NATIONAL IMAGERY AND MAPPING AGENCY

EDGE

GUARANTEEING THE INFORMATION EDGE
FEBRUARY–MARCH 2001

Presidential Inauguration and NIMA Support

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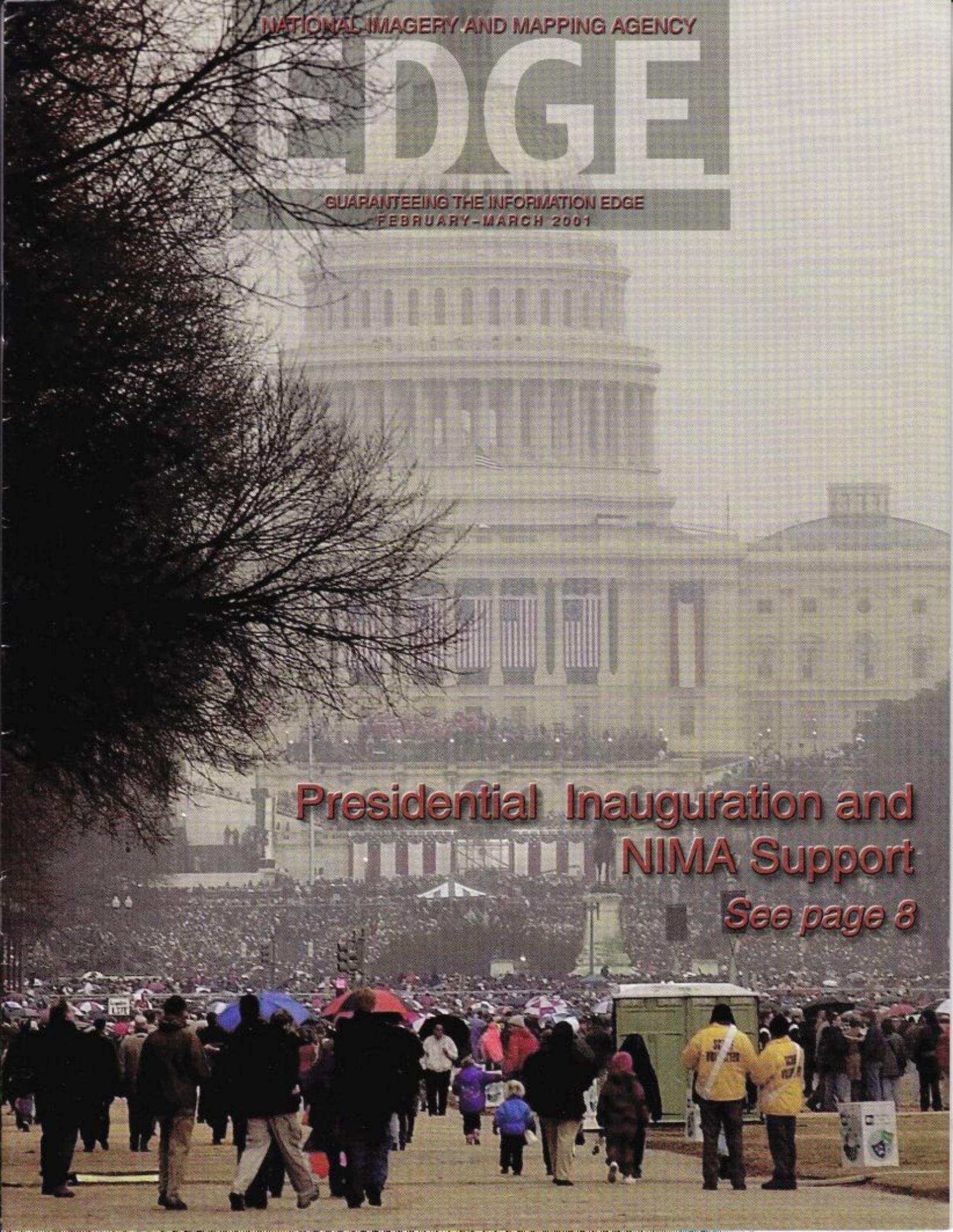
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On The Cover

On the day of the inauguration, hordes of people gathered to the platform where George W. Bush was sworn in as the 43rd President of the United States. Unseen by observers of the event was a small NIMA team using state-of-the-art technology to keep security forces up, not only on the movement of the President and Vice President during the ceremony and in the subsequent parade, but on the groups of protestors. See story on page 8. Photo courtesy of the Armed Forces Inaugural Committee (AFIC).

COMMAND POST

We are all created equally. What should distinguish us are our gifts -- our talent, skills and abilities -- not our race, sex, religion or color. Physical features cannot determine human excellence, and a business culture that supports some while it devalues others will not promote organizational excellence.

NIMA's success and prosperity throughout the 21st century and beyond will require the contributions of all its employees. A diverse workforce can yield innovative solutions, increase productivity and thus enhance our overall effectiveness. Only through competitive-edge employees will NIMA realize its vision of "GUARANTEEING THE INFORMATION EDGE." We must effectively evaluate and manage employee diversity to reap its benefits.

It is this recognition that sustains the business case for an effective diversity initiative. Simply put, no organization can effectively accomplish its mission without a competent, competitive and qualified *world-class* workforce. Developing such a workforce requires that managers and supervisors create work environments that maximize employees' contributions and promote effective customer service. We must manage employees as individuals, not as members of a group. We can enhance employee development and contributions through involvement, teamwork, training and balancing work with personal needs and family situations. Supervisors and managers must use fair, open and transparent processes when identifying and selecting employees for developmental and career-enhancing opportunities.

Managers and supervisors must be trustworthy to establish an environment of trust. Your words must be consistent with your actions, you should "walk the talk." Employees must act in similar fashion. Additionally, we must mute our rhetoric of "isms" -- racism, sexism, etc., for the good of the organization.

NIMA's future success as the premier imagery and geospatial agency and employer of choice depends on each of us. We must commit to organizational excellence through the effectiveness of our leaders and the competitiveness of our employees.

Our diversity initiative is one of the tools that will help us achieve this goal. Join me as supporters of this initiative and champions of diversity.

James C. King
Lieutenant General, USA

GI2I Stands Up with New Vision—
'Geospatial Information That Makes the Difference'

By Howard Cohen
Maritime Safety Information Center

GI Chief Lloyd Rowland, third from right in the front, and former Deputy Chief Jan Schneier, second from right, meet with leaders from some of the new centers and groups formed under GI21. In front, from left, they are Bill Carruthers (Strategic Initiatives), Candy Frame (Asia/Oceania), Lynne Puetz (Transnational), Lisa Canzano (Middle East/Africa) and Mike Rodrigue (Business Integration Group). In back, from left, are Jim Heskett (Transnational), Jack Fahey (Middle East/Africa), Joe Goines (Geospatial Operations) and Steve Wallach (Strategic Initiatives). Not pictured: Rick Akers, Cindy Burns, Bob Edwards, Phyllis Farris, Jeff Goebel, Steve Hall, Tom Hennig, Eric Hilberg, Jack Hild, Steve Prokasky, Carol Rauh, Jim Sippel, Roy Soluri, John Sorvik, Karen Thomas and Paul Weise.

On January 8, NIMA marked the new millennium with the standup of GI21, thus beginning a new way of conducting business. Not "Government Issued," but "Geospatial Information for the 21st Century," GI21 is a journey begun last spring with the formation of the Geospatial Regions Division in NIMA21; it is a new way to enhance NIMA's responsiveness and our ability to support customers' readiness needs.

Lloyd Rowland, Chief, is at the helm of GI21, guiding the many dedicated experts as the preeminent providers of geospatial information. Former Deputy Chief Jan Schneier is now Chief of the Integrated Production Office (IP).

"The success of GI21 depends on the men and women – armed with the latest technology — who deliver the products, data and services to our customers," Rowland said. "They are up to the task, and I have no doubt that they will achieve our vision of 'Geospatial Information That Makes the Difference.'"

There are eight Centers and two Groups within GI21. The Centers are regionally and functionally aligned to GI's mission of generating geospatial information. The four regional Centers are Asia/Oceania, Middle East/Africa, Americas and Eurasia; the four functional Centers are Maritime Safety Information, Geospatial Sciences, Transnational and Aeronautical Safety. Additionally, the Commercial Partnerships Group provides geospatial information generated by contractors, and the Business Integration Group provides the staff to support business operations and focuses on workforce development.

New Approach

Although basic production methods remain the same, the organization of business decisions has changed significantly. Schneier explains, "We recognize that the unpredictability of global events and fiscal constraints require that GI21 do business in the most efficient and effective manner. Rather than a centralized GI production program executed by separate organizations, each Center will develop and execute multiyear plans to meet their customers' readiness needs."

Center personnel will take complete ownership of their region and function. Empowering each Center with the full range of resources to build and execute unique plans will enable them to play a direct role in identifying and meeting the needs of their customers. Once driven by products on the shelf, programs will now be information-driven.

End-to-End Accountability

Rowland said, "Establishing each Center drives to the core value of end-to-end accountability. We will move beyond fulfilling directed requirements, and offer both tailored solutions and geospatial analysis to meet customer needs."

In the spring of 2000, NIMA Director LTG James C. King announced NIMA21, a modernization plan aimed toward customer requirements, people and integration of imagery, imagery intelligence and geospatial information.

"The GI21 objectives are to align GI with NIMA21 and the NIMA Strategic Plan through establishing regional and functional centers...we have done just that," Rowland said. In addition, GI must achieve the vision of the Directorate of Operations (DO). Both the NIMA Strategic Plan and the DO Vision describe a unified organization that produces the best imagery, geospatial, navigation and targeting information and analysis through the synergy of the geospatial and imagery disciplines. "GI21 is the mechanism toward unified operations and postures the organization to achieve the DO Vision," Rowland said. "Bringing together under one umbrella the numerous elements of the GI world within NIMA was no easy task. But it's the right time and the right thing to do."

The Future

And what does the future hold? According to Joint Vision 2010 and 2020, the future describes for NIMA an environment of information superiority in support of a flexible national security strategy. GI is currently building the infrastructure and establishing the processes to provide a rapid geospatial response in a dynamic security environment. Its people will serve as a force multiplier in the ability to improve geospatial readiness and responsiveness.

GI has a tremendous history of successful support to NIMA's many customers. "As NIMA enters the 21st century," Rowland said, "Our customers can be assured that GI21 is working for them." ✵

Look for the next Edge to learn more about the new centers that make up GI21.
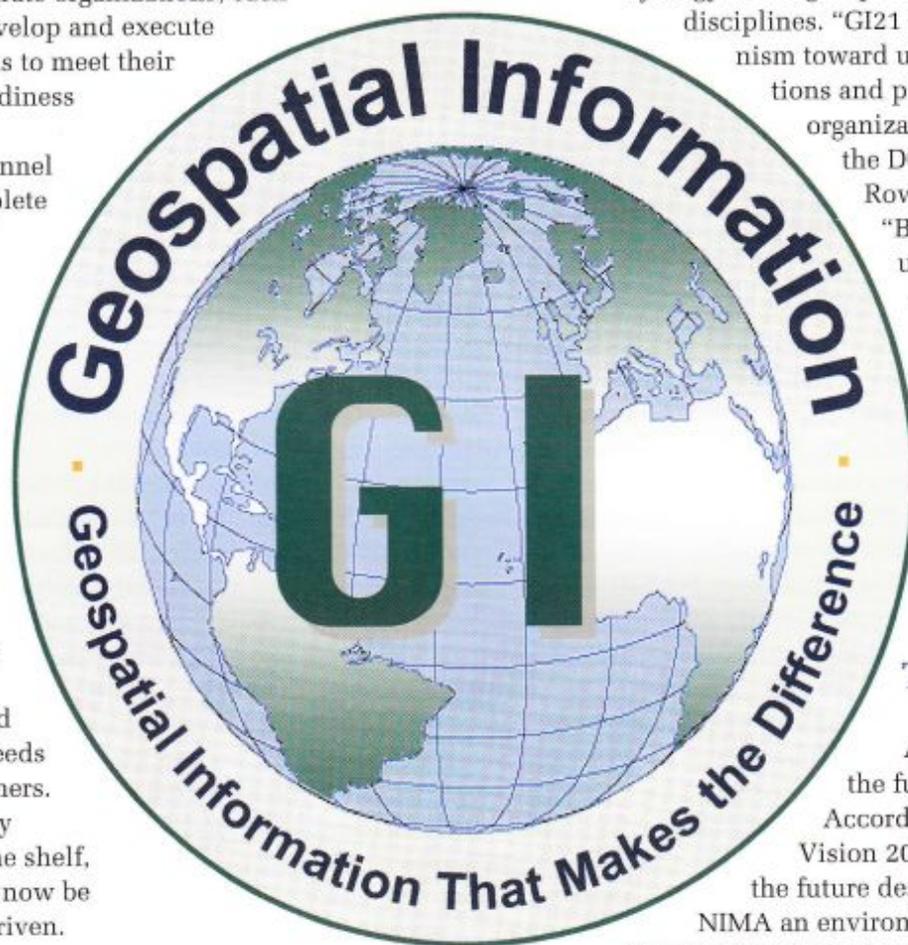
Operations CMB Will Support USIGS, Serving NIMA and Customers Better

by Bruce Donaldson

The Operations Configuration Management Board (Ops CMB) held its first meeting in February. The Board is the latest in a series of steps intended to establish a cohesive, integrated framework for operations and support for the U.S. Imagery and Geospatial Information Service (USIGS).

Bill Allder, Deputy Director for Acquisition and Technology (AT), signed a memorandum last Aug. 30 establishing the Ops CMB to provide configuration management of NIMA's USIGS operational baseline. The Ops CMB will facilitate communications and coordination across NIMA and with NIMA's mission partners and other external organizations.

CM Is Critical

While many people roll their eyes when they hear the term "configuration management" or "CM," it is an extremely important part of managing NIMA systems that enable the Agency to accomplish its mission.

The main functions of configuration management are as follows:

• The identification of all configuration items (i.e. , system hardware, software, firmware and documentation) and establishment of one or more baselines.

• The evaluation, coordination and approval or disapproval of proposed changes to this baseline.

• Recording of configuration item status and changes.

• Periodic reviews of the configuration items and their documentation to ensure that systems evolve properly with recorded traceability and meet program needs.

At the time of NIMA's standup in 1996, the level of configuration management and control varied according to the various predecessor organizations. While many engineering boards handled segment-level issues, none took a truly NIMA-wide view and handled inter-segment/system-level issues for the operational baseline on a daily basis. With the development of USIGS and the emphasis on multi-segment projects and common computing platforms and infrastructure, the requirement for an enterprise view became even more critical. The Ops CMB provides this enterprise view of daily activities for the NIMA USIGS operational baseline.

The operational baseline consists of infrastructure, segments, projects, corporate applications and systems that have transitioned into the Information Services Directorate (IS) for operations and support. Communication networks and all the common computing platforms and operating systems that are integral to their operations and support comprise the infrastructure. The operational baseline will be documented in an appendix of the NIMA Configuration Management Plan (NCMP).

Chaired by Roy Combs, Director of the IS Enterprise Services Office (ES), the Ops CMB is the technical arm of the NIMA Configuration Control Board (NCCB) for the operational baseline. Members represent the Systems Engineering Review Board (SERB), Directorate of Operations and IS Engineering Review Boards (ERBs) and operational Segment ERBs and Segment CMBs. In addition, the

About the Author

A senior systems engineer with Applied Technology Solutions Inc., Bruce Donaldson supports the Enterprise Services Office (ES) under the Multi-System Maintenance Services (MSMS) contract. He has been involved in DoD system development and sustainment planning since his retirement from the Army in 1998. In the Army he was a project and program manager for NIMA and the Defense Mapping Agency, Chief of the Mapping, Charting & Geodesy Branch for U.S. Strategic Command, MC&G officer for the Joint Strategic Target Planning Staff, division chief and deputy department chief at the Defense Mapping School and R&D officer with the Royal Australian Survey Regiment.

Plans and Customer Operations Directorate (PCO) and external configuration management authorities are providing representatives in support of operational USIGS segments at external sites.

The Ops CMB coordinates directly with the SERB for operational issues after coordinating these issues with the Directorate ERBs as appropriate.

Configuration Control Authority

As the Configuration Control Authority (CCA) for NIMA's operational baseline, the Ops CMB will do the following:

• Maintain knowledge of all configuration items that constitute the operational baseline and the operational baseline documentation (Appendix V of the NCMP).

• Approve all changes to the operational baseline and ensure the changes are properly documented.

• At its discretion, activate a CMB for segments without configuration control management.

• Manage inter-segment/system-level and system-critical issues. The Ops CMB will coordinate with the Segment CMBs regarding any system-level issue. The Ops CMB is the closure authority for all inter-segment/system-level issues or problems; however, final closure will be contingent upon concurrence by the impacted organization or operational site(s).

• Analyze all requests for changes (RFCs) and engineering change proposals (ECPs) for technical merit, interface impacts, resource requirements, schedule and disposition prior to

Roy Combs conducts the first meeting of the Ops CMB.

submittal to the SERB. The Ops CMB is the management authority for any problem report (PR), RFC, ECP, workarounds or software patches that may impact the operational baseline.

The Ops CMB will provide a single point of contact for operational system issues, reduce confusion in the management of inter-segment discrepancies, and provide inter-segment/system level knowledge through its management of the operational baseline. The success of the Ops CMB depends on its working closely with the other CM organizations and the end users. This includes AT, which manages the developmental baseline, to ensure configuration control of systems transitioning from development to operations, and DO and PCO to ensure changes to the operational baseline are closely coordinated to minimize the impact on end users. Additional information on the Ops CMB can be acquired by accessing the organization's folder (NIMA_O&S_Ops_CMB) in the IS directory located in BUS_UNIT

on the 'resinfo' drive of NIMA's Sensitive But Unclassified (SBU) network and Secret Collateral Enterprise Network (SCEN). The Ops CMB is in the process of developing a Web page to be hosted on both the SBU and SCEN Web sites that will provide agendas, minutes, points of contact, action items, documents and other information. In addition, the NIMA CMP is being updated, in part, to reflect the new role of the Ops CMB with an addendum to address its processes and procedures.

Since the formation of NIMA, many initiatives have been undertaken to consolidate and standardize the numerous processes and systems of the legacy organizations with the goal to improve NIMA's operations and thus provide better support to customers. The Ops CMB addresses just such an issue. With its implementation, the Ops CMB will help NIMA meet one of its strategic goals: to "Lead, acquire, deploy, maintain, and continuously improve USIGS." ✳

NIMA Plays Geospatial Role in Inauguration Security

by John Iler

With their networked event map, Stacy Mayse, Damien Kerr and team brought inaugural security forces a new "set of capabilities."

WASHINGTON, D.C., Jan.20—It was a bleak, cold, rainy Saturday here when George W. Bush raised his hand and was sworn in as the 43rd President of the United States. Millions of televisions across the country and throughout the world displayed live images of the event and thousands of onlookers lined the parade route along Pennsylvania Avenue cheering and, in some cases, jeering.

The close-fought election had been bitter and protestors were threatening major upheavals. Security, ever a concern to planners, was tight and helmeted police from a number of states stood ready with units of the military, Secret Service and FBI.

What millions of viewers did not see, however, was the role NIMA products, personnel and expertise were playing in the primary security command centers monitoring the event.

"Traditionally we have used maps or images to underlie the global command and control system, which shows where the various security units are located," said Al League, head of the Applied Technology and Process Innovation Office. "But in this case we raised the bar a notch."

In the past, League said, NIMA took part in many military exercises and technology demonstrations, even helping provide support to security overseeing the Pope's visit to St. Louis in January 1999, and for Public Service Recognition Week on Washington's National Mall last May. This time, however, the agency provided nearly real-time "situational awareness" by combining NIMA products with Surdex commercial aerial shots and Ikonos 1-meter satellite images and bringing them to the screens of 14 networked computers deployed at five individual sites.

In the Joint Operations Center (JOC) and at 600 Independence Ave., 17 NIMA personnel worked two 12-hour shifts. Headed by geospatial analyst Stacy Mayse (GITD), the teams received and entered parade progress and protestor and police movements onto an "event map" monitored by the Armed Forces Inaugural Committee's JOC; Presidential Inaugural Committee Headquarters' Joint Interagency Intelligence Support Element (also at 600 Independence Ave.); Emergency Operations Center, Ft. McNair, Va.; Multiagency Coordination Center (aligned with the Secret Service and FBI) at FBI Headquarters and NIMA Operations Center-Bethesda.

How it Began

NIMA's involvement in providing on-the-scene inauguration support began in December, shortly after Army Brig. Gen. Elbert N. Perkins, deputy chairman of the Armed Forces Inaugural Committee (AFIC), was briefed by NIMA officials at a Joint Warrior Interoperability Demonstration. NIMA had already produced some 60 compact disks containing interactive photo maps of inauguration sites, as well as hundreds of hardcopy maps, provided to AFIC by the National and Civil Branch of Customer Operations. (See the January *Edge*.)

"The agency's capabilities to zoom, pan, roam around maps, annotate them on the fly and distribute those annotations across an intranet intrigued him," League said, "but they really didn't know

the potential of what they were dealing with." Mayse was brought in to develop a technology solution.

"What we came up with," she said, "wasn't a system, but a set of capabilities used by geospatial and imagery scientists and analysts. It was simply tailoring our products to the needs of the customer." By the time the inaugural events began on Dec. 15, League added, "NIMA's annotated event map had become the centerpiece of the monitoring operations."

Photos courtesy of AFIC

George W. Bush takes the oath of office as 43rd president of the United States.

The Interface

The event map was created using ESRI's ArcView GIS, a customizable desktop mapping and integration software package. Used in conjunction with ESRI's Streetmap, an ArcView extension, NIMA not only was able to integrate its data, but overlay it on an annotated street map of Washington, D.C.

"Data was input from various law enforcement and military units, made available by the Secret Service, listed on a timeline and immediately annotated on the event map," Mayse said. "The map was updated using NIMA laptop computers and displayed on large, plasma-screen monitors." NIMA's involvement covered all the inaugural events, culminating with the swearing-in ceremony and parade down Pennsylvania Avenue.

Inauguration pageantry was backed by tight security.

"What Stacy and her team did," said League, "was push the envelope of what we've done in the past. In this case we walked in with some laptop computers and small projection devices and provided an entirely new level of situational awareness. Not only did we meet the needs of our customers, I'd say we exceeded it."

The Capabilities

By merging NIMA's products with commercial maps, aerial photography and imagery, Mayse and her team provided security personnel with the ability to track developments throughout the city. Days before the inaugural parade, NIMA team members used digital cameras with Global Positioning System (GPS) receivers to record changes to city streets. "This is because bleachers were built, check points established and roadblocks erected," Mayse said. The digital images were then dynamically placed into the software as annotations. "When users clicked on the annotation," she said, "there was the photo."

"Stacy and members of her team pulled together all the pieces and made it work 18 hours after receiving the laptop computers we were going to use," League said. "We got them at 2 p.m. on Friday afternoon, and by 3 a.m. Sunday morning, we were there and set up for a full dress rehearsal of the inaugural event."

'Flawless Performance'

In a February interview with *Space News*, Gary Zegley, chief of Current Operations for AFIC, praised the NIMA team.

"Combat people often look at new technology with some degree of suspicion, since it's not proven under battle conditions," he said. "But we gave NIMA free rein and they really put in a flawless performance."

The NIMA team included **League**, **Mayse**, **Damien Kerr** (TESB), **Jim Luzius** (OIPA), **Elizabeth Crews** (IPAB), **Michael Lenihan** (IPAE), **Tom Hersey** (DOIPAE), **Rick Dilley** (OIPA), **Mike Thomas** (OIPA), **Denise Filkins** (IPAB), **Todd Cummings** (NIMA's technical representative to the Secret Service), **Chris Riopelle** (IPA), **Marzio Dellagnello** (OGIRE), **Dave Berg** (TSS), **Marsha Mocaby** (GIDA), **Jeff Reichman** (OGID) and **Mark Tatgenhorst** (IPAA).

"The team worked great together," said team member Damien Kerr. "It was a genuinely educational and exciting experience to work so closely with D.C. local and federal law enforcement professionals. And I think they truly appreciated the technology and mapping products that NIMA brought to the table."

As a result of the team's success, League said, NIMA may be asked to provide support for the 2002 Winter Olympics in Salt Lake City, Utah.

Tom Hersey and Michael Lenihan were among those working 12-hour shifts to provide situational awareness in near real time.

"The scope for that operation would be different," he predicted. "We'd be looking at the entire state of Utah and perhaps 10,000 athletes from around the world and hundreds of thousands of visitors, and we'd be on a world stage. It would clearly be a bigger playing field." ✳

Points for a Fly-By: All in a Day's Work

by Paul Hurlburt

With the Presidential Inauguration four days away, the St. Louis Branch of GI's Transnational Center (GITA) got a request for navigation points to guide an inaugural fly-by. The Air Force's Air Combat Center (ACC) aerial events team needed the points for a fly-by of F-16s from the 20th Fighter Wing out of Shaw Air Force Base, S.C. Pilots use the Aim Points to validate their on-board navigation system.

Within hours, cartographer Jim Johnson (GITA) and tasking requirements manager Jim Kraus (TO) performed source feasibility over the requested area and cartographer Hal Chamberlain (GITA) mensurated the features requested. Three of the four features were easily identifiable but the fourth required coordination by team leader Ray Dvorchak (GITA) with the aerial events team to determine the exact location the aircrews requested.

The features were identified and mensurated on GITA's NIMA Production Cell, with imagery pulled from NIMA's Washington Navy Yard server and

From left: Jim Kraus, Ray Dvorchak, Jim Johnson and Hal Chamberlain.

positional data from NIMA's Digital Point Positioning Database product. Dvorchak sent the location of the metadata to ACC via SIPRNET and SBU by close of business the same day.

ACC responded three days later with an e-mail thanking the team for its effort and the accurate data. GITA serves DoD and the Intelligence Community with precise and accurate products to support, targeting, navigation and mission planning for training and operational use. ✳

Beware of Making Unauthorized Commitments
Only Contracting Officers Can Obligate Funds for the Government

In establishing the three bodies of government (executive, legislative and judicial), our forefathers created a system of checks and balances to ensure no one entity impinged on the rights of the nation or its people. In establishing the federal procurement system, the Congress has also established a set of procedures and processes (checks and balances if you will) to ensure public dollars are spent wisely and to protect against the potential for fraud, waste and abuse.

Three separate entities were established in the federal procurement process to budget/approve, execute/procure and manage/oversee procurement programs (certifying/approving officer, requirements manager, contracting officer). The certifying/approving officer certifies that funds are available and approves the use of the funds for a specific program/purchase. The requirements manager establishes what is needed, prepares the program documents and manages the technical aspects of the requirement. The contracting officer (to include ordering officers and credit card holders) obligates the funds, thus committing the government to the legal expenditure of funds. The contracting officer is the only entity in the federal government with the legal authority to obligate funds and commit the government to an expenditure. But even the contracting officer must use approved funds and then only for legitimate, established requirements.

The purpose of the separation of legal responsibilities is to protect the government against fraud, waste and abuse. The separation of authorities also protects the individual by limiting any potential for abuse. Because of the importance of maintaining this segregation of authorities, NIMA spends a lot of time and resources training people about their legal and technical responsibilities in the procurement of goods and services.

Unauthorized Commitments

When interacting with a contractor or prospective contractor, NIMA employees should be very careful about making statements or directing actions that can be construed as a new commit-ment, thus increasing the cost of the project/contract. Individuals without procurement authority who order supplies or services, who attempt to change the terms of an existing purchase or who make promises (written or verbal) to pay a contractor/vendor for a purchase, do so illegally and run the risk of personal accountability.

When such an action does occur, it is called an unauthorized commitment. The Government may or may not approve and fund the unauthorized commitment when it is discovered. If the action is approved, it is said to be ratified. Some actions cannot be approved because of certain other limitations. For instance, if the Government receives no benefit from the unauthorized commitment, or if the price is not fair and reasonable or if the purchase violates a statute, then the action cannot be ratified. In either case, the individual responsible for the unauthorized commitment may be subject to disciplinary action. If the action is nonratifiable, that person also may face a financial liability.

Ratification Process

The process for ratifying an unauthorized commitment is found in the NIMA Acquisition Regulation Implementation (NARI). Even when an unauthorized commitment is approved for ratification, the individual who made it is usually identified by name and called upon for a written explanation. The individual's immediate supervisor is required to recommend corrective action and describe any disciplinary action taken or explain why none was considered.

When in doubt, it is best to ask advice beforehand from a contracting officer or legal counsel so that an unauthorized commitment does not occur. However, if one does occur, it is even more important to bring it to the attention of a procurement professional or legal counsel as soon as possible. ❊

--Patricia Cusano
Procurements and Contracts Office
DoD Policy, Technical and Legislated Programs
(PCP)

A. Clay Ancell, Director of the Competitive Sourcing Group, retired Jan. 24 after 35 years with NIMA and its predecessor organizations. A native of Cape Girardeau, Mo., he earned his bachelor's degree from Southeast Missouri State University and began his federal career at the U.S. Air Force Aeronautical Chart and Information Center in St. Louis, later the Defense Mapping Agency Aerospace Center, and now NIMA in St. Louis.

He was assistant chief of the Scientific Data Department, chief of the Geopositional Department, and later director of Production Programs Modernization, where he managed the Center's transition to the congressionally mandated multi-billion dollar Digital Production System.

While assigned to the Headquarters DMA Research and Engineering Directorate as the agency's liaison to the Department of the Army, he developed Interim Terrain Data (ITD), which resolved a long-standing Army terrain analysis require-

ment, and continues to be produced. After two years, he returned to DMA in St. Louis, where he directed planning, programming and successful execution of the Center's support for Operations Desert Shield and Storm. In 1991 he was selected Outstanding Federal Executive of the Year by the St. Louis metropolitan area Federal Executive Board.

Ancell completed his DMA career in Merrifield, Va., at agency headquarters, where he was Assistant Deputy Director for Programs, Production and Operations, Deputy Director for Operations, and Associate Director for Requirements and Policy.

From NIMA standup in 1996 until his retirement, as Director of the Commercial Office and later the Competitive Sourcing Group, he guided the Agency toward significant leveraging of the private sector as a "force multiplier" in accomplishing its mission.

Ancell earned his masters in business administration from Southern Illinois University. ❊

James E. Johnson, Associate Deputy Director of the Information Services Directorate (IS), retired Jan. 12 after 36 years with NIMA and its predecessor organizations. Raised in Astoria, Ore., he earned his bachelor's degree from the University of Oregon. He began his federal career in 1964 as a cartographer at the U.S. Air Force Aeronautical Chart and Information Center in St. Louis, which is now part of NIMA.

At NIMA he was chief of computer operations in the Systems and Technology Directorate and a division chief and then deputy chief of USIGS Services and Systems Support Operations before assuming his most recent position.
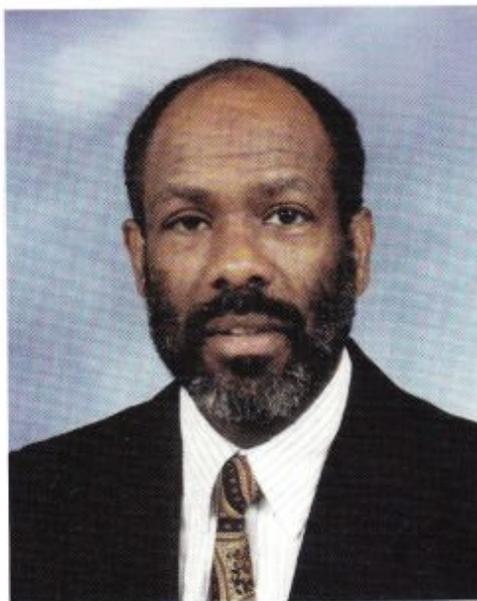
"My namesake, James Weldon Johnson, said in the Negro National Anthem, 'Sing a song

full of the faith that the dark past has taught us; sing a song full of the hope that the present has brought us.' I truly believe that 'faith' and 'hope' are the future for NIMA's workforce," Johnson said at his retirement ceremony in Bethesda.

After thanking family and coworkers for their guidance and support, he advised employees to take a positive attitude toward IS outsourcing, to share information for NIMA's benefit in guaranteeing the information edge, and to embrace teamwork, diversity and inclusion as the best way to accomplish NIMA's mission. ❊

Imagery Exploitation Contracts Show How NIMA Fosters Innovation by Small Businesses

by Kathleen Morrish

Last year New York Congresswoman Nydia M. Velazquez, ranking Democrat on the House Small Business Committee, authored a study, which showed that many government agencies failed to meet goals they negotiated with the Small Business Administration. "Someone's asleep at the wheel," she said. Committee Chairman Jim Talent (R-Mo.) agreed. "Agencies are standing in the way of a fair contracting process," he said.

They would be pleased to hear that NIMA, though exempt as a member of the Intelligence Community, takes advantage of the opportunity to partner with small businesses through the Small Business Innovation Research (SBIR) program. This program encourages small businesses to explore their technological potential for possible commercialization. NIMA is the only IC participant.

SBIR supports high-risk, high-benefit research because businesses with large market share often hesitate to introduce innovations that will make their product base obsolete. On the other hand, small businesses view such changes as a chance to take over market share.

The Advanced Research and Development Division (ATTR) manages NIMA's participation. ATTR invests in the development and enhancement of analytical tools that utilize data and information, particularly in the area of object recognition.

One of NIMA's SBIR topics, "Imagery Exploitation Applications of Neuroscience," addresses object recognition. It was advertised in fiscal 1998 and will be advertised again this fiscal year.

Current approaches to object recognition, change detection, automated feature extraction, and other imagery exploitation areas fall short of where NIMA analysts need them to be. By innovative use of knowledge of the human visual system, it may be possible to create a system that can do more of what a person does when looking at an image, freeing the analyst to concentrate on the toughest imagery exploitation problems.

New Solutions

Three years ago the "Neuroscience" topic resulted in 19 proposals, three of which were funded for Phase I work. One of the vendors created software to translate images in various formats to the National Imagery Transmission Format (NITF). The prototype translator attracted the attention of a software developer, who worked with the vendor to integrate the translator into a product. Now on the market, the product is suitable for use on data important to NIMA. There are plans to use it to process data from the Shuttle Radar Topography Mission.

In fiscal year 2000, NIMA awarded a two-year SBIR contract worth over $500,000 to Intelligent Optical Systems Inc. (IOS) on the same "Neuroscience" topic. IOS created a neuro-biologically based software system that uses its visual "memories" to recognize objects in a manner similar to how researchers feel humans use their visual memories to recognize objects. IOS will expand the system to deal with a variety of image types and recognition tasks. The hope is that, by the end of the contract, IOS will have produced a prototype object recognition system that will be ready to commercialize and that will be more effective than anything used today.

Do you have an idea for a research topic that would be suitable for the SBIR program? If so, call me at (703) 262-4557 or visit NIMA's SBIR Web site at http://164.214.2.59/poc/contracts/sbir/sbir.html from inside NIMA or http://www.nima.mil/poc/contracts/sbir/sbir.html. Working together, we will continue *guaranteeing the information edge!* ❋

About the Author

Mathematician Dr. Kathleen A. Morrish manages NIMA's Small Business Innovation Research program. She is on rotation from DIA through the Intelligence Community Assignment Program.

Cathy Babis – Toastmasters' Rising Star

by Carole Breckner

On Nov. 10 in Columbia, Mo., Cathy Babis competed against contestants from the other five divisions in Toastmasters District Eight.

It was the final leg of the Table Topics contest. Each contestant draws for a speaking position. Cathy drew number 6.

Contestants are given the same question. All are escorted out of the contest area and brought in one at a time to answer.

The question: "If you had a chance to live again in the 20th Century, which decade would you choose and why?"

Cathy chose the 1950s because of the music and the dancing.

As luck would have it, a country and western band in an adjourning room interrupted Cathy's presentation. Cathy used that to her advantage and it worked so well she won the contest.

"I guess I got lucky," she says. But actually it's just the latest in a string of speaking successes.

In August she won the Table Topics and Humorous Speech Contests in Speech Masters, 3268-8, the NIMA Toastmasters club in St. Louis.

In September she won the Area 15 contest, competing against four other clubs.

In October she won both contests in Division F, which consists of 17 clubs.

Cathy joined Speech Masters in 1998, soon after she arrived at NIMA St. Louis, where she is a briefing team member in GI's Aeronautical Safety Center (GIX).

She has served as VP Education, VP Public Relations and editor of the club newsletter.

One of the great things about Toastmasters, she says, is that if your membership lapses, you can pick up exactly where you left off. She has been a Toastmaster since 1979.

For 10 years she was in Air Traffic Control, both military and civilian. She is a flight instructor with over 3,000 hours of flight time, most of it teaching others to fly.

Cathy has two children and lives in Affton, Mo. She is a member, officer and regional officer of Parents without Partners.

She has written several articles for the NIMA *Connector* and the *Edge* about Toastmasters.

Photo by Gerald Goodin

Cathy Babis won first place in Table Topics among 17 clubs in District 8 Toastmasters Competition.

Currently Cathy has transferred to another Toastmaster's club in Arnold, Mo., the Jeffco Challengers, 9903-8. ✱

See the NIMA Connector *for information about Toastmaster clubs in Bethesda, St. Louis and the Washington Navy Yard.*

About the Author

Carole Breckner has been a very active participant of Toastmasters since 1988. Speech Masters 3268-8 is her home club. (Call her for more info on Toastmasters, at 314-263-8026 DSN 693). Carole attained her second Distinguished Toastmasters designation in November. She is the Immediate Past Distinguished District Eight Governor. District Eight Toastmasters received Distinguished ranking #14 in 1999-2000 out of a total of 75 Districts in the world. Assigned to the Aeronautical Safety Center (GIX), Carole is a member of the Ron Brown Airfield Initiative Team.
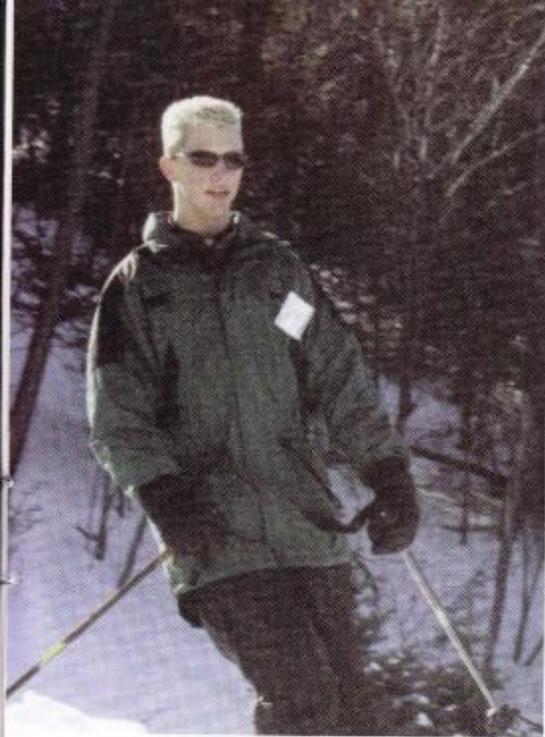
Randy Gray, son of trip organizer Guy Gray, learned to ski years ago on outings sponsored by the ski club.

Kim Mellen, wife of NIMA Reston employee Gerrit Mellen, and son Karl enjoy the snow.
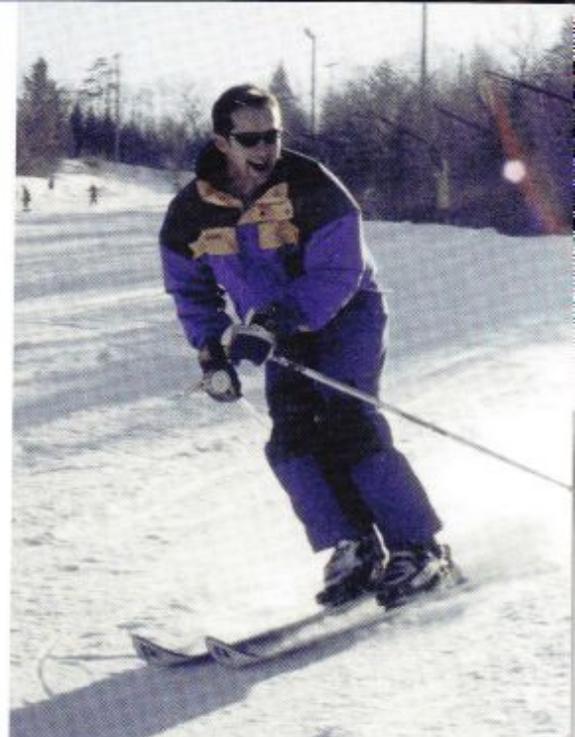
Peter Hughes, Royal Air Force squadron leader with the United Kingdom detachment at the Washington Navy Yard, does a good turn.

Down, Down and Away!

Employees and contractors from NIMA East, their families and friends enjoyed three successful Friday trips to ski slopes in Pennsylvania this season.

Guy Gray and his son Randy took the photos on the first trip Jan. 12 to Blue Mountain, northwest of Allentown. "On the second trip (to Seven Springs Jan. 26) we must have had 15 to 20 children," Guy said. "It's a wonderful way for families to be involved because it's so inexpensive." The Civilian Welfare Council subsidized the cost of the bus and the slopes gave steep discounts to the group on lift tickets, rentals and lessons. For the second trip, 121 skiers filled two buses or drove up themselves to stay longer. It was a diverse group, with people from various NIMA sites, Gray said. What's the appeal? "The fresh air, the cold and the speed, as long as I feel in control," Gray said. The third trip was Feb. 9 to Camel Back. ✲

Lift-bound Bethesda employees, from left, are Rick Gray, Linda Miedziaski (sister of Sue Wenner), Guy Gray, Sue Wenner, Bob Stewart, Sandy Folker and Dave Maule.
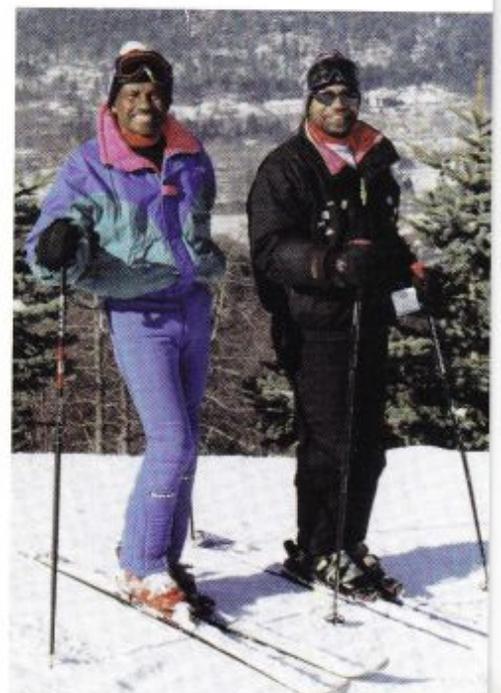
On their way down, an unidentified duo stop for a picture.

"I Leave You Love"

The theme of this year's Black History Month – "Creating and Defining the African American Community: Family, Church, Politics and Culture" – describes the lifetime work of Mary McLeod Bethune. The educator and advisor to President Franklin Roosevelt is honored in a memorial in Lincoln Square, 10 blocks east of the U.S. Capitol. The National Council of Negro Women erected the monument in 1974.

Bethune is quoted at the monument's base:
"I leave you love, hope, the challenge of developing confidence in one another, thirst for education, respect for the use of power, faith, racial dignity, also a desire to live harmoniously with your fellow man, and finally a responsibility to our young people."

As noted in a release by NIMA's Human Development Directorate, Black History Month is celebrated each February to affirm, recognize and appreciate the rich heritage, struggles, achievements, progress and diversity of African American peoples.

Photo by Paul Hurlburt