>> ALLDER GOLF CLASSIC >>> OSS RECAP >>> HUMAN GEO

BROUGHT TO YOU BY TRAJECTORY MAGAZINE

TUESDAY OCT 9 2012

Space and Time

Science and Technology Innovators Discuss Power of GEOINT

he power of space and time — and its ability to enable more accurate predictions — emerged as a key theme during GEOINT Foreword, the pre-symposium science and technology-focused forum that took place Monday before the formal start of the GEOINT 2012 Symposium. This year's program, which featured keynote speeches, networking opportunities, and panel discussions, also happened to take place on Columbus Day.

"More than 500 years ago, Christopher Columbus set out on a voyage of discovery and today I invite you to do the

same," said Dr. Jim Ellsworth, USGIF's chief performance officer and an organizer of the day's events, during his welcoming address. "Christopher Columbus, if you think about it, was a GEOINTer. He set out to redefine the way we visualize our world. And he didn't do it for the heck of it. Like us, he did it for his country and his investors."

Ted Cope, director of basic and applied research at the National Geospatial-Intelligence Agency (NGA), provided the morning keynote, which he entitled "20/20 GEOINT."

"I think we need GEOINT Fast-Forward to deal with all of the changes that are out there," Cope said as he greeted the audience.

Cope attributed these changes to the explosion of new geospatial imagery information and sources, from UAVs to social media.

"In the past, GEOINT was propelled by unique content we had access to from outer space," he said. "Going forward it is going to be our unique content from inner space."

This, he said is about making sense of all the available geospatial data so that we don't just see the Earth, we understand it. He said the future is a shift from target to

→ see Space and Time, p. 12

Ted Cope, Director, Basic and Applied Research, NGA

"It turns out when and where are the highest order data." - Jeff Jonas, IBM Fellow

USCIF SMALL BUSINESS ADVISORY

INVITES YOU TO A SMALL BUSINESS RECEPTION Tuesday, OCT. 9 | 4:30-5:30 p.m. | USGIF Booth #801 DROP OFF A BUSINESS CARD FOR A CHANCE TO WIN A NEW iPAD WITH RETINA DISPLAY!

> RSVP not required but appreciated: smallbusiness@usgif.org

When high performance is most critical, Accenture delivers.



We blend leading commercial solutions with defense and intelligence challenges to offer scalable solutions that help manage risk, lower costs and deliver outcomes. For more information, visit us at Booth #1435.

consulting | technology | outsourcing



» HIGHLIGHTS AND NEWS

FORE! A GOOD CAUSE

The 2012 Allder Golf Classic Raises \$25,000 for USGIF Scholarships



GEOINT 2012 kicked off Monday with the Allder Golf Classic.

amed in honor of William R. Allder Jr., the Allder Golf Classic serves as the official kickoff to the GEOINT Symposium.

This year, 144 golfers converged on the Grand Cypress Golf Club yesterday morning to help fund the annual USGIF Scholarship Program. Sponsored by SAIC, this year's tournament has already raised more than \$25,000.

"The USGIF Scholarship Program is incredibly important to seeding the future of the GEOINT Community," said Keith Masback, USGIF president. "The Allder Golf Classic is also an ideal event for supporting the program, as well as for networking and creating relationships that are the fabric of the GEOINT Community."

A core mission of USGIF is to provide educational opportunities through scholarships to promising high school seniors and collegiate undergraduate, graduate and doctoral students.

This year, USGIF awarded a total of \$104,000 to 25 recipients from the high school level up to the doctoral level. Since 2004, the Foundation has awarded a total of \$584,000 in scholarships.

"We are very excited to sponsor this year's Allder Golf Classic," said Tony Moraco, president of the intelligence, surveillance and reconnaissance group at SAIC. "This event is a great way to support the community and advance the tradecraft."

In 2005, William Allder passed away of a heart attack in Northern Virginia. He was a key figure in the GEOINT Community, serving in high-level positions at the National Geospatial-Intelligence Agency (NGA), and before that in key positions at several intelligence and civilian mapping and imagery organizations.

"The golf tournament is a fitting tribute to Bill Allder, and I am sure he would be proud to know his legacy lives on through our scholarship program," Masback said.

NGA STRATEGY PANEL

Experts Weigh in on the Future of the GEOINT Customer Experience



on't miss a special NGA panel discussion at the Innovation Pavilion (Booth 2003), Tuesday from 1 to 2 p.m., shortly after the keynote address by Letitia Long, director of the NGA. In May, Long released NGA's 2013-2017 Strategy and appointed Strategic Objective Champions to coordinate implementation efforts across the agency. The panel will discuss how the strategy continues to drive NGA toward achieving its vision for online, on-demand access to GEOINT for their mission customers via a flexible IT platform that enables users to access NGA products and services whenever and wherever necessary.

John Scali, Director, Office of Geospatial Intelligence Management Policy and Strategy Division, NGA, will moderate the panel consisting of the four Strategic Objective Champions:

- Jimmy Greene, Director, Source Operations and Management, NGA; and Strategic Objective Champion for Content
- Justin Poole, Deputy Director, Online GEOINT Services, NGA; and Strategic Objective Champion for Customer Service
- David Bottom, Director, Information Technology Services, NGA; and Strategic Objective Champion for Open IT Environment
- Lisa Spuria, Director, Analysis, NGA; and Strategic Objective Champion for Analytic Capabilities



Overwatch's RemoteView software will be on display in Booth 401.

AN EVOLUTION

Overwatch to Demo Evolving Capabilities in its GEO Theater

verwatch (Booth 401) plans to demonstrate its RemoteView geospatial analysis tool, along with its ELT/Series software for fusion of imagery and geospatial imformation to produce a digital battlefield in a big way at GEOINT 2012.

The Overwatch booth will include GEO Theater, a giant video screen enhanced with periodic presentations by Overwatch personnel. Although the RemoteView tool and software has been on the market for 15 years, its capabilities have continued to evolve. Among the updates Overwatch will feature is 3D PRO, which uses LIDAR to add altitude to longitude and latitude, creating a three-dimensional product that users, such as Special Operations Command, are finding essential to their efforts in Afghanistan.

"The whole notion of high-resolution 3-D from LIDAR is a rapidly growing market area," said Skip Maselli, vice president of Geospatial Solutions at Overwatch, a unit of Textron Systems. "A lot of people are talking about LIDAR at this conference. NGA has embraced it. The Army Geospatial Center also has been doing some leading work. It's a huge, big area."

Overwatch will emphasize its own evolution as well, from a software vendor to a company that offers mission-specific services. The GEO theater will also include presentations on human geography, using Overwatch's MAP-HT, a tool kit developed in conjunction with the Army's Joint Capability Technology Demonstration to collect cultural information in battlespace. Overwatch demonstrators will also show applications for mobile devices that can be used along a chain with links as far apart as the White House and the warfighter in the field.

EXHIBIT HALL HIGHLIGHTS



AGILE DEVELOPMENT & BIG DATA Blue Canopy to Showcase a Variety of Solutions

Founded in 2001 and noted as one of the fastest growing small businesses in the D.C. area, Blue Canopy (Booth 931) provides a variety of services across the Intelligence Community and for a number of government agencies. It plans to highlight its technical engineering services that are specifically tailored for the GEOINT Community during GEOINT 2012. These will include its agile development methodology for producing ozone-compliance applications, big data analytics for improving enterprise performances, and security and mobile solutions.

CYBER SECURITY Blue Coat Systems Combats Web-based Attacks

he defense and intelligence arenas require advanced web security technologies that seamlessly protect their users and data wherever they are, on any network. In addition, as more government agencies shift to cloud-based applications and bringyour-own-device initiatives, it is vital to have the right tools to block web-based attacks before they happen.

Blue Coat Systems (Booth 103) will highlight these needs with its Content Security Gateway Web Appliances, which includes the Blue Coat Unified Security solution that allows companies to extend their security perimeter to any user across devices on any network by delivering global threat protection. This cyber security solution leverages the same threat protection and policy control infrastructure across both hardware appliances and cloud services, providing a greater degree of flexibility.

Blue Coat Systems provides web security and WAN optimization solutions that optimize and secure the flow of information across the network. The company describes its technologies as speeding decision-making, maximizing employee productivity and reducing bandwidth costs, while protecting against web-based threats.



LEARNING AND **INNOVATION GO** HAND IN HAND. THE ARROGANCE OF SUCCESS IS TO THINK THAT WHAT YOU DID YESTERDAY WILL **BE SUFFICIENT FOR** TOMORROW. -William Pollard

EMPOWERING THE NEXT GENERATION

USGIF Academic Initiatives Create Future GEOINT Leaders

he mission of the United States Geospatial Intelligence Foundation (USGIF), the organization that hosts the GEOINT Symposium, goes far beyond this annual event. As an educational nonprofit, USGIF's academic initiatives support lifelong learning and professional development in the skills and competencies associated with the GEOINT tradecraft.

Through relationships and programs with educational institutions, USGIF ensures that the next-generation of GEOINT professionals have the knowledge to become future leaders and advance the tradecraft.

"We have seen a tremendous amount of traction in our academic programs, especially in the areas of university accreditation," said Dr. Max Baber, USGIF's director of academic programs.

To date, USGIF has accredited seven universities for programs in geospatial technology, with the University of Utah's Department of Geography being the most recent addition.

"We are excited about adding our seventh accredited university," Baber said. "The University of Utah is an excellent addition and is very solid in the areas geospatial statistics and analysis."

USGIF's other accredited universities and colleges include George Mason University, Pennsylvania State University, the University of Missouri-Columbia, the University of Texas at Dallas, the U.S. Air Force Academy, and the U.S. Military Academy at West Point.

In addition to the scholar-centric discussions that took place during the GEOINT Foreword pre-symposium event on Monday, academics at GEOINT 2012 will also take center stage at the Academic Pavilion. This special section of the exhibit hall will be dedicated to universities, colleges, and national labs showcasing their GEOINT programs and research. A number of universities are also bringing students to the

In 2012, USGIF donated three \$3,000 sponsorships to the Northern Virginia College Geospatial Leaders Summer Camp, the Washington College Geospatial Discoveries Summer Program, and the Central Florida GIS Workshop.

Symposium for the opportunity to attend conference sessions, explore new technologies, and meet with members of industry and government.

Another core mission of USGIF is to provide educational opportunities through scholarships to promising high school seniors, collegiate undergraduate, graduate, and doctoral students.

This year, USGIF awarded a total of \$104,000 to 25 recipients



189910111010

ranging from graduating high school seniors to doctoral students. Since 2004, the Foundation has awarded a total of \$584,000 in scholarships.

On Thursday morning, the brightest in GEOINT academia will be recognized with geospatial academic achievement and academic research awards, as part of the USGIF Awards Program. This year, the achievement award goes to the Geographic Information Systems Program at Washington College, and the research award will be presented to the Center for Geospatial Intelligence at George Mason University.

USGIF is also enhancing its academic and professional certification efforts with the recent appointment of Dr. James Ellsworth as the Foundation's chief performance officer. Ellsworth will lead the new Certified GEOINT Professional initiative, which will provide organizations with performance strategies and insights.

"It's very exciting to have Jim leading this new initiative that clearly ties back into our academic programs with new and innovative training efforts," Baber said.

USGIF is also dedicated to supporting academic programs related to geospatial technology each summer. In 2012, USGIF donated three \$3,000 sponsorships to the Northern Virginia College Geospatial Leaders Summer Camp, the Washington College Geospatial Discoveries Summer Program, and the Central Florida GIS Workshop.

"Thanks to the rise of Google Earth and other location-based apps that are part of young people's daily lives, we are entering an exciting time in geospatially related activities," said Baber. "USGIF will continue its mission of ensuring that educational institutions and students have all the right tools, knowledge, insights, and connections to fully advance our tradecraft."

UNIQUE CAPABILITIES

At DigitalGlobe, our unique capabilities enable our customers to solve their most difficult challenges. The industry's only eight-spectral band imagery is becoming an indispensable advantage for our customers in the areas of land feature extraction, classification, vegetative analysis, and topo-bathymetry. Our state-of-the-art super-spectral, short-wave infrared capabilities on board WorldView-3 are designed to penetrate haze, fog, smog, dust, smoke mist and cirrus, delivering users access to areas that were previously difficult to collect. DigitalGlobe continues to deliver real-world solutions, like no one else in the industry.

ALMOST THREE BILLION KM² IN THE ARCHIVE, AND ADDING 2.3 MILLION PER DAY



The Mich

THREE INDUSTRY-LEADING SATELLITES, PLUS ONE ON THE WAY

A WORLDWIDE NETWORK OF GROUND TERMINALS WITH INDUSTRY-LEADING SPEED OF DELIVERY

> VISIT DIGITALGLOBE BOOTH #1401 TO LEARN MORE

TASKING SERVICES



ANALYSIS SERVICES

DELIVERY SERVICES



LOOKING AHEAD

NGA Strives to Enhance GEOINT Experience for End Users



GA Director Letitia Long took a few moments before the GEO-INT 2012 Symposium kicked off to share with us a preview of her keynote address, some insight into NGA's current priorities, and her thoughts on the symposium.

Q: Can you provide us with a sneak peek of topics you plan to highlight in your keynote address at GEOINT 2012?

A: Our particular focus this year will be delivering on our vision of putting the power of GEOINT in the hands of the user. At the heart of that is GEOINT content. My number one priority is "smart" enabling all of NGA's content between now and next summer, and making it available for everyone to use, on demand, to meet their mission needs. I am also going to challenge the community to give their GEOINT content to NGA. We will host all the content for the entire community as a service of common concern. Plus, we now have the GEOINT App Store up and running on all three security domains: TS/SCI, secret and unclassified. By this time next year, I would like to see over 75 percent of the apps in the App Store developed by our partners. That is just a brief preview of what I will be talking about.

Q: Can you tell us about the new NGA Strategy and how it ties into NGA's overall platform for this year's symposium?

A: We are fundamentally transforming how we deliver GEOINT content and services to all our partners and customers, who are exceptionally diverse and require a wide variety of GEOINT support for their missions. We are ensuring that GEOINT content is discoverable, accessible, and usable across multiple security domains. We are developing and sharing new analytic methodologies that take advantage of the full spectrum of geospatial phenomenologies, and draw on traditional and non-traditional sources alike. We are providing an online environment that enables these capabilities and more, including virtual collaboration with our in-house experts across all disciplines.

11101899101111012

Q: You shared a bold vision for the future at GEOINT 2010. From your perspective, how would you grade NGA and NSG progress with respect to achieving this vision?

A: We have made some great progress together. Our biggest step so far is the launch of the Integrated Analytic Environment, or IAE. It provides users with the ability to dynamically change their virtual workspace, and allows rapid deployment of new tools for intelligence analysis. Users can customize their virtual workspace with apps, workflow, and content. All they need is a browser. The IAE is currently available to a limited number of users on all three security domains: TS/SCI, secret and unclassified. We will be expanding the content available as well as expanding to thousands of users during 2013.

Q: What are you most looking forward to at this year's GEOINT symposium, and why is the event significant for the community? **A:** It is our annual opportunity to re-engage–government, industry, and academia alike–on where we are and where we are headed. Also, this is a great opportunity to see in one place all the innovations that industry is achieving. It is also my chance to extend NGA's thanks to our partners for everything they do for our collective mission–ensuring the security of our country and our world. **...**

GEOINFORMATION

Pléiades, SPOT 6, TerraSAR-X, WorldDEM, SpaceDataHighway

Looking for a good cup of coffee and a place to relax while discussing GEOINT solutions? Stop by the Astrium GEO Café, booth 100.

While you're there, make sure to see the first images from SPOT 6! Also, get the latest news on Pléiades, the current TerraSAR-X promotions, the upcoming WorldDEM and the SpaceDataHighway.

Astrium GEO Café on booth 100. solutions@astrium-geo.com | www.astrium-geo.com



CNES 2012 – Distribution Astrium Services / Spot



AN EADS COMPANY

OSS RECAP Open Source Panels Draw Sizable Crowds

he growing importance of open source to the GEOINT Community was made clear by the number of attendees at the two GEOINT Foreword discussions Monday morning.

The first panel of the day titled "Increasing Access and Decreasing Cost" held a candid discussion about budgetary realities and the potential role of open source in this new fiscal environment.

Jason Kahn, program manager for the IC Applications Mall with the NSA, discussed the project he is working on to develop a government app store.

Air Force Lt. Col. Christopher Quaid. chief of Applied TECHINT at the NRO, talked about the open source benefit of being able to deliver capabilities and upgrades in near real time. A customer can make a request to change something about a software interface and an "extreme programmer" can then quickly make that code change.

"We can build a system while we fly it and make changes based on customer need," Quaid explained.

A discussion about open source also needs to address open standards, said Ben Tuttle, Ph.D., project scientist and GIAT apps team lead with NGA/Innovision. The longterm goal is an Open Geospatial Consortium (OGC) specification for use by all communities.

Code that is developed by the federal government doesn't belong to one agency, or one group of agencies, or even to the federal government. It belongs to the American people. They paid for it.

Ret. Col. Paul Hastert, director of ISR Innovation Capabilities, HQ USAF A2Q



Panelist John Sneveley, DCGS Enterprise Steering Group chair, addresses a sizable crowd at the second of two sessions on open source.



91101899101111010

John Scott, senior systems engineer and open tech lead, with RadiantBlue Technologies moderated the second of two GEOINT Foreword sessions on open source software.

"This is a new development paradigm," Tuttle said. "My team is working on a ton of projects and each one has an OSS component."

The second panel titled "Open Source Can't Do Everything... Yet" began with debunking some of the common myths about open source. Moderator John Scott, senior systems engineer and open tech lead, with RadiantBlue Technologies, said, "Open source is like a free puppy, you still have to care for and support it."

Keith Barber, senior advisor with the Agile Acquisition Strategic Initiative at NGA, added, "Over the past year or two, I've become more and more a believer in the tools and the toolbox [of open source]." He went on to state that when you invest in open source you are ultimately investing in people, the talent of the open source community.

The speed of deployment was a central theme throughout the day. Many panelists lamented the traditionally slow acquisition process of government and urged the need for this to change.

The landscape is starting to change, said John Marshall, chief technology officer, J2, Joint Staff. "Why today?" he asked. The answer: because of open source software and cloud computing.

Dan Risacher, a developer advocate with the Office of the Chief Information Officer with the DoD, said, "At the end of the day, we all have the same problems," underscoring the usefulness of shared problem solving offered by open source. And to those who want to join the open source community but aren't sure how, Risacher said, "Just do it."

Ret. Col. Paul Hastert, director of ISR Innovation Capabilities with Air Force A2Q said, "Code that is developed by the federal government doesn't belong to one agency, or one group of agencies, or even to the federal government. It belongs to the American people. They paid for it. It's not your software, it's America's software."



Visual Information Solutions

Create advanced image analysis web services Publish mission essential tools to forward deployed Deploy seamlessly to an existing infrastructure

In today's fast-moving defense and intelligence world, geographically dispersed personnel need GEOINT from imagery more than ever before, so they can make informed decisions quickly. Mission-critical decisions can't wait hours while geospatial data is downloaded and analyzed before results are disseminated to the people who need it.

That's why we developed **ENVI Services Engine**, a cloud-based image analysis solution that allows your organization to create, publish, and deploy advanced ENVI image and data analytics to any existing enterprise infrastructure. Now, end users can easily access the image analysis capabilities they need for geographic awareness from a web browser, remote desktop, or mobile and thin clients used by your organization. And, since ENVI has been used across the D&I community for years to create geographic knowledge, your analysts know they can trust the proven image analysis services they're delivering. For more information please visit **www.exelisvis.com/ENVIServicesEngine**.

ENVI SERVICES ENGINE

ONLINE, ON DEMAND GEOSPATIAL AWARENESS.



©2012, Exelis Visual Information Solutions, Inc. All rights reserved. E3De, ENVI, and IDL are registere ademarks of Exelis, Inc.All other marks are the property of their respective owners. Use of U.S. Departmen of Defense (DoD) imagery in this advertisement does not constitute or imply DoD endorsement

SPACE AND TIME CONTINUED



activity-based intelligence-meaning it isn't just about what a place looks like, but also what an activity looks like in space and time, and what those activities mean now and for the future.

He added that in order to achieve this goal of anticipating events, the main challenge from a research perspective is transitioning the tradecraft "from foveal to peripheral vision."

"How do we use the power of a network to cure the blindness of a nation and help us see with clarity?" Cope asked the audience.

He described several new areas for the direction of GEOINT research and development that are intended to increase "peripheral vision," including human geography, activity-based intelligence, participatory sensing, visual analytics, geo-journalism, and forecasting.

At the conclusion of his speech Cope acknowledged that GEOINT is undergoing a "revolution."

The GEOINT 2012 Show Daily is brought to you by trajectory, the official publication of the United States Geospatial Intelligence Foundation (USGIF).

trajectory

USGIF

For advertising inquiries, please contact Jeff Ley at Jeff.Ley@usgif.org or 703-628-8696.

website trajectorymagazine.com

twitter @trajectorymag

Publication Management



800-641-3912 | glcomm.com

IBM Fellow Jeff Jonas addresses the audience during his lunchtime keynote address Monday as part of GEOINT Foreword.

"People shouldn't be allowed to put us in a box and say 'go back to your pictures," he said. "We have a responsibility to use all of our skills, all of the data that we have, to use all of our methods and apply them to solving the nation's intelligence problems."

8897101110101

Following Cope's keynote, the remainder of the morning session featured two tracks, each with two panel discussionsone on open source software (pg. 10), the other on human geography (pg. 16).

WHEN AND WHERE

Jeff Jonas, an IBM Fellow and chief scientist for IBM Entity Analytics, gave a lunchtime keynote address, during which he discussed his theories for the physics of big data and proclaimed when and where as the highest order data.

"So much of this data is out there and so much of this data is coming, and it's going to be extraordinary what it's going to do," Jonas said.

Jonas used putting a puzzle together as a metaphor for understanding big data.

"Some of the pieces are missing, some of the pieces have errors, some of the pieces have professionally fabricated lies," Jonas said. "Until you start taking the pieces to the table you don't know what you have."

The lesson that can be learned from this. Jonas said, is that more data-even bad datameans faster and more accurate predictions.



"Space-time-travel data is the ultimate biometric," Jonas said. He added that this data will create enormous opportunities, unravel secrets, and challenge existing notions of privacy.

"Adoption is now accelerating at a blistering pace," Jonas said, adding that this realization about the significance of when and where has been quite the awakening for himself and many others.

The GEOINT Foreword program continued after lunch with two more afternoon panel discussions, one on Gaming Technologies for GEOINT, and another on Lessons Learned from the Arab Spring. The day wrapped up with an hour of GEOINTstant lightning talks, during which innovators discussed new trends and technologies with fun presentations of only five minutes.

MISSION DATA ANALYTICS

FROM A TO ZETTABYTE.

n

000

Raytheon processes every major type of intel data. We invented the processing thread to exploit the largest volumes of data possible. At the highest possible speeds. We deliver clean, correct, useful data – to increase analyst productivity by more than 10 times. All while ensuring operational success across every mission.











See how Raytheon is turning the largest volumes of data into world-leading mission performance: **Raytheon.com** | Keyword: BIGDATA

0100010101010100

Follow us on: 🔽 🔠 🚮 🔝



© 2012 Raytheon Company. All rights reserved. "Customer Success Is Our Mission" is a registered trademark of Raytheon Company

» HIGHLIGHTS AND NEWS

GOT QUESTIONS?

Student Volunteers Experience the Power of GEOINT 2012



Volunteers from the GEOINT 2012 Student Assistant program pose in front of the SA-2 medium to high altitude two stage surface to air (anti-aircraft) Soviet Union designed missile. The discovery by the U.S. of 24 of these missiles in Cuba in 1962, helped lead to the 14-day Cuban Missile Crisis. This missile was on display last night during the Cuban-themed Havana Nights Welcome Reception, and will be on display this week outside the exhibit hall.

f you see a number of people walking around GEOINT 2012 wearing bright red t-shirts that say, "got questions?" please introduce yourself. Not only will you get the assistance you need, you could be meeting the next great GEOINT innovator or leader.

Student volunteers from 10 colleges and universities that are-or are soon to be part of-the USGIF GEOINT Accreditation Program will have the unique opportunity of experiencing GEOINT 2012 thanks to the USGIF Student Assistant Program.

In addition to networking opportunities and hearing directly from GEOINT leaders, the students will also work 20 hours this week. This includes support for plenary and breakout sessions, plus other responsibilities. "Most students don't have the opportunity to attend and work at an event of this scale and magnitude, so this is very exciting for all of them," said Rakesh Malhotra, USGIF student volunteer coordinator and an assistant professor at Fayetteville State University. "The USGIF Student Assistant program gives students access to the right companies and organizations that could lead to a prosperous career in the GEO-INT Community."

11101899101111010

The student assistants come from diverse backgrounds related to the GEOINT community, including one student who is serving in the U.S. National Guard, and another who is part of the Wounded Warrior Program.

"This is by far going to be the highlight of the year for me," said Molly Schmaljohn, a Fayetteville State University student and U.S. National Guard member. "I look forward to networking and gaining diverse perspectives from all of the attendees and exhibitors. This is an amazing opportunity."

John Fletcher is an international studies student at Utah University and part of the Wounded Warrior Program as a result of an injury suffered while serving as U.S. Army Special Forces. Throughout his coursework he has studied the use of GIS in both homeland security and the war on terror, as well as the implementation of Village Stability Operations in Afghanistan and the Afghan Local Police. Fletcher hopes to attend law school in 2013.

"I am highly interested in the application of international law in the arena of U.S. covert and clandestine operations abroad," Fletcher said in his application. "Upon completion of law school I hope to find a position with the CIA's general council."

IN THE KNOW Two Apps for the Full GEOINT 2012 Experience

tay in the know by downloading the official GEOINT 2012 Symposium App, powered by Raytheon, through the iTunes and Android app stores. The mobile app puts comprehensive GEOINT 2012 show information in the palm of your hand, including a complete show agenda, keynote speaker information, maps, exhibitor directories, up-to-date symposium news, and social media feeds.

Experience print come-to-life in the Living Event Guide by downloading the Digimarc Discover App, brought to you by Digimarc and Invertix. Using Digimarc technology, you can unlock additional online content directly from the printed page. Scan the icon with the Digimarc Discover mobile app to connect to related online content. III



Managed Layers **Query and Search Attribute Table Structure Data Interc**

GRGlobe - A New Spin on GIS

Delivering enhanced GIS capabilities with the Google Earth[™] globe

26290 4631180

100

30W 533903 7207313

60 357100 56562

The GRGlobe™ application brings management to data through layers, attribute table structure, search and querying tools, data interoperability, and other popular GIS capabilities.

Experience the power of the GRGlobe application - schedule a demonstration today.

Visit us online or contact us directly at 866-417-5322 grglobe.com







HUMAN GEOGRAPHY

It's not new, but its application is.

he science is as old as man, but Bruce Heinlein acknowledged Monday that government's real human geography emphasis has come over the past two years, when events such as Arab Spring began to tell us that we still don't know all that we don't know.

"We are just beginning" to understand the potential and problems of the science, Heinlein told a group gathered for a panel session on "Human Geography Data Collection" Monday during GEOINT Foreword.

Heinlein, director of the Human Geography Joint Program Office for the National Geospatial-Intelligence Agency (NGA), led the panel.

Panelist Sam Striker traced it further back.

"The evolution of conflict is flowing away from the battlefield and the population is becoming center stage," said Striker, president of Hollin-Phoenix Consulting and a veteran of the Army's Human Terrain System efforts in the Middle East.

Understanding that population therefore becomes paramount in warfare, as well as in understanding how to forestall it.

Among the problems in human geography is training social scientists, many of whom already have advanced degrees that involved lengthy study and research into the movement of human beings, Striker said.

The evolution of conflict is flowing away from the battlefield and the population is center stage.

— Sam Striker, Hollin-Phoenix



Al DiLeonardo, president and CEO of HumanGEO, speaks at the Human Geography Data Storage session.



8991012101

Jason Patti, principal analyst for Courage Servcies, said, "There is no one-size-fits-all solution" to data storage problems.

"Social scientists take the long view," he said, pointing to studies of data spanning centuries.

But sometimes the demand for information allows a month, a week, even days to gather and process data. It then becomes a question of that data not being good, but good enough, anathema for some scientists.

Another issue is the concept of infinity when discussing Human Geography. Data is infinite. So is knowledge, and dealing with all of that involves increasingly complex processes.

"Wanting to know everything under the sun every time you go to the field is not practical," said panelist Tony Quartararo, president and CEO of Spatial Networks. "It's what makes human geography collection so special."

And so complex. And so important.

"Human Geography is not new," said Justin Poole, deputy director, Online GEOINT Services for NGA. "What's new is its application."

That application was the theme of a second panel session, "Human Geography Data Storage," which looked at handling that data spiral in such a way that it can be used.

"Human Geography doesn't suffer from a lack of data," said Poole, who led the panel. "It's a classic Big Data problem."

With a twist.

"Human Geography data comes in a wide array of forms, so there is no one-size-fits-all solution," said panelist Jason Patti, principal analyst for /Courage Services.

Even with all of the tools being developed, "humans are crucial to Human Geography analysis," he added. "In my opinion, the human will never be out of the equation."

That becomes particularly true when it's understood that Human Geography is but layer of a complex intelligence problem.

"Collecting data is one thing, but I think it needs to go a step further, to weaving a tapestry" among the layers, said Liz Lyon, of the Army Corps of Engineers.

That's why human geography is important after all.

» TUESDAY OCTOBER 9 GEOINT 2012 SYMPOSIUM AGENDA •••



TUESDAY, OCTOBER 9



8:00 A.M. - 8:15 A. M.

Presentation and Posting of Colors Osceola Ballroom C-D

8:15 A.M. - 8:45 A.M.

Welcome

K. Stuart Shea, Chairman and CEO, United States Geospatial Intelligence Foundation (USGIF); and Chief Operating Officer, SAIC

8:45 A.M. - 9:00 A.M.

Master of Ceremonies

The Honorable Joan Avalyn Dempsey, USGIF Board of Directors; and Senior Vice President, Booz Allen Hamilton

9:00 A.M. - 9:45 A.M.

Keynote The Honorable James R. Clapper Jr., Director of National Intelligence

9:45 A.M. - 10:45 A.M.

PANEL

Defense, Intelligence and Homeland Security Information Innovation

- Rob Carey, Deputy Chief Information Officer, Department of Defense (DoD)
- Al Tarasiuk, Chief Information Officer, Office of the Director of National Intelligence (ODNI)

10:45 A.M. - 11:15 A.M.

Networking Break

11:00 A.M. - 6:00 P.M. Exhibit Hall Open

11:15 A.M. - 12:00 P.M.

Keynote

Letitia A. Long, Director, National Geospatial-Intelligence Agency (NGA)

12:00 P.M. - 2:00 P.M.

Lunch

Exhibit Hall and Sun Ballroom A-B

1:00 P.M. - 2:00 P.M.

Lunchtime Roundtable The NGA Strategy

Innovation Pavilion, Booth #2003, Exhibit Hall

Ms. Letitia A. Long, Director, National Geospatial-Intelligence Agency (NGA), on May 14, 2012, released NGA's 2013-2017 Strategy and appointed Strategic Objective Champions to coordinate implementation efforts across the agency. We invite you to join a discussion with these Strategic Objective Champions on how the strategy continues to drive NGA toward achieving its vision for online, on-demand access to GEOINT knowledge for their mission customers via a flexible IT platform that enables users to access NGA products and services whenever and wherever necessary.

Moderator – Mr. John A. Scali, Director, Office of Geospatial Intelligence Management Policy and Strategy Division, National Geospatial-Intelligence Agency (NGA)

- Jimmy R. Greene, Director, Source Operations and Management, National Geospatial-Intelligence Agency (NGA); and Strategic Objective Champion for Content
- Justin Poole, Deputy Director, Online GEOINT Services, National Geospatial-Intelligence Agency (NGA); and Strategic Objective Champion for Customer Service
- David L. Bottom, Director, Information Technology Services, National Geospatial-Intelligence Agency (NGA); and Strategic Objective Champion for Open IT Environment
- Lisa J. Spuria, Director, Analysis, National Geospatial-Intelligence Agency (NGA); and Strategic Objective Champion for Analytic Capabilities

2:30 P.M. - 4:00 P.M.

Breakout Session Geospatial Interoperability: The Basis for Shared Information and Investments

Osceola Ballroom A

What do the IC, SBU and Public facing Geospatial Communities have in common; the need to access the right data and services, at the right time in a secure manner. Come learn how these diverse communities are collaborating to resolve a common challenge by advancing geospatial interoperability. The vision is the Geospatial Interoperable Reference Architecture (GIRA) – a framework for developing new geospatial system investments and aligning existing geospatial capabilities.

Moderator – Mike Howell, Deputy Program Manager Information Sharing Environment

- Dan Cotter, Chief Technology Officer, Department of Homeland Security (DHS)
- Jerry Johnston, Geospatial Information Officer and Director Geospatial Platform, Department of the Interior (DOI)
- James Kwolek, Director, Policy & Planning, Geospatial Information Executive, National Geospatial-Intelligence Agency (NGA)

Breakout Session

Confronting Complexity in Global Disasters Osceola Ballroom B

We are increasingly becoming interconnected as a society with the internet and globalization. Internet communication has allowed for a "Whole of Governments" environment and enabled response and volunteer based organizations to support catastrophic events from afar. Spatially and temporally referenced social media communications support rapid visualization of a crisis as it develops over time and space. Coupling government and commercial based systems like satellite imagery collection with the Volunteer Technical community is changing the way business is done during emergencies and disaster response around the globe.

Moderator – ADM (Ret.) Thad Allen, former Commandant, U.S. Coast Guard, and Senior Vice President, Booz Allen Hamilton

• Dennis Bowerman, Mission Manager for the Integrated Work Group -Readiness, Response and Recovery, National Geospatial-Intelligence Agency (NGA)

- Mark Synder, Director, Office of Transformation and Initiatives, Federal Emergency Management Agency (FEMA)
- Lars Bromley, Principal Analyst, United Nations Institute for Training and Research (UNITAR)
- Dennis Bowerman, Mission Manager for the Integrated Work Group-Readiness, Response and Recovery, National Geospatial-Intelligence Agency (NGA)
- John Crowley, Research Fellow, Harvard Humanitarian Initiative
- Dr. Dave Warner, Chief Information Officer, MindTel

2:30 P.M. - 4:00 P.M.

Interoperability Tech Talks Innovation Pavilion, Exhibit Hall, Booth #2003

4:00 P.M. - 6:00 P.M.

Exhibit Hall Networking Reception

WEDNESDAY OCTOBER 10 AT-A-GLANCE

8:00am-8:15am	USGIF AWARDS PROGRAM PRESENTATIONS [Osceola Ballroom C-D]
8:15am-8:30am	MASTER OF CEREMONIES – MG (Ret.) John M. Custer III, Director, Federal Strategic Missions and Programs, EMC [Osceola Ballroom C-D]
8:30am-9:15am	KEYNOTE – Air Chief Marshal Sir Stuart Peach, Commander, Joint Forces Command, U.K. Ministry of Defence (MoD) [Osceola Ballroom C-D]
9:15am-10:15am	 PANEL – The Converged Future of Geospatial Intelligence: Young Innovators [Osceola Ballroom C-D] Moderator: Todd Huffman, Private Consultant Alex Cooper, Senior Systems Engineer, SAIC Shay Har-Noy, CEO, Tomnod Shadrock Roberts, Senior GIS Analyst, U.S. Agency for International Development (USAID)
10:15am-10:45am	NETWORKING BREAK
10:45am-11:30am	KEYNOTE – LTG Michael Flynn, Director, Defense Intelligence Agency (DIA)
11:00am-6:00pm	EXHIBIT HALL OPEN
11:00am-12:30pm	INTEROPERABILITY TECH TALKS [Innovation Pavilion, Booth #2003 Exhibit Hall]
11:30am-12:15pm	KEYNOTE The Honorable Michael Vickers, Under Secretary of Defense for Intelligence (USD(I))
12:15pm - 2:15pm	LUNCH SESSION M&S Working Group Meeting [Sun Ballroom 1-3]
12:00pm-2:00pm	LUNCH [Exhibit Hall and Sun Ballroom A-B]
2:30pm-4:00pm	BREAKOUT SESSION – Activity-Based Intelligence: Delivering Contextualized GEOINT [Osceola Ballroom A] BREAKOUT SESSION – Threats in the GEOINT Industrial Security Enterprise [Osceola Ballroom B]
4:00pm-6:00pm	EXHIBIT HALL NETWORKING RECEPTION
4:00pm-6:00pm	INTEROPERABILITY TECH TALKS [Innovation Pavilion, Booth #2003 Exhibit Hall]

Put GEOINT in the hands



Today's warfighter is the most sophisticated sensor in the world.

But he can't be expected to be a GIS expert.

TerraGo[®] Technologies geospatial collaboration software and GeoPDF[®] maps and imagery are among the most widely adopted COTS solutions to produce, access, update and share geospatial information with anyone, anywhere.

From virtually any mobile device, warfighters can access interactive, compact, portable and secure GeoPDF maps and imagery and easily make georeferenced updates using notes, audio, video, Web services or other information in connected or offline environments.

When armed with the most up-to-date GEOINT, warfighters can collaborate peer-to-peer in the field or with Command to produce more relevant, current products that enable better decision making.

Check out TerraGo Mobile® for Android™





www.terragotech.com



UNLEASH THE POWER OF THE CLOUD GEOINT TO THE USER -ANYTIME, ANYWHERE, ANY MISSION

HUMINT

GEOINT

IMINT

SIGINT

COMINT

General Dynamics' open cloud architecture grants users remote access from any device to mission critical data in a consolidated, shared environment, enabling reliable collaboration and intelligence distribution.

Visit Booth #500 and experience our Open Cloud Demo to learn how we help provide users with intelligence they need, as they need it.

GENERAL DYNAMICS

www.gd-ais.com/Cloud www.gdit.com/Cloud

Learn How to Unleash the Power of the Cloud

