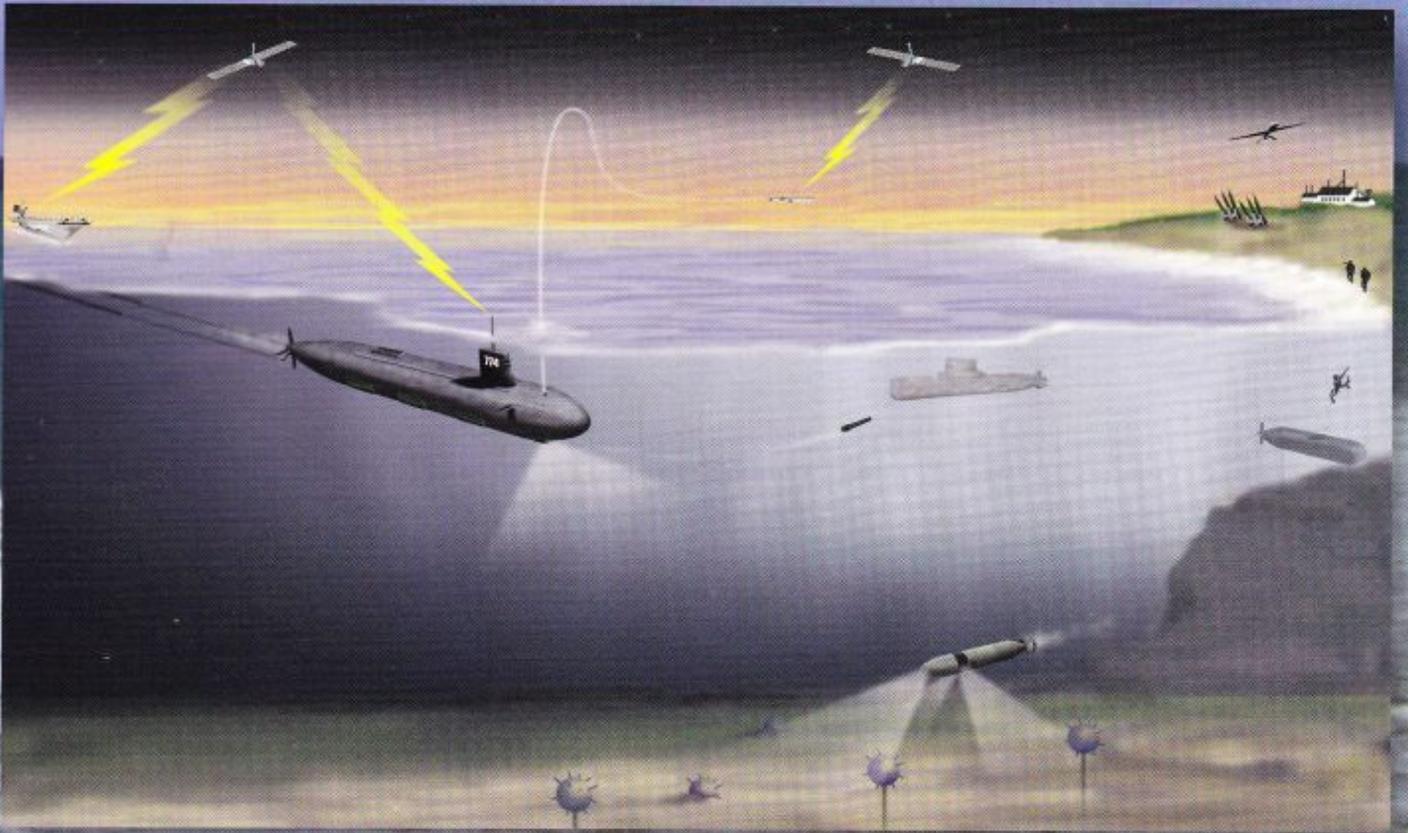


NATIONAL IMAGERY AND MAPPING AGENCY

EDGE

GUARANTEEING THE INFORMATION EDGE
SEPTEMBER 2001



**NIMA Supports the
*Warfighter at Sea***

SEPTEMBER 2001

EDGE

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On The Cover

Ships at sea will soon be receiving digital updates to NIMA's Digital Nautical Chart (DNC®) via satellite, as described in an article by Howard Cohen that begins on page 12. The graphic, courtesy of the Naval Undersea Warfare Center, shows a missile-launching submarine and an aircraft carrier receiving data from shore via satellite. Linda Miller designed the front and back covers.

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COMMAND POST

On September 13, 2001, at Summerall Field, Fort Myer, Virginia, I will pass command to Lt. Gen. (Ret) Jim Clapper. Sadly, it will no longer be my privilege to say I have the best job in the United States Government. But, I will have and will always cherish the memories of being part of this winning team. It has been a pleasure and an honor to serve with some of the Nation's most capable, hardworking, and dedicated patriots.

NIMA is the preeminent provider of imagery and geospatial analysis because you are truly a world-class workforce. I know you will focus on the positive as NIMA continues to undergo change. Management studies indicate that people-owned and operated organizations are more successful in meeting the demands of the 21st century. Remember that this is your Agency. Take ownership of NIMA and our continuing modernization initiatives. Always show pride in your mission, people, and Agency; constantly reinforce and expand the *esprit de corps* that lives within your offices and directorates.

NIMA exists to meet the information and decision superiority needs of the Department of Defense, the Intelligence Community, and the Nation. Being part of this crucial mission has been a rewarding and deeply satisfying experience. It saddens me to leave but, as Will Rogers commented, we all cannot be heroes. Some of us have to stand on the sidewalk and cheer. It will be my pleasure and honor to stand on the side and cheer as you continue to protect the peace and liberty of our great, beloved Nation. You are all heroes.

I struggled with how to conclude my last Command Post to the NIMA workforce, trying to balance thoughts and control emotions as I reflected on my time as your Director, my Army career, and on the future. In the end, I found General MacArthur's words the best reflection of my own thoughts and sentiments: "The shadows are lengthening for me. The twilight is here. My days of old have vanished — tones and tints. They have gone glimmering through the dreams of things that were. Their memory is one of wondrous beauty, watered by tears, and coaxed and caressed by the smiles of yesterday. I listen, then, but with thirsty ear...for the witching melody of faint bugles blowing reveille, of drums beating the long roll. In my dreams, I hear the crash of guns, the rattle of musketry, the strange...mournful mutter of the battlefield."

Thank you for allowing me the opportunity to serve on the NIMA Team. My charge to you remains — **CONTINUE TO GO FORTH AND CONQUER**. God bless all of you.

With love and admiration,



James C. King
Commanding General
National Imagery and Mapping Agency



Clapper Appointed Director of NIMA

Change of Director Ceremony Set for Sept. 13

Secretary of Defense Donald H. Rumsfeld and Director of Central Intelligence George J. Tenet have jointly announced the appointment of retired Air Force Lt. Gen. James R. Clapper Jr. as Director of the National Imagery and Mapping Agency. He succeeds Army LTG James C. King, who retires in November. The Change of Director Ceremony and retirement ceremony for LTG King is scheduled for Sept. 13.

Tenet described Clapper as a "legend in the intelligence business." The first civilian to lead NIMA, Clapper "will head an agency that is not yet five years old, but whose mission of full-service imagery and mapping support is more critical today than ever," Tenet said.

Praising King, the DCI said his "clear thoughts and decisive actions have left NIMA a stronger and better place."

Clapper retired from the Air Force in 1995 after a 32-year career.

Prior to his NIMA appointment, he worked at SRA International Inc. as Vice President and Director of Intelligence Programs where he led programs for the command, control, communications, and intelligence business element. Before joining SRA in 1998, Clapper was the Executive Director of Military Intelligence Programs for Booz Allen and Hamilton (1997) and Executive Vice President of Vredenburg Inc. (1995).

Clapper's last military assignment was as Director of the Defense Intelligence Agency. His earlier assignments included a variety of intelligence-related positions such as Assistant Chief of Staff, Intelligence, Headquarters, U.S. Air Force, during



James R. Clapper Jr.

Operations DESERT SHIELD/STORM, and as Director of Intelligence for three war-fighting commands: United States Forces, Korea; Pacific Command; and Strategic Air Command.

Clapper has served as consultant for the House Intelligence Committee, the former Defense Airborne Reconnaissance Office, the Defense Policy and Science Boards and as President of the Security Affairs Support Association. He has served on various government panels, boards, commissions and advisory groups.

Clapper earned a bachelor's degree from the University of Maryland in govern-

ment and politics, a master's degree from St. Mary's University, San Antonio, Texas, in political science, and an honorary doctorate in strategic intelligence from the Joint Military Intelligence College.

His military awards include the National Intelligence Distinguished Service Medal with Oak Leaf Cluster, Defense Distinguished Service Medal with Oak Leaf Cluster, the Air Force Distinguished Service Medal and a host of other United States military and foreign government awards and decorations. He served two combat tours during the Southeast Asia conflict, and flew 73 combat support missions in EC-47's over Laos and Cambodia. He was named as one of the top 100 information technology executives by *Federal Computer Week* in 2001, has received the NAACP National Distinguished Service Award, and the presidentially conferred National Security Medal.

Clapper and his wife, Susan, live in Fairfax, Va. and have two grown children and three grandchildren. ☪

NIMA Launches Quality Conference, Customers Fuel New Forum

Customers of the U.S. Imagery and Geospatial Information Service (USIGS) met with the NIMA team responsible for quality assurance at the inaugural NIMA Product Quality Users Conference in Chantilly, Va. June 6-8. Hosted by NIMA's Image Quality and Utility (IQ&U) Program, the conference drew 215 customers of NIMA imagery, workstations and tools from 50 organizations.

Quality and the Customer

The conference theme, "Quality — In the Eyes of the User," focused on the importance of extending IQ&U to customer organizations and was held in response to strong customer interest in the subject.

"By forming a partnership with the customer, NIMA will be better aligned to enhance image quality support in the future," explained Richard Heer, Chief of the System Engineering Office's Imagery Assessments Branch (ATSAI).

Steps to Ensure Quality

Setting the tone for an image quality partnership between NIMA and the user community, former NIMA Deputy Director John L. Helgerson, in his keynote address, quipped, "We're all in the same boat."

NIMA is acting to ensure image quality and utility through user training and visits to user sites and by requiring that USIGS perform to a set of established standards, Helgerson said. A concerted effort is also being made to instill product quality awareness throughout the imagery and geospatial community, he added.

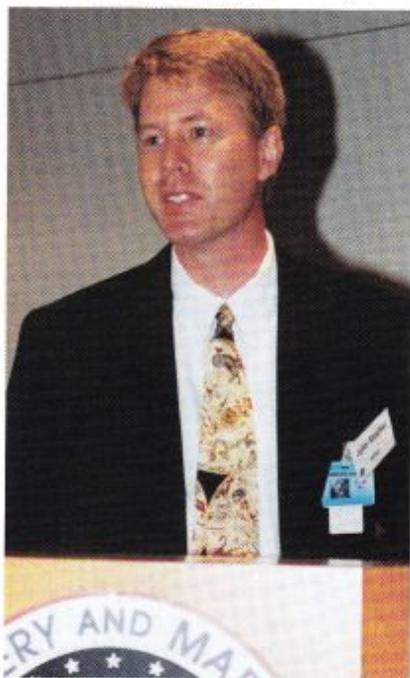


PHOTO BY LARRY FRANKLIN

Dr. John Stopher of the House Permanent Select Committee on Intelligence shares his perspective on issues related to image quality and utility.

In a second keynote address, Fred Faithful, Director of the Analysis and Plans Office (AP), provided a view into NIMA's strategic and technical future.

Dennis Miller, Chief of The Analysis and Control Division (ATSA), challenged the audience to raise tough issues, engage their hosts and help define the path to ensure customer satisfaction with NIMA products.

Program's True Scope

Presenting the true scope of the IQ&U Program, Manager Jerry Shourds said, "The on-site support and the projects you're all familiar with are only a fraction of our program responsibilities."

Echoing the conference theme, he added, "We must work as partners. NIMA will provide the guidance as you, the users, continue developing your own quality programs."

Attendees were particularly interested in monitor calibration issues, which are critical to the deployment of NIMA Imagery Exploitation System (NIES) workstations.

View from the Hill

On the second day, Dr. John Stopher, staff member of the House Permanent Select Committee on Intelligence, discussed issues that impact image quality, stressing the importance of ensuring that quality is maintained throughout the image chain. He then fielded audience questions for over an hour.

The three days of the conference saw briefings from representatives of the Joint Intelligence Center Pacific, Joint Analysis Center Molesworth, Joint Warfare Analysis Center, National Air Intelligence Center, National Ground Intelligence Center, U.S. Strategic Command and Air Force Image Quality Assurance Program.

Training Sessions

Training sessions on the color fundamentals of multi-spectral imagery and how to use Standard Image Data Sets (SIDS) were offered, among others.

Several vendors also previewed their wares, allowing many attendees to test the capabilities of current commercial exploitation software and workstations.

--Image Quality and Utility Program



PHOTO BY MURIDITH WINDER

Geospatial analyst John Tierney of NIMA's Applied Technology and Process Innovation Division (IPA) briefs members of the United Kingdom liaison team who toured NIMA's JWID '01 site in the Emory Building. Team members are, from left: Royal Army Col. Chris Dorman, Mark Pearce, Maj. Rupert Dash and Dave Maule.

NIMA Supports JWID 2001

By MURIDITH WINDER

NIMA played a major role in this year's Joint Warrior Interoperability Demonstration (JWID) held July 16-26.

"NIMA provided imagery and geospatial information and products to JWID 2001 coalition partners," said Don Talada, NIMA's senior JWID engineer. "We also tested proposed solutions to known coalition imagery and geospatial interoperability problems."

JWID 2001 provided an opportunity to conduct command and control interoperability trials and to assess technology capabilities at more than 35 sites around the world. There were four primary U.S. sites as well as sites in the United Kingdom, Australia, New Zealand and Canada. NATO also participated, with representation from Poland, Norway, France, Germany, Spain, the Netherlands and Turkey.

Talada said that NIMA's site, located in the Emory Building in Bethesda, hosted the coalition portal for imagery and geospatial services. This

portal provided "common access to query all imagery and geospatial information available on the coalition networks."

"This was a near-real world test environment where the warfighter could test capabilities and provide valuable feedback," said Damien Kerr, NIMA's JWID program manager.

Agreeing, Al League, chief of the Integrated Program Office Applied Technology and Process Innovation Division (IPA), said, "The demonstration brought imagery and geospatial analysts in direct contact with our customers.

"We could educate each other on needs and capabilities."

JWID is a Joint Staff-sponsored demonstration of evolving command and control, communications, computer, intelligence, surveillance and reconnaissance (C4ISR) technologies and joint/combined interoperability solutions.

JWID 2001 provided simulated support for five days of a notional 60-day conflict, involving a deployment of allied forces, a land and sea assault, a surrender and peacekeeping operations. ☛

Helgerson New NIC Chairman; Isham Appointed DD/NIMA

NIMA's new Deputy Director, Joanne O. Isham, was recently appointed to succeed John L. Helgerson. Isham was the Deputy Director for Science and Technology at the Central Intelligence Agency before assuming her new position.

Helgerson was appointed Chairman of the National Intelligence Council succeeding John

C. Gannon. As Chairman of the NIC, Helgerson will head a group of senior experts—known as National Intelligence Officers—drawn from all elements of the Intelligence Community and from outside the government. They serve the DCI in his role as leader of the Intelligence Community by producing National Intelligence Estimates on particular geographic regions of the

world and on particular functional areas such as economics and weapons proliferation.

"John's broad experience, outstanding versatility, and absolute commitment to sophisticated intelligence analysis will further enrich the remarkable group of penetrating, unorthodox thinkers who are the heart of the NIC," Tenet said in announcing Helgerson's appointment. ☛

National Information Library Opens for Business

By JOHN TEDESCHI and DARYL JACKSON

NIMA's largest imagery library, the National Information Library (NIL), has begun exporting imagery to selected customers.

One of five segments comprising the National Imagery Exploitation System (NIES), the NIL was launched in July 2000 as a repository for nationally collected imagery. The NIL, which relies almost exclusively on commercial off-the-shelf (COTS) hardware and software, will eventually store five years or more of digital imagery and archive some 25 million images, making it one of the largest archives of digital imagery in the world. Called the centerpiece of the U.S. Imagery and Geospatial Information Service, the NIL can ingest 5 terabytes of data per day and handle 80,000 queries a day, responding in 15 to 20 seconds.

Development of the NIL has been a project of the NIMA Libraries Program Office in the Acquisition Office's Storage Programs Division (ATAS).

On June 18, Dr. Keith E. Littlefield, Director of the Acquisition Office, declared the NIL open for business after an Export Operational Readiness Review (ORR), which involved a review of test results and organizational readiness.

In preparation for the ORR, the NIL Program Manager, Kevin Eichelberger, conducted a proof of concept test (PCT) to evaluate capabilities of the system in operational environments. Test results showed that the NIL meets or exceeds all of the requirements currently placed on it.

The PCT was conducted in the Imagery Analysis Office at the Washington Navy Yard, at the Integrated Test Facility in Newington, Va., and at the U.S. Special Operations Command (SOCOM) in Tampa, Fla. The test used two Internet browser-type clients, the Information Access



Dr. Keith Littlefield declares the National Information Library open for business.

Services/Common Client (IAS/CC) and the NIMA Library Web Client (LWC), to query the NIL for available data and select products for export.

During the PCT, the NIL exported data to standalone workstations like those of the Imagery Modernization Program, other servers such as the Image Product Library, and integrated workstations and buffers like the Integrated Exploitation Capability, a segment of the NIES.

Electronic imagery data were tested in different NIMA security enclaves. For SOCOM, the data was transmitted over the Joint Worldwide Intelligence Communications System (JWICS) network.

At the completion of the ORR, the Dissemination Services Office's Research Division (DSR) accepted day-to-day operational management responsibility for the NIL users that have already been granted access approval. DSR will establish policy and procedures for accessing the NIL. Lyndell Walker is the government point of contact (GPOC) and Fred Phifer is the system administrator.

Organizations that require access to the NIL will submit those requests to the Systems Engineering Office (ATS).

"The PCT participants are very excited about the ease and speed with which they can now receive operational data," Eichelberger said. "They were granted continued operational access to the NIL."

In addition to the PCT participants, the NIMA Production Cell/Americas in Reston was recently granted approval to access the NIL. ATAS had expanded the NIL hardware suite for the ORR and plans to keep expanding the size of the NIL to meet future customer needs. ■

About the Authors

John Tedeschi and Daryl Jackson are systems integrators, employed by the Engineering Edge Alliance, who supported the NIMA Library Program Office during the Proof of Concept Test and the Operational Readiness Review.

Resource Scheduling: Vital to NIMA's Mission

by EMILY BRITTLE

Think of a typical week at NIMA. Dozens of organizations at multiple sites are scheduling their many tasks to accomplish NIMA's mission.

Let's take a quick tour. We first stop at Arnold to visit the NIMA Gateway. Personnel are preparing for a server upgrade. Our next stop is Second Street in St. Louis, where an emergency has just arisen with a production system.

In Bethesda, network technicians are preparing for monthly maintenance to multiple computer networks, Mission Support needs to bring uncleared personnel into a production area to inspect fire alarms, and the Geospatial Information Office is planning weekend overtime to meet critical production needs.

At Reston, the Source Acquisition System (SA/S) is performing factory acceptance testing on its main server. At the Pentagon, Washington Navy Yard, and Langley, the NIMA Exploitation System (NES) requires database maintenance and a software upgrade.

About the Author

Systems engineer Emily Brittle is the RSR Coordinator for Bethesda and served as a member of the RSR design team. Since joining the Army Topographic Command in 1971, she has worked in photogrammetry, software engineering, configuration management and digital production. She earned a bachelor's in mathematics from Virginia Tech and pursued graduate studies in applied math at the University of Maryland.



PHOTO BY LARRY FRANKLIN

Emily Brittle discusses resource scheduling during a biweekly teleconference with a resource coordinator from another NIMA site.

An activity or outage at one site could affect other sites. A crisis could cause all outages to be canceled.

How is NIMA to accomplish its mission and meet all these needs? "Coordination is a *must*," stresses Ralph Symmes, Chief, NIMA Operations Center-Bethesda (NOC-B). NOC-B has responsibility for agency-wide scheduling to assure the Director that NIMA's mission readiness is *never* compromised.

To address this coordination and prioritization, the Information Services Directorate's Enterprise Services Office (ES) has combined a number of disparate systems into a single Resource Scheduling Request (RSR) Process. The process consists of a database, coordination meetings, approval requirements and telephone notifications. Outage requests rapidly reach production and support points of contact, who examine and clarify impacts at biweekly inter-site teleconferences.

All levels of management have received the RSR Process with enthusiasm. Joe Klimavicz, Chief of the Infrastructure Operations

and Support Division (ESI), states, "My job is now easier — no more surprises. More importantly, the RSR Process helps us manage NIMA's national asset, our technical infrastructure."

Ferne Cooper, Deputy Chief of ESI, adds, "NIMA has so many interdependencies of systems, networks, sites, and missions that a complete picture of planned or emergency outages is vital."

Members of the IS/ES team, who developed the process, are George Manders, Arnold; Emily Brittle, Bethesda; Claudia Creaven, Reston; Gretel Harris, St. Louis, and Sherri Younger, Washington Navy Yard. Steve Strothers, Bethesda, designed the RSR Database.

Anyone with a log-on to the Secret Collateral Enterprise Network (SCEN) may submit an RSR to schedule and coordinate (1) activities impacting NIMA's daily operations and (2) activities outside normal duty hours. For details on the process, access NIMA's SCEN intranet at <http://webbet01.se.nima.smil.mil/is/es>. Then, highlight "RSR." ■

Business Integration Group is 'Enabler' in GI

by CINDY BURNS, Deputy Associate Director

As the corporate business manager for the Geospatial Information Office, the Business Integration Group (GIB) is a new office created under GI21. Associate Director Mike Rodrigue, who leads the office, played a critical role in the GI21 transition.

GIB operates in both the Washington and St. Louis areas, providing strategic and resource support to the GI Director and the GI Centers. GIB enables and integrates many activities, such as:

- Managing the GI Operations Center
- Crafting GI's future
- Integrating GI-wide operational activities and interaction with NIMA partner business units
- Providing workforce development information and opportunities
- Acquiring the resources for GI to meet its near- and long-term goals
- Marketing GI's accomplishments and capabilities internally and externally
- Enabling GI Center production and integration
- Exploiting emerging support opportunities afforded by geospatial data and imagery integration
- Supporting external stakeholders

The GI Operations Center monitors worldwide events, 24 hours a day. Members Chris Jarvis (Chief), Jim Schaeffer, Jonathan Gettleman and Pat Nowicki review local and international events, anticipate emerging geospatial information needs, and coordinate the GI response for crisis and immediate-response tasks.

The Strategic Planning Branch (GIBB) is at the forefront of efforts to integrate imagery and geospatial information. Led by Scott Mooney, GIBB advises on GI's long-term environment and leads GI's participation in Agency and community forums responsible for developing long-term strategy. GIBB provides geospatial expertise to the ongoing planning and analysis efforts for the U.S. Imagery and Geospatial Information Service (USIGS).

The Business Operations Branch (GIBC) focuses on GI's near-term or "tactical" objectives. Led by Ken Peterman, GIBC consolidates operational information from the other GI offices to create a GI corporate perspective on contributing to Agency and directorate objectives. GIBC produces the Joint Military Readiness Review (JMRR). At present, much of GIBC is devoted to delivery of the Production Management Alternate Architecture, PMAA—GI's enterprise system.

The Workforce Development Branch (GIBD) works with NIMA College and training providers to manage GI and directorate training requirements, ensuring that employees acquire skills and experience described in occupation guides and individual development plans. Led by Irene Brodley, who also serves as Chair of the Cartography Occupation Council, GIBD enhances the career skills of GI employees by creating and facilitating ongoing training and education programs that include higher education initiatives and tailored training.

The recently transformed **Administrative Branch (GIBA)** resulted from the flexibility of GI21, which decentralized

CONTINUED ON PAGE 10

GIB operates in both the Washington and St. Louis areas. Pictured are some of those in Bethesda, from left, GIB Associate Director Mike Rodrigue, Gary Wilkins, Joe Sanford, Linda Fluke, Mike Jackson, Kevin Hayes, Delia Jennings, Eva Collazo de Cruz, GIB Deputy Director Cindy Burns, Debbie LaScola, Ernestine Sheinall, Pat Edwards, Karen Gray, Irene Brodley, Mary Fadely, Tim Hegarty, Beverly Fry, Gail Harding, Rick Ingram, Rick Gray, Donna Wyant, Scott Mooney, Bill Croisetiere, Tom Nichols, John Haddick and Kelley Dunkelberg.

PHOTO BY ROB COX



Commercial Partnerships Group Expands in Dynamic Environment

by MAURICE SAXTON, Executive Officer

When the Geospatial Information Office (GI) began operations in January as part of the GI21 reorganization, many of the technical experts who had been supporting the contracts program and working in several organizations were brought together. The resulting Commercial Partnerships Group (GIC), headed by Paul Weise, Associate Director, has the mission of supporting GI's regional and functional centers by using the growing commercial market of geospatial information and imagery providers to meet portions of NIMA's annual production program.

GIC is organized into two functional areas: (1) Geospatial contract production and (2) Commercial Imagery (CI) acquisition and Shuttle Radar Topography Mission (SRTM) data evaluation, processing and delivery.

Geospatial Contract Production

Geospatial Contract Production works with 14 prime contractors and nearly 200 subcontractors to complement NIMA's in-house production. The OMNIBUS contract allows GIC to quickly award work to the best-qualified producer of a product. GIC also manages the NIMA Production Prototype (NPP) contract, which drives change in production efficiency and the ability to exploit new types of source data.

Three branches administer the task orders awarded to Geospatial Contract Production.

The Safety of Navigation Branch (GICN), led by Craig White, augments the in-house production capabilities of GI's Aeronautical Safety Center and

Maritime Safety Information Center through the use of commercial partners. Aeronautical programs include the Flight Information Publication (FLIP) Program and the NIMA Airfield Initiative. Nautical programs include collection and maintenance of Digital Nautical Charts (DNC) Libraries, Tactical Ocean Data (TOD) and Standard Nautical Chart production.

The Strategic Foundations Branch (GICF) manages contract production for geospatial products critical to NIMA's geospatial databases including Feature Foundation Data (FFD), the Digital Point Positioning Data Base (DPPDB) and the Geopositioning database. Ken Hutchison, Branch Chief, points out that they are also "the process owners for both the one-meter and five-meter Controlled Image Base (CIB) programs."

The Mission Responsiveness Branch (GICR) is the largest branch in GIC, with the greatest variety of products to manage. Branch Chief Brad Hayek states, "Our mission is to provide tailored, rapid-response, mission-specific data by commercial contracts while continuing support to the production of traditional data sets." GICR's primary customers are GI's regional and functional centers. Says Hayek, "Nearly half of our resources support the Thailand FMS [Foreign Military Sales] TLM [Topographic Line Map] project, to be completed in fiscal year 2003." GICR also supports a 14-sheet TLM FMS project for Australia. The remaining GICR resources support a variety of products

CONTINUED ON PAGE 11

Business Integration Group

CONTINUED FROM PAGE 9

and reassigned staff to directly support the GI Centers and Groups. Today GIBA has two major roles: (1) to provide corporate administrative support and procedures, and (2) to support GI employees in training programs such as Senior Service Schools or Long-Term Full-Time Training.

The Resource Branch (GIBR) acquires and monitors GI resources. Led by Kevin Hayes, GIBR applies its understanding of goals and objectives to define GI's future through a resource lens. GIBR members answer questions such as "How many people and dollars are necessary to transition to

foundation-based operations?" or "How many people and dollars are needed to protect safe air and sea navigation?" Through the Programming, Planning and Budgeting System, GIBR plans and executes the use of GI resources.

Whether in St. Louis or Washington, GIB serves as the unified corporate staff of GI and a ready resource for its customers. GIB seeks to better exploit and apply resources to the challenges that NIMA and GI face. GIB ensures that GI is on the best path to providing "Geospatial Information That Makes the Difference" and that NIMA continues to provide the "information edge." ■



NASA PHOTO

GIC members who supported SRTM flight operations met with the crew during preparations at Johnson Space Center in Houston. Shown, from left: Mission Specialist Gerhard Thiele of Germany, Dr. Jeffrey Kretsch, Dr. Thomas Carson, Mission Specialist Mamoru Mohri of Japan, Dr. William Stein, NIMA SRTM Branch Chief Thomas Hennig, Dr. Paul Salamonowicz, Space Shuttle Pilot Dominic Gorie, Maj. Earle White, Joe Steel, Mission Specialist Janet Kavandi, James Spitznas, Shuttle Commander Janet Voss and Mission Commander Kevin Kregal.

including Counter Drug TLMs, Arc Digitized Raster Graphics (ADRG)/Computerized ADRG, Tactical Pilotage Charts (TPCs), Joint Operations Graphics (JOGs) and Vector Map (Vmap)/Urban Vmap (UVMMap).

One advantage of the OMNIBUS and NPP contracts is that they provide NIMA with a vehicle to assist other U.S. Government agencies and foreign governments (under the FMS program) to obtain contractor services to fulfill their geospatial needs. GIC acts as an agent for the "outside" organization, assisting in selecting the best-qualified contractor, preparing the statement of work, and assisting in negotiations with contractors. Once the work has been awarded, GIC's role varies from simple contract monitoring to review and acceptance.

GIC's largest FMS project is a three-year program with Thailand. When completed, contractors will have produced 661 TLMs, 168 Nominal Attributed Topographic (NAT) maps, 76 Digital Terrain Elevation Data (DTED) cells and 11 FFD cells.

Commercial Imagery and SRTM

Two new programs that came to GIC during the GI21 reorganization were the SRTM program and the CI program. These are on the cutting edge and will provide NIMA's customers with the "information edge."

The Shuttle Radar Topography Mission Branch (GICS) has the monumental task of evaluating, processing and delivering all of the data collected during the Space Shuttle's February 2000 mission (14,400 cells of data). The primary products will be Level 1 and Level 2 Digital Terrain Elevation Data (DTED), orthorectified image mosaics and corresponding terrain height errors. Ted Isringhaus, Branch Chief, explains that there is much work to do before the data collected can be used. He says,

"There are three efforts under way in support of the data processing requirements: development of a Ground Data Processing System by NASA's Jet Propulsion Laboratory, development of prototype finishing production systems by two independent OMNIBUS contractors, and in-house testing of sample prototype and finished products." Isringhaus also points out that in addition to the new and exciting technical activities, contracts must be monitored, product specifications written, and in-house expertise developed.

The Commercial Imagery Branch (GICI) acts as a purchasing agent "to provide the U.S. Imagery and Geospatial Community access to civil and commercial imagery and related remotely sensed data," says Jill Kieswetter, Branch Chief. As more commercial imagery providers become available and as imagery resolution improves (currently licensed by the government to one-half meter), demand throughout the federal government will increase. GICI is preparing to meet that demand by establishing contracts with imagery providers as their systems come on line, purchasing licenses to share the imagery with NIMA customers, providing assistance to customers in ordering imagery, providing a central storage facility, and improving dissemination using the SkyMedia Direct Broadcast system. In short, GICI is paving the way for the exploitation of commercial imagery in the federal government.

As a dynamic organization supporting NIMA's regional and functional centers, GIC nurtures partnerships with the commercial geospatial industry and advances the exploitation of the growing commercial imagery base to augment our National Technical Means, guaranteeing the "information edge" to a wider range of customers. ■

Recent Tests Prove Feasibility Of Digital Chart Updating at Sea

by HOWARD COHEN
Maritime Safety Information Center

“Imagine sending an update to be marked on a map without having to use coordinates—sending it as it were, directly to the eye of the soldier who needs to annotate a map, or to the navigator or mariner who needs to update a chart.” So stated a NIMA Commission report that was issued last December.

Easier said than done. NIMA’s Hydrographer, Chris Andreasen, and the Deputy Navigator of the Navy, Capt. Dan Soper, are tackling this challenge head on.

From April to June, NIMA tested digital updating of the Agency’s Digital Nautical Chart (DNC®) via military computer networks in ships at sea, in cooperation with the U.S. Navy and Coast Guard.

According to Soper, “The capability to receive updated DNC data electronically and apply the correction to the database while underway is integral to the fielding of the Navy’s Electronic Chart Display and Information System (ECDIS-N).”

Impact of Tests

“Through this test,” said Andreasen, “NIMA and the military have attained a significant milestone, which will ease the burden on shipboard personnel and make marine navigation safer.”

NIMA completed “digitizing the world,” last year, converting over 5,000 paper charts to 29 CD-ROMs of DNC to support worldwide operations of the Navy.

Completing the project, which took six years, was a great feat,

Andreasen says, “but there’s more work to be done. Now, the DNC needs to be updated just as a paper chart does.”

Writing hand corrections as you would on a paper chart is obviously out of the question. Implementation of digital navigation as the primary means of navigation requires that a routine method of updating be implemented. The question is *how* do you best update a digital data set?

“VDU” Updating

To answer that, NIMA, through a contract awarded in late 2000 to Science Applications International Corporation (SAIC), developed a method called the Vector Product Format Database Update, or better known as

“VDU.” VDU supports the digital updating of NIMA’s Vector Product Format products, including NIMA’s DNC.

Patch Method

“For VDU,” Andreasen said, “SAIC proposed the use of the ‘patch’ method. This is a commercially available technique in which software identifies the structural changes to the digital database so that only the *changed* data needs to be transmitted to the user.”

Terry Peasland of the Maritime Safety Information Center’s Center Integration Group and Dan Deguzman of the Center’s DNC Database Development and Finishing Team are involved with the testing.



U.S. NAVY PHOTO BY PHOTOGRAPHER'S MATE AIRMAN APPRENTICE DOUG PEARLMAN

The USS Enterprise (CVN 65) Battle Group steams in formation following training exercises in the Atlantic last May. NIMA is working closely with the Navy to implement digital navigation as the primary means of navigation for all battle groups by fiscal year 2004.

No more hand corrections with digital updating

"Our performance objectives are to build, disseminate, and apply the patch," Peasland said.

"VDU was first known as 'file replacement,'" said Peasland, who has seen the evolution of the concept since it originated five years ago. "Today, the VDU patch method is similar to online updating of software packages like virus protection software."

In-House Testing

There has been rapid prototype development of the latest version of VDU since a kick-off meeting in August 2000.

"We wanted to see if VDU could be produced in-house," Peasland said.

"The HydroVision NIMA Production Cell created some patch files and applied them to the data, and the process worked." VDU was also tried and successfully performed within the Data Capture and Finishing Environment (DCAFE), a major NIMA production system.

How It Works

Deguzman said that when a user receives an update, it is flagged on screen at its location on the DNC. "This way the mariner will know what changes are being applied and be apprised of any new hazards or changes along a planned route." The updated information is sent from NIMA's Navigation Safety System, which is the online source for NIMA Notices to Mariners updates.

The user can call up the text of the Notice to Mariners for an explanation of the change by using a mouse. All Notices for the time period of the update will be included with each VDU issuance.



ABOVE PHOTO BY ROB COX; BACK COVER PHOTO BY MURIDITH WINDER

NIMA plans to make the VDU updates available on two Internet networks, the Secret Internet Protocol Router Network (SIPRnet) and the Non-Classified IP Router Network (NIPRnet).

Future Availability

The Maritime Safety Information Center's World Wide Web site may also be an avenue for both DoD and civilian users to access updated "patch file" data.

The open web site is possible because only users with access to the base CD-ROMs can make use of the patch update. This allows users such as the Coast Guard or foreign partners to obtain updates without having to access the secure site.

The Maritime Safety Information Center web site "will be very useful to civil users once NIMA begins releasing DNC for waters near the United States," Deguzman said.

The initial release of DNC to civil users will be restricted to use in geographic information systems since the Coast Guard has not yet implemented regulations for civilian use of electronic charts.

The issue of foreign copyrights is also a hurdle for the distribution of DNC covering international waters to civil users.

For military customers, until DNC data and ship navigation

CONTINUED ON PAGE 14

Recent Tests Prove Feasibility Of Digital Chart Updating at Sea

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systems are certified by the Navy as meeting criteria established for electronic navigation systems, each DNC CD-ROM must carry the disclaimer: "DNC IS NOT TO BE USED FOR NAVIGATION."

Testing of digital chart updating was performed in two steps. First, data was downloaded within various military shore-side facilities, and then it was downloaded aboard several ships off the U.S. coast via both the SIPRnet and NIPRnet.

Updates within Minutes

"Satellite technology," said Peasland, "was used to reach the Navy's test vessels." The down-

load time for receiving VDU updates is dependent upon the customer's bandwidth. "We would like to have download times of two to three minutes and have the customer apply the patch in less than five minutes."

"Paperless Bridge"

NIMA is working closely with the Navy to meet its goal of achieving a completely "paperless bridge" for two battle groups in fiscal year 2002 and the remaining battle groups in fiscal year 2004.

Aboard Navy ships and submarines, and Coast Guard cutters, a paperless bridge would save money, space and manning requirements.

The Navy's newest *Virginia*-class submarine, the *Virginia* (SSN774), will have no chart lockers onboard.

Andreasen explains, "A chart locker is not a locker as one may envision at the gym, but rather "flat files" in which there are many numerically sequential drawers that roll out containing the charts." [See photo on back cover.]

"Chart lockers take up space and add weight," Andreasen said. "Without chart lockers, that space can be put to good use in adding to warfighting capabilities."

The *Virginia* is scheduled for completion in fiscal year 2003. ■

Newest Virginia Class Submarine Will Have 'Paperless Bridge'

The *Virginia* class submarine will provide the U.S. Navy the capability to maintain undersea supremacy well into the 21st century, providing the full spectrum of capabilities for both open-ocean and littoral missions.

Virginia's inherent capabilities of stealth, mobility and endurance will make it uniquely qualified as a member of the 21st century joint force. The *Virginia* class's electronic sensors will collect intelligence by locating radars, missile batteries and command sites; monitoring communications and tracking ship movements; detecting minefields; and monitoring other threats and



COMPUTER RENDERING COURTESY OF GENERAL DYNAMICS ELECTRIC BOAT

targets to ensure that mission objectives are met.

The *Virginia* will have no chart lockers onboard.

With its advanced combat systems and flexible payload of torpedoes, anti-ship cruise

missiles and naval mines, the *Virginia* class will be equipped to destroy hostile ships and submarines, and gain control of sea lanes. ■

OUR PROGRAMS

Distance No Barrier to Mentoring Relationship

by JAMES HALL

"I'm honored that you asked me," was the response from Tom Burton when Vickey Bohrer asked him if he would consider being her mentor.

The request had some particular challenges for a mentoring relationship. Burton, Director of the Facilities Consolidation Program Office (FC), is located in the Washington, D.C. area. Bohrer, Operations Officer for Mission Support West, is located in St. Louis.

In addition to the distance issue, Bohrer was initially concerned that Burton, a senior leader who often works extended hours, could not easily find enough time to mentor her. He quickly assured her that it would be a privilege to make the time.

Mentoring can vary from simple, occasional advice and feedback to more complex and time-consuming involvement. Both partners in a mentoring relationship decide the choice of style and time involved.

Using telephone conversations, e-mail messages and opportunities for temporary duty to meet face to face, Burton and Bohrer developed a program that both feel is beneficial, without placing a burden on their personal or professional time.

The Mentoring Program at NIMA is designed to provide a



PHOTO BY GERALD GOODIN
Long distance has been no barrier to their mentoring relationship, say Vickey Bohrer and Tom Burton.

source of career information and guidance to an employee seeking perspective from a higher level, or different area. The mentor acts as an advisor and role model to help foster the professional development of the employee. The mentored person should be willing to seek knowledge and follow advice that can help with career growth. The NIMA Mentoring Program was briefed to the workforce last year. This year, a renewed effort is being made to explain the importance of the program and facilitate involvement.

"Mentoring is a two-way effort," noted Burton during a recent meeting with Bohrer. "Both parties can walk away at any time if they don't feel it is working." He added: "If we do this right there is no time limit, as long as we both receive substantive gains. As a mentor, I learn and develop also." Burton said he too has been mentored informally at different times.

Bohrer said, "The fact that Tom agreed to be my mentor has motivated me. I feel he is candid with me in his opinions and that he will tell me if he feels I am going down the wrong path."

She initially worried that mentoring would cause her undue stress or that she would not meet expectations. "This is a

myth about the mentoring role," she says now. "What I want to achieve is up to me. Tom is there to help, not to push, me."

Burton sent Bohrer questions to research and challenged her to let him know when she was ready to discuss her answers. They also discussed the book about dealing with change, *Who Moved My Cheese?* Other assignments involved research and reading about leadership.

The relationship has included advice on career development. Wondering whether she should pursue graduate school, Bohrer said, "Tom was instrumental in offering me guidance, since it's been many years since I've attended college." Burton guided her through a process of search, inquiry, meeting with an advisor, weighing all the information, and making the best decision, she said. "I am happy to announce that I have just recently been accepted at Webster University in their MBA program." Classes began Aug. 13.

Bohrer also credits support from her boss, Thomas Mann, Mission Support West Site Manager, for his encouragement and suggestions.

Mann replies, "I've always been a big fan of mentoring." A

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School Partnerships Ready for New Year

By SHARON M. SMITH

NIMA School Partnership Coordinator

St. Louis volunteer “reading buddies” Sherry Mims and Diana Morrison have thoroughly enjoyed being part of a program at Hodgen Elementary School, called HOSTS (Help One Student To Succeed). “I have witnessed my assigned student reading better and with much more confidence,” says Mims. “I’m sure glad I got involved.”

Bonds between tutors and students form quickly. “I just love my little buddy, ‘Terrell!’ If you could see how big a smile he gets when he sees me! It just makes me melt,” says Morrison.

Almost anywhere NIMA employees find themselves, there are several opportunities to help out in the classroom through

NIMA’s School Partnership Program.

At Hutchison Elementary School in Herndon, Va., employees can team up with a child for a weekly tutoring session or become pen pals with a student to encourage development of writing skills.

Partners

‘Make a Difference’

“Most teachers have witnessed improvements in grades and classroom attitudes among tutored students,” says John Liebsch, Coordinator of the School Partnership with Hutchison. “I know these teachers view NIMA as a positive influence that makes a difference the Herndon community.”

Tutors have called their tutoring sessions a highlight of their week. “Many of them view tutoring as a NIMA team event, sharing rides to and from the school and comparing Hutchison experiences among themselves,” Liebsch says.

In Arnold, Mo., Ann Siener volunteered as a “guest reader” at Clyde Hamrick Elementary School. “I read *Rosie and Michael* by Judith Viorst, a really cute book about friendship. I asked the kids if anyone wanted to share an experience about friendship. It was overwhelming how many wanted to contribute their experiences and we heard so many great stories,” she said.

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Distance No Barrier

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former mentor at the Defense Mapping Agency’s Combat Support Center in Bethesda, Mann said “getting the perspective from a different culture” is also valuable. “I’m sure we’ll see pertinent gains from Vickey’s mentoring that will show with time.”

When asked where she would go from here, Bohrer replied, “Mr. Burton’s perspective has helped me to understand NIMA’s corporate stance. He wants me to look at where the Agency plans to be in the future.” She also plans to be a mentor. “I feel I owe it to the Agency when I’m ready,” she said. “Right now I’m thrilled to be receiving mentoring. It’s been an opportunity for me to expand both professionally and personally.”

Want to register or learn more about NIMA’s mentoring program? Call your local Career Development Center:

Bethesda (301) 227-7715
St. Louis (314) 263-4177
Navy Yard (202) 264-6046
Reston (703) 264-2135

About the Author

James Hall is a member of the Mentoring Integrated Process Team chartered by the Director to invigorate the NIMA mentoring program and increase participation. He works in Arnold as an imaging specialist in the Dissemination Service Office’s Media Generation Division (DSM). A member of the Media Production Occupation Council, he edits the Council’s newsletter and serves as a tour coordinator and briefer for DSM. He is also an instructor for “NIMA Orientation 201” offered by NIMA College and a trainer/briefer for the NIMA School Partnership Program. He worked in the 1998 Combined Federal Campaign as a loaned executive.





PHOTO BY JIM MOHAN

Cartographer Kevin Alphin answers questions from fourth grade students at Hodgen Elementary School in St. Louis about his presentation on "Modern Day Mapmaking."

Guest reader Richard Heigert, who read from a book relevant to a history lesson, said, "The students were all very eager to listen."

Besides the School Partnership Programs listed, NIMA sites are involved in special programs like holiday food drives, geography bees and grocery receipt collections.

To participate in any of the school partnership activities, watch for announcements in the *Connector* or contact your School Partnership Coordinator.

To volunteer, or for more information on NIMA's School Partnership Program, contact the coordinators listed below:

Hodgen Elementary, St. Louis
Gateway Middle School, St. Louis
Fox C-6 Schools, Arnold, Mo.
POC: Sharon Smith
PAS, L-10, (314) 263-4142

Hutchison Elementary,
Herndon Va.
POC: John Liebsch
RI, P-38, (703) 264-3104
Kim Roivas (Assistant Coordinator)

Fort Belvoir (Va.) Elementary
POC: SSgt. Angeline Frett
NCDP, K-2, (703) 805-2243

West Elementary, Washington, D.C.
POC: Maureen Fontenot
ISS, D-135, (301) 227-4076

School Partnership Activities

Hodgen Elementary, St. Louis

- **Help One Student To Succeed (HOSTS) (Oct. 1-June 2)**

HOSTS Language Arts is a nationally recognized, structured mentoring/tutoring program. With help from volunteer mentors, students receive the extra attention and encouragement they need to become successful readers and writers. Volunteers work with an assigned student for one-half hour every other week.

Fox C-6 School Dist., Arnold, Mo.

- **Guest Readers (Dates: TBD)**

The goal of the Guest Reader Program is to expose children to a variety of people from different occupations stressing the importance of reading in their lives. Classes invite Guest Readers to visit each class one time during the month. Readers may select their own reading material or the schoolteacher or librarian can select a book for them.

Gateway Middle School, St. Louis

- **Road Scholar Coaching (Dates: Oct. 1-Feb. 2)**

NIMA coaches work with students preparing for the Road Scholar Competition, one of 24 events in the St. Louis Science Olympiad. The competition requires the accurate interpretation and understanding of various map features using a road map and a U.S. Geological Survey topographic map. Coaches cover subjects such as magnetic declination, locating and interpreting symbols and features, and determining stream gradients, azimuths and bearings.

St. Louis Speakers Bureau

- Speaker Bureau members visit area schools giving presentations on mapmaking and geography to kindergarten through high school students. Upon receipt of the schools' requests, volunteers are surveyed as to their availability.

Ft. Belvoir (Va.) Elementary

- **Tutoring:**

Volunteers meet weekly with students to provide individual tutoring.

Hutchison Elementary, Herndon, Va., and West Elementary, Washington, D.C.

- **Tutoring**

Tutors are asked to spend one 50-minute session with a child each week. Sessions are scheduled for Wednesday at 2 p.m. Tutors are needed for grades 1 through 6 and subjects include phonetics, arithmetic, reading and writing. The student's teacher will assign the material that needs to be covered.

- **Pen Pals**

Employees volunteer to correspond with a student. The goal is to provide the children with a fun way to practice their writing skills. Pen pals will be asked to trade letters throughout the school year.



Lynne Resowski



Anthony Mehalic



Lt. Col. Joan Harchelroad

NIMA People Win Honors

Lynne Resowski, Acquisition Team Lead in the Infrastructure Integration Office's Desktop and Collaboration Services Department (IICC), was one of 16 individuals to receive a gold award in the Excellence in Federal Career Awards Program sponsored by the Federal Executive Board of Baltimore. Winning in the administrative management category, she was recognized for her outstanding career in procurement. Among her accomplishments, she developed and executed an automation plan for NIMA's Procurement and Contracts Office that resulted in a centralized procurement database for responding to external inquiries.

Regional analyst **Daniel Donnell** of the Maritime Information Safety Center (GIH) received a bronze award in the Excellence in Federal Career Awards Program in the scientific, technical and program support category.

Army **Lt. Col. Joan Harchelroad** of NIMA's Systems Engineering Office received the William F. Lackman Jr. Award from the National Military Intelligence Association. As project manager for the National Imagery Exploitation System (NIES), she managed the system's complex requirements. Deployment supports services and agencies, from command level to units in the field, with an imagery exploitation capability designed

to bring them information superiority and decision dominance. Harchelroad was cited for her "superior work with the development, integration and deployment of the NIES." The former Central Imagery Office established the Lackman Award in memory of its first director.

Anthony Mehalic, Deputy Chief of the Imagery Analysis Office Korea Branch (IAAK), was honored by the Deputy Secretary of Defense for his leadership during the 2000 Combined Federal Campaign. He was the only civilian to receive the John O. Moreland Award as the most outstanding CFC Executive in the Department of Defense. (A military service member also received the award.) Mehalic led the CFC for the Department of the Navy in the National Capital Region, where participation increased to 60 percent of the workforce and a record number of units won campaign awards. He was also cited for process improvements he made to the CFC throughout the National Capital Region.

These individuals receiving awards from organizations outside NIMA were honored at the Director's Quarterly Awards ceremony July 12 in Bethesda.

NIMA Awards

The Director presented NIMA awards to several individuals and teams in Bethesda July 12 and St. Louis Aug. 13, as reported in the *Digital Daily Edge* and *Connector*.

Among individuals receiving awards, **Stephen Webb** of the Transnational Center (GIT) was honored for Distinguished Civilian Service. Webb is matrixed to the Customer Operations as Special Operations Production Manager.

Eight employees were honored for Meritorious Civilian Service: **Kimberly Barclay**, staff officer in Transnational Center (GIT); **Ray Blehar**, Chief of the Financial Management Directorate's Management Control Division (CFO-\$M); **Lynda Chamowitz**, former Chief of Imagery and Geospatial Policy Division (NPP), currently on rotational assignment as the Deputy Assistant to the Director of Central Intelligence for Foreign Intelligence Relationships; **Debbie Ridley**, Director of the Diversity Management Office; **Stanley Schwartzbart**, NIMA Senior Liaison to the Director of Intelligence, J2, at the Pentagon; **Kevin Spitler**, who recently completed an assignment as NIMA Senior Liaison to the U.S. Pacific Command; **Joseph Stooks**, NIMA Library Program Manager in the Acquisition Office Storage Programs Division (ATAS) and **Herbert Westphal**, Liaison Officer in CO's Special Operations Branch (COJS).

Dale Winters, Aeronautical Imagery Production Manager in the Aeronautical Safety Center (GIX), was honored for Superior Civilian Service. 🌟

NIMA Wins AFCEA 'Golden Link' Award

by JOHN ILER

The Armed Forces Communications and Electronics Association (AFCEA) presented NIMA its Golden Link Award during this year's TechNet International. The convention was held in Washington, D.C., June 5-7.

The award recognized NIMA's Pathfinder project, an acquisition process that provides flexible, acquisition-compliant links between the Agency, the Imagery and Geospatial Community, government developers, commercial vendors and other interested parties.

Three Golden Link Awards were presented. NIMA won in the federal acquisition category, Montgomery County, Md., won in the state and local technology solutions category and Ben Gurion Airport in Tel Aviv, Israel, won in the international defense/civilian government category.

"The Pathfinder process identifies and assesses tools, then publishes its findings on the current tools and technologies that will better exploit increasing amounts of imagery," said Sylvia Spriestersbach, project lead, who accepted the award on behalf of the team. "This improves service to the customer population because it provides the tools we all need to work together."

Pathfinder is the successor to the 1995 Project Beacon, which defined the analyst processes and identified promising software search technologies for imagery analysts. Since 1996, it has grown to be



Carole Brooks, NIMA Outreach Office, explains NIMA's role to visitors at AFCEA's 55th annual conference, TechNet International, Washington, D.C.

a viable tool in the integration of imagery intelligence and geospatial information.

"Pathfinder 2000 included motion imagery, automatic feature extraction and assisted target recognition, and Pathfinder 2001 reviewed commercial and government off-the-shelf tools that can boost scene visualization data production and the exchange process," said program manager Dale Lewis. "This year, our objectives were to identify the tools supporting the processing and exploitation of multi-spectral and hyper-spectral information, as well as the dissemination of the final products to our customers." The project, he added, enables government customers to quickly purchase tools and technologies that best suit their organization's needs without having to repeat the entire acquisition process.

Team members are Dale Lewis, Sylvia Spriestersbach, Chris Diez, Robert Alcaparras, Bruce Collins and Erika Gray of Booz-Allen & Hamilton; and Betsy DeWeese and Thomas Johnson of TRW.

AFCEA is an international non-profit association for the communications, electronics, intelligence and information systems community.



John Okay, president of J.L. Okay Consulting and chairman of the Golden Link Committees, presents the Golden Link award to Sylvia M. Spriestersbach, project lead of NIMA's Pathfinder team.

NIMA PEOPLE

by PAUL HURLBURT

Herbert Smith, Executive Officer of the Enterprise Support Infrastructure Office (ESI), has positive thoughts when he looks back on his two Army tours in Vietnam.

"I'd like to go back and see my bridges," said Smith, who served as a combat engineer and logistician during the Vietnam War.

Smith procured all the equipment and material to build or improve more than 100 miles of roads, including bridges. The projects were intended to help Vietnamese bring their goods to market, as well as facilitate the movement of troops, he said.

Perhaps Smith's proudest accomplishment was getting a railroad operational that had been shut down for more than five years.

"It ran for about a month. Then the VC blew it up," he said, hitting four or five spots along the track in one night. Smith was familiar with destructive, as well as constructive efforts, having spent his first six months in Vietnam as a self-described "tunnel rat" blowing up tunnels.

Nowadays the retired Maj. Smith runs a model railroad at his home in Manassas, Va. The garden-scale trains run around the perimeter of his property



PHOTO BY LARRY FRANKLIN

Herbert Smith shows off his unique boxcar - "It's probably the only one of its kind in the world."

through some 30 rose bushes, 30 camellias, rhododendrons and azaleas, and 700 bulb plants, including tulips and hyacinths.

Smith has eight locomotives with a rolling stock of about 70 cars. Perhaps his most unique boxcar is the one decorated with the NIMA and WORKFORCE21 logos. It was presented to him by the WF21 Board of Council Chairs upon his departure after a six-month rotation as its Secretariat. He was responsible for administrative support to the Occupation Councils and setting up the WF21 grievance program.

Smith has a reputation for sharing his hobbies with co-workers. He brought in 300 feet of spare track and set up his train in a vacated area of Roberdeau Hall during the holidays last year. Everyone got to be an engineer, wearing engineer caps provided by Herb.

"Herb is wonderful, he brings in his toys and shares them with us," said systems engineer Joan Nickless, who, Herb says, talked him into bring in his train. Herb also supplies the office with flowers from his gardens "365 days a year."

Besides growing flowers and building model trains, Smith flies model airplanes and designs and builds large-scale indoor and outdoor aquariums.

Smith came to NIMA by way of the Defense Mapping Agency in the 1980s. As a child, he lived nine years in Germany and three years in Japan. "I was an Army brat," he explains. "I never intended to visit all 50 states. My sister and I just realized one day we had."

Herbert Smith, second from left, shares his model train with co-workers, from left Stuart Hirsch, Joan Nickless, ESI Chief Joe Klimavicz and Louis Artis.



Softball East and West

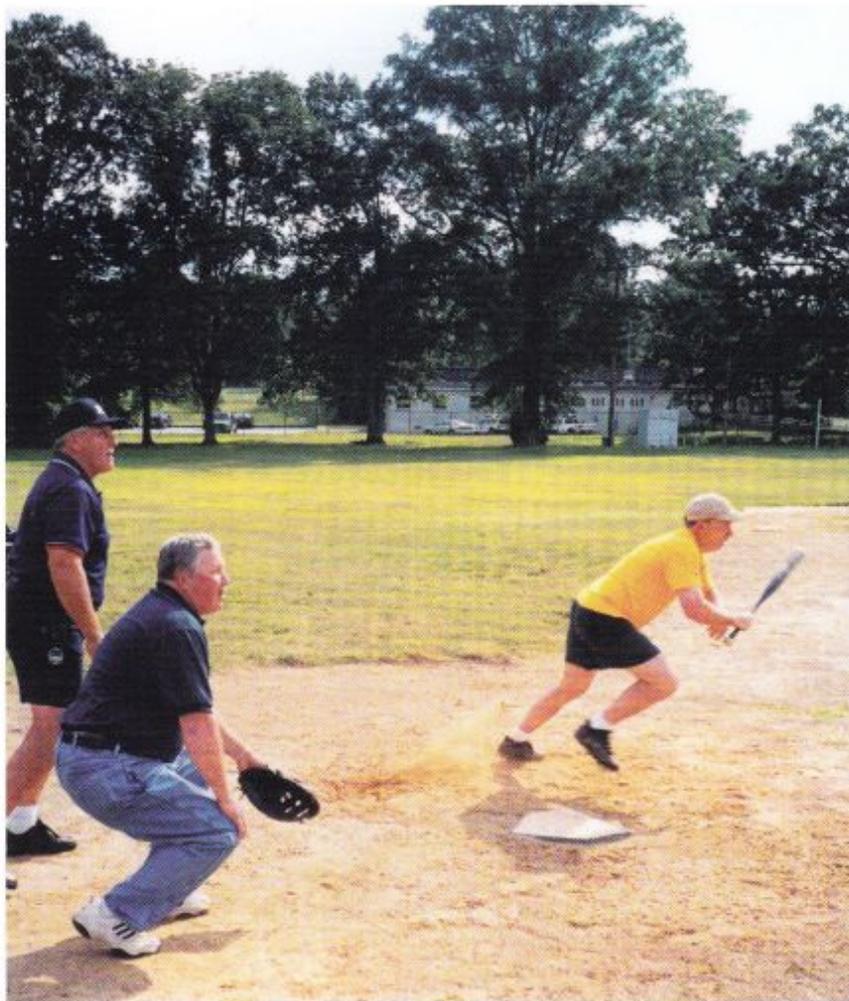


PHOTO BY BOB WHITE

In the photo at left, Gregg Hinkle of the NIMA Benchmarks hits a liner to right field during regular season play in the NIMA-Naval Surface Warfare Center Softball League, which played in Carderock, Md. Ron Witmer of the NIMA Gutter Punks catches.

NIMA softball teams played each other and teams from outside NIMA in both the Washington and St. Louis areas this summer.

A NIMA team, the Raiders, won the NIMA-Naval Surface Warfare Center League, romping through a tournament with a 4-0 won-lost record to win their third championship. Team members were Manager Keith Jones, Assistant Manager Lance Christensen, Mark Burnell, Tim Deak, Mike Evans, Al Frank, Andy Gutgesell, Brad Hayek, John Hummel, Jeff Merkle, Reggie Moore, Mike Panas, Gary Parker, Mike Utterback and Chris Zavrel.

In the St. Louis area, NIMA's Natural Lites won the Open Division of the St. Louis Municipal Softball League, beating the second-place NIMA Green Dust Weasels 16-6, to win their third straight league championship. Team members were Manager Bill Buckwalter, Barry Auth, Dave Biding, Greg Brouk, Roger Burlingame, Neal Covington, Mike DeSalvo, Bill Durham, Mark Gibson, Dean Kalmes, Robert Logterman, Vincent Preheim, James Strande, Steve Survant and Mark Wayne.

OUR PROGRAMS

InReach Changes Hands

Paula Alexander has been selected as the new InReach Program Manager. She succeeds Penny Thornton, who is attending Senior Service School.

Alexander was previously a requirements manager in the Plans and Customer Operations Directorate.

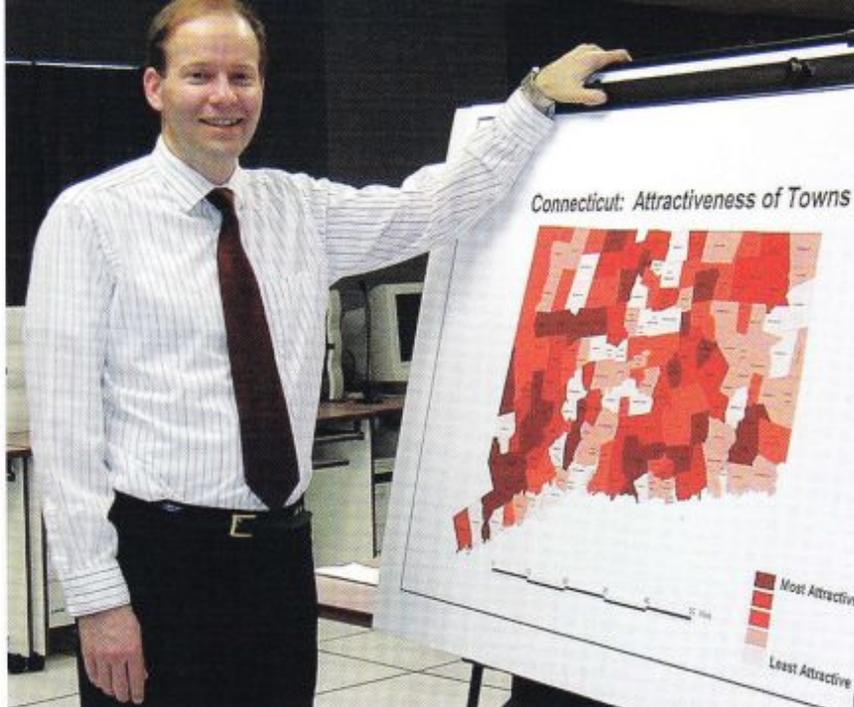
The InReach Program provides opportunities for NIMA employees to interact with customers to express opinions, share ideas and become partners as they better understand how each other performs their duties. 🧑‍🤝‍🧑



PHOTO BY KERRY GILBERT

Paula Alexander, left, and Penny Thornton.

Richard MacGregor displays a map ranking Connecticut towns by "attractiveness." The NIMA cartographer used a geographic information system to conduct his study as a class project at George Mason University. NIMA was not involved.



NIMA Cartographer Draws Fire For GIS Study on Connecticut

by JOHN ILER

The Danbury, Conn., *News-Times* called it a "municipal beauty pageant" and complained that competing towns had "no chance to primp." And the Torrington, Conn., *Register Citizen* bemoaned its county's "D-" rating. That, however, doesn't disappoint NIMA cartographer Rick MacGregor, who late last year released a geographic information system (GIS) study rating Connecticut communities. NIMA was not involved in the study, done by MacGregor, who defends his work as a serious effort.

Assigned to NIMA's Office of the Americas (AM), MacGregor recently accepted a three-year assignment in Guatemala. To some, the sooner he starts for Central America, the better.

"He ought to adjust his eyeglass prescription," said Danbury Mayor Gene Eriquez. Stung by the fact that Danbury received a less-than-perfect 155 rating out of 169 towns and cities, Eriquez pointed out to the *News-Times* that *Money* magazine once picked Danbury as the Number One city in the nation to live in. And the *Hartford Courant*, noting that Hartford rated dead last, began a news article on MacGregor's work by asking, "Who you callin' ugly?"

But MacGregor isn't swayed. "None of this should be taken as gospel," he says, flipping through his 66-page report. "But I do believe this is an effective use of GIS to rank cities and towns by attractiveness and quality of life. And I think it may be the most accurate rating of cities and towns, regardless of method, period."

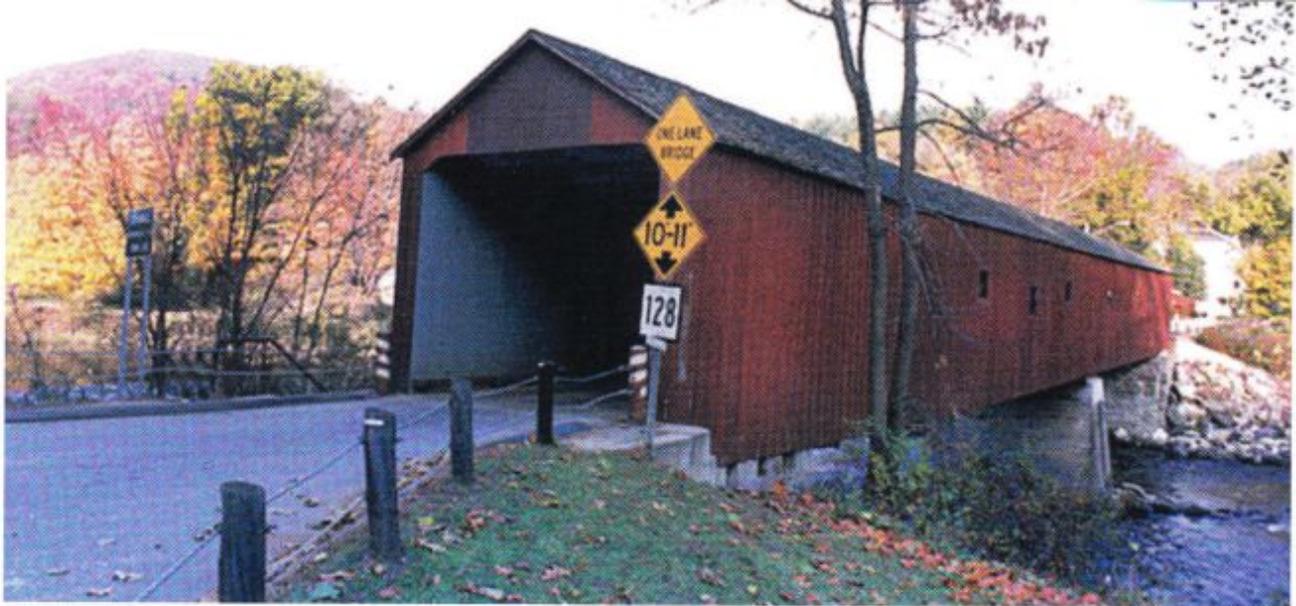
MacGregor says that by using ArcView GIS, commercial mapping and GIS software, he not only provided accurate results but better analyses. "That, combined with the fact that I'm from Connecticut and have spent many hours thoroughly revising and improving my work, most of it based on hard, empirical data, adds to the strengths of my report."

MacGregor knows about fierce community loyalty because he feels it himself. He grew up in Winstead and says that no community in the state deserves a D-. "All of Connecticut gets an A, with the possible exception of Hartford," he laughs. "What I've done is rank what I'd call the best of the best."

The Beginnings

MacGregor began his study last year for a GIS course at George Mason University in northern Virginia. "Actually, it was the final project," he said. The initial research took him two months. Gaining permission to use NIMA computers during his off-hours, he used ArcView to gather and generate empirical data. Categories included crime rate, distance from metropolitan areas, distance from the shoreline, housing prices, taxes, incomes, poverty rates and unemployment. His professor gave him an A+ and noted it was a "fun study!"

MacGregor's family and friends also pored over the report and suggested he contact the media. In preparation, he spent four months reworking the report, correcting typos and data, and adding



Ranking "prettiness" among towns was difficult in a state full of scenes like this one, Richard MacGregor says of his study to rank Connecticut towns in several categories.

newer data from the Connecticut Department of Economic and Community Development. He dropped some categories, such as distance of towns from the shoreline ("You're never more than an hour and a half away anywhere in the state"). He also visited communities, leading to the addition of perhaps his most controversial category – "prettiness."

"I traveled more than 1,000 miles around the state to visit the 20 or so communities I'd never been to before, as well as revisit the great majority of the other towns," he said. Taking extensive notes, he talked to family and friends before awarding final rank numbers. "Based on this type of input," he said, "some towns got raised or lowered a notch." When the report was finished in October 2000, MacGregor had visited all 169 towns and cities in the state.

What's So Bad about Hartford?

MacGregor's research touched off considerable interest with the media and with Connecticut residents. Those living in highly rated areas of the state were thrilled. Those living in lower rated areas, particularly Hartford, were not.

Michael McGarry, a former Hartford councilman and a board member of Hartford Proud and Beautiful, took strong exception.

"What's that guy smoking?" he asked *Courant* reporter Helen Ubinas. "He obviously knows nothing about Hartford." And Wilson Faude, executive director of Hartford's Old State House, called MacGregor's findings "absurd," adding, "Is the man blind?"

In other communities, residents complained that low housing prices aren't necessarily a plus. "The high house prices keep overpopulation, to some degree, at bay," said John Katz, Ridgefield Planning

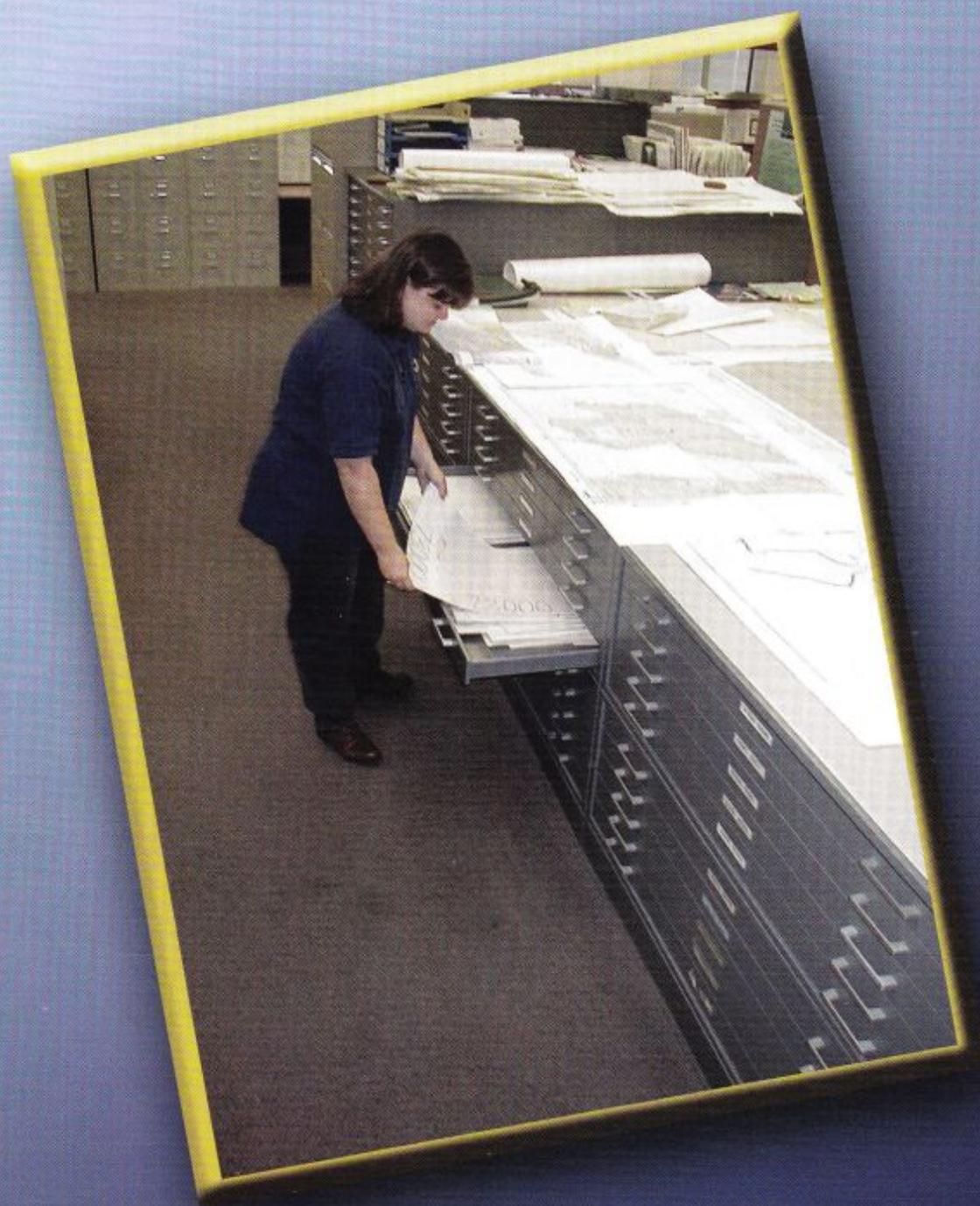
and Zoning Commission member. Katz told the *News-Times* it also doesn't make a difference what other people think. It "isn't even on my radar screen," he said.

MacGregor defends his report's objectivity and points out that sometimes his opinions don't agree with the data. "For example," he said, "Hartford ranked very low—and in some cases, dead last—in categories like per capita income (lowest), infant mortality (highest), poverty (highest) and unemployment (highest). It also had the second highest crime rate and ranked in the lowest bracket on the 'prettiness' scale." Even so, he added, Bridgeport, which ranked third lowest in the report, is his least personal favorite.

Ranking prettiness was difficult in a state full of scenes that MacGregor says appear to be taken from Norman Rockwell paintings. He admits his study isn't perfect, but points to other publications that rate states and communities.

"If I had it to do over again, I can't think of anything I'd do differently," he said. "I did everything as best as I possibly could. I don't know if what I've done is the very first quality of life study to be based on GIS, but I do think it's a groundbreaking study and a useful planning tool for families relocating to Connecticut. And I expect that one day it will be done in other states."

Assisting MacGregor in his study were Army Capt. John Esposito, NIMA Defense Mapping School; Brian Pope, contractor, Logicon Corp. and Greg Edgar and Alice Celay, NIMA geospatial analysts, none of whom represented NIMA in connection with the study. For a complete ranking of Connecticut towns, and maps of all categories used in the study, visit Rick MacGregor's web site at <http://www.gcol.com/macgregor/conn.htm>.



***Chart Lockers will be
eliminated with Digital Charts
and Digital Updating***