemination facility in Arnold, Mo.

Besides relocation of the depot in Germany, DLA will assume control of distribution functions at several NIMA combat support elements in the United States and overseas.

Plans call for DLA to transition to a standard DoD supply management system after the transfer is complete.

Order processing of NIMA maps under DLA will be based on national stock numbers, with a cross-reference

'Great Service' Seen in NIMA-DLA Partnership

by Paul Hurlburt

"NIMA brings the experience, competence and total commitment of furnishing mapping products to customers, while DLA brings the experience and commitment of furnishing a broad range of supplies and services to these same customers."

An existing warehouse in Richmond is being renovated to accommodate map products and provide additional security for classified materials. Prior to the transfer, DLA had warehouses at Germerscheim, and one of them is being converted for map storage.

Periodic meetings are being held with NIMA customers to learn their requirements for maps and minimize impacts of the change for them. In May, NIMA and DLA shared a booth in San Diego at DLA's annual "customer expo."

"We want customers to be comfortable with the idea of coming to DLA for NIMA products," Kelley said.

Maps pose some unique distribution problems.

"For example, we operate on the principle of 'one requirement, one product.' We don't normally handle errata sheets or provide revised editions," Kelley said.

"We are hiring experienced people from NIMA prior to the transfer. Our people don't know maps, but they know the DoD standard supply system, which the NIMA people may have to learn a bit. We look forward to them mixing and learning from each other to produce a truly great service." ☆

updateupdateupdateupdate

NIMA's first workforce survey hit the streets in late October and the responses are now being processed. In the time leading up to and during the survey, a number of questions were asked concerning survey administration and follow-up. The following questions and answers focus on those concerns.



Will the anonymity of my responses be maintained?

Yes, in fact great care has been taken to ensure that all responses will remain anonymous. To do this, survey responses will be sent directly to International Survey Research Corporation (ISR) in Chicago, where the data is processed. NIMA will only receive "grouped" survey results, not individual data records.

A "group" result is made up of 20 or more respondents. Thus, if you fall into a group of less than 20 people (by gender, grade, ethnicity, etc.) those results will be aggregated into the next larger group or no results will be reported for that group. No attempt will ever be made to identify individual respondents.

Who is being surveyed?

One hundred percent of NIMA employees will be surveyed. All CIA affiliates, DoD civilians and military personnel will receive surveys.

When will we see the results?

We expect to communicate results to the workforce in early to mid-January.

How will results be reported?

To make sure survey results are given the widest distribution possible, a variety of methods will be used to report information. ISR will brief the survey results and identify key issues to the NIMA senior staff in early January followed by a series of town hall meetings. Copies of survey data will be distributed to directorates and offices. We expect to soon identify a way to make the data available to selected users online for specialized analysis. You will also see articles on key themes and issues in all forms of NIMA media, including the Digital Edge, The Edge, the NIMA Intranet and local bulletins.

How will the survey results be used?

The survey results are a key tool for NIMA's improvement program. As such, results data will

be used to identify the Agency's significant strengths and areas for improvement. Areas identified for improvement will be prioritized for action. As actions are completed, others will be initiated. The survey results also will be used to assess NIMA's performance in employee effectiveness/satisfaction.

Who is responsible for survey follow-up actions?

The senior leaders have taken responsibility for survey follow-up actions. They may enlist the support of facilitators (either government or contractors) to help them with the process.

When does the follow-up occur?

Look for follow-up actions to begin by early February.

Will employees be involved in the survey follow-up actions?

Yes. Experience shows that employees are often the best source of solutions and/or issue clarification. Typically, employee focus groups are a good mechanism for collecting more information about problems and developing possible solutions. Other techniques like internal and external benchmarking and process modeling may be used depending upon the complexity and type of issue.

How will we know if things have improved?

Periodic status reports to the employees will be made by the senior leadership. In the Spring, NIMA will resurvey a representative sample of employees to determine if the actions taken were effective. Because the mid-cycle sample survey will use the same questions as the Fall survey, NIMA will be able to compare its performance over time in all key areas.

Does NIMA plan periodic surveys of its employee population?

Yes, the next census survey is scheduled for October 1998. ❖ A ddressing a series of employee meetings in St. Louis last month, NIMA Deputy Director Leo Hazlewood described senior managers' top priorities within the available fiscal 1998 resources.

"Overall, the budget is at an acceptable level," Hazlewood said, "although some of the specific impacts are disturbing. We will not have nearly the level of dollars and people we would like to have." The deputy director assured employees that NIMA was treated no differently from other

agencies in this regard.

Among the budget impacts is the possibility of a deeper drawdown in the DoD civilian workforce than originally expected. Hazlewood described NIMA as "well along the way" of a first phase of downsizing through the offer of voluntary separation incentives and voluntary early retirement authority to targeted occupations, grades and locations throughout the Agency. Among those eligible for "buy-out" were employees affected by Agency outsourcing and consolidation plans, including the transfer of hard-copy distribution and inventory management to the Defense Logistics Agency, contracting of computer operations. consolidation of printing functions and reductions in in-house software maintenance and facilities support. Others were eligible for buy-out because of skill imbalances in the geospatial information production support offices.

More voluntary separation programs are being considered, Hazlewood said. (By press time, two more buy-out offers had been announced. One targeted GS-11 and -12 cartographers and closed Nov. 7. A second is open to most NIMA DoD employees and closes Nov. 21.) "There is still a possibility of a Reduction in Force," he added, "but that is the absolute last recourse." He cited the success of NIMA's internal placement program in finding other jobs for employees not wishing to leave NIMA. "Our rate is twice the placement rate of the rest of DoD. Employees at GS-12 and below have a good chance."

Within the resources available to the Agency, Hazlewood cited five priority areas. First, NIMA will continue to invest in development programs providing modernized production capabilities and improved customer access to imagery and geospatial data. Vital investment will continue in such programs as NIMA Libraries, improved access to our digital geospatial information, softcopy workstations and tools, and equipment supporting the next-generation production environment that will enable cartographers and imagery analysts to better communicate and share data.

A second area of focus will be the GI and IA production programs. Hazlewood noted that GI's initial production program called for 500 more workyears of effort than NIMA could satisfy. NIMA will devote its available production resources to satisfying the highest priorities of the Commands and Services. Resource priority will also be given to initiatives that help achieve

Deputy Director Cites FY 1998 Priorities for NIMA

by Laura Snow

"C2" readiness status in critical areas tracked by the Chairman's Joint Monthly Readiness Review. These include support to noncombatant evacuation operations and training exercises. NIMA IA will continue to follow the priorities of Presidential Decision Directive 35 in its production program. NIMA will present its production program to customers in the second annual Customers' Conference this month.

Hazlewood cited a third priority as the design and implementation of WORKFORCE 21, "to bring NIMA as close to a single personnel system as possible. Although budget cuts will slow implementation, we plan to do as much as we can to implement WORKFORCE 21."

A fourth priority is connectivity improvements. Funding availability will be the key determinant in the pace of improved connectivity, Hazlewood said. "We need to improve our ability to communicate across NIMA, and we need to integrate the stovepipe systems we inherited. For the Workforce21 system, our goal is to move to a backbone of a secure Local Area Network, but to allow unclassified access. We must also make the necessary changes to systems to avoid problems in the year 2000," since some computer systems will not recognize the field "00" as a year.

A fifth priority will be joint initiatives with NIMA's collection partners, the National Reconnaissance

Continued on page 14

NIMA Helps Play the Name Game

by Don Kusturin

A number of rapid-fire changes have occurred worldwide over the past several months through both peaceful and military means. Hong Kong and the Democratic Republic of the Congo, respectively, are examples of each type of change.

Some of these—and others in the making—involve changes in names and governments. For NIMA's products to reflect those changes, the agency coordinates with the U.S. Board of Geographic Names (BGN). Created by public law in 1947, the board can trace its roots to President Benjamin Harrison, who urged such an organization as early as 1890.

The BGN is divided into two committees—the Domestic Names Committee (DNC) and the Foreign Names Committee (FNC). As their names imply, the DNC is concerned with place names within the United States and its holdings, while the FNC is concerned with the development of standard place names spellings in foreign countries.

The FNC looks foremost to native mapping, census reports, official bulletins and other materials. These are used to standardize names for use by U.S. agencies. It works with the British Permanent Committee on Geographical Names to develop systems for converting names not written in the Roman alphabet.

"By providing the foreign geographic names staff support to the BGN," said Randall Flynn, the board's executive secretary for foreign names, "NIMA plays a fundamental role in the operation of the board.

By looking at the recent examples of the Democratic Republic of the Congo, formerly Zaire, and Hong Kong, one can get a feel for NIMA's participation.

The changes in both areas were greeted with public celebration by the residents. However, that is where the similarity ends, except for the response by the BGN.

On May 17, "rebel forces" led by Laurent-Desire Kabila captured the Zairian capital of Kinshasa. With that came the change to the establishment of the Democratic Republic of the Congo.

"That Laurent-Desire Kabila would impose a change in country name after his seizure of Kinshasa on May 17 should have come as no surprise," Flynn said. "The name Zaire had been imposed by the late Mobutu Sesi Seko in 1971. The name of Kabila's rebel organization, the Alliance of Democratic Forces for the Liberation of the Congo (ADFLC) left no doubt as to his view on the country name."

In fact, name changes are nothing new to that part of the world. When this area was colonized, the names of the newly named Democratic Republic of the Congo and its neighbor the Republic of the Congo were known as the Belgian Congo and the French Congo. It wasn't until

Mobutu's name change that Zaire existed.

"Word of the name change emerged here on the afternoon of May 18. Radio and television reports from Voix du Congo, the renamed national broadcast bureau in Kinshasa, announced the dissolution of the constitution, the elimination of the transitional parliament and the readoption of the name Democratic Republic of the Congo," Flynn explained.

The BGN's NIMA contingent went to work the following day attempting to verify the name change, but encountered only chaos. Even calls to the former Zairian embassy were inconclusive.

By providing the foreign geographic names staff support to the BGN, NIMA plays a fundamental role in the operation of the board.

Enough evidence finally surfaced to substantiate the new name. This, however, led to another problem. The official name Democratic Republic of the Congo was burdensome to keep saying. What about just "Congo?" The problem was that the Republic of the Congo used the same term.

"The State Department requested the staff look into prior precedent covering this situation," Flynn recounted. "At the next meeting of the FNC, the staff reported that historically the BGN had declined to formally differentiate countries with the same name. Informal guidance had been issued in the 1960's that the official long-form name of one of the countries be used in situations where the context was unclear."

This did not satisfy cartographers facing space limitations on small scale graphics. The practice then developed in mapping and charting circles to use names of capital cities parenthetically to distinguish homonymic countries. Thus historical maps would depict Congo (Brazzaville) and Congo (Kinshasa), Yemen (Aden) and Yemen (Sanaa), etc.

The committee decided in the case of the Congos to follow this precedent and not formally recognize an official means of distinguishing between the two countries. Federal cartographers from several agencies had already indicated they intended to resurrect the historical approach.

If the case of Zaire/Congo represents the BGN reacting to world events, then Hong Kong shows the board working proactively to deal with political change in advance, Flynn said.

The staff learned earlier that British authorities were working on a new finding list of Hong Kong place-names that would include the Pinyin and the traditional Eitel/Dyer-Ball spellings in the Roman alphabet.

"The British agreed to supply the staff with a copy of the list when it was completed. The State Department assisted by providing an advance copy of the official Guidance Bulletin to be issued following the transition of Hong Kong to China."

Flynn said even the timing of the meeting of the Foreign Names Committee June 30 was keyed to the date of Hong Kong's transition. With very little discussion, the committee approved the precoordinated recommendation that Hong Kong would become the Hong Kong Special Administrative Region, or Hong Kong S.A.R. The Pinyin rendering Xianggang Tebie Xingzhengqu could also be used in applications where the native language name is required. The simple short form Hong Kong may be applied where space is at a premium.

Particularly challenging for the federal departments and agencies that comprise the board are situations where a nation's government cannot reach a consensus on what it should be called. Not only maps and charts, but intelligence reports, foreign policy documents and catalog records maintained by the Library of Congress are all affected by board decisions.

For example, in 1995, riding a wave of nationalism, Kazakhstan notified the United Nations and the board through diplomatic channels that it henceforth wished to be known in English as Kazakstan, a spelling that moved away from the Russian language name of the country and closer to the indigenous Kazakh language spelling. Laws were enacted mandating a 10-year Kazakh

language education program.

"But the difficulty the government faces is that 60 percent of the population is ethnically Russian and the development of a national language policy in a multilingual nation is a political tightrope act," Flynn noted. "The swing back to the Russianbased spelling of the country name in July indicates that speakers of Russian are being heard. Keeping tabs on the spellings of the thousands of other place-names in Kazakhstan represents a stiff challenge for our staff." 3

Customer Feedback **Dominates Conference**

by Jennifer Lafley

ast year's customer conference introduced NIMA as a new agency to its customers, but this year's conference, held at the Westfield Conference Facility Nov. 19-20, focused on hearing from those customers.

"Although NIMA has achieved many successes during its first year, much work remains in meeting the needs of its customers." said Air Force Brig. Gen. Arthur D. Sikes Jr., director of the NIMA Customer Support Office. "By inviting our customers to come and share their viewpoints during the conference, we gained a sense of how we can improve our efforts and results."

With a theme of "Listening to our Customers," Agency officials concentrated on hearing how NIMA can better serve its customers, said Mary Clawson of the Customer Support Office. Clawson and coworker, Mike Flowers, are the conference planners of NIMA's Second Annual Customer Conference.

"The agenda was completely customer driven," Clawson said.

To prepare that agenda, Flowers and Clawson canvassed customers at commands. services, national imagery and geospatial agencies to request proposed topics for discussion.

"The more we know about our customers and what they need," Clawson said, "the better the conference will meet their expectations."

Customer responses include requests for discussions on commercial imagery, the transfer of distribution to DLA and USIGS (U.S. Imagery and Geospatial System) migration plans—all topics on the agenda.

The first day was devoted to customer "feedback" sessions.

"One of our goals was for customers to get their questions about NIMA answered," Clawson said. She added that more than 300 attended the conference.

Only through continuous improvement in providing information and services can we expect to reach the level of success that our customers deserve, Sikes said.

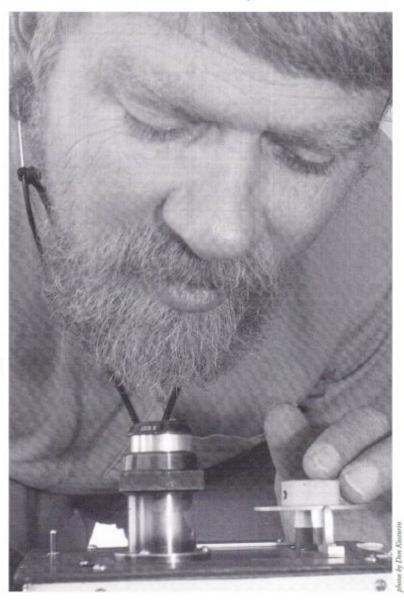
Theme of 'Listening to our Customers' Says it All!

The Word is Out!

On Site Geodetic Service Provides Pin-Point Accuracy

by Don Kusturin

Charlie Wallmo takes a gravity reading on a Relative Gravity Meter.



board that depend on NIMA data from a GPS standpoint.

"All our systems rely on knowing where they are in relation to points on the ground, both before they take off and as they fly," Scott explained.

Although the Flight Test Center is its largest customer, the G&G group supports several other customers, including the Western Test Range, Utah Test and Training Range, U.S. Army Kwajalein Atoll, and a number of Department of Defense agencies and their contractors with geodetic and geophysical information.

The office is comprised of three entities—the main office at Edwards AFB and satellite offices at Vandenberg AFB, Calif., and the Kwajalein Atoll, Marshall Islands. The Kwajalein office, headed by Dick Massetti, provides down range support for

If being there is half the fun, then members of NIMA's Geodetic and Geometric Branch, California Office, should be having the time of their lives. Located at Edwards Air Force Base, the NIMA office is readily accessible to its customers.

"It's really a two-way relationship," said Randy Scott, director of Plans and Programs at the Air Force Flight Center, located on Edwards. "We're able to provide the NIMA team with the facilities they need to operate on site and, in exchange, they support nearly every mission we have. We wouldn't be able to operate without their support."

Virtually every aircraft at Edwards relies on known geodetic points for navigation accuracy. Additionally, most aircraft, as well as smart bombs, have Global Positioning Satellite (GPS) systems on

NIMA's Quest for Excellence

by Mary Ellen Seale, Plans Programs and Analysis

NIMA is committed to excellence. In that pursuit, the Corporate Improvement Team in PA will showcase activities each month personifying outstanding examples of customer service, exceptional performance, innovation and creativity.

Our quest for excellence is a never-ending journey requiring all our efforts. Communication is a key enabler in promoting and accelerating our development into a world class organization.

This column will also provide information about ongoing methods to improve procedures, products and services. In support of this process, we challenge all NIMA employees to strive daily to improve their personal performance and contributions to our critical national defense mission.

In the Operations Directorate, the Geospatial Information and Services Office (GI) had as a key fiscal 1997 goal to "Implement GI corebusiness process improvements that were identified through a Quality stand-down day." During this process, 1,019 employee ideas were generated. They were then consolidated into 445 issues for consideration and 259 ideas were implemented into GI processes, system improvements, customer feedback and training. Nearly \$2 million in life-cycle savings resulted from these suggestions. This required coordination across many divisions of GI and was a true team effort.

NIMA recently learned the Department of Defense (DoD) has revised the waiver request process for "cutting red tape and eliminating bureaucracy." Under the auspices of the National Performance Review (NPR), designated reinvention laboratories and centers were encouraged to challenge regulations and red tape by requesting a waiver from regulations via the NPR. DoD subsequently expanded this concept and will accept waiver requests from any DoD directive, instruction or publication for service.

Previously, agencies were required to become a reinvention lab prior to asking relief Continued on page 21

intercontinental ballistic missile launches. The Vandenberg group supports space and other missile launches.

"Working face to face with customers on a daily basis allows us to dissect customer needs and the ability to better meet them," said Bob Wideman, chief of the Geometric Geodesy Branch, California Office. "In many cases, they know they need some geodetic information, but they may not know exactly to what accuracy or if we can even provide it." Being able to talk to customers face to face and listen to their requests, he added, allows the NIMA team "to really nail down the requirements."

In many cases the customer will accompany the geodesists into the field to describe exactly what they're looking for.

"I've gone with the NIMA guys on many surveys and even helped them dig some of the holes," said Bob James, NASA's X-33 extended range support team tracking representative. "They're very professional."

A suborbital, unmanned craft that will reach speeds exceeding Mach 15, the X-33 is a 50 percent test model of the Venture Star, which is intended to be a low cost method of putting a payload in orbit. It is crucial that the geodetic data guiding the X-33 be precise.

Reliability is what makes NIMA data so

valuable to Agency customers.

"Lots of people have GPS receivers," James said. "And they go out and start doing surveys. Our experience has been that the results from such surveys are so varied and wild they can't be used. And frankly, I don't trust any survey unless it's done by NIMA." Since the X-33 is going to be unmanned and have a preprogrammed trajectory.

he added, it is vital the aircraft and the ground station agree in their data, especially when it comes to the landing site.

Another NASA program the NIMA office has been involved with is the space shuttle. Besides the shuttle's navigational needs, Wideman's group set the telemetry for the tracking radar. Data is so precise that a one degree error would greatly hamper the tracking station's ability to detect the shuttle.

"Our work is highly important and very critical," said geodesist Ray Shipp. "Without the GPS support or conventional surveys we provide, a lot of their projects literally couldn't get off the ground."

Shipp points to the unmanned craft such as Dark Star and Global Hawk, both of which are designed to do reconnaissance work. As with the X-33, ground information is crucial. If navigational measurements are wrong, it could result in a crash.

"Our real problem is that we're not able to make sure everyone realizes that Bob Wideman's team is out here to do the surveys," said Air Force 1st Lt. Richard Cimino, an intelligence officer who also serves as the Mapping, Charting and Geodesy officer at Edwards. "When they find out the accuracy they can achieve with these surveys, they're blown away!"

Some program managers who initially contracted with outside sources have been less than satisfied.

"Many times they go to NIMA after they've contracted with someone else because they didn't get what they were looking for," Cimino said. "With NIMA, they get a great deal and the accuracy they need." A

Director's Suspense File Helps Keep NIMA on Track

by Sharon Alexander

Ver wonder how NIMA keeps track of NIMA? Look no further than DSF—the Director's Suspense File.

According to the Executive Administrative Support Team (EST), suspense file is an unclassified correspondence and action tracking system intended to be used for and by all of NIMA.

The support team uses the file to enter action items for the NIMA director, assigning them to the appropriate offices and then tracking and monitoring the actions.

The file shows whether actions are overdue, open or upcoming, as well as provides summary reports on actions and the status, purpose and originator. The team further explains that the information can be accessed by organization, due date and status.

When it was time to expand and improve the use of the Director's Suspense File and correct initial problems, the support team called on Clayton Leitch.

"The suspense file was accessible from only three computers and was plagued with problems," Leitch recounted. "The support team asked me to improve the file's response time and to enable more than one user to log on simultaneously." It also wanted to share the database with all of NIMA. "I could easily fix the first two problems," Leitch said, "but the third problem required an overhaul of hardware and software."

Leitch began by making the existing file web compatible to allow electronic access via the Netscape web browser.

"I installed Tango software interface builder for Netscape on two 8550/200 MacIntoshes—one each for a web server and a database server," he said. That way, he explained, the DSF program could be run on any computer platform including Mac, PC and UNIX.

"Any full table compliant browser can read this system, including Internet Explorer, Air Mosaic and Netscape," he said.

The Executive Administrative Support Team has unlimited access and offices can input information for actions assigned to them by using a unique password to access the file. Leitch said anyone who has Netscape has read-only access to the DSF. He said the general user need only sign on to Netscape and type in the URL http://dsf.nima.mil/tango/dsf/. At the correct prompt, entering a general user identification and password allows read-only access.

As of early August, more than 2,000 records were in the DSF and Leitch expects that number to increase. Not surprisingly, he said the busiest day is Wednesday, the day of the senior staff meeting. "We use the DSF to generate weekly status reports for distribution at the weekly staff meetings," said one team member.

Leitch said more than 300 action files are delivered to workstations and more than 100 different workstations have been used to access the suspense file.

With the changes that Leitch made, the support team reports that the DSF system is operating virtually trouble-free.

Since making the changes, 112 people per second can use the system simultaneously, although Leitch has never seen more than six users at any one time. The response time has also improved significantly, averaging three to five seconds.

For those who experience a slower response times, Leitch said the reason is most likely that the proxy server in Netscape is not properly set up on the workstation being used. "But that's something I can talk users through over the telephone."

A future improvement includes pushing the level of access to the three-letter code offices (currently, only offices with two-letter codes can track their own actions). Leitch said this will be done gradually, office by office. He has gotten suggestions from users for additional improvements, but overall, users have responded favorably to the new and improved DSF. &

Deputy Director Cites Priorities, continued from page 9

Office (NRO) and Defense Airborne Reconnaissance Office (DARO). "NRO is delivering additional capabilities at the end of this century, calling for changes in our architecture, followed by the Future Imagery Architecture," said Hazlewood. "We are also working with DARO to ensure that what comes out of the unmanned aerial vehicle program is responsive to intelligence, mapping, charting, and geodesy requirements and is made part of an integrated architecture."

The deputy director promised more "bursts of information" as NIMA completes its fiscal 1998 strategic planning and budget deliberations.



Denicke and Winfrey.

NIMA Makes GLOBAL APACHE '97 Seem Like the Real Deal

by Jim Mohan

arriors from the U.S. military's active and Reserve components honed their warfighting skills during Global Apache '97, a joint service exercise held in August at the Army's Dugway Proving Grounds in Utah. The exercise, directed by the National Guard Bureau, was designed to provide low cost training and serve as a laboratory for field testing new technology. It involved more than 141 units from the Army, Navy, Air Force, Marines, the Army and Air National Guard and Canadian Air Force units.

The mock battles over the Utah desert served as a "stand in" for the Korean peninsula. Adding to the realism was the use of NIMA products such as navigation and planning charts featuring Korea, Utah and various Military Operations Areas (MOAs) throughout the United States. These lined the walls of the Air Operations Center (AOC), located at the Proving Grounds. The AOC was responsible for the centralized planning, directing

"We not only used the planning charts, we used the FLIPs (Flight Information Publications) extensively," Denicke said. "It was interesting helping create them and then turn around and use them. I have to say I found them very user friendly." Calling the NIMA products a "vital necessity," he added, "Without them, we couldn't get there from here."

Winfrey, an ANG staff sergeant and surveillance technician, agreed.

"I felt a great deal of pride seeing how our products are used in the field. They are an essential part of every exercise. It's good to be [a customer] on the other side and to see how NIMA is responsive to users' requests and needs."

The main focus of Global Apache '97 was to develop interservice interoperability, allowing fighters from different military services and specialties to train within a complete system.

"We not only used the planning charts, we used the FLIPs (Flight Information Publications) extensively," Denicke said. "It was interesting helping create them and then turn around and use them. I have to say I found them very user friendly."

and coordinating of all air assets during Global Apache '97.

The variety of aircraft participating in Global Apache was extensive, including the B1-B, B-52, F-15, F-18, F-16, A-10, Harriers, AWACS, KC-135, C-130, C-141, C-5, Blackhawk and Apache helicopters.

As the battle raged on, Army and air planners shifted their focus from plotting simulated "kills" and mock engagements on Korean charts to planning and executing real world/real time missions over U.S. airspace.

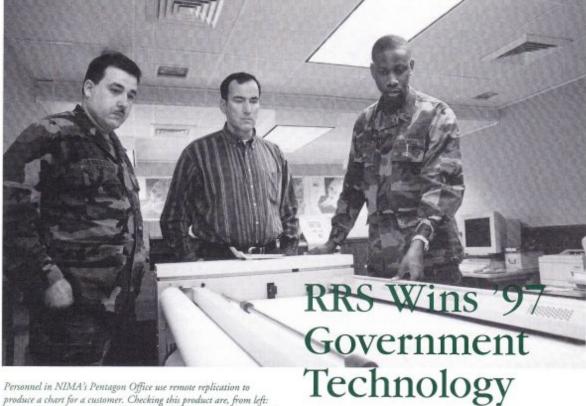
Two individuals with a unique perspective of the exercise were NIMA aeronautical information specialists, Rick Denicke and David Winfrey, both members of the Missouri Air National Guard (ANG).

Denicke, an ANG chief master sergeant, served as the noncommissioned officer-in-charge of the Air Operations Center Defensive Cell. He said NIMA products were critical in the planning of simulated missions and controlling of real world flying operations. Advanced satellite technology connected four sites allowing scenario builders, planners, targeters and others to receive battle management training.

Rather than moving the players to a remote training location, information was transmitted to participants, allowing soldiers and airmen to be fully involved while remaining at or near home stations. This, planners said, resulted in huge cost savings.

"The grand concept of Global Apache was to provide effective, low cost, joint training to the participants," said Air Force Col. Ted Dodson, joint director of the exercise and commander of the 152nd Air Control Group, New York Air National Guard.

A vital concept in the exercise was reverse tasking. According to Utah Army National Guard Lt. Col. Bruce Galton, joint director of the exercise, "units coming to the exercise were invited to make their training needs known. Then those training needs drove the planning of the exercise."



Personnel in NIMA's Pentagon Office use remote replication to produce a chart for a customer. Checking this product are, from left: Navy Petty Officer 2nd Class Ramon Enriquez, Richard Beaman and Petty Officer 3rd Class Derrick Randle, (Photo by Larry Franklin)

ompeting with more than 150 submissions, NIMA's Remote Replication System (RRS) was selected as one of 23 winners of the 1997 Government Technology Leadership Award.

"We believe that excellent performance by government agencies often goes unrecognized.," said Timothy Clark, editor of Government Executive, a sponsor of the competition. "The technology awards honor innovative programs that have made a difference."

Making a difference is what the RRS is all about.

"The RRS develops materials on demand that are distinctly tailored to the users' requirement," said Jim Sippel, program manager for the RRS.

The RRS process scans lithographic material or receives a digital file, generating data that can be manipulated at a computer workstation to quickly produce maps and charts.

For customers in remote sites, the RRS has had a dramatic impact, especially in terms of rapidly responding to crisis situations, said Sippel. Using off-the-shelf technology, maps and charts can be reproduced at sites other than established production facilities. The remote sites can then transfer digital map files in various formats directly to the customer for use in computer systems or local printing.

In response to an emergency in Sierra Leone this summer, Marines aboard USS Kearsarge evacuated 2,500 Americans relying heavily on the RRS to help guide pilots in evacuation helicopters to the correct locations. The system proved itself a Award

Leadership

by Jennifer Lafley

"We believe that excellent performance by government agencies often goes unrecognized," said Timothy Clark, editor of Government Executive

winner in other situations as diverse as supporting troop deployments in Bosnia to identifying evacuation routes for hurricane impact areas.

Saving both time and money, the RRS process can be accomplished within several hours versus the conventional lithographic process of months. And for infrequently requested products, the RRS provides a cost effective replication and distribution strategy and it reduces storage requirements for these items.

Judges for the award included representatives from the Department of the Army, General Services Administration, the Department of Agriculture, the World Bank and the U.S. Forest Service.

The award will be presented to NIMA representatives next month. 3

NIMA College Revamps Web Site, Adds New Customer Services

by Forrest Lynch NIMC Webmaster

he National Imagery and Mapping College (NIMC) has redesigned its Internet web pages. The new look provides prospective students with more detailed information about the college as well as easier and faster access to needed college information.

The NIMC web page was established as a central point for NIMA employees to access information that will aid in their personal and professional development. David Broadhurst, director of the NIMC, sees the NIMA college as "a professional learning center delivering full service, timely and relevant training and education for both

The new NIMC web page provides customers easier and faster access to NIMC course offerings at both the St. Louis campus and the Washington, D.C., area campuses....

NIMA and our global customers." The new web page, he said, will provide the necessary information to get that training.

The NIMC web site was first created and brought online in February. At that time, the site consisted of a college directory listing the four NIMC schools—the Career Development School, Defense Mapping School, National Imagery and Analysis School and the System Training School; a college administration and policy office page and college registration procedures.

For the past eight months, the site has significantly expanded. Links have been added for college curriculum, community outreach forum and NIMC library page. Along with a quarterly listing and descriptions of resident courses for the four NIMC schools, the curriculum page offers information on vendors, service schools, distance learning courses and colleges and universities within both the Washington D.C. and St. Louis areas that offer courses for NIMA employees.

"This is the first comprehensive listing of course offerings available to NIMA employees," said Raymond Filbey, dean of the College Administration and Policy Office. "A search engine to enable queries on all course offerings is in the design phase and should be ready for release in a few months. The ability to search course titles, campus locations and offering dates should provide a wide range of flexibility and user friendliness."

The community outreach page provides information on a number of outreach forums such as the Community Imagery Training Council (CITC) and Geospatial Information Training Council (GCITC). Included on the community outreach pages are the meeting minutes for each council and subcommittee meeting.

The NIMC Library provides access to college reference documents, including training management plans and technical manuals. College administration pages provide information on college points of contact, college registrars, office training coordinators and registration procedures.

The new NIMC web page provides customers easier and faster access to NIMC course offerings at both the St. Louis campus and the Washington, D.C., area campuses including Bethesda, Ft. Belvoir, Washington Navy Yard and Central Training Facility. A link for comments and feedback is provided at the end of each section for remarks and suggestions.

Interested employees may access this unclassified site on the Internet via the NIMA home page at http://www.nima.mil, or the OSIS site at http://osis.nima.mil. At the NIMA home page, click on "About NIMA." Then click on National Imagery and Mapping College (NIMC). Employees can also visit the site direct at http://164.214.2.59/org/NIMC. For access to the classified NIMA site on INTELINK, contact the college. ❖

The Edge Now Welcomes Letters

The Edge now welcomes your comments, ideas and feedback for publication in a forth-coming "Letters" column.

Beginning next month, we will publish letters relevant to both NIMA and *The Edge*. It's your way to sound off on the issues you feel are important.

Letters for publication should be sent via e-mail to The Edge; hard copy may be sent to "Letters," Mail Stop D-39. Submissions must be signed, dated and include the author's name, phone number and organizational code.

The Edge reserves the right to edit for clarity and brevity. ince NIMA's standup a year ago, the National Imagery and Mapping College (NIMC) has relentlessly pursued Agency

training needs and requirements.

"The traditional data calls typically end up with shopping lists of training needs," said Dave Broadhurst, college director, "and the lists are not always tied to the mission of the Agency." He added the college will shift away from "shopping list planning" and instead focus on providing or facilitating NIMA mission-essential training.

The new approach began with conducting an Agency-wide skill inventory survey. The college just completed the first phase of the survey and soon will create a board of advisers to guide it in develop-

ment of our curricula.

In conjunction with Human Resources, it conducted the survey to

NIMA College: Moving From **Shopping Lists to** Skills Inventory

by Raymond Filbey

To get a picture of required technical skills needed three to five years into the future, more than 40 interviews were conducted with mid- and senior-level managers. identify the technical skill mix required for the near term (1998). In light of the emerging technologies affecting NIMA, the survey also was designed to identify technical skills NIMA employees will need in the 2000-2003 timeframe. A skill inventory advisory group composed of representatives from throughout NIMA was formed in March to help define the scope of the survey. The group suggested that training requirements for the immediate future could be obtained by talking with a cross section of middle managers.

To get a picture of required technical skills needed three to five years into the

future, more than 40 interviews were conducted with mid- and senior-level managers. Subsequently, four focus groups convened to validate, refine and rank the initial findings.

The results were surprising and predictable. Of the 132 skills identified as being very to extremely important, only 56 needed to be provided by NIMC.

"The results are not surprising in that this statistic confirms there are numerous skills best taught on-the-job and in the work environment," Broadhurst said. "Our job at the college will now be to assist the NIMA Offices in establishing structured on-the-job training programs for those skill areas, and we'll all need to work together on

The college plans to review the current curriculum and address each course for compliance with the skill survey results. The survey results call for several new courses and more depth and focus in others. Copies of the NIMA Future Skills Inventory are available by contacting the college at mail stop K-1, or by calling 703-805-3268.

One of the many functions of the College Advisory Board will be to keep the college informed of NIMA training needs and requirements, thus eliminating the old surveys and shopping lists for training course selection. The board will keep abreast of the training demands so that NIMC training will remain relevant and current to missionessential requirements. The advisory board will be composed of NIMA personnel representing the many geographic locations and technical skill categories.

To keep informed of the training available from the college, check out its home page on the WWW, OSIS/SBU and INTELINK local area networks. The college page can be found through the NIMA home page by clicking the "About NIMA" button. The NIMA home page can be accessed on the world wide web at http://www.nima.mil. The address of the OSIS/SBU is http://osis.nima.mil. 🌣

OFF HOURS

Former NPIC Employee Keeps Historic Imagery Photos, Documents

by Sharon Alexander



Brugioni's library includes many books he authored himself, including one on the Cuban Missile crisis.

Photo by Rob Cox

estled in the rolling hills of northern Virginia not far outside Washington, D.C., is perhaps the most unusual personal aerial photography collection in the world. Dino Brugioni, a retiree from the National Photographic Interpretation Center (one of the organizations that merged to form NIMA), collects historical aerial photographs, associated rare documents, early equipment used to interpret aerial

Brugioni has added to his collections in several ways. Some items he bought, others he got through trades; some even were gifts.

"A lot of people know I'm a collector, so they send me photos," he said. "Especially publishers for whom I review books on photography." He occasionally receives photos from NASA and, as photographs are declassified, acquires them through the National Archives or the Department of Defense.

Brugioni's photographs document the progression of aerial photography from the Civil War through two world wars, numerous international crises right up to more recent historically significant events such as Desert Storm.

photography and aerial shots associated with historic events such as the Holocaust.

His collection includes photographs taken as early as 1860, interpretation equipment from World War II and rare documents more than 50 years old. Dino, as he is known at NIMA Washington Navy Yard, also has more than 5,000 documents and photographs on the Cuban missile crisis alone.

"These collections are a valuable asset in looking back to see how we've progressed over the years," he explained.

Brugioni's photographs document the progression of aerial photography from the Civil War through two world wars and numerous international crises right up to more recent historically significant events such as Desert Storm. He even has overhead photography with imprints of the Santa Fe Trail in Nebraska.

"See," he says, pointing at the photo. "The packed dirt of the trail is still visible from the air." Brugioni has been collecting since World War II, during which he flew 66 bombing missions, as well as a number of missions as an aerial photographer. Among his several photo interpretation equipment sets is the one he was issued during the war and one used when NPIC was founded.

Today's equipment costs several thousand dollars, he said, and cannot be easily transported. But his first set only cost \$20 and fits in the breast pocket of his jacket. The three-piece set consists of a microstereoscope for viewing, a set of calipers for measuring and a slide rule for computations. The eyepiece even has lenses attached for viewing 3D, or "stereo," and a nodule to adjust the interpupillary distance.

Brugioni has some famous photographs in his collections. Among his most valued are "day before" and "day after" photos of Hiroshima, recently

continued on page 21

Congratulations offered on



THE DESICTOR OF CENTRAL INTELLIGENCE

6 October 1997

Rear Admiral J. J. Bantone, Jr., USN hoting Director, National Imagery an Mapping Agency 6613 Lee Eighway Pairfax, Virginia 22031-2137

Gwar Admiral Dantone

I wish to congratulate you and your staff on the first anniversary of the National Imagery and Mapping Agency. NIMA is melding our nation's disparst imagery and mapping compabilities into a flexible, responsive organization providing superlative imagery and geospatial support.

I am especially gratified to see the concept of a national imagery agency node to fruition so quickly and so productively. Your unique technologies shillites—the primest in the world, and the highly skilled people who utilize them—thave been key to past intelligence successes. They will be absolutely vital as we deal with the multi-disensioned, volatile issues of the maxt Century. These you for your important contributions to abtional security, and I look forward to your continued development.



Anniversary



NATIONAL RECONNAISSANCE OFFICE

DIRECTOR 10 September 1997

MEMORANDIN FOR DIRECTOR, NATIONAL IMAGERY AND MAPPING Jack /

On behalf of all employees of the National Recommaissance Office (NRO), I congratulate the National Imagery and Napping Agency (NIMA) on its successful first year of operations.

Bringing together the numerous elements of the imagery and mapping world was no easy task, but it was a task that needed to be done. The creation of NIMA is one of many steps towards improving the quality of imagery products provided to our customers worldwide.

We are proud to serve our mission partner, NIMA, by designing, building, and operating the nation's recommaissance satellites, We exhrace your organization as part of our vision; One Twam, Revolutionizing Global Reconnaissance

Tuil P. Har



WASHINGTON D. C. 20218-9999

30 September 1997

RADM J.J. Dantone, Jr., USN Acting Director, National Imagery and Mapping Agency 8613 Lee Highway Fairfax, Virginia 22031-2137

As my chairmanship draws to a close, please accept my appreciation for the great work you have done as Acting Director of the National imagery and Mapping Agency. The establishment of a new Combas Support Agency has been an extraordinary challenge, and your outstanding leadership has ensured success. The imagery and mapping support provided to the Joint Chista of Staff, the CINICa, and me has been magnificantly to our success during a critical period in American history, and you can be justifiably proud of your many accomplishments.

I appreciate the outstanding support the National Imagery and Mapping Agency has provided under your superb

Joannie joins me in sending best wishes to you and Maria for continued success and happiness in service to this great Nation, Well Done!

> JOHN SHALIKASHVILI Cheirman of the Joint Chiefs of Staff



15 September 1997

Dear RADM Dantone:

On behalf of the National Security Agency, I extend our most sincere congratulations to the men and women of the National Imagery and Mapping Agency on the occasion of your first anniversary. I am confident our agencies will continue to enjoy our great partnership as we work together to meet the challenges of the 21 st Century.

Best wishes for many years of service to the Intelligence Community and the nation. We look forward to a continued collaboration between NIMA and NSA.

400 KENNETH A. MINIHAN Lieutenant General, USAF

RADM Joseph J. Dantone, Jr., USN Director, National Imagery and Mapping Agency 8613 Lee Highway Fairfax, VA 22031-2137

Bryan Assumes Command, continued from page 5

He served with the 3rd Armored Division during Desert Storm and Desert Shield as executive officer, 3rd Battalion, Eighth Cavalry. His assignments for the past five years include battalion commander, 8th Engineer Battalion, 1st Cavalry, Fort Hood, Texas; Division G3 officer, 2nd Infantry Division, Korea; deputy chief of staff, V Corps, Heidelberg, Germany; and chief of staff, Operation Provide Comfort and Northern Watch, Incirlik, Turkey.

Bryan is a graduate of the Field Artillery Officers Basic Course, Engineer Officers Advanced Course, Command and General Staff College and the Air War College. He graduated from the United States Military Academy, West Point, with a bachelor's degree in engineering. He has a master's degree in human resources from the University of Utah.

Awards and decorations include the Bronze Star Medal, the Defense Meritorious Service Medal with one oak leaf cluster and the Meritorious Service Medal with five oak leaf clusters.

Bryan and his wife, Mandy, reside in Virginia. They have two sons, Patrick and Danny, and a daughter, Cassie.

Keeper of Documents, continued from page 19

discovered photos of German death camps at Auschwitz-Birkenau and the Cuban missiles aimed at the United States. He also has photos taken from the U-2 and SR-71, balloons, airplanes, bombers and new satellites.

He emphasizes that he does not collect entire sets of photographs, but select ones associated with historical events.

In addition to photographs, Brugioni's collection includes some few-of-a-kind documents. For example, he displayed "Mutual Inspection for Peace," the document former President Dwight D. Eisenhower used to show the value of photo interpretation.

"He [President Eisenhower] was concerned that people did not know too much about photo interpretation, so the document was used to show how the photo interpretation process could be used," Brugioni explained.

He also has photo interpretation keys for Europe and the Pacific that were used during World War II. These documents and those he has on mapping and charting, as well as photogrammetric techniques, he believes, are not found in any other collection.

Since retiring from NPIC in 1983, Brugioni's expertise led to him testifying before Congress on the environmental uses of aerial photography and performing analyses for the EPA. Additionally, he is often called on to write articles and books on photography.

"I just completed a book on photo fakery that Random House asked me to write," he said. And most recently, the Smithsonian's Air and Space Museum and asked him to write an article on what constitutes a good reconnaissance pilot.

Brugioni is uncertain of the future of his collections.

"Both the JFK Library and the Air and Space Museum have expressed interest in having them," he said.

Meanwhile, he continues to add to his collections. If you have not seen them, one day you may. Brugioni said that if his son does not want the collection, he most likely will donate them to the Smithsonian. **

NIMA's Quest for Excellence, continued from page 13

from regulations. However, the Office of Secretary of Defense Comptroller (OSD(C)) staff indicated this is no longer true. Any DoD agency can request relief without being designated as a reinvention lab. Requests will be reviewed and processed within a 30-day period through OSD (C). Any NIMA office desiring to request a waiver, or to obtain copies of the directive, can call our office for further information.

Improvements will continue to be highlighted in upcoming articles. Should you have nominations, contact NIMA's Corporate Improvement Team, CA/PA, (703) 275-8583 or contact the team leader, Mary Ellen Seale, at sealeme@nima.mil. ☆



NIMA Geodetic Info Vital to Orbiting Communication Satellites

by Don Kusturin

hether speaking, faxing or electronically transferring files through hand-held telephones, NIMA is helping people "reach out and touch someone" through precise geodetic information supplied to orbiting communications satellites.

In fact, according to Madeline Akronowitz, a geodetic analyst for ITT Federal Services, the prime contractor for Space Command at Vandenberg Air Force Base, Calif., the information supplied by NIMA is vital.

"Our work is very precise. Even a small miscalculation will put a rocket off by hundreds of miles. ...NIMA is very important to us. We could not do our job without NIMA."

"Our work is very precise," she said. "Even a small miscalculation will put a rocket off by hundreds of miles. We need data within a meter. Most of the time we get it within a third of a meter. NIMA is very important to us. We could not do our job without NIMA."

A series of Delta II Rocket launches are planned to support Motorola's IRIDIUM system. These launches will place a

constellation of 66 low Earth orbit commercial satellites in space six at a time. The satellites will deliver voice, data, facsimile and paging services to hand-held telephones located virtually anywhere on the surface of the Earth. The launch window is less than 10 seconds long, and NIMA provides precise geodetic survey information assuring the success of those missions.

The information is gathered through a variety of methods, including the Global Positioning System, conventional, astronomic

and gravimetric, according to Fred Diaz, NIMA's lead geodesist at Vandenberg.

"We use a combination of GPS and conventional surveying techniques to position the center of the mount," he said. "We also do periodic check surveys on the mounts to ensure there has been no critical movement over time. It's of the utmost importance to provide our customers with precise geodetic positions to launch satellites in their correct orbit." The information is used by



NIMA's Mark Belrose shows Madeline Akronowitz features of a Total Station, an electronic theodolite.



the tracking devices on the ground to ensure precise location of the satellites in space.

Providing telemetry data and information for the azimuth alignment piers, which are used to line up the rocket in relation to due north, the NIMA geodesists provide critical gravity information.

"The 30th Space Wing and the launch vehicle contractors must know the force of gravity and the direction of the gravity vector to apply thrusts to put the satellite in the correct orbit," said NIMA's Mark Belrose.

"It's of the utmost importance to provide our customers with precise geodetic positions to launch satellites in their correct orbit."

As technology improves and more reliance is placed on handheld GPS receivers, the Agency's customers continue to trust only NIMA geodetic information. They point out the lack of reliability of the smaller, cheaper units—some with the accuracy of plus or minus 20 meters. They stress the customer focus NIMA's geodesist exhibit.

"It's important is to have a resident expert out in the field," said Dale Lemen, flight safety operations supervisor at ITT Federal Services. "We need someone in that position to know we are moving progressively, because if a mistake is made, we need to know where. If you don't have the training, you may never find out." &

The fourth in a series of Delta II rocket launches designed to deliver a series of 66 satellite for the Motorola Iridium system.

