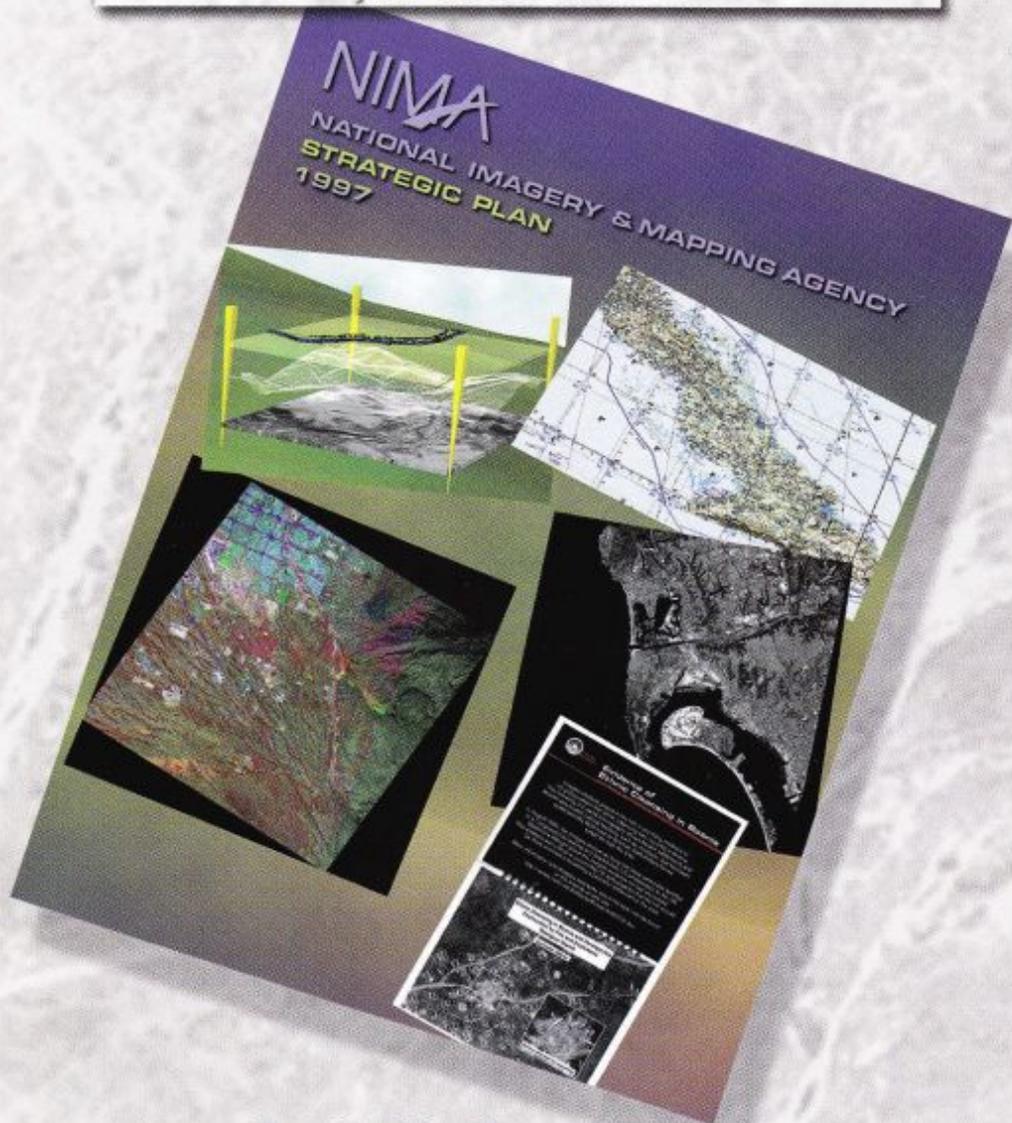


NATIONAL IMAGERY AND MAPPING AGENCY

EDGE

GUARANTEERING THE INFORMATION EDGE
JANUARY 1998



NIMA in the NEW YEAR

SPECIAL REPORT
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JANUARY 1998

EDGE

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As I See It



It's been quite a year by any measure. Mixed with many successes have been difficult decisions and actions taken to shape our new organization for the future. Change is always difficult and displaces us from routines and relationships that have become comfortable.

In any case, it's a new year ahead. I'm checking through Chinese newspapers. Someone told me next year might be the year of NIMA.

Happy New Year.

A handwritten signature in cursive script, appearing to read "J.J. Dantone, Jr.".

J.J. Dantone, Jr.

Remember! Celebrate! Act!

... this year's theme for Black History events



Planning committee members are, from left: Peggy Etheridge, Deborah Harrison, Teresa Smiley, Pamela Battle and Mark Vance. Not pictured are Vietta Williams, Victoria Chase, Rochester Murphy, Carla Lunsford, Kenneth Minor, Irene Brodley, Betty Patterson and Thomas Coghlan, Senior Executive Sponsor.

by Jennifer Lafley

The tradition continues.

Last year's breakfast held in Erskine Hall cafeteria commemorating the birthday of Dr. Martin Luther King Jr., was one of NIMA's most well-attended events, and this year promises a repeat performance.

At press time, tickets are going fast.

Aside from the breakfast, Bishop David T. P. Perrin, a minister at the Church of the Great Commission of Camp Springs, Md., will speak at the breakfast program and later in the day at headquarters.

"These events are a good opportunity for each of us to pause to consider the greatness of the man and the importance of his message," said executive sponsor, Tom Coghlan, director of the Imagery & Geospatial Community Management Office (CF).

Also in the planning stages are events for February's Black History Month.

Peggy Etheridge, diversity officer, is the head of the African American Program Planning Committee, a group of enthusiastic volunteers who plan the yearly events in the Washington area.

"It is important for us to recognize Dr. Martin Luther King's accomplishments and those of other civil rights leaders, particularly at work. Without him, many of us might not be working here," she said.

Etheridge says this year's theme for Jan. 19, "A day on, not a day off," is particularly significant. "We hope having programs at NIMA before the holiday will make it more meaningful."

"It is good for NIMA to recognize King; in general, it is important to recognize African-Americans that have made a positive impact on the progression to equality in America," said Marjorie Hall of Information and Services in St. Louis.

Another St. Louis employee agrees. "Just as we study the history of

the civil war, there is a need to study and review Dr. King's message for better understanding of what we as a national should continue to strive to develop and achieve," said Belinda Rhone of Mission Support.

NIMA's celebration of King's life is sponsored by the Diversity Management and the Equal Employment Opportunity division.

"We always have a large number of volunteers for the breakfast and for Black History Month," said Mike Price, division chief. "It makes planning these events rewarding for everyone involved."

Dr. Martin Luther King Jr. is known as one of the world's best advocates of non-violent social change strategies. He studied theology at Morehouse College and received his doctorate at Boston University.

King gained national prominence for his personal courage in continuing his work even after his house was bombed and he was arrested several times. In 1957, King founded the Southern Christian Leadership Conference. The following year he toured India, increasing his understanding of non-violent strategies. In August, 1963 King delivered his famous "I Have a Dream" speech to more than 250,000 people in Washington, D.C. The following year he received the Nobel Peace Prize.

King was assassinated on April 4, 1968, while seeking to assist a garbage workers' strike in Memphis. †



NIMA Points Way in Future of Imagery Architecture

by Terence Meehan

A high-tech effort now under way in NIMA will be paying dividends in the coming millennium. The Future Imagery Architecture (FIA) program is a significant directional arrow on NIMA's roadmap to the future, and senior leaders who may not have been previously involved recently had a chance to learn more about it.

FIA Day, held at NIMA headquarters Dec. 17, was hosted by NIMA's Office of Plans, Programs and Analysis (PA), in coordination with the Operations Directorate Customer Support Office and the Systems and Technology Directorate. It brought senior Agency leaders up to date on the purpose, progress and future activities of the future imagery architecture.

FIA represents the next generation of national imagery satellites, envisioned as a constellation of smaller, less expensive, yet more capable satellites. When implemented, FIA will bring space-based collection of imagery into the 21st century.

"NIMA plays a leadership role in defining FIA," said Rob Zitz, director of NIMA's PA office. "We've worked to ensure an unprecedented level of user involvement throughout this process."

NIMA, working with its mission partner, the National Reconnaissance Office, leads the national, defense and civil communities' efforts to define, prioritize and consolidate functional and performance requirements for FIA. NIMA hosted the USSPACECOM-led Senior Warfighters Forum (SWARF) Dec. 11 to establish a common understanding of FIA among the eight warfighting Unified Commands. A follow-on SWARF will assess FIA's ability to meet warfighter requirements. NIMA cochairs the National/Civil Users Board, which represents the requirements for FIA of the intelligence community and other government organizations.

It also is important to note, Zitz stressed, that while FIA will bring an enormous improvement in collection capability, "collection is only one piece of the puzzle."

Corresponding improvements to production and delivery of data to NIMA's customers, he said, must also be forthcoming. That is why NIMA and the rest of the imagery and geospatial community are moving ahead with other improvements. "NIMA's Strategic Plan and our USIGS Migration Plan lay out the programs needed to ensure that we will reap the benefits of these impressive collection improvements."

As the leader in FIA architecture integration issues, NIMA is investigating ways to incorporate commercial imagery in ways that will meet certain mapping and broad-area coverage requirements, thereby reducing the load on FIA in meeting overall collection objectives.

Working with its customers, the Agency has identified the community's overall imagery needs, but without consideration of cost constraints. The next step is to weigh requirements against costs and determine overall program affordability.

FIA takes a new approach in establishing system specifications. In the past, the intelligence community prescribed specifications. Under FIA, industry is given a set of prioritized community imagery requirements and asked to find the best solution to meet them.

FIA will be a full and open competition. The Request for Proposals (RFP) will be released to competing industry teams in late spring/early summer 1998. Contracts will be awarded on the basis of best value. |

Contributing to this article was Paul Mich, CA/PAS.

NIMA to Move Headquarters

by Jennifer Lafley

It's official. NIMA headquarters, Fairfax, Va., will soon relocate to NIMA's Bethesda site. Scheduled to begin in February, the move will continue through September.

The relocation has been under consideration since the NIMA standup, Oct. 1, 1996. Senior leaders decided that consolidation of NIMA sites would be a cost-saving benefit, maximizing work space and bringing the workforce closer together. The Fairfax site's lease expires on Nov. 28.

The relocation, approved by Deputy Secretary of Defense John Hamre, eventually will save the Agency more than \$4 million annually.

A Moving Experience

Although senior leaders concentrated on the pros and cons of the move, a task force was established in July 1997 with employees from Network and Enterprise Systems (SN), Mission Support (MS), Congressional and Public Liaison (CP), General Counsel (GC), Comptroller (CM), and Procurement and Contracts (PC) offices.

Weekly meetings have been ongoing to plan and execute preliminary work needed to start the move.

Heading the project is Don Cuming of MS.

Town hall meetings with Rear Adm. J. J. Dantone, Jr., and Col. David Tarbox, then-commander of the Eastern Region, were held with employees in the Washington area and local residents in the Bethesda area to discuss the possibility of the move. An assessment was completed in October 1997 that determined the move will not have a significant impact on the environment.

The initial space plan and schedule were developed in late July 1997 by Gary Mills, Mike Andrew, Tom Pate (MS), and Henry Kreysa (GID), with contractor support from The Cube Corporation.

Since then, changes are factored in daily.

"The workforce changes—reorganizations, buyouts, early retirements and reductions-in-force, continue to affect the planning process," Cuming said.

Cuming estimates that 1,016 personnel will be moved by September, a figure that includes small moves within the Bethesda complex. At press time, more than 170 employees have been moved within the Bethesda complex. Only 11 employees from the Customer Support Office will move from Fairfax to Reston.



photos by John Iler

A change of plans is a daily event for Don Cuming, project manager.

"The workforce changes—reorganizations, buyouts, early retirements and reductions-in-force, continue to affect the planning process."

Preparing for the move, a worker in mask and stilts works on third floor renovations at NIMA, Bethesda. Work is progressing rapidly to accommodate the influx of people from Fairfax.



A Penny Saved

Budget restraints have made the move even more of a challenge," Cuming said. "Working smart and keeping costs down to a bare minimum has made the planning process more of an adventure."

The move, which will save the Agency \$4 million a year in leased costs, is budgeted for \$3.6 million in fiscal 1998. This represents less than 70 percent of what had originally been budgeted.

"We have no money to spare," Cuming said. Reductions in Agency supply funds, travel and deferral of facility projects will be required.

What About all Those Cars?

Because of reductions-in-force, buyouts, retirements and reorganizations, exact numbers of employees who will populate Bethesda aren't known. However, impact on existing parking is expected and MS has developed a plan to address the problem. The parking lot will be restriped for compact cars, an overflow lot will be created behind the main building and carpools, rideshare programs and vanpools will be encouraged. The Environmental Assessment lists 1,852 total employee parking spaces with a projected figure of 3,200 working at the Bethesda complex.

Moving Ahead

A surge of enthusiasm is flowing at the weekly move meetings now that a final decision has been made. "The fun part begins now," Cuming told the team at the meeting following the announcement.

Although space planners anticipate plenty of discussions and changes in the coming months, they are ready to start.

"We could not have gotten this far without the hard, dedicated work of all of the team members," Cuming said.

Move schedules and each office's orientation briefs will be announced as soon as detailed plans are completed. |

NIMA'S Remote Replication System Wins Annual Technology Award

by Jennifer Lafley

As announced in the November *EDGE*, NIMA's Remote Replication System (RRS) was selected as one of the 23 winners of the 1997 Government Technology Leadership Award sponsored by *Government Executive* magazine.

Roberta Lenczowski, deputy director for Operations, accepted the award Dec. 2 on behalf of the Agency at the Marriott Metro Center Hotel, Washington, D.C.

"We are proud to honor such outstanding work like the Remote Replication System," said Timothy Clark, publisher of the magazine, in presenting the award. "It is a huge advance in government communications capabilities—delivering timely information to defense forces at critical times."

NIMA was selected from 187 nominations submitted by government and industry. Winners were judged on innovative use of technology, degree of difficulty and real cost savings.

"The RRS develops materials on demand that are distinctly tailored to the users' requirement," said Jim Sippel, program manager. "The commands love the system; it has been a real success story." He added that the cooperative teamwork between the NIMA team and government contractors significantly contributed to RRS's success.

The Remote Replication System is a prime example where technology



Ralph Grant of 3M Corporation, Roberta Lenczowski, Ruth Ann Lofton and Regina Jennings at RRS display.

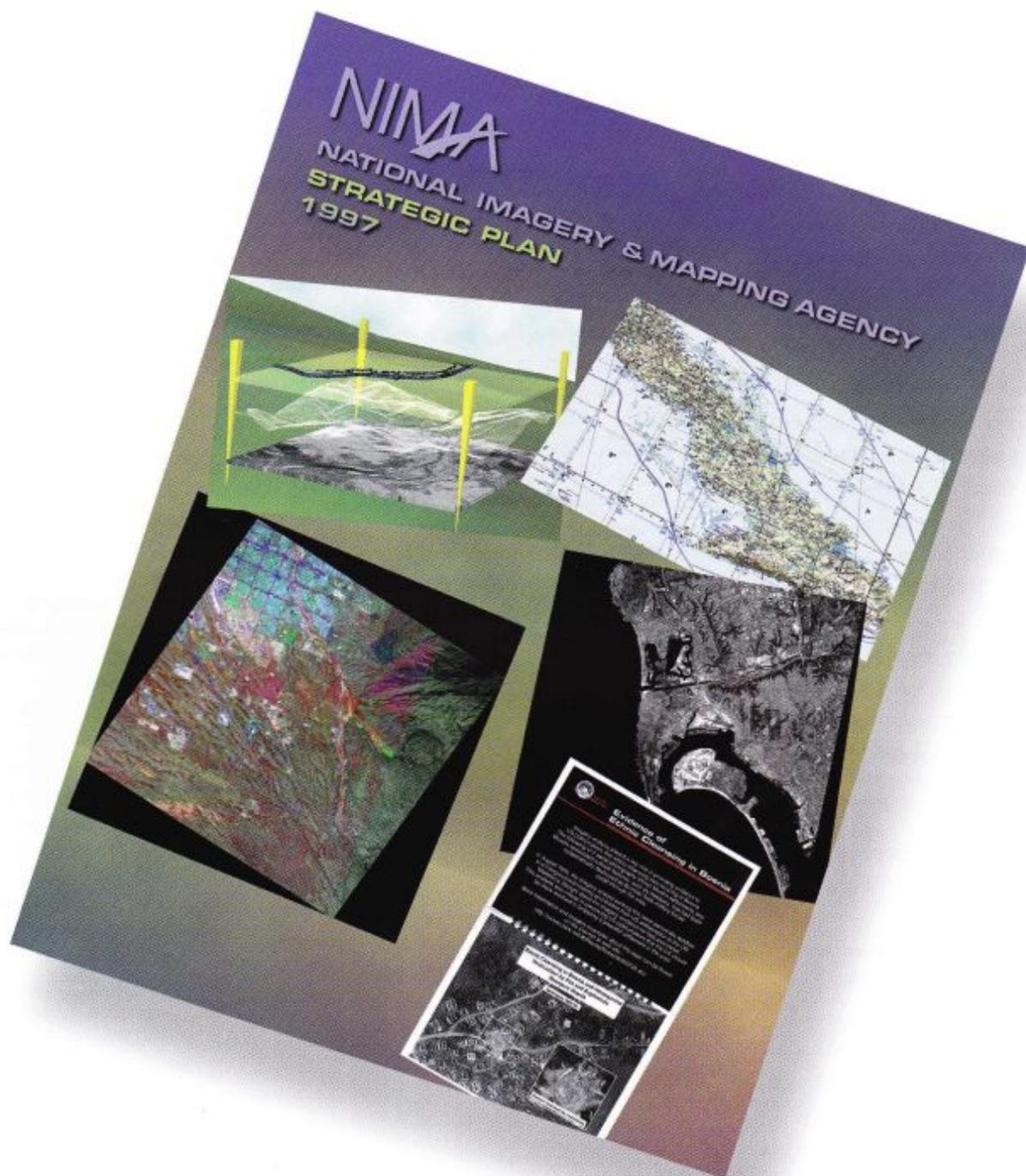


Remote Replication Team

"a real success story."

infusion has improved the way the Agency does business. "It provides our customers with the products they need while reducing overall costs and is a model we are using to carry NIMA into the next steps of digital dissemination," said Rear Adm. J.J. Dantone, Jr., in a letter to the magazine.

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



NIMA's senior leaders approved the 1997 NIMA Strategic Plan at the senior leadership offsite held in November. The plan outlines the corporate road map to the future and will be the basis for NIMA's decision-making processes. It states NIMA's commitment to enable information superiority in the 21st century battlespace, to address civil issues critical to our national interest and to improve decision and cycle times for those who make and execute national security policy. The Strategic Plan helps NIMA's employees understand how the work they are doing as an agency is supporting that commitment. The next three pages contain excerpts from the document. The full text provides a detailed timeline with specific strategies that will be used to achieve objectives. It will be available through NIMA's home page on the Internet (www.nima.mil) and Intelink. Printed copies are also available in limited quantities. For further information contact Navy Cmdr. John Thomas, NIMA/PA, (703)275-8583.

Through our strategic planning efforts, we identified four core businesses and two supporting businesses that most effectively utilize and integrate our assets to deliver information products and services to our customers. The Information Production business generates imagery intelligence and geospatial information in response to customer needs. Imagery and other source data required by customers, as well as for production, are obtained through the Information & Services Acquisition business. The Information Access & Delivery business enables customers to receive information as needed, whether produced by NIMA or acquired from others. In addition, the Information Applications & Systems business provides related hardware and software solutions to the other businesses as well as to customers. The two supporting businesses are Customer Service and Infrastructure. These businesses are further described in the NIMA Business Plan.

We have developed a three-phased investment strategy for achieving our goals and objectives and implementing the NIMA Business Plan. The first phase lays the foundation by focusing on information production. The second phase improves access and delivery of information, and the third phase integrates our information and services with our customers. This phased approach will ensure we are producing greater quantities of information in a more efficient manner and that robust access and delivery capabilities are in place as we deploy the USIGS across the Imagery and Geospatial Community. All four core businesses, as well as our two supporting businesses, will play important roles in each timeframe.

Phase 1: Lay the Foundation (present - 99)

- Concentrate on providing high value information
- Lay the basic foundation for exchanging data, e.g., access & delivery
- Lay the basic foundation for integrating products & services

In the first phase, our priority is to improve production output and capabilities. We will increase data output, begin to integrate our production capabilities, and provide access to new sources of imagery, imagery intelligence, and geospatial information. Additionally, we will lay the foundation for improved access to, and delivery of, products and services by establishing the framework for the NIMA Information Service (NIS). Through our functional management and community leadership activities, we will also lay the foundation for interoperable information and services in the Imagery and Geospatial Community.

Phase 2: Accelerate the Transition (00-02)

- Refine & tune information production
- Concentrate on creating high performance access & delivery
- Improve essential foundations for distributed, integrated products & services

In this second phase, we will shift our focus to full implementation and deployment of the NIS, which will provide high performance accessibility and delivery of imagery and geospatial information. We will allow users to browse and review the information before it is sent to them. We will continue to improve our core business of information production as well. These two activities, along with strong community leadership activities and fielding of commercial systems, will lay the foundation for the third phase—integration.

Phase 3: Achieve Integration (03-beyond)

- Fine tune & maintain high quality information production
- Upgrade access & delivery
- Concentrate on fully integrating NIMA products & services into the customer environment

In the third phase, we will support the integration of the NIS with other intelligence data, such as signals intelligence and human intelligence, to create a geospatially referenced, multi-intelligence database of information. This will allow customers to request tailored information that best fulfills their needs before delivery. In addition, we envision NIMA analysts and cartographers working directly with the customer, either virtually or in person, using common, collaborative tools and distributed networks. This will ensure we achieve our vision of guaranteeing the information edge as we fulfill our mission to provide timely, relevant, and accurate imagery, imagery intelligence, and geospatial information in support of national security objectives.

This strategy forms the basis for our seven Objectives and their implementation. It helps us prioritize our Objectives so that we accomplish tasks in a logical, rational order as we seek to add value for our customers and to use our resources efficiently. We present our Objectives and their Implementing Strategies in the context of this strategy. Our Implementing Strategies are prioritized over time in concert with these three phases.

Our objectives and their associated Implementing Strategies provide a framework for community cooperation. This framework will provide guideposts for development and a means to assess progress over time. Performance measures will be applied to all areas so we know how responsive we are to our customers' needs.

Objective 1

Increase and expand information production

We will increase resources devoted to information production to make sure we produce what our customers need, in both imagery intelligence and geospatial information. We will increase our use of commercial talent to perform imagery analysis and to develop the information layer necessary for a geospatially referenced database—the foundation of the NIS. We will increase our co-production by working more closely with our international partners as well. We will also convert selected hardcopy products to digital form. Finally, we will work with the Imagery and Geospatial development community to continually improve our sources of data.

Objective 2

Improve production responsiveness

We will expand our digital production capabilities throughout NIMA and the IGC and work with our customers to help them transition to a digital environment as well. We will incorporate new technologies that enable more efficient production, using commercial systems and applications. Where processes and products are outdated, we will reengineer them to increase our responsiveness to the customer. We will conduct continuous critical analyses of processes and tasks to improve methods, efficiencies, and effectiveness of data sources and production and delivery systems. Transitioning from peacetime to crisis response will be transparent to the customer.

Objective 3

Establish the NIMA Information Service

We will specify the framework for the NIS—a digital database of imagery, imagery intelligence, and geospatial information and software applications in support of customer needs. We will also build the necessary storage and retrieval systems. As the foundation for this capability, we will define the end-to-end USIGS operational, technical, and systems views of the USIGS architecture, in coordination with the other members of the Imagery and Geospatial Community.

Objective 4

Provide access to the NIMA Information Service

We will establish an Internet-like interface to enable ease of access to the NIS. We will work together with our customers to make sure that connection requirements are defined and communicated. We will also work with the Defense Information Systems Agency (DISA) and other communications providers to ensure our connectivity and capability requirements are understood and satisfied. Customer access to the NIS will include use of push and pull technologies and prepositioning of data in libraries.

Objective 5

Establish NIMA as a clearinghouse for all sources of imagery & geospatial information

The availability, quality, and utility of open source imagery, imagery intelligence and geospatial information is rapidly improving. As demand for this information increases, we will establish ourselves as the clearinghouse for imagery and geospatial information from all sources in addition to the NIMA-provided information. We will provide access to commercial and foreign government information we obtain and will establish easy-to-use arrangements with information providers so our customers can buy directly from suppliers.

Objective 6

Establish an integrated training program

Rapid advances in technology and increased integration of disparate systems require an aggressive and focused training program. This program will be mission-focused and will provide enhanced technical skills and professional development. This program will also address imagery analysis and cartographic training for members of the IGC as well as lifecycle training concerns for users of USIGS systems.

Objective 7

Create an infrastructure for the 21st Century

We will identify the future NIMA skills and provide the means to adapt the workforce in support of our evolving mission, as we move from producing information and developing systems ourselves to leveraging from commercial or other providers. We will ensure our facilities and equipment provide them with the environment and the tools to maximize efficiency and effectiveness.

“goal 4. Pursue a focused modernization effort that maintains U.S. qualitative superiority in key warfighting capabilities, exploits the Revolution in Military Affairs, and supports the joint operational concept delineated in Joint Vision 2010.”

Quadrennial Defense Review

CONCLUSION

The successful implementation of this plan depends on a number of factors.

Senior Leadership Involvement and Ownership

Internally, the success of our Strategic Plan depends on the involvement and ownership of the plan by NIMA senior leadership and employees. For all the technical capability in the agency, the strategic planning process is still wholly dependent upon human interaction, analytic acumen, and responsiveness. To the maximum extent, we will ensure that our work culture and ethic promote a participative environment conducive to the successful accomplishment of our Goals, Objectives, and Implementing Strategies. Institutionalizing strategic planning means that we all need to use this Strategic Plan, not just for thinking about the future, but also as the basis for making decisions in the present.

External Factors

External factors can fundamentally affect our direction. Fiscal constraints and national priorities do not provide the ability for any agency to address each of its goals in the time frame desired. The NIMA planning process is prepared to change direction when necessary. The success of this plan also depends on partnership and cooperation between the IGC as well as with our larger customer base and commercial partners.

Customer Satisfaction

Customer confidence in our information and services directly equates to the continued success of our agency. While this may be considered an external factor, it is one influenced by our conduct, capabilities, and responsiveness. As such, it is a factor that can be substantively influenced by every person in NIMA.

Performance Measurement

We will write a NIMA Performance Plan, including performance measures, to provide the specific actions, timelines and responsibilities for implementing this Strategic Plan in the coming year. Additional internal implementation plans will be developed as necessary to address functional or process requirements contained in this plan.



The Common Operational View of the Mission Space
Provides Value-Added Information to
NIMA's National, Military and Civil Customers



NIMA Performance Measurement System Approved for Implementation

by Mary Ellen Seale

The first official NIMA Performance Measurement System (PMS) was approved Nov. 26 by Rear Adm. J.J. Dantone, Jr. Authored by the Program, Plans and Analysis Office (PA), it is the culmination of many long hours and teamwork among PA's Performance Measurement Team, business office performance measurement experts and agency senior officials.

The PMS is designed to provide all levels of NIMA management with a tool to assist them in making fact-based decisions. The system, which loosely resembles the widely used Balanced Scorecard approach, measures NIMA's performance in four key areas:

- *Internal and external customer satisfaction.* This measures customer perceptions of factors such as readiness, timeliness, quality and responsiveness;

- *Business performance:* results (output, productivity, quality, etc.) and the impact on results of key enablers (connectivity, key contractor/supplier performance, etc.);

- *Workforce Effectiveness* in areas such as employee satisfaction and rewards and recognition;

- *Strategic and Corporate Initiatives:* progress and status against the Agency's long term strategic objectives (NIMA Information System establishment and access, 21st century infrastructure, etc.) and

short term high priority initiatives such as WORKFORCE 21, Future Imagery Architecture, etc.

In addressing a meeting of office representatives charged with implementing the PMS, NIMA Deputy Director Leo Hazlewood said, "The objective is to allow me to look across NIMA with a standard set of measures to tell where NIMA is and to be able to make decisions on where we want to go as an Agency." He went on to stress that the PMS is an evolving process and that it will take time to identify the measures most relevant and meaningful to informed decisionmaking.

The data to support each of the critical measurement areas are currently being collected by the affected business offices and will be presented in quarterly agency-level briefings for the director and senior management starting this month. |



photo by Don Kusturin

Iron workers at NIMA's new Arnold facility celebrated a major construction milestone Dec. 11 when they hoisted an I-beam into place, completing the building's metal framework. A traditional "Topping Out" ceremony was held to mark the occasion. A special iron beam featuring NIMA's seal, and signed by all iron workers who participated on the project, was bolted into place signifying the last significant piece of the building's structure. The beam included two traditional ornaments, an evergreen and an American flag. Work continues on the rest of the project which is expected to be completed in August.

NIMA Says 'Anchors Aweigh' With 3rd Fleet

by Don Kusturin

NIMA recently provided key support to the 3rd Fleet in one of the largest targeting experiments conducted by the U.S. Navy.

Dubbed "Silent Fury," the three-week exercise off the U.S. west coast generated the most activity in the targeting and navigation since Desert Storm.

The operation was inspired by the near-term procurement of two new systems: the Joint Stand-Off Weapon (JSOW), a glide bomb with wings but no propulsion; and the Joint Direct Attack Munition (JDAM), a guided bomb using steerable fins only. Both bombs use Global Positioning Satellite (GPS) and inertial guidance systems to find their targets.

At issue was how to get the targeting coordinates for them quickly, accurately and in volume to support the deployed battlegroup environment.

NIMA's involvement began early on with personnel from Geospatial Information, Imagery Analysis and Customer Support developing a coordinated showcase of NIMA's wide range of capabilities. These included imagery collection and dissemination, targeting and geodetic support and production of special products using the Remote Replication System (RRS).

NIMA personnel participated in the planning process and, according to communications team leader John Tuley, they performed a key role in providing on-time targeting and intelligence information to the warfighter.

"Historically, NIMA St. Louis has participated in many exercises," he said, "but this was the first major exercise with the Navy."

Besides the traditional support, NIMA provided several "ship riders" to ensure direct assistance to naval units underway.

"From enlisted to officer, all showed great appreciation to all three NIMA representatives as we demonstrated what and how NIMA products and information could be used," said NIMA customer liaison Stan Huffman, who served aboard USS *Coronado*, a command and control ship.

NIMA starred in its supporting role as a critical provider of mensurated point target information. Agency's analysts produced nearly 600 mensurated points throughout the exercise.

The Contingency Collaborative Targeting (CCT) system, which helps achieve synergy between agencies sharing and updating information as needed, also was used and evaluated by NIMA personnel.

"Although the CCT needs further development," said Russ Smeds, points functional support manager, "the capability points ahead and

reinforces the pervasive expectation that future conflicts will be fought from a team standpoint and, increasingly, with emerging technologies."

During the experiment, targets were posted on a classified web page so participants would have equal access to the information. To program manager Claire Andracsek, this sometimes proved challenging because of the lack of standardization in hardware and software of the various agencies.

"Communications aboard ship was much more limited than in land-based systems," she said. "However, the experiment showed the willingness of all participants to work together and share information in a coordinated mission."

A release from the 3rd Fleet Public Affairs Office reflects this view: "If for no other reason, Silent Fury was successful for bringing together the many brilliant people from throughout the DoD and the civilian technical community to think about the future. GPS-guided weapons will play a major role in that future and the feedback and lessons learned from this experiment will help ensure they will be effective."

Another experiment is planned next year to exercise these same capabilities. |

Scott Lorbert and Claire Andracsek review imagery in support of "Silent Fury."



photo by Don Kusturin

LETTERS

The Geodesy and Geophysics Department extends a hearty thank you to Don Kusturin and other members of the Edge staff for the excellent articles in the November issue. (See "On Site Geodetic Service Provides Pin-Point Accuracy" and "NIMA Geodetic Info Vital to Orbiting Communications Satellites.") Not only were they well written, they captured information on the high degree of training and professionalism demonstrated by the survey personnel.

The articles also highlighted the significance of the data to a wide range of applications and the close "face-to-face" relationship between the end user and our NIMA personnel. And they featured some of the critical products and services provided by NIMA geodesists at the California Surveys Offices.

You may also be aware that our New Mexico and Florida offices also provide unique and interesting applications for precise geodetic data, on and above ground and even underwater. Our geodesists at those locations also maintain very close relationships with their customers.

Not to forget our St. Louis Office—it provides the same high quality products and services to users whose locations and applications are often highly unusual and very interesting.

Thanks again for the very fine job done on the November articles.

Ken Burke
Chief/GIMG

Thanks Ken.

Yes, we're aware of the Agency's geodetic services, their high rate of customer satisfaction and reputation for tack-driving precision. This issue of The EDGE includes a feature on the Florida Survey Office (see page 18). Rest assured that we'll be checking in on your other sites in upcoming issues. Stay tuned!

The EDGE staff welcomes story ideas from all employees. Do you know of an office or project that deserves some recognition? Let us know! Just drop us a line via e-mail to The EDGE, or send us a note to Mail Stop D-39.

The EDGE Now Welcomes Letters

The EDGE now welcomes your comments, ideas and feedback for publication in its new "Letters" column.

Beginning this month, we will publish letters relevant to both NIMA and The EDGE. It's your way to sound off on issues you feel are important, and another way to give feedback to NIMA leaders.

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.



"We know. He's only fixing the antenna."

NIMA Charts Imagery's Future With Capstone Requirements Document

Imagery support to the warfighter is one of NIMA's crucial missions, one recently highlighted in the new joint warfighting doctrine, *Joint Vision 2010* (JV 2010). The Agency is now describing future imagery requirements for military support in the *Imagery Capstone Requirements Document* (ICRD).

Written by NIMA's Studies and Analysis Division (PAS) at the direction of the Joint Chiefs of Staff, the document describes imagery as "a key element in reaching the dominant battlespace awareness" envisioned by JV 2010. The capstone requirements document not only will authoritatively describe, but also provide the conceptual operational requirement for future imagery support to warfighters and Department of Defense decision makers.

"Developing the imagery requirements is a complex process," said Scot

Currie, deputy team leader of the NIMA Joint Requirements Oversight Council (JROC-PAS). "And it's critical to the preparation of the ICRD."

NIMA's database for DoD's future imagery needs for the next 10-15 years is the Community Imagery Needs Forecast (CINF). It is continually evolving, Currie said, to meet changing needs.

"NIMA worked closely with the U.S. Army when staffing the ICRD office to incorporate the specialized ground tactical requirements evolving from new Army warfighting concepts and doctrine," he said. "These call for the expansion of existing and the development of new surveillance capabilities and procedures which increase demands on projected imaging systems and the corresponding end-to-end imagery cycle."

Currently, the draft ICRD is in the final phase of formal DoD review, with

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coordination commentary expected by year's end. The next step is a series of formal briefings in early February. "Once validated," Currie said, "the ICRD will be periodically revised and updated (such as the expansion of geospatial

information requirements) as future imagery needs are defined. The ICRD, with the CINF, will help the U.S. Imagery and Geospatial System set the target to meet the demands of DoD warfighting concepts and information needs." |

Agency Acquires New Paper Sheeting Equipment

NIMA paper products are now being produced with greater flexibility and less cost, thanks to new paper sheeting equipment acquired by NIMA St. Louis. Ken Whitlow inspects paper as it is being processed through the paper sheeter. The sheeter reduces costs by allowing NIMA to buy paper on one-ton rolls rather than bundled sheets.

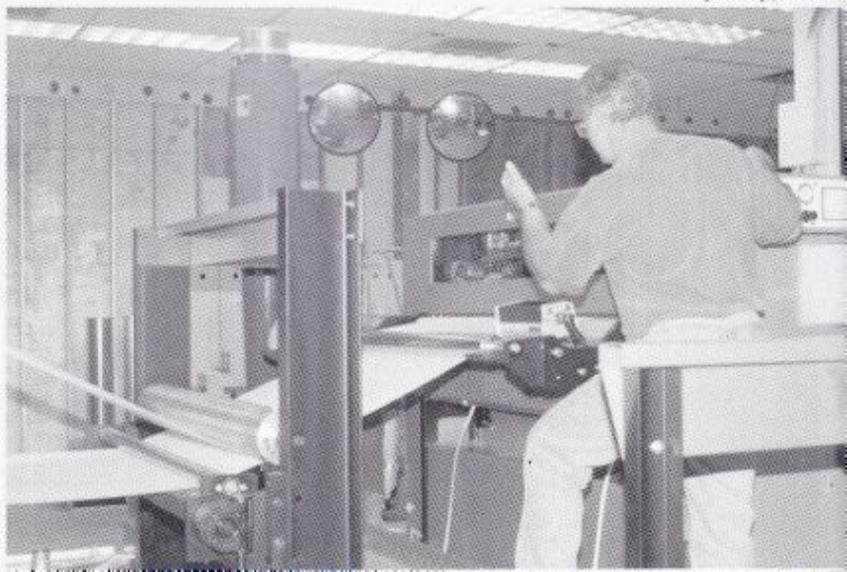


photo by John McCl...

NIMA Recognized in Intelligence Community Awards

by John Iler

Director of Central Intelligence George J. Tenet personally presented awards to the intelligence community in a special ceremony held Dec. 11 at CIA headquarters, Langley, Va. NIMA personnel were included in three of the organizational recognitions and several of the individual awards.

The President's Imagery Team, Imagery Priorities Working Group and the Derived Products Task Force all received National Intelligence Meritorious Unit Citations. NIMA personnel received the awards from Tenet on behalf of their teams.

The President's Imagery Team

Headed by Shawn Dilles, who received the award on behalf of team members, the President's Imagery Team was recognized for "sustained superior performance" from October 1994 to June 1997. During that period, it achieved "an unparalleled level of imagery support" to senior U.S. policymakers through the President's Analytic Support Staff (CIA).

The citation specifically recognized that "NIMA intelligence on a remarkable range of issues has supported policy decisions," resulting in actions that have advanced U.S. interests worldwide.

Said Tenet: "The President's Imagery Team embodies NIMA's strong customer focus and commitment to providing timely, relevant and accurate imagery, imagery

intelligence and geospatial information in support of national security objectives."

Team members recognized included Ken Meyers, Michael Starr, Camden Cochran, Theresa Roberts, Christopher Merkle, William Golden, L. Ian Charters, David Melat, Andre McGuire, Daniel Dueweke and Warren Uhler.

Derived Products Task Force

Task force team leader Kevin Spittler, a policy officer with the NIMA Imagery and Geospatial Imagery Policy Office, received the meritorious unit citation on behalf of the interagency Derived Products Task Force. The task force was recognized for work conducted from February 1995 to October 1996. During that period, task force members developed "new and innovative" policy for the creation of unclassified imagery-derived products from classified reconnaissance satellite imagery.

"The members of this task force worked long hours on extremely difficult concepts that they knew would have a long and lasting effect on imagery policy decisions reaching well into the future," Tenet said. "The commendable and time consuming work of the Derived Products Task Force reflects credit upon its members, their respective agencies and the intelligence community."

NIMA members include Merle Biggin, Carmela Bucklew, Daniel Dueweke, Michael Gilbert, Ernie Gorospe, William

Hopkins, Erik Hund, Paul Kelbaugh, Harry Ketts, Dr. Jeffrey Kretsch, Edwin Kemper Lear, Joel Maloney and Robert Mericsko. Other agencies participating in the task force were CIA, NRO, USGS, Navy, Army, NSA, DIA, USDA, OSD and DOI.

Imagery Priorities Working Group

Karl Broom, chief of NIMA Intelligence Issues and chairman of the group, received the meritorious unit citation on behalf of his colleagues. The Imagery Priorities Working Group was recognized for its "important and substantial" contributions to the intelligence community from Nov. 1996 to May 1997. During that time, this interagency team conducted an "exhaustive review of the priorities" that drive U.S. national imaging capabilities. It also addressed the most critical issues in support of Central Intelligence, at both the presidential and director levels.

Working group members, the citation read, "keenly and aggressively representing the interests of their own organizations, pulled together in the larger interests of the intelligence community and established a new baseline of imagery priorities and a national imagery priorities process that will serve this country for years to come."

Other Recognitions

Individual NIMA employees also were recognized for outstanding achievement during the ceremony.

Dennis P. Rooney received the National Intelligence Certificate of Distinction for successfully establishing acquired funding and guiding programs that significantly enhanced the imagery intelligence work environment.

Anita Cohen received the National Medal of Achievement for leading the transition and standup of the system acquisition element of NIMA, incorporating personnel and major programs from eight predecessor organizations into the new agency. She also developed the strategy for the merger of multiple ongoing "stovepiped" acquisition initiatives into "a coherent U.S. Imagery and Geospatial Information System."

And **Mark E. Robey** received the National Intelligence Distinguished Service Medal for the "profound effect he has had on how U.S. imagery reconnaissance satellites are tasked and how the resultant imagery is exploited." Robey also pioneered new technical photogrammetric concepts and methodologies that have contributed to the exploitation process.

Editor's Note: At the request of the Imagery Priorities Working Group, the names of the NIMA members are not being published.

NIMA Survey Office Celebrates Three Decades of Service

by Jim Mohan

Geodesy, datums, ellipsoids, geoids, World Geodetic System (WGS) 84 geodetic coordinates, deflections of the vertical—esoteric terms for many, but they're all critical to the success of the NASA and Department of Defense space programs.

NIMA's Florida Geodetic Survey Office, a branch of the Geodesy and Geophysics Department, NIMA St. Louis, is celebrating its third decade providing geodetic and geophysical (G&G) support to the many agencies and customers throughout the state. It provides G&G support and technical assistance for the U.S. Air Force 45th Space Wing and plans, executes, processes and publishes precise G&G surveys.

"The surveys," said Randy Staker, chief of the Survey Office, "are produced using classical (horizontal and vertical), astronomic (azimuth and position), satellite (absolute and relative Global Positioning Satellite [GPS]), magnetic and relative gravity" techniques.

The 45th Space Wing support and instrumentation facilities are located throughout the Eastern Range, which encompasses Patrick Air Force Base, Cape Canaveral Air Station, Kennedy Space Center, Port Canaveral, Antigua AS, Ascension Auxiliary Air Field, Argentinia Missile Tracking Annex and Florida annexes, located at Cocoa Beach, Malabar, Melbourne and Jupiter Beaches.

The Eastern Range is the survey office's primary customer. It accounts for more than 50 percent of the survey office's workload. Maintenance, refurbishing, reconfiguration and relocation of Eastern Range support equipment requires periodic surveys to recalibrate and realign on-board guidance systems and tracking instrumentation.

"The type of geospatial information needed and survey accuracy required are identified through interaction with the requesting organization," Staker said. "There are no exterior layers of approval to impede the production process. Open communication gives the customer mission-essential information." Direct customer contact also avoids misinformation from playing the "telephone game," he added.

Through the years, the office's responsibility has grown. Office personnel provide identical services to the Atlantic Undersea Test and Evaluation Center (AUTEK), Andros Island, Bahamas; the Atlantic Fleet Weapons Training Facility (AFWTF), Naval Station Roosevelt Roads, Puerto Rico; and other military installation and government organizations throughout the southeast United States and the Caribbean.

Advances in technology are bringing new equipment online requiring improved G&G data.

Survey accuracy has increased tenfold in the last decade and state-of-the-art surveying equipment, data processing capabilities and training improve the



photo courtesy Kennedy Space Center

K.C. Ferris measures the height of an antenna over a GPS control point at the Kennedy Space Center, Florida, part of upgrading the Center's horizontal/vertical control network.



J. Dale Walden (left) and Richard S. Stroud observe the stars for astronomic position, part of an upgrade to the Deflection of the Vertical database for the Kennedy Space Center in Florida.

timeliness and efficiency of survey operations.

"GPS technology, electronic theodolites and total stations, digital levels, bar-coded level rods, automatic data recorders and astronomic astrolabes have revolutionized the way we do business and the services we provide," Staker said.

Recently a permanent GPS tracking station was put into operation on the survey office's roof and is available to the Eastern Range customers.

"Future developments consist of in-house Geospatial Information Services (GIS), which will contain our various databases and small-scale graphics capabilities," Staker said. "The intent is to interact with other Eastern Range organizations developing a GIS of their own. In the beginning, it will include horizontal and vertical control stations, survey sketches, historical

observations, local adjustments, transformation parameters, digital maps and other planning source material."

Geodetic and geophysical data continuity is upheld by the NIMA G&G office with databases containing nearly 50 years of data. They include 1,000 survey projects, large-scale horizontal-vertical combined geodetic data files for the Eastern Range and downrange tracking sites, station descriptions of 3,000 geodetic control stations and instrumentation, local geoid models, datum transformations and deflections of the vertical.

The Survey Office spends considerable time maintaining these databases and a solid geodetic control network. It currently is involved in upgrading the combined G&G data files of the entire Eastern Range, including the Antigua and Ascension tracking stations, as well as the Delta, Atlas and Titan shuttle launch complexes.

Of the 50-plus surveys accomplished each year, only two are programmed. All others are accomplished on short notice, typically tied to construction schedules.

"Continued expansion and upgrade of the control networks are required as improved tracking systems technology requires more precise and accurate geodetic coordinates," Staker said.

NIMA's geodetic surveyors have supported the U.S. space program since its early days in the 1950s. And Staker described how the people of the Florida Geodetic Survey Office are committed to their mission.

"Every project is completed with personal pride, integrity and professionalism. Our employees keep current with technological changes and we make sure our ties with the survey community are maintained. Seminars, workshops and training play a major role, too,"

Staker said. He added that the success of the Survey Office is evident by its progressive 10 percent production increase during the past three years.

"Data integrity and personal accountability are part of our tradition," he said. "We provide source material for the 45th Space Wing Geodetic Coordinates Manual. Since our data are used as 'truth,' our people focus heavily on quality control." |

