

NATIONAL IMAGERY AND MAPPING AGENCY

EDGE

GUARANTEEING THE INFORMATION EDGE
MARCH 2000



Shuttle Radar
Topography Mission

MARCH 2000

EDGE

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On The Cover

The space shuttle Endeavour roars through the atmosphere Feb. 11 on its mission to map the majority of the Earth. The Shuttle Radar Topography Mission was scrubbed Jan. 31 due to weather and a faulty master event controller.

(Courtesy Image)

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COMMAND POST

The Space Shuttle Endeavour launched on Feb. 11. As I write this article, the Shuttle Radar Topography Mission is collecting the data we need to produce our Digital Terrain Elevation Data®. We are an agency that has launched ourselves into the 21st Century.

The move to the launch pad began five years ago when the Defense Mapping Agency first conceived of using radar interferometry to collect the most accurate, high resolution, near-global data set of digital topographic data ever produced. As the Space Shuttle makes over 140 orbits around our globe, it is providing detailed three-dimensional geospatial information for about 75 percent of the earth's surface.

The raw radar data will be processed, first by the Jet Propulsion Laboratory to transform it into radar images and terrain height data, and then by NIMA to complete the processing into DTED®. This process will take two years to complete and our first data sets will go to our customers in January of 2002. Our capability to serve the military, national intelligence community, other Federal agencies, and the civil and scientific communities will be greatly enhanced. For the military, over 200 systems will benefit from this data. These include systems used for mission planning, training and rehearsal, terrain analysis, navigation, and command, control and intelligence.

We are proud of the huge contributions we are making to the national security and welfare of our country. Thank you all for your daily contributions.



James C. King
James C. King
Lieutenant General, USA

Good Communications Stop Rumors, Prevent Unwanted Surprises

This is the third in a series of articles keeping the workforce informed about the competitive sourcing initiatives at NIMA.

As the federal government embraces competitive sourcing, the emphasis on informing the workforce is a primary concern. What is competitive sourcing? How will it affect operations and jobs?

The two previous articles discussed what competitive sourcing is and the seven step A-76 studies governing it. And according to Clay Ancell, director of NIMA's Commercial Office, educating employees about the process is a critical part of the Agency's Competitive Sourcing Communication Plan.

"It's a way to ensure that employees understand what's going on and not hold any questions back," he said. When employees pose questions, feedback is provided within three working days. "This approach eliminates rumors and provides assurance that the program is dedicated to following applicable laws. Good communication also makes good business sense."

The goal, he said, is to ensure that NIMA employees know what is going on in the current and planned A-76 studies. This will be achieved through a number of communication vehicles, including the *Edge* and the intranet. The effectiveness of the program will be gauged by the numbers of questions and comments received, website hits and workforce questionnaires sent to employees affected by the A-76 process. "The

purpose of these questionnaires," Ancell said, "is to determine if the information is getting to the right people and if it's useful." The two-way communications in town hall meetings also will be used to assess the effectiveness of the communication program.

The Competitive Sourcing Website

The Competitive Sourcing website is available on the Sensitive But Unclassified (SBU) Network at <http://osis.nima.mil/comad/sourcing/>

[frontpage.htm](#). It provides a way for employees to ask questions about any phase of the competitive sourcing process. "If submitters don't want to be identified," Ancell said, "there's no requirement to provide names, e-mail addresses or phone numbers. If they want direct responses,

there's a way to do that, too." The goal is to respond to questions within three business days, he added. Frequently-asked-questions (FAQs) and answers also will be published on the website. "The answers to many common questions will be there or they may prompt other questions," he said. The site also contains information and source material on the Federal Activities Inventory Reform (FAIR) Act of 1998, *OMB Circular A-76*, applicable DoD Directives or other reference documents, and provides direct links to these references. All users need do is click on a link and they will be taken there. The site also has links to news about A-76 studies at other federal agencies. Users can visit

"It's a way to ensure that employees understand what's going on and not hold any questions back. ... This approach eliminates rumors and provides assurance that the program is dedicated to following applicable laws. Good communication also makes good business sense."

these web sites to view their frequently-asked-questions and other related information.

In addition to general information, pages will be posted with information and status of each NIMA competitive sourcing study—users should click on the button labeled “Study Status.”

Other Avenues

Besides the intranet, users can receive monthly status updates on the competitive sourcing studies underway at NIMA via e-mail. Questions regarding the A-76 process or individual studies may be submitted by sending them to comad@nima.mil (also listed at the bottom of any webpage of the competitive sourcing website). E-mail questions and comments may also be sent to the Commercial Activities Office, via Microsoft Outlook, by typing in Commercial Advocate in the “TO:” block on the e-mail form. Submissions may also be made by standard mail or through the NIMA distribution system. The address is:

*Commercial Office (OC)
National Imagery and Mapping Agency
4600 Sangamore Rd. MS D-135
Bethesda, MD 20816-5003*

Town Halls

Town hall meetings are another valuable communication source. The Commercial Office is establishing a schedule where NIMA leadership will meet face to face with employees who may be affected by the competitive sourcing studies. “Appropriate staff personnel will attend the meetings to answer questions specific to their staff oversight and support functions,” Ancell said. “The meetings will be held at various locations and announced far enough in advance to allow for maximum attendance.”

Help Desk

Employees also can submit their A-76 competitive sourcing questions to the Help Desk (1-800-852-8931) anytime, day or night, throughout

the year. Help Desk personnel will take questions and Commercial Office staff will provide the answers. Questions also may be submitted by fax at 301-227-5079 (DSN, 287-5079). If a return fax number or other means of return communication is not provided, the questions and answers will be published on the FAQs page of the Competitive Sourcing website.

From the Director

One of the most valuable means of communication is NIMA’s Director, Lt. Gen. James C. King, who has, and will continue, to provide advance information concerning management initiatives potentially affecting employment opportunities at NIMA. So far, the Director has issued four memoranda on commercial outsourcing and will address other issues relating to the A-76 process as they arise.

Bulletin Boards and Brochures

A bulletin board on A-76 competitive sourcing activities can be found outside the Commercial Office (Room 532) in Erskine Hall. Other boards will be established at other locations. Information posted will include the most current *Director’s Memoranda for All Employees*, schedules for town meetings, help desk and facsimile telephone numbers, e-mail addresses and other pertinent information.

“There will be spot announcements on NIMA’s closed-circuit television concerning the status of the on-going studies and the initiation of new studies,” Ancell said. “These will be shown several times a day and, of course, we’ll advertise our website and other communication tools. We’ll also produce brochures to keep the workforce informed.”

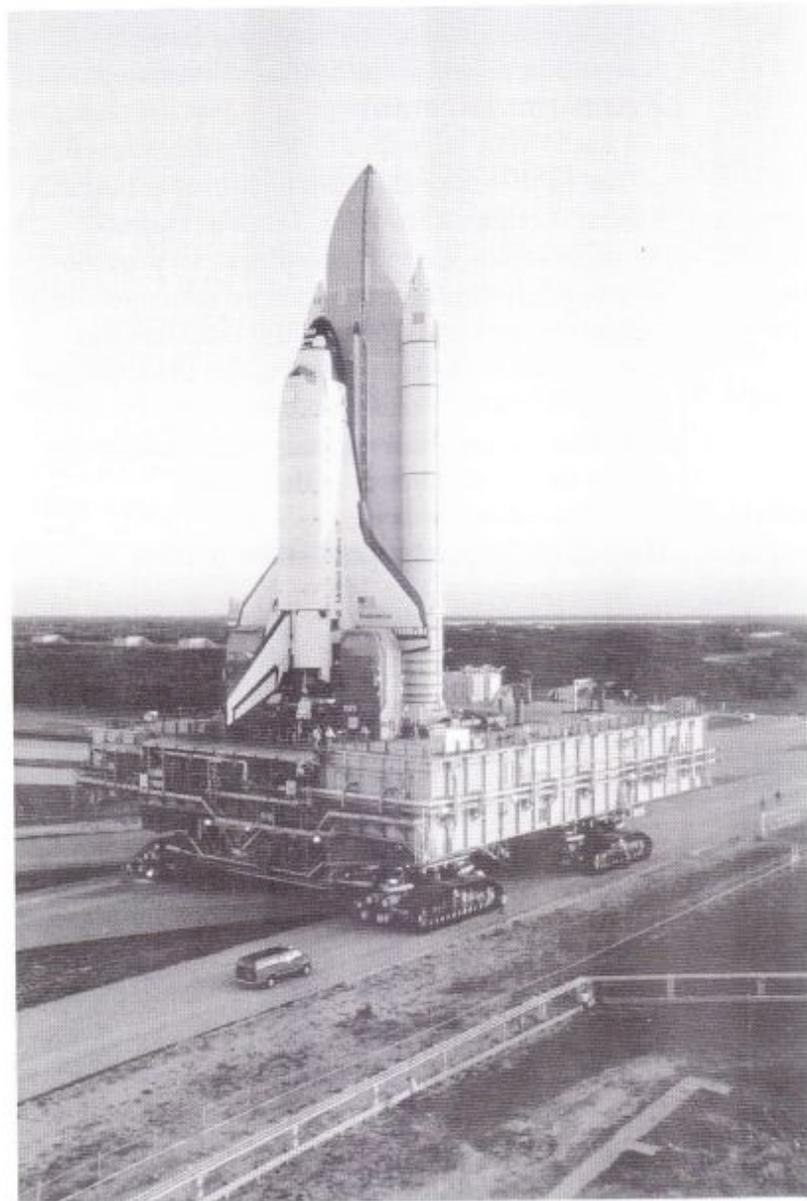
A-76 Library

The Commercial Office has established a library of documents concerned with the competitive sourcing studies. Any document or file can be accessed depending on the users’ secu-

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NIMA/NASA Shuttle Mission Combines Science, Partnerships

by Jennifer Lafley



The orbiter Endeavour, mounted on a "crawler," in transit to the launch pad and its historic mission to scan most of the Earth's surface.

As the first Earth mission of the millennium of the National Aeronautics and Space Administration (NASA) in partnership with NIMA, the Shuttle Radar Topography Mission (SRTM) adapts available

technology for a unique space application. Its ambitious goal is collecting near-global elevation data in a single effort, using a specially modified radar system.

The SRTM makes the first on-orbit use of the technology called single-pass radar interferometry. Radar beams will be bounced off the surface of the earth and received by two antennae—one in the Shuttle's payload bay and one at the end of a 60-meter retractable mast extended from the payload bay. The raw data will be converted into digital terrain elevation data (DTED®), an evenly spaced grid of points on the Earth's surface for which elevation measurements have been recorded. DTED® provides three-dimensional coordinates—latitude, longitude and elevation.

For NIMA, the SRTM promises to be one of the best geospatial collection tools in the history of mapping. Collecting day and night, the shuttle's radar is not limited by weather or darkness. It will collect areas previously inaccessible for mapping because of cloud cover. The data will be uniform and nearly seamless, in contrast to the patchwork of data now available.

NIMA and its predecessor organizations have been collecting and using DTED® for three decades. Today, the agency's holdings cover about 70 percent of the Earth's landmass, with measurements

taken every 90 meters. This data set is known as DTED® Level 1. NIMA also produces a denser grid of elevation measurements spaced every 30 meters, known as DTED® Level 2. The Agency's current holdings of DTED® Level 2 cover only

about two percent of the earth's landmass. In contrast, the SRTM mission will collect elevation data at that same 30-meter resolution, over more than 70 percent of the Earth's landmass. This DTED® will be nine times denser and twice as accurate as the Level 1 data set. It will take about 2 years to process the trillion measurements into a complete data set.

Benefits to NIMA's Customers

"The SRTM collection data set will give us the most accurate, high resolution, near global collection of digital topographic data ever produced," said NIMA Director, Army Lt. Gen. James C. King at a press conference held at Kennedy Space Center on Jan. 30.

King praised the value of the three-dimensional data provided by the SRTM mission in helping customers visualize their information space. "Just think of the wonderful uses that will be available for both scientific and academic and military communities—rapid terrain visualization, the capability for 3D visualization, modeling and simulation," said NIMA's Director.

In fact, more than 200 military systems depend on terrain elevation data. Used in these systems, it allows the decision-maker in Washington, the commander-in-theatre or the operator on the ground to share a common, three-dimensional view of the operational area, without being there. For military planners, the ability to visualize the terrain gives commanders an unsurpassed situational awareness and tactical advantage, especially when elevation data is fused with digital maps or current imagery and overlaid with other intelligence or operational information.

For aircrews, the elevation data can be used in mission planning, flight simulation and mission rehearsal systems. With imagery fused to the elevation data, pilots can plan to use terrain to shield them from enemy air defenses, radar and visual observation. They can plan and actually rehearse the routes they will fly on a mission before they step into the cockpit.

NASA Associate Administrator for Earth Science Dr. Ghassem Asrar described the value

of the mission to the civilian community. "For the first time, we are trying to build a three-dimensional structure of our home planet from space," he said. "This digital information could be used for areas such as vital resource management, understanding of natural hazards, and also for managing the cities."

Release of SRTM Data

An exciting aspect of the mission is that none of the SRTM data will be classified. The near-global DTED® Level 1 will be released as a public sales item, as will DTED® Level 2 data over the Continental United States and strip image data worldwide. NIMA and NASA will cooperate to facilitate scientific access to the

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DTED® Level 2 data outside the Continental United States.

"Just think about it, 90-meter post-spacing elevation data worldwide, a near worldwide global data collection set, and 30-meter post-spacing over the United States," said King.

The release of the 90-meter data worldwide represents a major milestone for the civilian community and commercial industry that has been anxious for this quality of data. The public currently has access only to 1,000-meter resolution data.

"How exciting it is to see the unprecedented amount of high resolution data that the SRTM mission will provide for scientific, academic, public and military use," said King. ❖

Frustration, Rainy Weather Mix in Shuttle Delay

by Don Kusturin

The space shuttle Endeavour, secured to the giant rocket at Cape Canaveral, was poised in the familiar pre-launch position, its nose pointed skyward. Overhead, low clouds and mist loomed over the spacecraft and rain pelted its hull and windshields. Inside the craft, six NASA astronauts remained strapped to their seats, patiently waiting. The countdown had been stalled for nearly two hours. Now it continued, nine minutes and counting.

Jan. 31, the planned day of the launch, had been a long one for assembled NIMA employees, guests, journalists and NASA ground personnel. Anticipation was guarded. Observers waited patiently in the distance, many braving the wind and rain with umbrellas and jackets, others watching from cars. In the control room, south Florida's dismal weather was constantly being monitored and systems checked and rechecked.

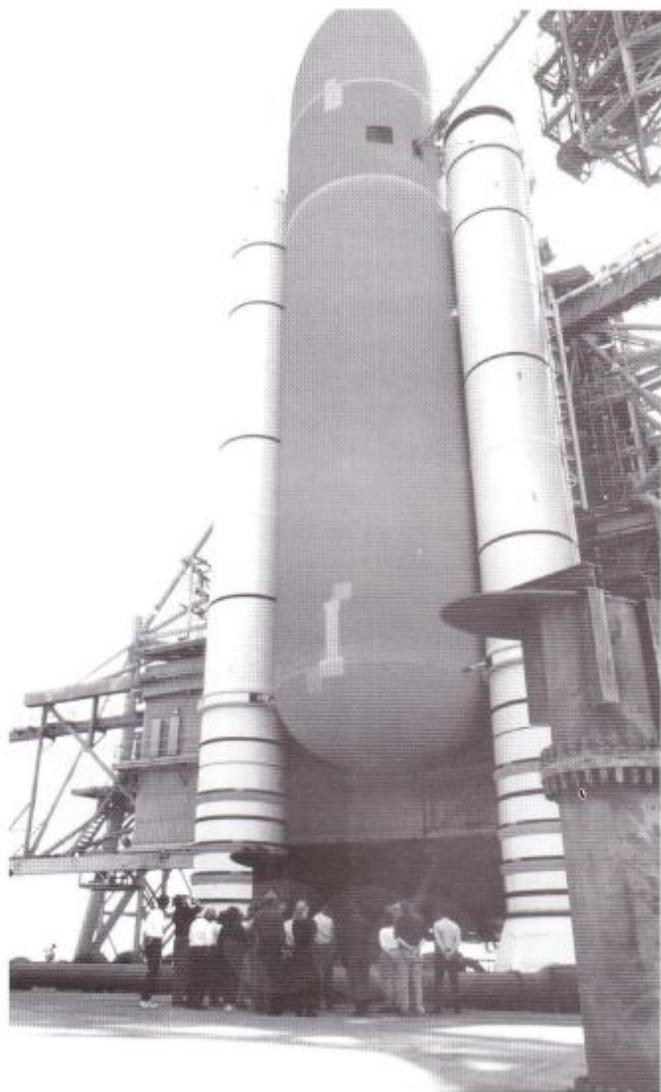
Then, with minutes to go until liftoff, the countdown suddenly ceased and the launch was scrubbed. It was over, at least for that day.

It seemed it was the last of the day's frustrations. The launch's sporadic countdown had been delayed for nearly two hours before resuming and stopping. The culprit was not so much the weather, NASA officials said, but the malfunctioning of a crucial signal relay—one of two identical units designed to play a key role during a shuttle's 8 1/2-minute climb into orbit. The devices route computer commands needed to ignite the shuttle's twin solid rocket boosters and then jettison them two minutes into flight.

The problem, at press time, was corrected.

Mission managers had counted on replicating the problem during overnight testing. Doing so was considered critical to clearing Endeavour for a successful launch.

As launch time approached, anticipation and frustration grew at the Kennedy Space Center's (KSC's) Visitor Center—anticipation of seeing an



Photos by Don Kusturin

NIMA employees are dwarfed by the massive size of the shuttle booster and solid fuel rockets.

event most had only viewed on television, frustration because the causeway, a small strip of highway, where people with car passes could view the launch also had been closed.

NIMA guests had made their way to the Visitor Center to watch the liftoff of the Agency's own Shuttle Radar Topography Mission. Many were cautiously optimistic about the event taking place near the projected launch time.

"We're hoping to see the shuttle go up today," said Dave Kovar, a St. Louis cartographer. "I'm a little disappointed that we've got to watch it from here at the Visitor Center, but it happens."

In an earlier briefing, he heard that a move from the causeway to the Visitor Center had only happened once before. And though the rain and cold weather were annoyances, Kovar said he was still glad he came with his wife Jennifer and daughter Lindsey.

"We're going to Disney World after the launch," he said. "And we spent yesterday at Cocoa Beach swimming and watching the Rams win."

A good day for both he thought.

Bethesda's Mike Anderson and his wife Mary had decided this was an important event for their children, Eric, Heidi and Laura.

"We decided to take the kids out of school to see this," he said. "We left the Washington area Saturday morning and drove all day, getting down here Saturday evening."

To help his children understand what they were about to witness, Anderson spent Sunday with his family at KSC learning about America and the exploration of space.

"We took a tour yesterday and went through all of the displays," he said.

Unlike the Kovars who were taking time to visit other tourist attractions, the Andersons were in Florida only to see the mission and would be leaving once it was over.

"This is what we're sticking to," Anderson said.

Paula Alexander, from Reston's Systems and Technology Requirements Office, and her husband John spent the weekend filling their children's time with Mickey Mouse and the others at Magic Kingdom and Animal Kingdom.

Even though they were prepared for bad weather—Paula was wearing two coats—

they, too, were disappointed about not seeing the launch from the causeway. However, Zachary and Cassidy seemed more interested with good-natured mischief at the Visitor Center than what would have been a historic launch for the Agency.

"At seven and three, they're excited about the trip in general, but they don't understand the significance of the mission," said Alexander.

They, like the other NIMA employees, spent the morning buying souvenirs and wandering the exhibits at the Visitor Center killing time and trying to stay warm and dry.

Although many people traveled with their children, some took advantage of the chance to have time to themselves. Tom and Trinket Troy were the first NIMA employees at the KSC Visitor Center on Saturday to pick up their viewing passes and make plans for tours on Sunday.

Tom, a Plans, Programs and Analysis employee, spent several years working finance issues in getting NIMA ready for the launch. He said he took pride in seeing the mission coming so close to reality.

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Trinket and Tom Troy are the first from NIMA to pickup their launch viewing passes at the KSC Protocol Office.

Making the Most Out of Performance Planning

by Sue Meisner
Human Resources

Performance planning not only defines performance expectations for employees and matches performance goals with NIMA's mission, it's a useful tool for aligning those goals with employee development.

Done properly, it helps employees work more effectively and, at the same time, can help them achieve their professional goals.

"The performance management process begins with the individual development plan (IDP) and progresses through four steps," said Kelly Bermel, a Bethesda information services occupational counselor. The first step is developing the performance plan. Next is performing a midpoint review. If deficiencies are noted, step 3 is to address the deficiencies. The final step is to complete a performance evaluation.

"Most NIMA employees have completed their *WORKFORCE21* IDPs and received and discussed their performance plans with their supervisors," Bermel said. "Some may even think they're done for the year. But the IDP isn't a static document—you don't have to wait until next year to change it." In fact, she added, the IDP should be versatile, reflecting opportunities and goals that develop during the year.

Jim Brunger, acting *WORKFORCE21* performance management lead, recommends the *WORKFORCE21 Performance Management Desk Guide*, which employees received in training last year. "It's the employee's vehicle to outline career goals and strategies for achieving them," he said. "It outlines the steps in completing the IDP and performance plan, as well as who does what and when."

Not Really New

"The basic principles are not really new," said Mike Rodrigue, a deputy division chief in NIMA's Central Imagery Tasking Office (CITO). "We've simply formalized and documented the process and have made it easier for employees to understand."

The current IDP updates previous NIMA individual development plan procedures. "Past IDPs," Bermel noted, "were not utilized as well." The new forms are easier to fill out and tie in more directly into the performance plan.

"The new IDPs got a lot of people thinking about where they want to go. There was not a lot of movement within the agency in the past, but people didn't think of the impact on their long-term careers—that they're in charge of where they'll

end up."

The IDP process was a positive influence on Gwen Hinton, formerly a CIA Affiliate secretary in CITO. "*WORKFORCE21* made me look at where I was professionally," she said. "I'd been in my job six years and had no place to go." She set a goal that, by year's end, she would be a grade higher than she was. "The IDP process required that I put my goal down on paper. I didn't just sit there waiting for the promotion to happen. I realized I was in charge of my own career."

Now a secretary with the CIA's Arms Control Intelligence Staff, Hinton met her goal and received the promotion.

Paige Shoger, a library technician in the Information Services occupation, also has a



success story. "The IDP got me thinking about my short- and long-range goals," she said. "Putting them in writing helped me solidify them."

Shoger's goal was completing her master's degree in library and information science. She had been taking classes at night, but was looking for a chance to concentrate on her degree full-time. Applying for *long-term full-time training* was her vehicle. She is currently attending the University of Missouri for one year.

"I'm glad that NIMA's encouraging us to set and document our goals," she said. "And it's good to know our goals are important to the agency, too."

Something Totally New

"I wanted to learn something totally new," said Tim Held, a data extractor in the Geospatial Information and Services Office. A member of the cartography occupation, he wanted a broader perspective of the job flow at NIMA. He's now in the first few months of a one-year developmental assignment in Information Services.

"My supervisor was helpful and made sure I got where I wanted to go," he said. "As a data extractor, it was my job to produce the [mapping] product. Now I work in customer service, retrieving data for customers from the cartographic database and shipping it to them. I'm glad I turned in my IDP and made a move to learn something new."

Bermel offers some pointers to employees completing their IDPs. "Ask yourself what your goals are and how you're going to achieve them. Refer to your occupational guide for possible training, education and rotational assignments."

Preparing the Performance Plan

In the performance plan, the supervisor details the critical elements (what the employee is expected to do), the performance standards (how well the employee is expected to perform the elements) and the weights (the

Performance Management Process

1. Complete Individual Development Plan (IDP). IDPs should be versatile, reflecting opportunities and goals that develop during the year.
2. Perform midpoint review. The supervisor details the critical elements, the performance standards and the relative importance of each critical element.
3. Address identified deficiencies.
4. Complete a performance evaluation.

relative importance of each critical element). The occupation guides contain suggested critical elements and performance standards. The supervisor not only must provide the written performance plan, but discuss with the employee his or her performance expectations.

"If there's disagreement," said Rodrigue, "this is the opportunity to talk through it. Priorities need to be worked through and agreed upon."

He emphasized that although the performance planning procedures aren't new, "*WORKFORCE21* ties the processes together and gives us the tools to make them work." Supervisors, he said, have to accept the fact they might have to let employees go elsewhere to gain needed skills, but that rotational assignments are an investment in the future.

IDPs are separate from, but linked to, the performance plans, Brunger said. "Supervisors need to see if the employee's career goals from the IDP can be folded into work assignments and the performance plan.

"Performance planning under *WORKFORCE21* is really not so different from the past," said Brunger. "It's always been the process of defining expectations. Under *WORKFORCE21*, we're just trying to do a better job of it." ♦

Enterprise Licensing Program Reduces Costs For Obtaining Commercial Software

by Muridith Winder

A program instituted last year already is reaping benefits for NIMA. Contracts sponsored by the NIMA Enterprise Licensing Program (NELP) allow NIMA to corporately take advantage of bulk buying in the area of commercial-off-the-shelf (COTS) software.

"Consolidating like software requirements from multiple NIMA programs allows us to negotiate lower prices on the higher quantities of software," said Dan Collins, Program Manager for Enterprise Licensing. "We also can redeploy returned licenses corporately across NIMA."

Collins has been participating in the Department of Defense Enterprise Software Initiative where NIMA can benefit from adding its quantities of software purchases to DoD's quantities for even greater savings. To ensure NIMA personnel are not duplicating software purchases, Collins has been named as NIMA's single point for coordinating all NIMA software purchase requests.

The program has netted savings ranging from hundreds of dollars to individual customers who were buying software on credit card to millions of dollars on major NIMA programs. "Coordination has really picked up as the word gets out that we are saving you money," Collins said.

Although the NELP has sufficient licenses for the more commonly used desktop software, data calls have gone out to all offices to find out how many licenses are needed for software under negotiation.

For those products which the NELP has a contract and license, the NELP handles all costs, including updates. If a contract is available but there's no NIMA license, individual offices must fund and buy the software; however, the NELP will provide for maintenance. For software where there's no contract or license, the office needing it must get Collins' approval to pur-

chase the software and the office will be responsible to maintain it.

"A simple e-mail message with justification can take care of that," Collins said. "I'll send a reply granting permission to buy it. Without this permission, the desktop maintenance people won't install the software on the computers." A web form has been established at http://osis.nima.mil/SC/public/SoftwareRequestFiles/excepted_form.htm to assist with these requests.

"Another benefit of coordination," Collins said, "is that we are able to see NIMA's software purchasing trends and can add a software title to an enterprise contract if the quantities warrant it."

Key enterprise agreements are broken down into six basic categories. If you have a specific question about one of the categories, call the point of contact listed below. ♦

Enterprise Agreement POCs

Desktop/server products

Dan Collins 703-264-7265

Oracle products

Norbert Pink 703-264-7018

Sybase products

Norbert Pink 703-264-7018

Informix products

Dan Collins 703-264-7265

ESRI products

Wes Neal 703-264-3034

ERDAS products (Under Negotiation)

Norbert Pink 703-264-7018

For more information about the NELP, contact Dan Collins via e-mail or at (703) 264-7265.

Lodholtz Receives Energy Award

by Jim Mohan

A NIMA employee won the top award presented to federal employees for outstanding contributions toward increased energy efficiency, renewable energy and water conservation in the Federal sector.

Mark Lodholtz, an engineering technician in Mission Support's Operations and Services Branch, received the 1999 Federal Energy and

energy manager, Lodholtz established an energy management team and developed operations and maintenance activities to reduce energy consumption and costs. He developed an ambitious communications plan to increase energy awareness and inform the workforce about the NIMA's energy program.

Lodholtz was also cited for his efforts to

reduce NIMA's energy consumption. He proposed the purchase of new equipment and changed operating techniques to increase energy savings. Through his efforts, NIMA's St. Louis fiscal 1998 total energy consumption was reduced by 12 percent compared to fiscal 1997.

Lodholtz received a letter of congratulations from Senator John Ashcroft (R-MO), complementing him on his award.



Lodholtz, (center) with his wife, Robyn, and Thomas Burton, deputy director of Mission Support, who presented the award.

Water Management Award for Exceptional Service. His energy management program reduced energy consumption and saved NIMA approximately \$173,000. The award, from the Federal Interagency Policy Committee and the Department of Energy, was developed to focus attention on federal energy and water conservation efforts. The federal government is the nation's largest energy consumer, with an annual energy bill of more than \$8 billion.

Lodholtz was recognized as the primary developer of the NIMA St. Louis energy management program. After his certification as an

"I take great pleasure in joining the Department of Energy and the Federal Interagency Energy Policy Committee in extending to you congratulations on receiving recognition in 1999 for your untiring efforts and outstanding achievements to increase efficiency and water conservation.

"The high standards signified by your award are a tribute to your hard work in saving energy, promoting a cleaner environment and creating a stronger economy," Ashcroft said. ♦

Imagery and Geospatial Challenges of the 21st Century

by Denise Droneburg
Deputy Chief, Integration and
Assessments Division, Customer
Support Office

"The forgotten, unsung component to information superiority is the common operating picture. I am concerned that as a digital information provider, we've moved out in front of our customers."

This is just one of the remarks made by NIMA Director Lt. Gen. James King at the fourth annual NIMA Customer Conference, held Nov. 3-5 at the National Reconnaissance Office's (NRO's) Jimmie D. Hill Conference Center.

In Kosovo, King said, NIMA provided classic 20th century support—12 million maps, 1,200 target graphics, 1,000 Imagery Derived Products—with 21st century digitized information. "The problem," King added, "was that there were not enough people in the field who knew how to use the [digital] information because they weren't trained adequately. Technology is not the problem. We need smart people, and we have to train them."

Addressing more than 350 imagery and geospatial community representatives, King outlined NIMA's perspective of imagery and geospatial challenges during times of crisis, specifically highlighting the Agency's support during recent events in Kosovo. He praised

the Agency's innovative PC-based map database "NIMA-in-a-Box" as providing low cost, seamless access to imagery and geospatial information using commercial technology (see "NIMA-in-a-Box Huge Success in Operation Allied Force," July issue). But now, he said, as the functional manager, NIMA needs to work in partnership with the military to move forward in determining how best to integrate NIMA-in-a-Box into routine operations.

Dr. Anita Jones, co-chair of the Defense Science Board Task Force on NIMA, presented the keynote address. The task force was formed to review NIMA plans to meet national and military information needs into the 21st century. Her approach, she said, was to consider imagery and geospatial information as one system and recommend specific actions to strengthen existing capabilities.

In the future, Jones said, information superiority will be based on innovative exploitation of data and high velocity delivery of information, with some exclusive collection. She

focused on NIMA's efforts to develop a tasking, processing, exploitation and dissemination (TPED) architecture. She said the TPED modification plan is a good first step, but cautioned that timelines "must be fast enough to react to the actions of our adversaries and...incorporate all sources." She recommended developing an advanced architecture that describes not just communications and storage but the system's properties. She also recommended that the Agency "evolve to a smaller, elite mission-driven organization." More NIMA people should be deployed to the field, she said, and the number of service people at NIMA should be increased. Other suggestions for



Dr. Anita Jones

NIMA include the establishment of a Deputy Director for Modernization and a workforce with enhanced systems engineering competency—not relying solely on contractors to perform system engineering for the Agency.



Customer Support Conference attendees had ample opportunity to view NIMA products.

"NIMA cannot afford to fail at either operations or modernization," she said. Commercial capacity to meet U.S. imagery needs is rapidly increasing. She urged that NIMA nurture the commercial industry and "set aggressive outsourcing goals. NRO should collect only that which cannot be procured competitively from commercial. There will be a commercial industry—we need to ensure that it's U.S."

Many of Jones' observations were echoed throughout the day by a distinguished lineup of guest speakers. One was Navy Rear Adm. Thomas Steffens, Director of the Intelligence and Information Operations Center, U.S. Special Operations Command (USSOCOM).

Steffens discussed the challenges of the Post-Post Cold War era and the future trends for proliferation, terrorism, asymmetric warfare, information warfare, and advanced technology. He said NIMA technical representatives at the combatant command level were the "best idea since sliced bread." He offered alternative views from an information warfare perspective on various issues and challenged the audience to question even the most basic assumptions when confronting complex issues.

Dr. William B. Wood, Director of the Office of the Geographer and Global Issues, Department of State, addressed the cultural differences between defense and diplomatic agencies. State Department officials, he said, "like maps, but they

love words." Crisis driven, they are accustomed to *responding* to events rather than *preventing* them. He also described how geographic information systems (GIS) played a critical role in Kosovo repatriation efforts. GIS, he said, helps create a common "geographic information" platform, enabling data sharing among a variety of agencies engaged in distinct but complementary missions that support the safe return of Kosovars.

Wood stressed how repatriation planners need to know, in real time, likely complications affecting returns and conditions at destinations. GIS, as a planning tool, he said, can help sort through myriad layers of data and help focus on key repatriation problems.

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Foreign Clearance Guide Transferred to USAF

by Howard Cohen
Marine Navigation Department



Bernita Lambert (left) and Kathryn Moylan

NIMA's Foreign Clearance Guide, published by NIMA and its legacy organizations since the 1950s, was officially transferred to the U.S. Air Force in November. It was managed by the Marine Navigation Department and provided information from foreign countries on entrance requirements for Department of Defense personnel and aircraft.

"We were in Pentagon City with an office of five, including a supervisor, editors and us, as editorial assistants," said Kathryn Moylan, who describes herself and coworker Bernita Lambert as the "last of the Mohicans." Retirements and buyouts, they explained, thinned out the office, but she and Lambert remained responsible for producing the Foreign Clearance Guide.

Now the Guide is no longer considered NIMA core business.

There are four regional areas that provide worldwide coverage, North and South America, Europe, Africa, and the Pacific. Three times a year each regional book was updated.

Both Lambert and Moylan have been involved with the program for the past 12 years and, according to Lambert, "We've never missed a deadline."

Retired Air Force Master Chief, Dale Cheney, who oversees the Foreign Clearance Guide for the Air Force said, "NIMA, and particularly Ms. Lambert and Ms. Moylan, did a superb job maintaining the Foreign Clearance Guide under government downsizing." Today, the Guide can be viewed on the Internet.

Now that NIMA is relinquishing the Guide, Lambert and Moylan are looking forward to new career opportunities at NIMA. Said Lambert: "We're training to be Marine Analysts!" ❖

Photo by John Iley

DISES Appointments

Dr. Robert H. Laurine Jr., deputy director, Technology Office, Systems and Technology Directorate, has been appointed to the Defense Intelligence Senior Executive Service (DISES). He previously served in the same capacity as a Defense Intelligence Senior Level (DISL) employee.

Kim A. Robson was appointed as chief, Exploitation Systems Division, Systems Office, Systems and Technology Directorate. She previously served as deputy chief of the Middle East and Africa Division, Imagery Analysis Office, Operations Directorate.

John J. Ott was appointed as chief, Systems Engineering Division, Systems Office, Systems and Technology Directorate. He previously served as the director of Mapping and Remote Sensing Systems, Imagery and Geospatial Systems Division, Raytheon Systems Company.

David E. Rogers was appointed scientific advisor for Digital Photogrammetry, Technology Office, Systems and Technology Directorate. Rogers previously served as the

Senior Engineer assigned to the Technology Office, Systems and Technology Directorate.

SIS Appointments

NIMA Director Lt. General James C. King announced the following Senior Intelligence Service (SIS) appointments, effective Jan. 2:

Roy M. Combs to the SIS position of Deputy Chief, Management Systems Division, Systems Office, Systems and Technology Directorate. Combs previously served in this position at the Band V level.

McAdo Schuler, Deputy Director, INTELINK Program Office, Systems and Technology Directorate, Central Intelligence Agency (CIA). Schuler previously served as a Project Management Engineer in the Technology Research and Development Division, Technology Office, Systems and Technology Directorate, NIMA.

Patricia L. Cribb, Chief, Replication Division, Information Services and Training Office, Operations Directorate, to the SIS level 02.

Pamela Hockaday, Chief, Technology Plans and Programs Division, Technology Office, Systems and Technology Directorate, to the SIS level 02. ❖

NIMA Welcomes New Aussie Exchange Officer

Maj. Matthew (Matt) Jackson has been appointed the Australian Army Exchange Officer to NIMA for 2000-2001. He replaces Maj. Steve Hledik, who returned to Canberra after three years at NIMA.

Jackson, a graduate of the Australian Defence Force Academy and the Royal Military College, is assigned to the Royal Australian Engineers and holds degrees in computer science and geographic information systems. A 12-year veteran, he has served in topographic engineer units involved in map production and field support.

Jackson previously served as the procurement officer for a tactical digital topographic support system, earning the Conspicuous Service Medal for his work in bringing this system into operation. He has also served with the British Army and attended the Defense Mapping School. Jackson arrived at NIMA immediately following active duty in the International Forces in East Timor (INTERFET). He will spend his time at NIMA as a Staff Officer on the Army Customer Support Team.

Linking Plans to Resources: NIMA's Crown Jewel

“NIMA’s program development is one of our crown jewels. Our overseers in the Intelligence Community praised our work as the best intelligence program submission in the community. Our fiscal 2001-2005 POM and Intelligence POM make our strategic plans a reality.”

Lt. Gen. James C. King

It takes considerable resources to deliver a wide range of services to customers world wide, but how does NIMA define its resource requirements? Who determines what’s the most and least important?

“NIMA has a process that links plans to resources and underpins it all with real analysis,” said Patti Garland, of the Office of Plans, Programs and Analysis (PA). “The key planning document for the agency is the Strategic Plan, of course, which is the driving force for everything that follows in programming and budgeting.”

Programming is the process of translating plans and guidance into detailed initiatives, or projects, with specific funding requirements. The NIMA program consists of two key documents—the Program Objectives Memorandum (POM) and Intelligence Program Objectives Memorandum (IPOM).

“The POM and IPOM,” Garland said, “represent the building blocks that determine the shape and scope of NIMA in the future. They translate the agency’s diverse requirements into tangible programs with dollars attached that eventually become NIMA’s budget.”

Donna Burrows, branch chief for Program Development, said NIMA receives its funding from two distinct sources: the Department of Defense, through the Joint Military Intelligence

Program (JMIP); and the Director of Central Intelligence (DCI), through the National Foreign Intelligence Program (NFIP). NIMA submits its POM to DoD (Office of the Assistant Secretary of Defense, Command, Control, Communications and Intelligence) and the IPOM to the DCI (Community Management Staff).

NIMA-Wide Involvement

Preparing the annual POM and IPOM involves the entire NIMA leadership and staff from every directorate. “Developing a comprehensive program that spells out where we are taking the agency, and the financial resources required to achieve that, requires a tremendous amount of expertise,” Burrows said.

Building the POM and IPOM is a major undertaking. In fact, NIMA recently received high marks for a well-prepared and comprehensive program from both the DOD and DCI offices responsible for intelligence program oversight. “More important than those kudos,” she added, “is the fact that NIMA has a solid program that strongly positions our agency for the future.”

In Operations (DO), significant progress is expected over the next five years toward an Imagery and Geospatial Center of Excellence. This will help transition the agency’s cartographer workforce to geospatial analysts as a core occupational specialty.

In Systems and Technology (ST), funding is aligned to deliver the highest priority systems to manage requirements and to process, analyze and disseminate imagery, imagery intelligence and geospatial information. It also provides the systems, applications, tools and capabilities necessary for imagery and geospatial analysts worldwide to work with common, interactive tools that aid collaboration and sharing expertise.

Finally, Garland said, NIMA's success depends on developing and maintaining a world class workforce and the infrastructure to support it.

"The program assures that we will have the resources to build and sustain that workforce by getting the right people, training, leadership, services, facilities, security and logistics," she said. "And, we have requested a significant increase in funding for mission training." This increase, she said, will support the modernization of instructional programs, courseware delivery and infrastructure to provide training in advanced analysis and in new systems and tools. The program also provides for implementation of *WORKFORCE21* to ensure a human resource system that supports evolving mission needs and promotes compatibility and interoperability with the Intelligence Community.

"NIMA has the toughest job in the community," said Rob Zitz, director of the Initiatives Group. "We must continuously support national

A-76 Studies

Continued from page 5

ity clearance. Ancell said the exception are documents classified as procurement sensitive which pertain to actual procurement matters. "These documents are restricted in order not to allow a private contractor to have an advantage over other private contractors or the federal government's most efficient organization development effort."

Ancell believes keeping employees informed will go a long way to preventing rumors and creating fear. "We must do to everything we can to get the word out regarding the status of the NIMA A-76 Competitive Studies.

He urges employees to review the FAQs often. A review of the published answers, he said, could generate additional questions. "But our intent is to encourage employees to ask questions. We will get them the answers."

policymakers, military commanders and civilian users of our products and services, in peace, crisis and war." NIMA's work touches virtually everyone, he said.

Zitz said NIMA also must simultaneously maintain legacy systems while developing and migrating to a new digital, high tech environment.

"We are doing tremendous work with less than adequate resources," he said, "and very hard choices must be made all the time. We believe our annual POM and IPOM process help make the right choices for our future." ❖

Customer Support

Continued from page 15

Charlie Allen, Assistant Director of Central Intelligence for Collection, spoke on "Collection Strategies to Meet Intelligence Challenges." He said he believes collaboration is the "survival tool of the millennium" and bases his vision around that theme. His vision is "a commitment to collaborative, cross-discipline solutions that will optimize current and future collection resources and deliver a decisive information advantage to consumers."

NIMA representatives conducted 15 technical workshops with detailed interactive discussions on topics including the National Exploitation System transition; Shuttle Radar Topography Mission status; targeting myths and realities; and the Commercial Imagery Program. The conference also included 12 demonstrations showing customers where NIMA is using new technology or creatively applying existing technology.

Many presentations were videotaped and will be scheduled for viewing by the NIMA workforce as part of the InReach program. Watch for InReach program e-mail announcing dates, times and locations. Copies of the presentation slides are available via the Customer Support Office home pages on OSIS, Intelink(S), and Intelink(TS). For additional information, contact Denise Droneburg, the conference coordinator, 301-227-5050. ❖

In Memoriam



Gerald (Jerry) Schuld, 56, a branch chief in the Data Generation Division (DGW), died Dec. 13 following complications with Parkinson's Disease. He had worked for NIMA and its predecessor agencies for nearly 35 years.

According to Clay Ancell, head of NIMA's Commercial Office, Schuld took his work seriously, from entry-level cartographer to department head, and understood his role in support of the Agency and his people.

"The thing I remember most about Jerry as my boss, my coworker, my employee, and always foremost, my friend," said Ancell, "was his unwavering loyalty, dedication, and concern for his country, family, church, friends, his work, and the people who worked with and for him. Jerry was blessed with good common sense, a good sense of humor, and an intuitive sense to do the right thing. He consistently followed all those good senses in all aspects of his life."

Known for his positive attitude—even in illness—as well as his creativity and his sense

of humor, Schuld was an accomplished and entertaining storyteller. "He could usually be found bending someone's ear with his spin on life and office politics," said long-time friend Jim Jackson. "In fact, people usually found their way to Jerry to be charmed by his unique views, as well as to compare notes on favorite restaurants, which was a particular passion of his."

Schuld's friends and coworkers describe him as kind and thoughtful, with a friendly, happy-go-lucky streak. Another of Jerry's friends, notes that Jerry was ordained as a deacon in the Catholic Church. In this capacity, among other projects, he was very active with baptisms and working with the Boy Scouts.

"My friend Jerry Schuld left behind a legacy of positive influence," Ancell said. "He was a patriot, a loyal and respected leader, a mentor for his employees, a dedicated husband and father, and a leader in his church and community. I considered Jerry to be a role model for all the important things in life, and I know that Jerry's influence on all of us will not be forgotten."

Retired Army Capt. **Donald Ivan Abbott**, 76, who joined the Defense Mapping Agency (a NIMA predecessor), in 1962, died Jan. 15 at Bethesda Naval Hospital following a heart attack. He was with DMA 19 years. Born in Belpre, Ohio, he was a 20-year veteran with the U.S. Army, serving with the occupation forces in Germany after World War II and two tours of duty in Korea during the conflict there. When he retired from DMA in 1981, he was Director of Communications and Administration. He is survived by his wife, Anne; four children, a sister and 10 grandchildren.

NIMA Imagery Analyst Team Provides Onsite Support to

by Don Kusturin

Since its standup three years ago, NIMA has made customer support its top priority. One initiative that's proven to work is assigning imagery analysts to various commands. That's the word at the U.S. Space Command (SPACECOM), Colorado Springs, Colo.

"I think since NIMA's standup, the agency has pulled all stops to help the commands at large," said Air Force Senior Master Sgt. Gene Robinson, chief of SPACECOM's Combined Imagery Exploitation Facility at Peterson Air Force Base, Colo. He supervises the work of five NIMA imagery analysts, a team the command needs to fulfill its imagery mission.

"We're responsible for reporting indications and warnings for launch events, as well as watching worldwide terrestrial space-related facilities," Robinson said. "That includes anything that communicates with a satellite—tracking, data reception and control."

Fully Integrated

"We're fully integrated into the day-to-day operations," said NIMA's Patricia Silber. "We write reports on a daily basis and we augment the night shift, which writes the Indications and Warnings reports." Silber, like the other NIMA analysts, spent several years in the military in the intelligence field. Her 16 years as an Air Force imagery analyst give her a broader perspective.

NIMA imagery analyst Dawn Chute agreed and added that the complexities of the command level analyses constantly provide new challenges.

"It's like doing puzzles nonstop," she explained. "It's rewarding and has a real function. And I feel I'm doing something important."



NIMA Imagery Analysts, Steve Franklin and Pat Silber, discuss imagery at USSPACECOM.

The newest member of the team, Steve Franklin, said the team's emphasis on SPACECOM's mission makes it more customer-oriented.

"We provide the conduit for information flow between NIMA and SPACECOM," he said. "And being joined geographically benefits us as well as the customer. Being located elsewhere would make overlooking something more likely."

In the Command's Best Interest

Since each of the people working for him can be assigned as needed, having the NIMA imagery analysts at hand makes it easier for Robinson to get to know them and take advantage of their areas of expertise.

"Nothing is out of bounds," he said. "We have 11 geographic areas worldwide and I assign at least one analyst to each area. If an analyst has an interest in a specific area, I try to accommodate them. Conversely, if a person is very good at satellite control sites, one month they may work in one area and next month do the same thing in a different geographic section." ❖

NIMA Employee Uses Heimlich Maneuver to Save Choking Victim

by John Iler

Security administrative specialist Bernie Cole was talking to the access control officer on the loading dock of Bethesda's Ruth Building on Dec. 17 when she and others noticed cleaning contractor Mike Moten suddenly clutching his throat and trying to cough.

"We could see something was wrong," said contractor Michael Brucks, who was standing next to Cole at the time. "Mike was coughing and spitting, and he indicated that he was choking." Both he and Cole moved towards Moten to render assistance, but Cole reached him first. Stepping behind him, she performed the Heimlich Maneuver. Within seconds, a piece of hard candy in Moten's throat was dislodged and he was breathing again.

"He was turning red and pointing at his throat," Cole remembers of the incident. "I yelled for someone to call 911 and kept performing the maneuver until his throat was clear."

Minutes later, NIMA's Emergency Medical System (EMS) team responded, but by then, Moten was breathing normally and the crisis was over.

"In checking with Mr. Moten," said Lt. James L. Brunson, a NIMA security



Bernie Cole

Photo by John Iler

guard in his report of the incident, "he stated that he was okay and did not need further assistance. Members of the EMS team also checked Mr. Moten and indicated they did not observe any additional medical problems."

The Heimlich Maneuver was conceived by the famed Cincinnati thoracic surgeon, Dr. Henry Heimlich, in 1974. Since that time, it has become one of the mainstays of cardiopulmonary resuscitation (CPR) courses worldwide. The maneuver is performed by standing behind the victim (if conscious), making a fist with one hand and covering it with the flat of the other hand. With the elbows out, the fist is pulled inwards and upwards into the victim's abdomen about an inch above the navel. This

thrust should be performed repeatedly and may be required up to six times before positive results are obtained.

Heimlich believes the maneuver also works on drowning victims, clearing the lungs of water and stimulating the heart and respiratory system—though many CPR professionals, including the American Red Cross, believe mouth-to-mouth resuscitation is superior. Even so, increasing numbers of drowning victims are being revived by Heimlich's maneuver—some by children who have seen the maneuver demonstrated on television.

When asked where she learned the Heimlich Maneuver, Cole credited a CPR course at NIMA. "Every year, a free CPR class is offered and I just attended the class for safety

precautions because I have small children." In the event that anything happened, she added, "I would know what to do until the paramedics arrived."

In reflecting on the incident, Cole is grateful for the course.

"Never in a million years did I think I would have to use the Heimlich Maneuver or any-

thing I learned in the class," she said. "I'm really surprised I remembered what to do. I guess everything happened so fast I didn't have time to think about what was going on. You just react and pray."

For her quick thinking and decisive action, Cole received a Special Act Award and a Certificate of Appreciation.

"Everyone in Mission Support is very proud of Bernie," said Cole's supervisor, Lynn Griffin-Bell. "She's very proud of herself and she should be. She's a very caring and nurturing person. So her action was right in line with her personality."

Heimlich Maneuver: Some Variations

The Heimlich Maneuver has proven itself an effective way of saving choking victims since it was conceived by Dr. Henry Heimlich in 1974. It's simple, easy to remember and has made Heimlich's name a household term worldwide.

But what if a person's unconscious? Or it's an infant who's choking?

The first thing to remember, say CPR professionals, is that a person's airways being clear is the first priority. Even if a person goes into cardiac arrest, any obstructions must be clear before cardiopulmonary resuscitation should be attempted.

Choking victims who are unconscious should be placed on their backs. If another person is present, he or she should call 911. The first step is to open the victim's mouth and use your fingers to probe the throat for an obstruction. Straddle the victim's thighs and place the heel of your hand over his or her abdomen just above the navel. Use the

flat of your other hand to cover the first.

Keeping both arms straight, press down and forward with quick thrusts. After several thrusts, if the object has not been expelled, sweep the throat with your fingers and again check for the obstruction. If the person vomits, turn them quickly to the side to avoid further blockage of the windpipe. In any event, call 911 immediately afterwards and administer mouth-to-mouth resuscitation if the victim is not breathing.

For children, place the child on its back across your thigh and check the mouth and throat. Using two or three fingers of one hand, position your fingers between the tip of the breastbone and the navel. Make a series of gentle inward and upward thrusts (not too much) into the abdomen. Again, if vomiting occurs, turn the child to the side.

The Heimlich Maneuver is as versatile as it is effective. You can even use it to save yourself. In the event something becomes lodged in your own throat,

quickly locate a firm, rigid (preferably nonmoveable) object about the height of your abdomen. Position your abdomen across it between the tip of your breastbone and navel and forcefully press your weight downward. Repeat this motion until the object is dislodged. The edge of a table or the back of a chair can be used to accomplish this.

Besides being beneficial to choking victims—and possibly drowning victims—the Heimlich Maneuver has been found to be highly effective in stopping asthma attacks. The wheezing and shortness of breath in such attacks can be fatal when muscles surrounding the airways contract, narrowing the air passages. Mucus fills the airway and plugs the airways. Even if the blockage is not total, the Heimlich Maneuver can compress the lungs, expelling trapped air and mucous plugs which caused the attack.

NIMA Briefers Score Big During GIS Day

by Sharon Smith

Forty-nine NIMA employees participated in the first National Geospatial Information System (GIS) Day during Geography Awareness Week, Nov. 15-19. NIMA's pledge to educate 1,000-2,000 children was exceeded by more than 100 percent. In St. Louis, 3,996 children at 45 local schools hosted NIMA volunteers. Five schools also participated in the Washington, D.C., area.

The National Geographic Society, the American Association of Geographers (AAG) and Environmental Systems Research Institute (ESRI) sponsored the event to promote geographic literacy in American schools, communities and organizations, focusing on the education of children. Geography Awareness Week also promotes the understanding of geography in schools throughout the world.

NIMA employees Richard Lesage (GIMRS) and Keith Tripp (GIDGB) visited the 5th Grade at Dewey International School of Studies in St. Louis.

"It was great," said Lesage. "I got as much out of it as they did!" Tripp agrees, adding, "It was fun!"

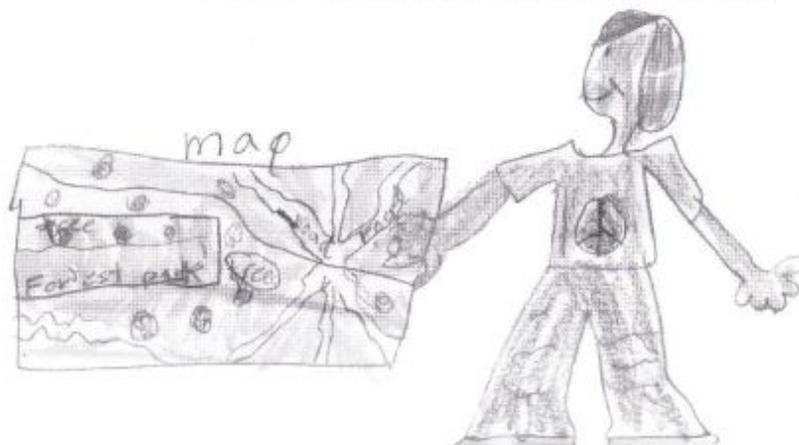
"The day went very well," said Air Force Capt. Doug Beridon (ISCDO). "I talked to about 175 6th graders that day."

In St. Louis, students received handouts of the Papal Route Map—a NIMA project last year that helped the city prepare for the Pope's visit—and teachers were presented with NIMA World Maps for use in their classrooms. Many briefers opted to use materials made available to them through the Congressional and Public Liaison Office. Map packets of NIMA products, including the Escape and Evasion Training Chart, added additional reality to the briefings.

Several employees worked diligently putting together briefings appropriate for the various

grade levels. Liz Hunter (GIDAG) put together one of the most requested briefing packets, "Mapping in Transition," which was presented to middle and junior high school students.

Using a briefing provided by ESRI, Hunter incorporated several old photos of manual mapping techniques, St. Louis flood pictures, and planning maps from the Pope's visit. Hunter not only prepared the briefing, but also did



presentations to more than 900 children during Geography Awareness Week.

"It was fun and exciting," said James Hall (ISRDA), "though I was surprised at the number of tough questions the 4th grade students at Captain Grade School in Clayton asked." Dale Willeford (GIDP) briefed 3rd and 4th grade students at Jefferson Grade School in Collinsville, Ill. "The kids responded very well," he said.

"The kids loved it!" said Carla Perkins-Dumas (GIDP) upon returning from the Pattonville Heights Middle School.

For use in the primary grades, Hunter also updated the briefing, "Me on the Map," originally created by Kathy Wever. The briefing included pages that were given to the teachers for future classroom activities.

Lisa Deen (GIDAJ1) visited a 2nd Grade class at Mesnier Primary School in Affton. "The students had a wonderful time," she said after

class. One little girl approached her saying, "Mrs. Deen, I really liked your stuff today!" she said.

Two employees, Mark Bloomfield (GIDAH) and Chris Ratigan (GIMSC), offered specialized briefings. As a result of his work on the Papal visit project, Bloomfield gave a briefing to several area high schools.

To give the students a new perspective on the practical application of GIS, several high schools requested Ratigan's briefing on mapping for mosquito population and its relation to community health problems. This gave the students a chance to see how GIS is used in solving everyday problems experienced by a community.

Who enjoyed the day more, NIMA employees or the students, is still being hotly debated.

St. Louis presenters included Kevin Alphin (GIDAH5); Cathy Babis (GIMAAC); Duane Benson (GIMRS); Ron Bersett (GIDAH2); Mark Bloomfield (GIDAH6); Bob Butterworth (GIDAD); Bill Carlson (GIDAD); Rich (Paul) Conrad (GIMACE); Tom DeCleene (GIDBG6);

Lisa Deen (GIDAJ1); Jessica Dobberstein (GIMT); Chuck Erpenbach (GIMT); James Hall (ISRDA); Mary Heidbreder (GIMT); William Hinkle (GIDAI); Liz Hunter (GIDAG); Joe Husgen (GIDAI); Harold Israel (GIDAI); Jim Jackson (GIDAG); Richard Lesage (GIMRS); Lisa McCurdy (GIDSD); Christine McMahon (GIDBG); Mike Minicky (MSASH); Jim Mohan (CPPR); Tim Morrison (GIDAH5); Lt Col. Rick Mowrer (USAF, IGW); Chris Nixon (GICA); Gus Piening (ISRR); Carla Perkins-Dumas (GIMGC); Chris Ratigan (GIMSC); Derek Reinertson (GIDBL); Lisa Salvatore (GIDSF); Monica Sharp (ISC); Robert Shaw (GIDAH); Cindy Sim (ISLS); Bill Small (GIDAD); Milda Stone (GIDAI); Pat Tolefree (GIDAD4); Keith Tripp (GIDBG); Dave Wesloh (GIDSD); Mark Whitney (GICA); Dale Willeford (GIDP); and Bryce Wyble (GIMSC).

Washington presenters included Air Force Capt. Doug Beridon (ISCDO); Dan Deguzman (GIDBG); Steve Giovannetti (COTI); Anna Hamann (GIOA); and David Young (GIDAE). ❖

Frustration, Rainy Weather Mix in Shuttle Delay

Continued from page 9

He had passed that feeling on to Trinket, his wife. "It's hard to believe now that we're here and actually seeing things. Seeing it on TV is different than actually being here. Just seeing it all first-hand is very impressive."

Kevin and Denise Vermeulen, geospatial analysts from St. Louis, flew into Orlando Sunday, leaving behind them the aftermath of a winter storm—four to six inches of snow. Denise said they managed to get to their room just in time for the Super Bowl.

Wanting to get a good view from the causeway Monday, the Vermeulens got up early and made their way to KSC. When they arrived at the gate at 8 a.m., they were told they had to watch it from a parking lot just inside the facility. Seeing

no alternative, they parked and waited, and waited, and waited.

At 3:30 p.m., nearly 40 minutes after the launch window expired, they heard on the radio that the launch had been delayed until Tuesday. So they got up early Tuesday and heard the second announcement, that the mission would be delayed until the following week.

"At that point we decided to go to Sea World," said Denise. "We were disappointed, but decided to take advantage of what we could do."

After Sea World, the Vermeulens heard about the planned launch of an Atlas rocket on Wednesday, but when the local news predicted more unreliable weather, they decided to return home. ❖

NIMA Products Help Army Tugboat Navigate To England

by Muridith Winder

An Army Reserve unit in two tugboats made a 4,000-mile-plus journey across the ocean last summer using NIMA products for the first time.

"This is the first Army Reserve tugboat unit to use Digital Nautical Charts (DNCs) and FUND (Full Utility Navigation Demonstration) to



A combination of old and new technology was used on the voyage to England.

navigate across the ocean," said Edwin Danford, NIMA's liaison to the U.S. Navy. Members of the 949th Transportation Company traveled aboard a 128-foot ocean-going tug towing a 100-foot tug from Baltimore to Hythe, England.

Unit personnel used to rely on more time-honored methods such as sextants and charts for navigation. But when Reserve Warrant Officer Charles Gienger got wind of NIMA's products, he put in a call to Danford for assistance.

"Gienger heard about DNC from his neighbor, Margaret Pittman, a NIMA employee," Danford said. "As NIMA's liaison to the Navy, I wanted to see the use of DNC spread to other services." Danford saw Gienger's interest in DNC as the perfect opportunity to introduce NIMA products



Chief Warrant Officer Charles Gienger practices using NIMA's charts and DNC used for his ocean voyage.

and show how they could help ensure clear sailing.

"Using DNC and Global Positioning Satellite (GPS) would help us better track and maintain our route and position," said Gienger, who served as second mate aboard the U.S. Army Large Tug LT-805 *MG Winfield Scott*. "We used route monitoring and were able to zoom in and out on the laptop [computer] display to check our progress."

DNC is a vector database of nautical features replicated from paper charts to support navigation systems and Geographic Information Systems (GIS). Depicted features are thematically organized into 12 categories called "coverages." These include cultural landmarks, hydrography, inland waterways, limits, aids to navigation, obstructions, port facilities, relief and data quality.

"It was very handy when navigating along coastal and inland waters," said Chief Warrant Office Bob Blomerth, the vessel's master. "When we traveled up the Chesapeake Bay, it helped us make quick corrections."

Even when he traveled to unfamiliar waters such as around the Azores, a group of Portuguese-owned islands in the middle of the Atlantic Ocean, he didn't have to worry about doing extensive plotting. He was impressed with DNC's accuracy, coupled with GPS.

"When looking at the computer monitor," Blomerth said, "if you can see the boat approaching or passing a buoy, you can look outside the boat and see the buoy at the same time."

Photo by Charles Gienger



Photo by Charles Gienger

The LT-805 pulls into docks in the Azores.

To get them started, Danford made calls arranging for the tug's use of FUND and DNC. He provided necessary DNC data for their navigation route, gave Gienger information on FUND software and DNC data and requested an engineer be sent from the Navy's Little Creek Space and Naval System Center, Norfolk, Va., to assist with installation of hardware and FUND software on the tug. Danford then supplied

FUND software instruction to the tug's navigation team and continued e-mail and telephone communications with tug support staff during and after the 18-day voyage.

The 23-person crew from the 949th took the tugs to England and left them there for contingency operations. The towed tug was refurbished at Hythe, located in the sprawling port of Southampton, home of the U.S. Army Combat Equipment Base, North Atlantic. The facilities and workforce are tailored to provide maintenance, storage and support of forward-deployed Army watercraft.

The tugboat crew traveled to England by way of the Azores. Averaging 11 knots (approximately 12.5 mph), the crew left the Baltimore area July 10, arrived in the Azores—a 28,000-mile journey on July 21. It departed the Azores July 23 and traveled approximately 1,600 miles, arriving in England July 29.

Although the trip was uneventful, it did prove tricky towing a smaller tug that distance, especially around obstacles. And because the laptop computer loaded with the DNC was so small, it did not take up precious space onboard.

"It was very handy for working in tight, confined areas," Gienger said, "and really helpful cross referencing with the charts." ❖

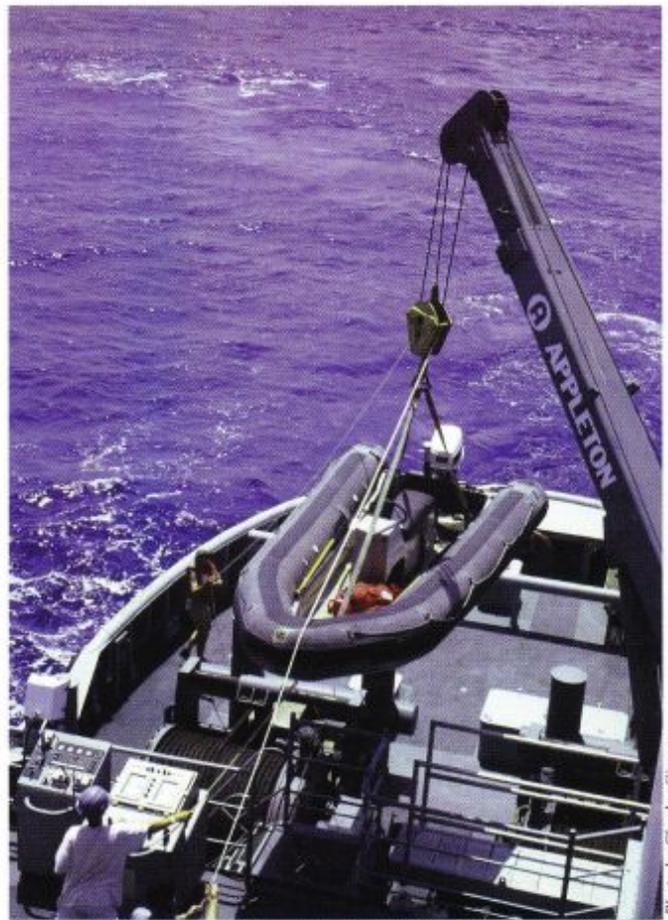


Photo by Charles Gienger

Crewmembers use a rubber dinghy to check the towed tugboat.



VOSS MOKRI KREGEL
GORIE KAVANDY THIELE