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PATHFINDER

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Serving the Front Line

March/April 2009

INTERNATIONAL EDITION: YOUR PASSPORT TO **GEOINT**

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On My Mind

Uniting the Global GEOINT Community

Strong and innovative international partnerships are essential to meeting global security challenges. The Intelligence Community and Department of Defense embrace the culture of collaboration and value the contributions of all of our foreign partners. Geospatial intelligence (GEOINT) is enriched by an international perspective. Our analysis is improved by the valuable context and expertise all our partners provide, and because of this we are committed to building new and enhancing enduring foreign partnerships.

Our leaders have outlined the strategic imperative to collaborate. The new Director of National Intelligence, Dennis Blair, recently stated, "The intelligence services need to have open minds, change traditional ways of thinking and be bold and creative in identifying possible threats to the nation." As Secretary of Defense Robert Gates explained, "We must find ways to capitalize on our individual strengths, while also respecting and honoring the sovereignty of each nation ...." President Obama emphasized, "We can meet those new threats that demand even greater effort—even greater cooperation and understanding between nations." Our leaders understand that collaboration is not just an option, it is a necessity.

Partnerships in Action

Our combat forces share battle space with the North Atlantic Treaty Organization (NATO) and our coalition partners. We are getting better and better every day at sharing GEOINT and supporting these warfighters in accomplishing their mission. GEOINT analysts from NGA are constantly learning from our international partners and improving support on a wide range of mission sets. For example, NGA has partnered with international and U.S. mission partners to collect geospatial data across Afghanistan in support of combat operations, foundation data missions and host nation capacity.

International partnerships are often most evident when disaster strikes. Natural disasters like the earthquake in China in May 2008 and the typhoon in the Philippines in June demonstrate the need to understand our world and cooperate with partners around the globe. In the aftermath of the China earthquake, the unprecedented request from China for GEOINT showed our capacity to support a wide range of countries with a diverse range of missions. NGA support was vital in saving lives by providing a clear operating picture and informing emergency personnel of potential risks associated with the earthquake. International events like the Beijing Olympics and the NATO Summit provide opportunities to collaborate with GEOINT professionals in support of joint requirements. Imagery and geospatial information serve a tremendously important role in enabling emergency response personnel to understand their environment and act quickly to reduce further risk, regardless of national borders.

Allied System for Geospatial Intelligence — Enhancing Partnerships

Good GEOINT is possible only by incorporating multiple perspectives, high-quality tradecraft, dedicated professionals and multiple-intelligence collaboration. GEOINT is bigger than NGA. The entire National System for Geospatial Intelligence (NSG) produces and participates in providing GEOINT to our nation's decision makers and warfighters. We work closely with our allies on a day-to-day basis, and to reflect this reality we have expanded this operating model to more fully incorporate the valuable input of our closest allies. Therefore, we are now operating an Allied System for Geospatial Intelligence (ASG). The NSG joins Australia, Canada, New Zealand and the United Kingdom to form an international GEOINT community, with each member building on the contributions of others and underlining the strengths of each nation. The ASG is a platform for cooperation on issues ranging from standards to technology, from training to fulfilling joint requirements in the topographic, aeronautical and nautical areas, as well as joint requirements in theater. By working in close coordination with all our international partners, we reduce redundancies, we share the burden of data collection, we leverage regional expertise and ultimately we improve our efficiency and effectiveness in achieving our mission.

The strategic importance of our partnerships grows every day, and we continue to strengthen and deepen our ties as we move forward together to create an intelligence and decision advantage for our decision makers, warfighters and international partners.

Robert B. Murrett
Vice Admiral, USN
Director

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On the Cover

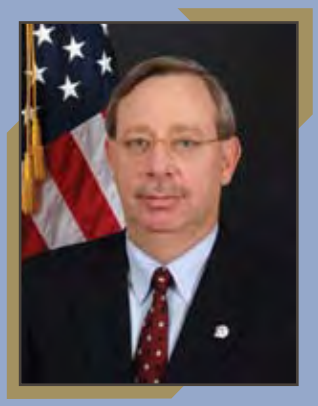
A passport represents excitement and expectation, the opportunity to extend the boundaries of experience. Whether exploring over miles or over the printed word, a journey to foreign lands inevitably proves rewarding. The traveler's perceptions change and knowledge expands. Travel through these pages and transit international realms and activities—all related to the application of geospatial intelligence (GEOINT). Your itinerary is to your right. Follow it in order or rove at your leisure; no matter the course, your passage begins within these pages. Cover design by Anika McMillon.

More to the Story?

The online Classified Pathfinder, which is accessible by members of the Intelligence Community, may include additional information and expanded sections of some Pathfinder articles. The Classified Pathfinder provides a forum for reading and discussing topics at the level of "Unclassified//For Official Use Only" and higher. For information please contact the Classified Pathfinder editor, Heather Cox, at 301-227-2290.

Letter to Our Readers

International Edition: Your Passport to GEOINT



There are no boundaries to geospatial intelligence (GEOINT)—it is everywhere all the time. The role of NGA extends far and wide as the agency's dedicated workforce ensures safety across the globe. Reflecting the depth of the agency's mission, NGA personnel reside in over 100 locations worldwide to guarantee success. Many monumental GEOINT achievements are attributable to NGA's essential international partnerships and global presence.

Undeniably, the GEOINT tradecraft is essential to the nation's welfare. GEOINT is a team effort and NGA actively collaborates with the National System for Geospatial Intelligence, the Allied System for Geospatial Intelligence and beyond to provide this location-based, visual form of intelligence. But NGA's success and influence do not stop at the U.S. border. NGA's capabilities allow GEOINT to reach internationally, even to remote areas of the world, to aid mission partners in times of need. The agency collaborates with its international mission partners to produce the best and most accurate GEOINT products.

Start your trip around the globe with a special look at NGA's partnership with Canada. Col. D.H.N. Thompson, Canada's Director of Geospatial Intelligence, provides insight about the role of GEOINT in action—whether supporting training activities or carrying out operations.

View NGA's recovery and relief efforts as Katherine Zimmerman outlines the agency's contribution to supporting the People's Republic of China after the devastating earthquake in May 2008. Visit Afghanistan with Craig Rickert and Rosemary Simmons, who explain the contributions of a multinational working group providing accurate map products to navigate that country's diverse terrain.

Carlos Montenegro describes NGA's support to the stand-up of a national GEOINT capability in Iraq, reflecting on the emerging partnership between NGA and Iraq's Ministry of Defense. The agency's ability to share information and provide training to promote Iraqi GEOINT self-reliance proves the continuing need for and benefit of NGA's presence worldwide.

Stephanie Chang shares the path taken to ensure that NGA-deployed personnel enjoy secure networks to carry out their missions—an effort protecting over 100 systems worldwide. Dawn Eilenberger, who directs the agency's Office of International Affairs and Policy, explores NGA's relationship with the North Atlantic Treaty Organization as a critical enabler in the fight against terrorism and as an advocate for peace. Complete your journey with the NGA historian's perspective on the fight against international maritime piracy, still a significant concern in many parts of the world.

Altogether, the articles in this issue establish the importance of international partnerships to the expanding footprint of GEOINT. No less important, NGA's domestic relationships play an essential role in international and national security, as the May/June Pathfinder will examine.

Paul R. Weise
Director, Office of Corporate Communications

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GETTING PUBLISHED
All members of the geospatial intelligence community are welcome to submit articles of community-wide interest. Articles are edited for style, content and length. For details on submitting articles, send an e-mail to pathfinder@nga.mil.

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Guest Column

Meet Canada's Directorate of Geospatial Intelligence

By Col. D.H.N. Thompson, OMM, CD, Director of Geospatial Intelligence

Editor's Note: The United States, Canada, Australia, the United Kingdom and New Zealand enjoy a distinct geospatial intelligence relationship. The Pathfinder invited Col. D.H.N. Thompson to introduce our readers to Canada's Directorate of Geospatial Intelligence, which he leads.

Photo by Department of National Defense

Col. D.H.N. Thompson, OMM, CD, Director of Geospatial Intelligence

Canada's Directorate of Geospatial Intelligence (D Geo Int) is headed by the Director of Geospatial Intelligence, who serves as the functional manager for ensuring the effective planning, coordination, control and provisioning of geospatial intelligence (GEOINT), measurement and signatures intelligence (MASINT) and meteorological and oceanographic services to the Department of National Defence (DND) and the Canadian Forces (CF). The director reports to the CF Chief of Defence Intelligence (CDI).

Indeed, no CF operations or training activity occur without D Geo Int products and services. Every map and chart, most MASINT products, meteorological forecasts and imagery intelligence come from D Geo Int teams, without whom ships do not sail, planes do not fly and no one crosses the line of departure. D Geo Int maintains numerous international and national partnerships that are key to achieving the necessary effects, among them its strong partnership with NGA.

The director commands a small staff and oversees the operation of the Directorate of Meteorology and Oceanography and three line units, namely the Mapping and Charting Establishment (MCE), the CF Joint Imagery Centre (CFJIC) and the Joint Meteorological Centre.

D Geo Int coordinates requirements for and provides GEOINT products and services to the military's Environmental Chiefs of Staff, strategic and operational military staff, and tactical units at home, during training and while conducting domestic or expeditionary operations, including:

» force generation, which includes manning and training of deploying elements
» reviewing and providing guidance and input as needed in the production of the GEOINT documents supporting operational plans
» direct reachback support to forces in theatre
» management of national and international arrangements to produce GEOINT support standards and plans in the context of Canada's many multinational and bilateral agreements, including collaborative production plans
» advising on the GEOINT support aspects of CF capabilities plans
» recommending policy on the standardization, production and exploitation of GEOINT and on requirements among Canada's national agencies
» serving as the CF's military and civilian GEOINT advisor and recommending professional standards, career patterns, trade structure, training requirements and policy
» advising on related GEOINT research and development programs

Current D Geo Int projects include the CF Weather and Oceanographic Service (CFWOS) Transformation Project, which will ensure the long-term provision of high-quality meteorological and oceanographic services to the CF's operational community. Part of this process was the

stand-up of an interim Joint Meteorological Centre in Gagetown, New Brunswick, on Nov. 13, 2008. By final operating capability in 2010–11, the centre will include provision of CF-wide weather briefing and forecasting.

The directorate has concluded the first phase of a major study to position CDI to effectively deliver the full range of 21st century GEOINT capabilities to the DND and CF. The study's recommendations include the need to establish a more robust governance regime for the GEOINT function within the DND and CF, and CDI has agreed in principle with this. Staffing of the necessary documents is ongoing.

As part of Canada's ongoing support to operations in Afghanistan, a D Geo Int team participated with our U.S. and British colleagues, including NGA, in the highly successful Operation Rampant Lion 2 mission during the spring and early summer of 2008. This activity provided a large volume of GEOINT data and products that were able to be exploited in near-real time in support of CF troops, as well as for our allies in theatre. This was the first truly integrated D Geo Int operational activity with a composite team of imagery intelligence experts from the CFJIC and geomatics technicians from the MCE. It has paved the way for much more integration of the capability in the future, both domestically with other fellow Canadian government departments and internationally within coalition theatres of operation.

D Geo Int values its relationships with NGA and all its foreign and domestic partners. The increasing importance of GEOINT to the collective safety of Canada, its forces abroad and its partner nations drives D Geo Int to maintain these indispensible relationships and perform its essential missions through the continued provision of timely, accurate and current GEOINT products.

Up Front

British General Honored With NGA Medallion of Excellence

Photo by Larry Franklin

NGA Director Vice Adm. Robert B. Murrett honored British Royal Marines Maj. Gen. John Rose on March 5, 2009, in a ceremony at NGA headquarters in Bethesda, MD. Murrett awarded Rose the NGA Medallion of Excellence in recognition of his outstanding contributions to the mission of NGA and the Commonwealth partnership. Rose, who serves as the United Kingdom's Assistant Chief of Defence Staff for Intelligence Capabilities, retires at the end of March. The ceremony marked his final visit to NGA.

British Royal Marines Maj. Gen. John Rose receives the NGA Medallion of Excellence from NGA Director Vice Adm. Robert B. Murrett on March 5, 2009.

GEOINT Serves NATO

By Dawn Eilenberger

The North Atlantic Treaty Organization (NATO) in today's world has never been more important. NATO continues to deal with threats such as terrorism, as well as support peacekeeping missions and humanitarian and disaster relief efforts, in every corner of the globe. The changing world environment faced by NATO increasingly highlights the role of geospatial intelligence (GEOINT) as a critical enabler.

Interoperability and Standardization

Whether at NATO Headquarters or the Supreme Headquarters Allied Powers Europe in Belgium, at the NATO Intelligence Fusion Center in the United Kingdom, or in theater in the Balkans and Afghanistan, NGA has demonstrated that the provision of GEOINT directly supports senior decision making and operational commanders. Today's dynamic world demands that GEOINT support a wide variety of mission objectives. From infrastructure studies aiding strategic discussions on reconstruction efforts to counternarcotics and counterterrorism reports for current operations, GEOINT is at the forefront as an enabler of decision making and strategic planning.

As NATO nations bring their national military assets to bear on global operations, the standardization and interoperability of equipment and procedures present an ongoing challenge. A particularly critical area that NGA is working is joint intelligence, surveillance and reconnaissance, or Joint ISR. Airborne collection assets are growing in number, and their use on the battlefield is becoming evermore decisive. Ensuring interoperability and data standardization will be key to enabling coalition operations. NGA, as custodian of a number of Joint ISR-related NATO standardization agreements, is committed to working with the NATO nations to implement common standards.

Additionally, the storage, cataloging, retrieval and dissemination of GEOINT data and imagery become a greater challenge as the volume of data grows. NGA has recently assisted NATO with engineering expertise to develop a NATO standard geospatial technical capability for management and dissemination of geospatial data in Afghanistan. NATO's implementation of this standard capability at the Allied Joint Force Command (JFC) Brunssum in the Netherlands, the headquarters of the International Security Assistance Force Afghanistan, and at the Afghanistan regional commands will ensure all coalition nations are fighting with the same map.

Data Sharing

Gathering and sharing data, as well as producing actionable intelligence, are key enablers to mission success. Sharing data in a multinational environment can be difficult and challenging.

Supreme Headquarters Allied Powers Europe near Mons, Belgium.

NATO photo

One example serves to highlight the agency's data sharing successes. Over the past year, NGA has been working with seven other NATO nations in a program sponsored by JFC Brunssum to produce new geospatial products over Afghanistan and to ensure an efficient and effective means of supplying these maps to troops on the ground. In a hallmark of cooperation, over the next year this project will yield new topographic maps over regions that have not been mapped in decades, and the map depot in Afghanistan will be able to order these products from a single, comprehensive catalog.

Convergence of Imagery and Geospatial Responsibilities

NGA's experiences in Afghanistan have proven the value of fusing geospatial and intelligence data to create products the warfighters use in performing their daily mission. As NATO and NATO nations work to converge imagery and geospatial policies and responsibilities, the valuable knowledge gained on the battlefield will surely play a role in policy and program development. The Intelligence Fusion Center, where analysts from NATO nations work together on critical GEOINT products, provides an excellent environment in which to teach each other and develop tradecraft. NGA is committed to supporting the center with analysts and data to enable the mission.

Expanding NGA's NATO Presence

Increasing NGA support to NATO and the European Community to support the agency's foreign partners has led to the recent establishment of a senior international officer at NATO Headquarters in Brussels. Additional support to NATO in the areas of geospatial sharing policy, disclosure and release guidance, foreign military sales, and operations in the Balkans, Afghanistan and Iraq are some of the critical areas that NGA's forward presence will coordinate.

Meeting the Operational Challenges

At the 2008 GEOINT Symposium held last October in Nashville, Tenn., Col. John Fitzgerald of NATO Headquarters International Military Staff outlined some of the biggest GEOINT operational challenges. The complexity of interoperability, data management, and data sharing is one of the top issues that NATO faces in day-to-day operations around the world. We must also place emphasis on GEOINT training and education as more nations participate in coalition efforts against a broad array of missions.

A Bright Future

NATO's mission continues to grow, and the increased collaboration with NGA highlights the critical role of GEOINT. NATO is transforming to meet new strategic challenges, and NGA is poised to contribute to both NATO operations and NATO's strategic transformation. P

North Atlantic Treaty Organization Headquarters, Brussels, Belgium.

NATO photo

Dawn Eilenberger
is the director of NGA's Office of International Affairs and Policy.

GEOINT: THE NATION'S EYES SAVES LIVES

China Earthquake Effects an Unprecedented Call for GEOINT

By Katherine Zimmerman

On May 12, 2008, a devastating 7.9 magnitude earthquake struck China's Sichuan Province, reportedly killing more than 70,000 Chinese citizens. The destruction and loss left in the earthquake's aftermath were so catastrophic that the traditionally self-reliant country of China accepted offers of foreign assistance—including those from the United States—to support humanitarian and disaster relief efforts in the region. Immediately following the earthquake, President Bush pledged America's support to the People's Republic of China (PRC) as it began mounting its recovery effort, saying, "The United States stands ready to help in any way possible."

Organizations including the U.S. Agency for International Development soon began providing humanitarian and disaster relief assistance to the Chinese as part of a consolidated U.S. government response. In support of this unprecedented activity, NGA's Office of International Affairs and Policy (OIP) Disclosure and Release (D&R) Team began working closely with the Department of State (DOS) to navigate policy channels to allow the sharing of geospatial intelligence (GEOINT) products to assist in recovery and relief-related activities. As analysts from NGA's Analysis and Production Directorate set to work on tailored products, the agency coordinated to reduce production time and quickly approve the products for release. On May 16, NGA delivered the first of numerous products to DOS, which worked directly with the Chinese government.

Working with DOS as well as relevant U.S. federal organizations, NGA coordinated and processed incoming GEOINT requirements to support the PRC's efforts to assess the earthquake's effect on infrastructure, roads, bridges, reservoirs and urban centers. OIP ensured that GEOINT policy was in place that enabled NGA to utilize all sources of remotely sensed data to fashion and create effective GEOINT products. These products assisted the PRC in locating desperate victims, identifying serious damage and maintaining situational awareness regarding the increasing risk to villages and cities that were being slowly inundated with water as earthquake-formed landslides caused damming on local rivers across numerous affected areas. NGA analysts also produced earthquake-related products and analysis in support of the agency's many mission partners.

As demonstrated time and again by the agency's support to disaster relief and humanitarian efforts, both here and abroad, NGA's data, information and products have proven essential to those leading recovery and response efforts following earthquakes, hurricanes, floods and other devastating events. GEOINT products, such as maps, can be quickly created as simple, easy-to-understand representations of critical recovery and relief information, such as the status of the key infrastructure within an area devastated by the forces of nature. The simplicity of these products is critical to their utility because the end users, including first responders, relief workers and provincial and local officials, often have limited experience as consumers of GEOINT yet need to quickly understand what areas have been hardest hit by a natural disaster.

The extensive efforts of NGA, in close coordination with DOS, reinforced the United States' commitment to assist worldwide governments in the wake of a catastrophic event. NGA's groundbreaking outreach and responsiveness to China's unusual and unexpected request once again demonstrated the power of GEOINT to support damage assessments, humanitarian relief efforts and disaster recovery activities. P

Katherine Zimmerman
is a contractor supporting the Disclosure and Release Team in the Office of International Affairs and Policy. Dean Ferrell, chief of the China Internal Security Branch in the Office of Asia–Pacific, contributed to this article.

Multinational Working Group Unifies Afghan Mapping Efforts

By Craig Rickert and Rosemary Simmons

Forty nations are working side by side in Afghanistan as part of the International Security Assistance Force (ISAF), led by the North Atlantic Treaty Organization (NATO). As these nations work to assist the Afghanistan government in securing and developing the country, their ability to navigate the terrain to accomplish their mission remains key. In a true model of multinational cooperation, the United Kingdom, the Czech Republic, Canada, Norway, Italy, Germany, Poland, the Netherlands and other European nations have banded together to provide up-to-date geospatial information and maps covering much of the country.

Experience gained from early deployments to Afghanistan generated this effort. As these nations sent their troops to Afghanistan, they discovered that geospatial data in that war-torn country had not been updated in many years. Several nations began individual efforts to revise the data and produce maps of the regions where their forces were deployed. They soon realized that, in some cases, nations were duplicating efforts. This realization led to the establishment of the Afghanistan Production Coordination Working Group (APCWG), led by the Allied Joint Force Command (JFC) Brunssum, the NATO command tasked with overseeing ISAF operations. The group, consisting of JFC Brunssum and 11 nations, is charged with coordinating national geospatial production to meet ISAF geospatial requirements.

The APCWG, which met most recently in September 2008, has made significant progress in its mission. To date, seven nations are producing vector data, image city maps, Multinational Geospatial Co-Production Derived Graphics (MGCP-DGs), and full specification topographic line maps over most of Afghanistan, using

AFGHANISTAN
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Sheberghan
Sar-e Pol
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Farah
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Mehtar Lam
Khost
Feyzabad
Khwahan
Ashkamesh
Taloqan
Khanabad
Dowlatabad
Andkhoy
Maymana
Qal'eh-ye Now
Chaghcharan
Kowt
Farah
Ghazni
Gardiz
Jalalabad
Kabul
Pol-e Alam
Mahmud-e Raqi
Charikar
Bamian
Pol-e Khomri
Sar-e Pol
Sheberghan
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Kondoz
Taloqan
Aybak
Baghlan
Meymaneh
Chaghcharan
Herat
Farah
Ghazni
Gardiz
Jalalabad
Kabul

commercial imagery. An ISAF catalog, developed by the group, designates the standard products to be used by the coalition forces on the ground. The catalog is updated as new products are produced and agreed to by the participating nations. So far, the group has produced approximately 150 new map sheets, with more due for delivery by the end of 2009.

Production of new products is just the beginning. The APCWG group also took on and solved the challenge of developing an efficient supply chain for delivery of these multinational products to the forces in Afghanistan. As with the early production efforts, JFC Brunssum realized that the ISAF participating nations were supplying

Germany Spearheads Mapping for Northern Afghanistan

By David Carey

As a member of the Multinational Geospatial Coproduction Program (MGCP) and the Afghanistan Production Coordination Working Group, Germany is a major producer of 1:50,000-scale topographic line maps (TLM50s) for the International Security Assistance Force (ISAF) in Afghanistan.

Germany has up to 3,500 troops in Provincial Reconstruction Teams in Afghanistan, the third largest contingent in ISAF. As the ISAF nation with primary responsibility for Regional Command North, Germany volunteered to produce most of the new TLM50s for northern Afghanistan. The Bundeswehr Geoinformation Office (BGIO), located in Euskirchen, Germany, is the geospatial organization for the German armed forces (Bundeswehr) and the central institution of the Bundeswehr Geoinformation Service. BGIO, in cooperation with Norway and Sweden, has the job of producing the TLMs.

BGIO has the capability to produce printed maps from start to finish. Beginning with existing MGCP vector data, BGIO first extracts additional features like culverts and powerline pylons that were not included in the MGCP specification but are required for TLM50s. As needed, BGIO also uses recent imagery to extract new features like roads or buildings to update the vectors. BGIO then creates contour lines from elevation data and extracts spot elevations. The vectors are symbolized to produce an NGA-specification TLM50 print-ready final product. BGIO also integrates best-available geographic place names from NGA's GeoNames database and other sources. These vector updates are also very valuable to the maintenance phase of the MGCP database.

BGIO's process includes photogrammetric preprocessing. Accustomed to using Controlled Image Base® 1 and other conventional image source for feature extraction, BGIO's analysts are enthusiastic about their new primary image source—NGA's Afghan Regional Ortho imagery. This commercial pan-sharpened color imagery is current, high-resolution and multispectral.

After finishing, the four-color print-ready files are printed in-house with a digital-to-plate process. Maps intended for distribution by the U.S. Defense Logistics Agency (DLA) are shipped to the DLA map warehouse in Germany. The map warehouse further distributes the products to U.S. and international partners, including the ISAF theater map depot in Afghanistan.

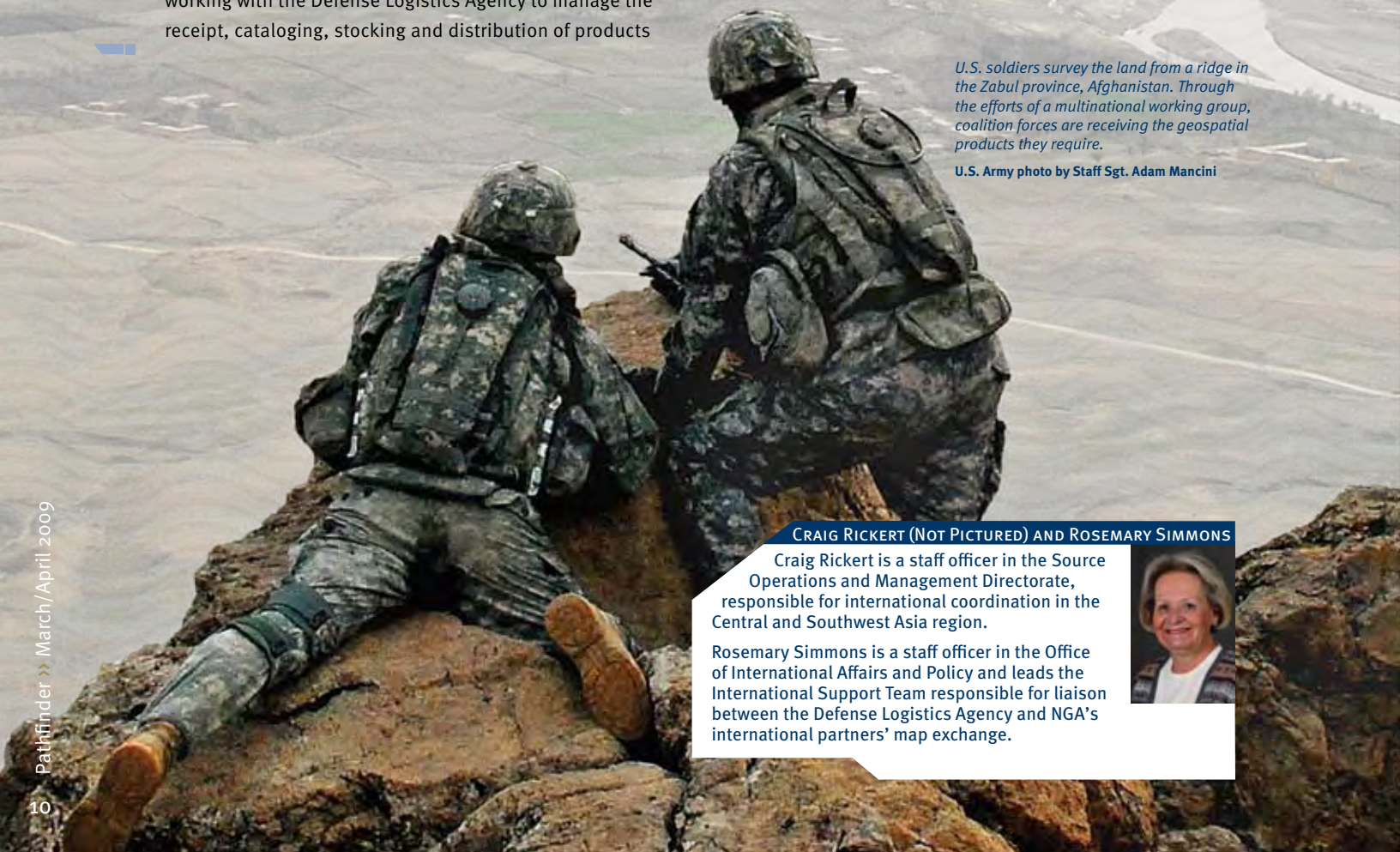
In 2008 BGIO started preparing vector data for over 90 map sheets at 1:50,000 scale, starting from the original MGCP vectors. Planning their Afghan 1:50,000-scale mapping in close coordination with NATO and NGA, BGIO expects to produce the remaining 185 sheets by the end of 2010. Together with new production from NGA and other NATO allies, this new large-scale map coverage will be a vital resource for ISAF forces operating in the area.

David Carey
is the NGA geospatial liaison at the U.S. Military Liaison Group in Germany.

geospatial products to their troops unilaterally or through national shipments to the theater map depot (TMD) in Afghanistan, which stores and distributes coalition maps in Afghanistan. The result was that the TMD sometimes had multiple versions of maps over the same area, with no clear idea of which was the most current and correct, nor any way to manage what was being shipped into theater. In June 2008, the United States, the United Kingdom and Canada worked together to develop a recommendation for a supply methodology that would standardize distribution of products. The recommendation was endorsed by the APCWG, and JFC Brunssum published a standard operating procedure in September 2008 directing the APCWG nations to follow the new methodology when supplying products to theater.

NGA has taken a lead role in coordinating the supply of products with the APCWG nations and JFC Brunssum, working with the Defense Logistics Agency to manage the receipt, cataloging, stocking and distribution of products to the TMD. As a result of the standardized process, the TMD will have the ability, for the first time, to place a single order for products and receive those products through a single supply system, enhancing its ability to manage and replenish stocks. The TMD can now supply the forward map distribution points within Afghanistan, ensuring up-to-date geospatial products for use by coalition troops.

Coalition operations have become the norm in the 21st century. Thanks to multinational cooperation, the ISAF coalition forces are getting the geospatial products they need to perform their vital mission. As British Lt. Col. John Fennell, chief geospatial officer, JFC Brunssum, stated, "The APCWG is a shining example of how national production agencies can work together, make best use of available production effort and make a real difference for the [men and women] in the field—that seems like win, win, win to me." P



U.S. soldiers survey the land from a ridge in the Zabul province, Afghanistan. Through the efforts of a multinational working group, coalition forces are receiving the geospatial products they require.

U.S. Army photo by Staff Sgt. Adam Mancini

Craig Rickert (Not Pictured) and Rosemary Simmons

Craig Rickert is a staff officer in the Source Operations and Management Directorate, responsible for international coordination in the Central and Southwest Asia region.

Rosemary Simmons is a staff officer in the Office of International Affairs and Policy and leads the International Support Team responsible for liaison between the Defense Logistics Agency and NGA's international partners' map exchange.

Agency Teams Enable Iraqi GEOINT Self-Sufficiency

By Carlos Montenegro

NGA has been at the forefront of providing consistent forward geospatial intelligence (GEOINT) support to the warfighter through its network of deployed GEOINT Support Teams (GSTs). NGA is following on this success by establishing a bilateral exchange agreement with the Ministry of Defense, Republic of Iraq, and assisting the Multinational Security and Transition Command Iraq (MNSTC-I), which is charged with developing the capabilities of the Iraqi Security Forces.

NGA's Office of International Affairs and Policy (OIP) is supporting the stand-up of Iraq's Imagery and Mapping Directorate (IMD), within the Directorate General of Intelligence and Security (DGIS), through establishment of a Basic Exchange and Cooperation Agreement (BECA). The BECA will facilitate the exchange of geospatial data and provide the necessary foundation for IMD to support Iraqi military forces with GEOINT and decrease Iraq's reliance on U.S. forces.

In 2006, NGA Director Vice Adm. Robert B. Murrett took the initial steps to assist MNSTC-I during his first visit to Iraq. He has since deployed a permanent GST to Baghdad to support MNSTC-I's Intelligence Transition Team and its effort to stand up Iraq's military intelligence, including IMD. In addition to deploying the GST, Murrett signed a Statement of Intent on Jan. 7, 2008, with the Director General of DGIS to form a close working relationship between NGA and DGIS.

In order to coordinate this emerging international relationship, OIP established a full-time international officer to coordinate the efforts of an NGA Iraq Country Team that includes representation from all NGA organizations with core roles in the Iraqi partnership. Between March 21 and 31, 2008, members of the Iraq Country Team traveled to Baghdad to evaluate IMD facilities, personnel and capabilities and to identify areas where NGA could work with the IMD. The team determined several areas for mutual efforts that will produce quality GEOINT for Iraqi military forces and support joint counterterrorism operations in a coalition environment. The partnership will include geographic information system training and IMD access to NGA standard products and commercially available imagery. When signed, the BECA will be the first of its kind with the Iraqi Ministry of Defense, establishing a permanent exchange relationship of controlled unclassified information and providing for the necessary training and geospatial data for Iraqi self-reliance.

Establishing a GEOINT exchange relationship with any foreign partner has inherent risks that challenge the status quo and must be balanced with the real benefits of supporting an allied partner in a

A poster illustrates cooperation between U.S. and Iraqi forces in the former Marine Corps base of Camp Fallujah, Iraq. A bilateral exchange agreement will decrease the Iraqi Security Forces' dependence on U.S. GEOINT support.

Photo by Richard Antin

joint combat environment. To guide these deliberations, the NGA Iraq Country Team evaluates risks against the numerous national intelligence objectives outlined by the Director of National Intelligence, the Department of Defense and the U.S. Central Command (USCENTCOM or CENTCOM). The team has developed a risk mitigation plan to limit the risk of any unauthorized disclosure and protect NGA resources.

NGA coordinated its BECA effort throughout the Intelligence Community. The Office of the Under Secretary of Defense for Intelligence and the Department of State have concurred on this effort. NGA is awaiting formal approval from the Office of the Under Secretary of Defense for Policy before initiating bilateral discussions with the Iraqi Ministry of Defense. The proposed BECA will enable NGA to provide the necessary data and training and facilitate IMD capacity building in accordance with CENTCOM strategic plans and MNSTC-I mission objectives.

The benefits of fostering a relationship with IMD can be seen today. After the resurgence of violence, which began in Al Basrah in April 2008, IMD came into its own and helped Iraqi Security Forces with time-dominant GEOINT support. Working under demanding time constraints, IMD produced numerous Arabic-annotated photomaps that proved critical in the planning and successful execution of several high-profile operations involving elements of the Iraqi Counterterrorism Center, the Iraqi Army, local and national police and coalition forces. In late August, IMD was asked by the Ministry of the Interior's (MOI's) National Information and Investigation Agency to provide a number of products to support border security efforts—the first instance of DGIS support to the MOI.

The BECA will decrease the Iraqi Security Forces' dependence on U.S. GEOINT support and enable Iraqi self-reliance. As U.S. forces draw down and Iraqi forces assume increasing control over security in the country, NGA will continue to support the MNSTC-I mission, fostering greater self-sufficiency for DGIS and IMD through the continued exchange of unclassified geospatial data and greater GEOINT training for IMD personnel.

Aerial view of Baghdad.
DOD photo

Carlos Montenegro
is a staff officer in the Office of International Affairs and Policy working as the focal point for NGA international engagement policy with the government of Iraq.

NGA Facilitates Commonwealth Collaboration

By Alan Higgins and Peter Paquette

Geospatial intelligence (GEOINT) sharing and analytical collaboration remain vital to achieving NGA's strategic vision. As the following examples demonstrate, the agency embraces the unique opportunity of providing tools to facilitate GEOINT collaboration between the United States and its Commonwealth partners.

Quadripartite to Quintipartite

The analytical efforts of the United States, Canada, Australia and the United Kingdom collectively form the Quadripartite Committee, or Quad. NGA's multidisciplinary government and contractor personnel perform crucial roles, ensuring that analysts working within the Quad environment have the tools and resources to perform their mission-critical work.

As the National System for Geospatial Intelligence (NSG) transforms, NGA is challenged to ensure that the Quad transforms in concert with the NSG. This means leveraging NGA capabilities to implement similar, even identical, capabilities within the Quad. The opportunities to improve the Quad's technological, analytical and collaborative capabilities are tremendous.

Two factors are increasing the scope and complexity of the challenge. Quad analysts need analytical tools and systems to access data while working as integrated team members within NGA work spaces, and the recent inclusion of New Zealand in the Commonwealth imagery sharing arrangement is transforming the Quad environment into the Quintipartite environment.

Two projects, recently completed by NGA, illustrate the breadth of activities fostering collaboration and the sharing of GEOINT. They stretch from NGA's U.S. facilities across oceans to the facilities of the agency's Commonwealth partners.

The Beijing Olympics Cell

In a first for NGA, analysts from Australia, Canada, the United Kingdom and New Zealand worked around the clock alongside their NGA colleagues supporting the agency's Beijing Olympics Reachback Cell in St. Louis, Mo., monitoring the 2008 summer games. These Commonwealth partners exploited imagery, reviewed requests for and evaluated sources of information, and wrote reports that U.S. and Commonwealth personnel could access in their respective countries.

Another first for this effort was the use of an expanded network to provide dissemination and exploitation capabilities for the Commonwealth analysts working with their U.S. colleagues. For the Olympics cell, NGA quickly implemented the system in St. Louis. The

Photos by Getty Images.

Photo illustration by Anika McMillon.

newly installed network exceeded all operating requirements. Although analysts downloaded far more imagery than originally envisioned, the system's design and the close collaboration between analysts and system developers enabled the network to handle the additional volume. Lessons learned from the experience will be applied to a more fully capable system in 2009, increasing the collaborative capabilities among Commonwealth and U.S. analysts.

The Olympics cell set the bar high for future integrated efforts with Commonwealth allies. The reliability of the systems used, the precision of the products created, and the professionalism of both Commonwealth and NGA personnel provided a unique glance into the future of multinational intelligence collaboration.

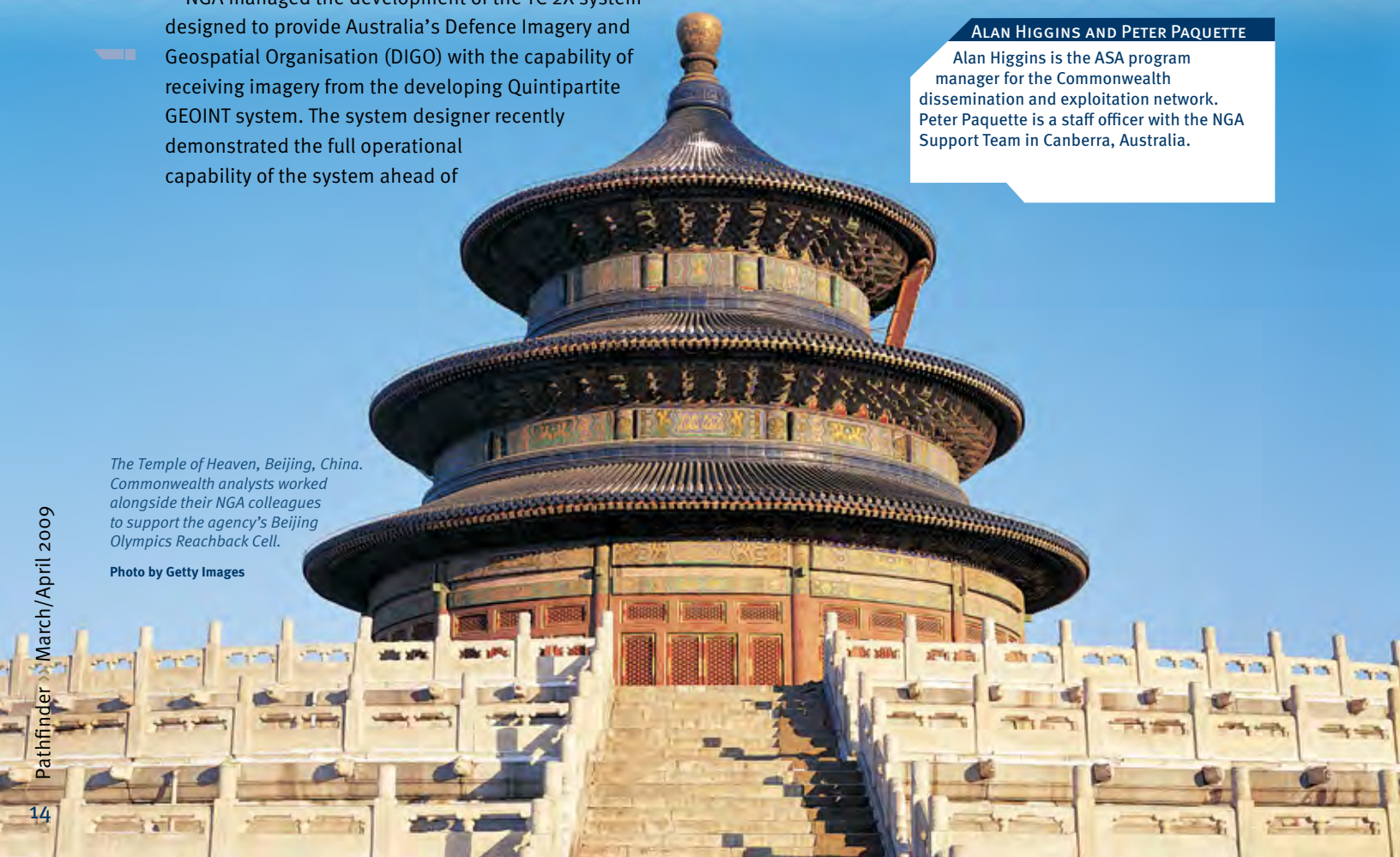
A Friendly Capability

NGA managed the development of the TC-2X system designed to provide Australia's Defence Imagery and Geospatial Organisation (DIGO) with the capability of receiving imagery from the developing Quintipartite GEOINT system. The system designer recently demonstrated the full operational capability of the system ahead of schedule, under budget and with exceptional performance. This outstanding performance illustrates how an effective partnership gets the job done—the right way. The main organizations involved in TC-2X are DIGO, the Defence Material Organization (DMO), which manages contracts on behalf of the Australian Defence Forces, and NGA. The new system and capability that DIGO now possesses are the culmination of more than five years of effort.

Although collaboration and sharing of GEOINT with Commonwealth partners are daunting, ever-changing tasks, these examples demonstrate the success NGA has achieved. NGA is meeting these challenges head on and actively searching for new and smarter ways to integrate its mission partners into NGA's global efforts. ⊢

Alan Higgins and Peter Paquette

Alan Higgins is the ASA program manager for the Commonwealth dissemination and exploitation network. Peter Paquette is a staff officer with the NGA Support Team in Canberra, Australia.



The Temple of Heaven, Beijing, China. Commonwealth analysts worked alongside their NGA colleagues to support the agency's Beijing Olympics Reachback Cell.

Photo by Getty Images

Accreditation Team Ensures Secure Global Network

By Stephanie Chang

Since Sept. 11, NGA has increasingly deployed collection, analysis and other systems into theater as the demand for technology to exploit and share geospatial intelligence has grown at a rapid pace. Today, in direct support of deployed personnel and mission partners, the agency deploys over 100 systems across multiple networks in more than 35 locations worldwide. Ensuring the security of those systems before and after their implementation is one of the challenges of rapid deployment. NGA's Accreditations and Risk Analysis Division (CSA) in the Information Security Management Office of the Office of the Chief Information Officer has met that challenge head on. The division works with multiple military, intelligence and international partners to make sure that no matter where NGA systems are located, the information NGA provides to warfighters is protected from adversaries.

A Unique Challenge

CSA assesses the overall security risk of all systems the agency deploys. Properly securing NGA systems prevents disclosing information to unauthorized entities while allowing authorized users quick and reliable access to data. To that end, the division has established procedures for certifying and accrediting all NGA systems and networks that reside within agency spaces.

Externally deployed NGA systems posed a unique challenge as the systems had to be integrated within the footprints of the combatant commands. Each partner's information assurance team has its own established process, so the integration of NGA systems in command footprints required collaboration. All stakeholders jointly agreed to a way forward, adopting a common certification and accreditation (C&A) approach to secure the networks.

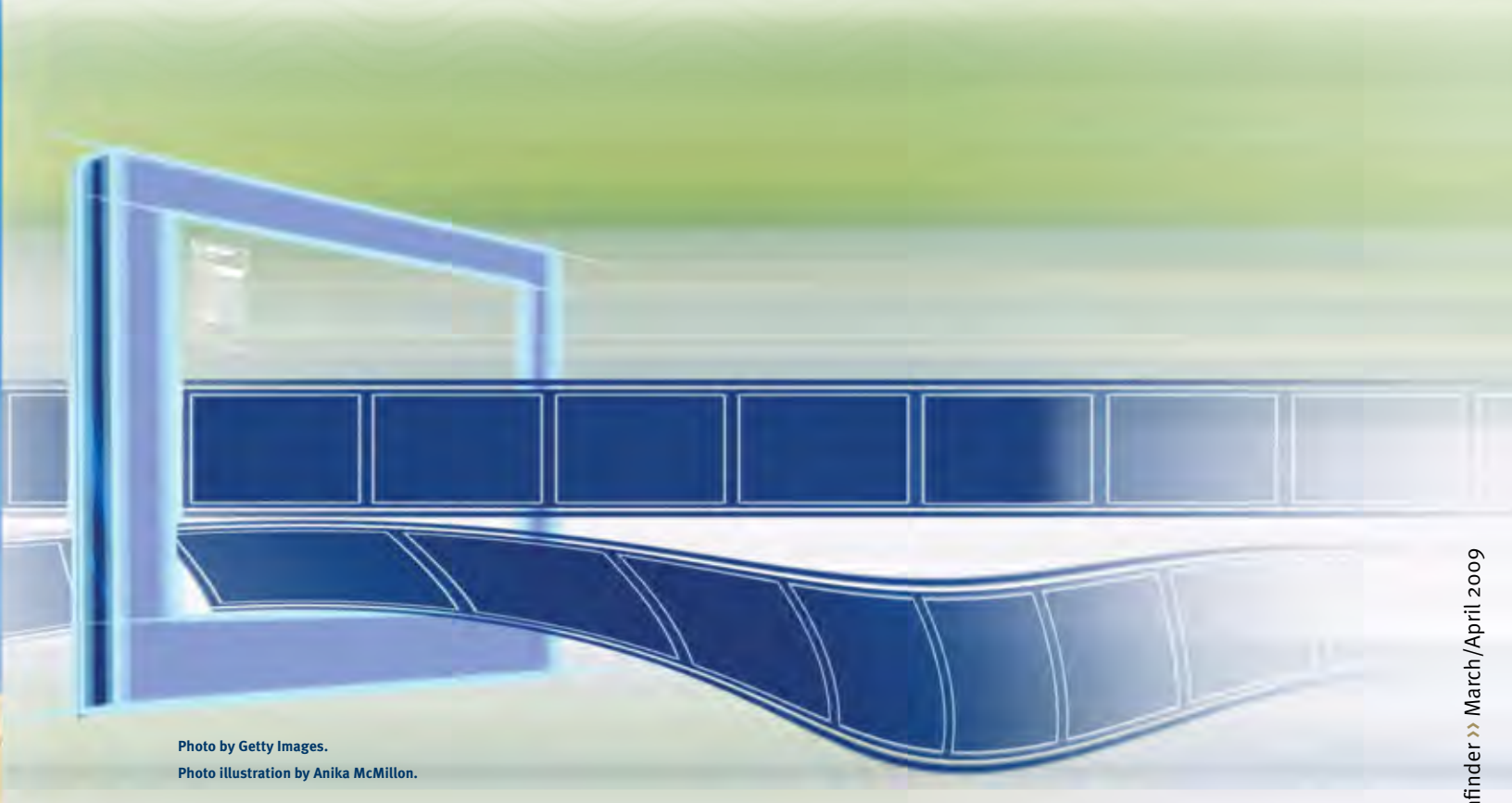


Photo by Getty Images.
Photo illustration by Anika McMillon.

The U.S. Central Command (USCENTCOM or CENTCOM) became a test bed for this evolving collaborative process as the command's need increased for deployed systems to support forces in its area of responsibility (AOR). With multiple intelligence and military agencies involved, concerns grew about information and systems security.

In June 2007, CENTCOM called for a common approach to the protection and sharing of information within its AOR. A CSA senior liaison working with NGA's Office of Global Support (OGS) stated that this "was the catalyst for us to sit down and look at our own C&A process to make sure it meets both NGA and the DOD [Department of Defense] requirements." The ultimate goal is to "make sure that the end user doesn't suffer, that [the warfighters] get what they need, but the information is protected."

A Collaborative Approach

CSA stood up tiger teams, specialized groups to examine the existing C&A processes, to satisfy both DOD and NGA requirements for deployed NGA systems to make sure that the agency is in line with its DOD partners' needs. By collaborating with CENTCOM, the Defense Information Systems Agency, the Defense Intelligence Agency, and other partners with a presence in the CENTCOM AOR, CSA fulfilled both NGA and mission partner requirements for C&A to meet the need to deploy secure systems rapidly.

In the summer of 2007, the CSA division chief deployed with OGS to multiple regions in the CENTCOM AOR to get a clearer picture of local requirements. The biggest benefit of working directly with the end users was to help CSA understand the operational mentality of the warfighters and to ensure the C&A process works within the operational tempo in theater.

All this effort culminated in a reciprocity agreement between the DOD and Intelligence Community (IC) chief information officers in August 2008. The agreement states that the DOD and the IC will adopt "common guidelines to streamline and build reciprocity into the certification and accreditation process." This allows military and intelligence mission partners to accept each other's C&A standards and processes for deployed systems and to share information on those systems.

Rapid Deployment of Secure Systems Worldwide

The hard work of CSA and other stakeholders has resulted in a faster, more streamlined process for deploying secure NGA systems into theater with a clearer understanding of each mission partner's C&A process. CSA has achieved dramatic improvement in the deployed systems accreditation rate, from just over 10 percent in February 2008 to a current rate of nearly 90 percent. All of this translates into more secure systems and more protected information for warfighters to better execute their mission. P

Stephanie Chang
is a contractor supporting the Communications Team in the Office of the Chief Information Officer.

Australia's GEOINT Relationships Prove Vital

By Lachlan Wilson

Editor's Note: The following article was adapted from "DIGO's Eyes in the Sky," which originally appeared in Defence, the official magazine of Australia's Defence Imagery and Geospatial Organisation.

After hosting the head of NGA and a major international conference, Australia's Defence Imagery and Geospatial Organisation (DIGO) continued to build its vital international relationships and its intelligence capabilities throughout 2008. The DIGO–NGA partnership highlights the importance of these relationships.

An Effective Alliance

International partnerships are vital to the business of DIGO. Traditionally, the United States, Australia, Canada and the United Kingdom have formed a unique and special partnership concerning the sharing of geospatial intelligence (GEOINT). In 2008, New Zealand was readmitted to this partnership after an absence of more than 20 years.

Australia's requirements for GEOINT are global. Like its allies, Australia has strategic and economic interests around the world and troops deployed abroad in international coalitions. In this environment, international burden sharing and cooperation on GEOINT are critical. Vice Adm. Robert B. Murrett, the head of NGA, DIGO's U.S. counterpart, visited DIGO in 2008 and provided a very useful perspective on collaboration and the value the United States obtains from working closely with Australia. "International partnerships, with Australia in particular, are absolutely vital. In fact, it's remarkable how much Australia adds to making us collectively more effective in Asia."

Murrett cited successful support to the 2007 Asia-Pacific Economic Cooperation Leaders' Summit in Sydney and the significant impact of U.S.–Australian GEOINT cooperation on humanitarian relief operations since the December 2004 Indian Ocean tsunami as achievements that "individually we never could have accomplished."

He also stressed the importance of GEOINT collaboration in supporting military operations, in particular through the provision of forward support. "The way that NGA and DIGO are most effective in supporting our operational forces is to be there with them and be embedded parts of the teams."

The vital contribution DIGO also makes in the field of mapping is reflected in Murrett's remarks about the Pacific. "We have joint requirements in terms of topographic, aeronautical and also nautical information—which is very important in the Pacific because of the vast water areas that are involved. We are cooperating very closely with Australia on all of that because of the sheer amount of effort it takes to have the best geospatial data we can have for all of the Pacific region."

A Historic Forum

Coordination across the international GEOINT community is achieved through an annual heads of agency board meeting, supplemented by quarterly participation by these partner agencies in the broader National System for Geospatial Intelligence Senior Management Council (NSMC), which brings together all the U.S. Combatant Commands, producer organisations and Commonwealth collaborators. Quarterly participation is via videoteleconference (VTC), usually at 3:00 a.m. Australian Eastern time because of the difficulties of establishing a worldwide VTC.

The agency board meeting is the primary means through which the partners can discuss face to face the governance and strategic direction of the partnership. It also plays host to subgroups that come together at the working level to discuss and plan business operations, capability development, and research and development. Each of the members brings complementary strengths and resources, as well as independent perspectives to the partnership. Conference discussion is usually frank and robust. In the view of Clive Lines, the Director of DIGO, the agency board meeting should be about ideas, rather than briefs.

The 2008 agency board meeting was historic for two reasons. It was the first hosted by DIGO in Canberra, and it was the first opportunity for New Zealand to participate as a full member.

Key themes at the 2008 meeting included burden sharing, communication systems, and capability development. Underpinning all these are ongoing initiatives to enhance data interconnectivity and analytical exchange between the partners, such as next generation e-mail and common data repositories.

Participants discussed further developing the fusion of GEOINT with other sources of information, in particular signals intelligence. Fusion has become increasingly important to the GEOINT production process. It consolidates and meaningfully depicts diverse data in a single product to give the intelligence customer a unique insight into an issue. Fusion has vital applications in military and counterterrorism operations—for example, in providing indicators and warnings about the locations and uses of improvised explosive devices or about terrorist activities and operations.

The true measure of the effectiveness of the 2008 agency board meeting in establishing a platform for cooperation over the following year will not be apparent until the next gathering in London in 2009, when progress against agreed initiatives can be gauged. But the consensus view of conference delegates on departure was that the 2008 agency board meeting had generated outstanding momentum for future cooperation and further integration of all partners' respective national GEOINT systems.

This article draws in part from an interview conducted by the author with Vice Adm. Murrett on March 21, 2008, prior to his attendance at the 2008 agency board meeting.

Lachlan Wilson
is the acting director for Policy Security and Compliance for the Defence Imagery and Geospatial Organisation.

Our Heritage

GEOINT Facilitates a Global Solution to Piracy

By Dr. Gary E. Weir

History often gives us the feeling of déjà vu, that sense of having already experienced something just encountered. Everyone has that feeling on occasion. For example, given recent television news stories, does this sound familiar?

> Above all, the cost of dealing with the pirates was excessive. The locals were numerous, well-armed, and dangerous. To impose order on a population reduced to poverty … and not infrequently starving would have required a major military expedition. The human cost would be high, and the diplomatic problems grave. Such an operation would be, in effect, a short-term invasion and conquest. The alternative naval response, instituting regular patrols, would have been uneconomic.

This certainly describes those conditions in Somalia and off the Horn of Africa responsible for a current rash of piracy very difficult to control. However, King's College historian, Professor Andrew Lambert, recently composed the above passage to describe the efforts of the British government to address the effects of Riff tribal piracy in the Mediterranean Sea in the mid-19th century! He concluded that the British authorities adopted the only reasonable course open to them. They supported a resurgent local Moroccan government and let its central control over the area subdue the tribes involved in piracy. An effective customs system with reasonable tariffs and a police organization to enforce expectations eventually presented the best long-term solution. In this case, the British looked to a combination of informed authority, regional awareness, national infrastructure and effective enforcement to restore local stability and freedom of action. This made normal trade possible, as well as effective international diplomacy, an essential tool for peace and prosperity.

However, you cannot implement any of these things so important to arresting piracy if you do not have a very high level of regional awareness. You must know where the pirates make their base, what ships and boats they can use, their movement by land and sea, their numbers, and their order of battle. Any effort to accomplish these ends also requires intimacy with

Photo by Jupiter Images.

Photo illustration by Anika McMillon.

regional geography. The British discovered all of this the hard way when the Riff tribes first became a major regional nuisance in the 1840s. Scholars have discovered a familiar scenario in studying these North African pirates, who regularly seized merchant vessels sailing under a variety of colors. As one historian observed,

> When the inevitable naval vessel turned up to recover the captured ship, or simply bring down some righteous indignation on the locals, they soon discovered an uncomfortable truth. The British had little knowledge of the area, lacking accurate maps, and reliable charts. The Bu Gafar villages were almost impossible to locate, often out-of-sight and invulnerable to bombardment, as were the boats, which the Riff buried in the sand, or hid in caves. The coast was dominated by cliffs, a marked advantage in a firefight. The same vantage point enabled them to spot approaching warships with their excellent telescopes, and they used signal fires to communicate orders.

Regardless of whether the international community employed force, political support for local authorities, or diplomacy, the protagonists would need geospatial information to understand the threat and the terrain while weighing options that promised a possible solution. The 19th century did not permit aerial photography, but maps and charts of the coastline and the pirate staging areas in the interior made effective action possible. Those intent on illegally seizing ships, crews and cargoes depended on an adversary's ignorance of the landscape, his inability to discover the best landing points along the shore, and the amount of time he would waste looking for pirate vessels hidden in caves and inlets in a foreign land. Indeed a foray ashore by the north German navy with a force of 60 in 1856 ended in defeat at the hands of the Riff pirates, excellent marksmen from the high shoreline cliffs. The north German venture took heavy casualties, including Adm. Prince Adelbert of Prussia, wounded while serving as expedition commander. The British and Germans, as well as the French, quickly learned the value of maps, charts, terrain data, ocean depth estimates, village locations, points of embarkation, preferred weapons, expertise with those weapons and any intelligence information regarding pirate movement.

These particulars are as important to modern geospatial analysts as they were to our professional predecessors over a century ago. Geospatial tools and information provided the imperial European powers of the 19th century with a broad context of physical and cultural knowledge upon which to build policies and local plans of action in response to the Riff pirates. The geospatial intelligence (GEOINT) generated by NGA today, augmented by imagery, digital charts and GPS-based location systems, will provide a 21st century context for the solutions and policies designed to arrest modern piracy. The United States, our Commonwealth allies, France and others, as well as those all-important regional authorities and cultural forces, will once again address this problem and build a solution on a geospatial foundation. Pirates violate the rights of all. GEOINT is playing a major role in facilitating a global solution.

Dr. Gary E. Weir
is the NGA Historian.

A GREAT DAY @NGA

November 19, 2008

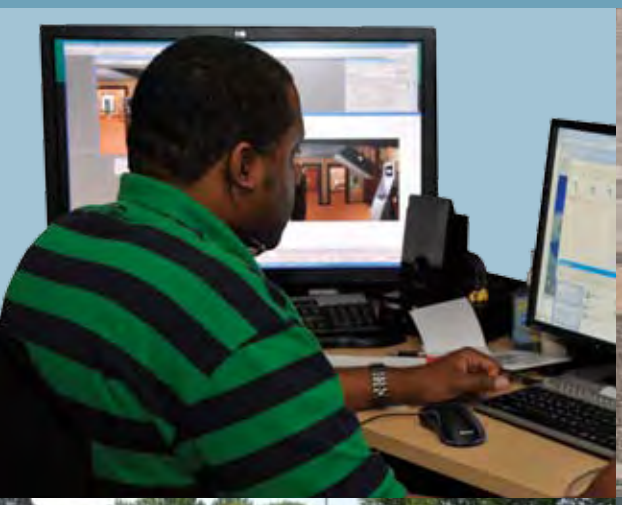
The National Geospatial-Intelligence Agency randomly chose a day to highlight the variety of significant agency activities involved in delivering geospatial intelligence to the nation.

Photos represent a typical day at NGA.

- Two members of the Presidential Transition Team conducted their initial visit to NGA. They were interested in a variety of topics, including source mitigation challenges, domestic security, analytic collaboration and E.O.12333 NSG Functional Management authorities.
- Geospatial Intelligence Advancement Testbed personnel at a forward operating location in southeast Asia installed a node supporting PACOM/SOCPAC.
- The Office of Financial Management delivered NGA's Agency Financial Report to the Director of National Intelligence, the Office of Management and Budget, and Congress.
- The Office of International Affairs and Policy (OIP) provided a stock of new 1:50K topographic line maps to the Theater Map Depot in Kandahar, Afghanistan. These Afghanistan maps are being produced by foreign partners to aid the International Security Assistance Force (ISAF) Afghanistan coalition.
- Human Development Recruitment Services processed applicants from NGA's first major hiring event, which was held 13–15 November. NGA received 5,616 résumés and conducted 1,185 interviews resulting in 698 conditional offers of employment.
- The Enterprise Operations Directorate printed 21,000 maps, replicated 4,700 optical media and scanned 115 charts; processed

18 print and 74 georeferenced maps for electronic availability; compiled and shipped five 500GB firewire drives and 10 optical media drives; generated 450 media; and purchased 60,000 aeronautical products for customers.

- The Office of General Counsel gave 78 legal opinions/advice to internal and external clients. This included travel topics, collection of EEO data/records and documents, affiliate benefits, liability insurance for employees, industry interaction, licensing agreements, data rights questions, procurement of server maintenance question, and a Ft. Belvoir opinion on overhead barriers.
- The Office of Global Support (OGS) reached a milestone in welcoming its 400th deployer to the NGA Volunteer Deployment Team. Since initiated in September 2001, OGS has deployed over 1,600 times in support of customers around the world.
- NGA celebrated support to the 2008 Beijing Olympics with an awards ceremony to honor the contributors. The event was hosted by the Office of Asia Pacific's Olympic support team.
- Construction continued at New Campus East with 42 steel beams being put in place.
- NGA Test Organization (NTO) conducted test number 2,931. The NTO is the independent test authority to issue Certificates to Field for all NGA products to the Department of Defense Intelligence Information Systems (DoDIIS) community.
- The Director's Action Center broadcast the daily Operations and Intelligence meeting to 42 sites worldwide, giving an update to the Director, NGA and his leadership team on current intelligence events, such as the exercise COLD START, as well as our mission posture.
- The Office of International Affairs and Policy worked with the Analysis and Production Directorate to bring a Battlefield



Information Collection & Exploitation System (BICES) workstation online.

- The State Department NGA Support Team attended the Department of State-chaired International Athletic Events Security Coordinating Group. Items discussed included security planning and exercises for the Vancouver 2010 Winter Olympics, security planning and Intelligence Community involvement with the April 2009 Summit of Americas in Trinidad and Tobago, the 2010 South Africa World Cup, and the 2012 London Summer Olympics.
- NGA Support Team analysts created terrain maps of four countries that will be used in determining possible illegal crossings away from border posts. They also coordinated with a deployed analyst at Joint Task Force–Guantanamo Bay on an Afghanistan map that was created in 2001.
- The Source Operations and Management Directorate supported the COLD START exercise with people assigned from the GEOINT Foundation Office working 205 hours.
- There are currently multiple NSA personnel partnering with NGA analysts to tackle complex intelligence problems. NSA is actively working to embed additional analysts in NGA spaces to further the joint analytic collaboration.
- The Security and Installation Operations Directorate provided flu shots to employees in the East and at the West facilities. Total shots for the year are 2,880 in the East and 1,493 in the West for a total of 4,373 employees inoculated.

- The Office of Diversity Management and Equal Employment Opportunity hosted its Quarterly Awards Ceremony, presenting 30 Special Act and Time Off awards as well as a special "Making a Difference" Team Award.
- The Analytic Visualization Division editors worked closely with CIA counterparts to arrange a reciprocal collaborative effort. After a CIA editor participated in a September visit to NGA, plans to invite NGA senior editors to CIA spaces began. After coordinating with the CIA NGA Support Team, a reciprocal visit was scheduled for mid-December. The interaction has been so positive that NGA plans to extend participation with editor counterparts at DIA, NSA, and the Pentagon.
- The Office of Corporate Communications gave "Media Training" and "NGA In the News" briefings to a class of 12 advanced imagery analysts and edited 13 news articles, 77 business cards, the script for NGA Newsbreaks, and one brochure. The Congressional branch delivered Iraq maps to the Senate and responded to multiple Congressional staff queries.
- Office of GEOINT Sciences, processed information for the GPS satellites and sent the information off to the Air Force in a timely manner.
- The Acquisition and Source Operations and Management Directorates teamed to generate over 100 geospatial and commercial imagery products.

SAVE THE DATE!
GEOINT TECH DAYS
JUNE 2-4, 2009

The fifth annual GEOINT Tech Days is just around the corner!

Tech Days provides a valuable and unique opportunity for USGIF members from government, industry and academia to showcase the latest geospatial intelligence technologies and capabilities in a small, inviting environment.

For more information, please visit www.usgif.org/Events_TechDays.aspx

DAY 1 - TUES., JUNE 2

NGA Technology Day

8:30 a.m. - 4:30 p.m.

June 2 is limited to the NGA workforce. For more information on this, please see the splash page.

NGA Headquarters - Bethesda, MD

DAY 2 - WEDS., JUNE 3

NGA Technology Day

8:30 a.m. - 2:30 p.m.
Classified Session

This event continues to serve as a premier opportunity to unite and explore new ways to harness the power of geospatial intelligence to address tomorrow's challenges. NGA's exhibits will highlight GEOINT products, emerging technologies and cutting-edge tools utilized in forward support throughout the world.

NGA Headquarters - Bethesda, MD

DAY 3 - THURS., JUNE 4

USGIF Technology Day

8:00 a.m. - 6:00 p.m.
Unclassified Session

USGIF members display the latest geospatial intelligence technologies in an unclassified setting to truly examine the future of the tradecraft. The USGIF Technology Day also lends itself to be a great, low-key networking venue in an intimate tradeshow floor.

Transportation for NGA personnel will be provided from select NGA sites to the Hyatt Regency Reston. Please see the splash page for more details.

Hyatt Regency Reston - Reston, VA

Produced by the United States Geospatial Intelligence Foundation (USGIF) in cooperation with the National Geospatial-Intelligence Agency (NGA)

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