ASPRS Central Region

Central Region Newsletter
American Society for Photogrammetry & Remote Sensing

Volume 15, Issue 5 October 2003

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Earth Science Week

Central Region recognized EARTH SCIENCE WEEK on October 15th on the UMR campus. This year we were joined by student members of the "Association of engineering Geologists (AEG). We set up a table in McNutt Hall to demonstrate some of the geography skills of our members and local college students. We once again brought out our "Guess This Location?" game. This test of students' geography skills with Landsat (http://landsat7.usgs.gov/gallery/index.php) and TerraServer (http://terraserver.homeadvisor.msn.com/famous.aspx) imagery proved very interesting for all participants. Images from around the world were printed and displayed for "guessing."

Volunteers Kevin James and Anna Saindon

Thank you to all the volunteers who helped with this activity: UMR Students – Todd Joslin, Anna Saindon, Sarah Stock, Craig Kaibel, Kevin James and ASPRS Members – Bill Harris, Dan Canfield, Sue Mills, Kari Craun, Shelley Silch, Matthew Reed. If you would like more information about this activity please contact Shelley Silch at 573-308-3521.

Arkansas GIS Users Conference

The Arkansas GIS Users Conference was held Eureka Springs, Arkansas from September 3-5, 2003.

The Arkansas GIS users conference was well attended, and it came as a surprise to me. There were approximately 230-250 participants and around 25 vendors who had their display booths. There were several workshops offered on the day preceding the conference. These workshops were well attended and sometimes overcrowded. There was good student participation, with students from various universities and EAST students from high schools. There were four to five concurrent technical sessions each day, focusing on multitude applications of GIS. The technical presentation varied from wetland mapping, water quality, forestry, transportation, to 911 emergency response. The poster presentations were displayed throughout the conference. Most of the trinkets and information folders we had at the ASPRS booth were gone by the end of the second day. The most significant outcome of this conference was that it brought people from so many different backgrounds and interest areas together on one platform. Audience included people from county offices, highway commission, ADEQ, Arkansas GIS office, Arkansas Land Information Board, USGS, CAST, various universities, schools, etc. Overall, it was a very interesting and successful conference.

—Submitted by Dr Sreekala Bajwa

Summary of Panel Discussion on Licensing and Certification for GIS and Mapping Professionals

Regulating professions for the public's interests is the responsibility of each state. Land surveying or engineering is regulated within the United States through state licensing programs. The mission of the National Council of Examiners for Engineering and Surveying (NCEES) is to provide the states with model legislative language, national examinations, and a uniform set of rules, in order to encourage similarity and consistency between states. Over the past 8 years, changes have been made to the NCEES Model Law for Surveying, which encompasses some photogrammetric mapping, remote sensing and GIS activities. ASPRS endorses the NCEES Model Law and supports its adoption by states, in a manner described in the "ASPRS Policy and Procedures concerning the Licensure of Photogrammetrists and GIS Professionals".

On October 21, 2003, the ASPRS Central Region hosted a panel discussion on licensing and certification for GIS and mapping professionals. The panel was composed of administrators from federal and state government agencies and from private industry. Many of the panel members hold professional engineer or land surveying licenses. The panel members follow:

- Karen Schuckman: P.L.S; ASPRS National VP; Director of Geospatial Applications, EarthData Technologies, LLC.
- Scott Perkins: VP ASPRS Central Region; VP Western Air Maps
- Bob Shotts: L.A., P.L.S.; President MO Society of Professional Surveyors; President Robert S. Shotts, Inc.
- Mike Flowers: P.L.S; State Surveyor MO Dept. Natural Resources (MODNR)
- Stan French: P.L.S.; Director MO Society of Professional Surveyors; Boundary Manager U.S. Forest Service
- Kari Craun: National Director ASPRS Central Region; Chief USGS Mid-Continent Mapping Center (MCMC)
- Jim Anderson: P.L.S.; Chair of MO Board for Architects, Professional Engineers, Professional Land Surveyors and Landscape Architects; President of Anderson Survey Company

Karen Schuckman, ASPRS National VP, presented the following: a comparison between professional license and certification, an overview of the current ASPRS certification programs, and a review of the ASPRS policy regarding licensing and certification. Some highlights on the comparison between certification and licensure follow. Certification is a voluntary program meant to endorse a person's level of expertise in a particular field. On the other hand, acquiring a license is mandatory to practice in a specific field, and it endorses that a person has attained a level of competence (in a field) that ensures the public welfare. A licensed field of practice is regulated by a state board, which has the authority to penalize its constituents or non-licensed practitioners. Certifications are not regulated in a legal sense.

The panel discussed the pros and cons of developing a licensing program for photogrammetrists and GIS professionals. Being most familiar with the laws regulating surveying in Missouri, the panel focused on how such a program may be initiated in Missouri. The general consensus was the following:

- Land surveying in Missouri consists determining the location and limits of real property rights. The practice of land surveying does not regulate mapping work unless the work affects real property rights, or is associated with the location of real property rights (See: http://www.moga.state.mo.us/statutes/c300-399/3270272.htm). Therefore, photogrammetric or GIS mapping is not considered land surveying in the state of Missouri, unless it is used to map features that are relied upon, in the same context, to locate real property rights. For this reason, the panel felt that photogrammetric and GIS mapping could continue without infringing on the surveying practice. However, it should be noted that the State Surveyor's office and Missouri Board of Architects, Professional Engineers, Professional Land Surveyors and Landscape Architects promulgates mapping regulations to which surveyors must adhere (http://www.sos.mo.gov/adrules/csr/current/10csr/10c30-6.pdf). Conversely, map information not created by a surveyor may or may not adhere to these standards.
- It was felt that the surveying community would be willing to assist with the development and implementation of a licensing program for photogrammetrists and GIS professionals. This new licensing program may be incorporated under the land surveying program, in some fashion. However, there would need to be a consolidated effort by non-licensed mapping professionals in the state to form and pursue such a licensing program.
- Developing a new or modified licensing program could take a great deal of time and effort. Some justification would need to be established and accepted by the state. In other words, it would need to be established that the public is, or could be, harmed by the lack of a licensing program for mapping professionals. It is likely that this justification could be generated by users of photogrammetric or GIS products, and by those paying for the development of such products.
- From a private sector perspective, it is difficult to develop map products or applications that are acceptable at a regional or national level when standards of practice vary from one state to the next. Furthermore, business opportunities are limited when varying levels of rigor exist between state licensing systems and no comity is established. Thus, new licensing programs within a state should include a grandfather clause for in-state practitioners and a measure of comity to facilitate interstate business.

Other states that provide licensing programs for photogrammetric and/or GIS mapping include South Carolina, North Carolina, and Florida. The newest member to this list will likely be Virginia, where the state regulatory Board is actively discussing the development of a licensing program for mapping professionals. In general, the same boards that regulate land surveying in these states extended the licensing to include mapping professionals.

The impetus behind expanding the licensure program in North Carolina was a large expenditure that the state was considering for statewide topographic mapping. In Florida, the land surveyor community generally felt the need to incorporate some mapping work within the practice of land surveying because, historically, this selected set of work had been defined as surveying but licensing for the work was not being enforced. As newer technologies enabled non-surveyors to potentially commit further infractions, regulations in Florida were expanded to include licensing of mapping professionals.

In summary, this article describes a general overview of the panel discussion on licensing and certification that was held on October 21, and it includes abbreviated technical descriptions. It is intended to summarize the topics that were brought up at the meeting for which further evaluation is required. Currently, we are identifying examples of how mapping affects the health, safety, and welfare of the public. If you would like to contribute some examples to this effort or provide further comments or suggestions concerning possible modifications to regulations for mapping professionals, please contact Larry Stanislawski (lstan@usgs.gov), and stay tuned for further discussion.

Conference Calendar

November 19-21, **Seven Hills Regional GIS Usergroup (SHRUG) 2003 SHRUG GIS Workshop: " Expanding Our Boundaries"**, Tallahassee - Leon County Civic Center, Tallahassee, FL, Info requests: workshop@shrug-gis.info, www.shrug-gis.info

December 1-2, **U.S. Commercial Remote Sensing Industry Conference**, Westin Grand Hotel, Washington D.C http://www.srinstitute.com/CG101

· Learn from key players within the remote sensing industry to enhance company growth.
· Expanding your company's market share by examining current market influences with industry experts.
· Best business practices direct from industry leaders, representing both aerial and satellite platform initiatives.
· Financial business planning with experienced industry executives.
· Unearthing U.S. Commercial Remote Sensing Policy. How will it affect your business?
· Latest Federal Agency implementation plans.

December 2 - 5, **ISPRS WGI/2 International Workshop on Radiometric & Geometric Calibration**, Gulfport Grand Casino, Gulfport, MS http:**www.edudevweb.com/isprs/**

- Review best practices for post-launch calibration of commercial aerial and satellite sensor imagery for government uses.
- Explore possibilities for standardizing calibration practices.
- Present these results to the ISPRS General Assembly as a joint ISPRS/CEOS-WGCV report

Classifieds

The Region Board of Directors has decided to start a Classifieds section in the newsletter. Region members seeking to hire or to be hired should send information to the Newsletter editor.

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Help Wanted – Volunteer Assistant Web Master. The Central Region is looking for a volunteer to assist the web master in keeping our page up-to-date. General computer skills and good computer aptitude are required. Knowledge of HyperText Markup Language (HTML) would be helpful, but is not necessary. It is estimated that the effort would entail approximately three hours a month. Communications technology, such as File Transfer Protocol (FTP), allows this position to be filled independent of geographic location. For questions or to express interest, contact Mike Finn (mfinn@usgs.gov) or Shelley Silch (ssilch@usgs.gov).

Central Region Members in Earth Observation Magazine

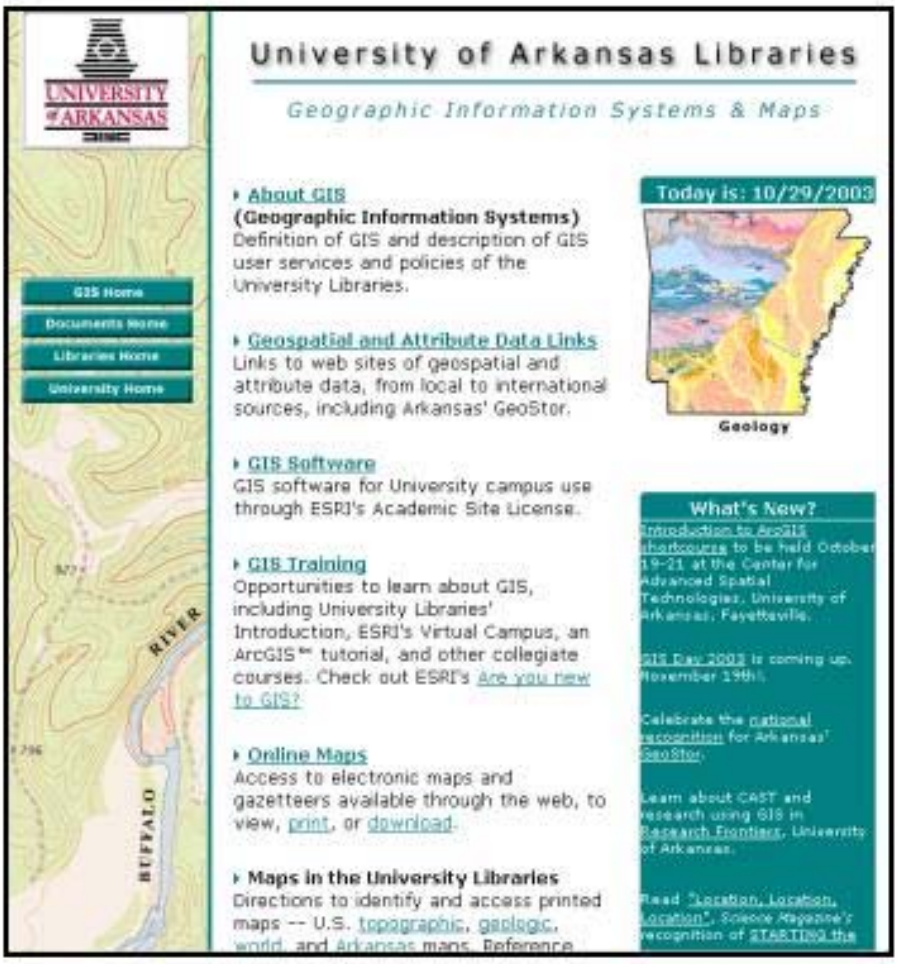
Central Region members Matt Dunbar, Dr L. Monika Moskal, and Dr Mark E. Jakubauskas have a feature article in the October 2003 edition of Earth Observation Magazine. The article, titled "3D Visualization of Forest Cover Change: Human Impacts in Northeastern Kansas and Natural Disturbance in Yellowstone National Park", presents how the authors used a variety of data sources and software to generate three-dimensional stills and animations for the study areas as well as documenting potential uses for such visualization techniques and animations. You can learn more by pointing your browser to http://www.kars.ukans.edu/projects/visualization/

GIS DAY: OPEN HOUSE

Wednesday November 19, 10 a.m. to 1 p.m.

Mullins Library, Rooms 486 and 487

Please join us for a reception in celebration of GIS Day.



- Learn more about GIS applications
- Meet area GIS users
- View U of A campus GIS projects
- Tour GIS / Map Collection facilities

Rooms 486 and 487 -- Level 4 east, near the Government Documents Department.

The University of Kansas

GIS Day Symposium

Wednesday, November 19th, 2003
9:00 am – 5:00 pm

A Forum for the Entire GIS Community

GIS Day is a nationwide event to promote awareness and appreciation of geographic information systems (GIS). KU will open its doors to schools, businesses, and the general public to showcase real-world applications of this important technology. *The Geography Graduate Student Organization, The Mount Oread Geospatial Technologies Club, and the University of Kansas Geography Club* would like you to join in this year's exciting events.

Lindley Hall, Room 317 — Morning Session

9:00-9:20	**Ed Martinko** - Kansas Applied Remote Sensing Program, Director Introduction & Welcome
9:20 –9:40	**Bryce Hirschman** - The City of Lawrence, GIS Coordinator Municipal GIS
9:40-9:50	**Matt Dunbar** - KU Department of Geography "Larry" Model of downtown Lawrence
9:50-10:10	**Rick Miller** - Chief Information Technology Architect, State of Kansas GIS in the State of Kansas
10:10-10:20	Break
10:20-10:40	**Scott Perkins** - Western Air Maps, Inc., Vice-President, ASPRS Central Region, V.P. GIS Certification and Licensure
10:40-11:00	**David Carttar** - Risk Management Solutions Modeling Terrorism Risk: A GIS-Enabled Methodology
11:00-11:20	**Keith Cunningham** - Spatial Data Research, President A Geographer Builds a Business
11:30- 1:30	Lunch : Cheese, Crackers, Fruit & Vegetables, and Drinks Provided
12:00-1:30	**Student Illustrated Paper Presentations**

Lindley Hall, Room 412 — Afternoon Session

1:30-2:45	**Panel Discussion** – The University Consortium for GIS - KU GIS Stakeholders **Jerry Dobson, Rhonda Houser, Ken Nelson, Xingong Li,** and **Jerry Whistler** GIS Initiatives, Data and Resources, Curriculum, and Facilities at KU
2:45-3:00	Break
3:00-4:00	**John Kelmelis** - Chief Scientist for Geography, US Geological Survey The National Map to the Global Map: Geography for Sustainability
4:00-5:00	**Jerry Curtis** - Centers for Disease Control and Prevention , Public Health Advisor, Emergency and Environmental Health Services GIS in the Bioterrorism Anthrax Outbreak

Please feel free to attend all or part of the day's activities as your schedule permits.

No registration required – For more information contact Jerry Dobson at 864-5536

Sponsored by:

The University of Kansas Department of Geography
The Kansas Applied Remote Sensing Program
The Kansas Biological Survey
The Kansas Geological Survey
- State of Kansas Data Access and Support Center (DASC)
The University of Kansas Libraries
- GIS and Numeric Data Lab
The United States Geological Survey
The Mount Oread Geospatial Technologies Club
KU Geography Graduate Student Organization
The KU Geography Club
The American Society for Photogrammetry and Remote Sensing (ASPRS) Central Region
Western Air Maps, Inc
The Coca-Cola Company
The Centers for Disease Control and Prevention

Highlights of the ASPRS Board of Director's Meeting and ASPRS—MAPPS Fall Conference "Terrain Data: Applications and Visualization — Making the Connection." 28-30 October 2003 in Charleston, South Carolina

In my role as the National Director for the ASPRS Central Region, I attended the Board of Director's meeting on October 27, 2003 in Charleston, SC. Highlights from the meeting include:

- The Society's financial status continues to improve. We have just completed action to take some funds out of the operating cash accounts and move them into reserve. The Society's goal is to attain a level of funding in its reserve accounts approximately equal to the funding necessary to operate for one year.
- We are within about $25,000 of paying off the ASPRS HQ building mortgage. This achievement is significant and, again, contributes to the financial stability of the organization. A "mortgage burning" ceremony and celebration will be held at the annual conference in Denver, May 23-28, 2004.
- ASPRS is developing a statement for public release on the situation with both Landsat 7 and the Landsat Data Continuity Mission (LDCM). The Federal Government rejected the only proposal for LDCM, so, the future of this program is in question at this point. The draft statement is currently being reviewed by the Board.
- The certification program is doing very well. Exams have recently been updated. The technologist certification exams will be offered in 2004.
- Declining membership in the Society is of concern to the Board. Regions were asked to provide a point of contact for membership issues within their Regions, as well as a Sustaining Member POC. Any and all ideas for increasing membership should go to either Shelley Silch (our Central Region membership POC; ssilch@usgs.gov) or me (Kari Craun; kcraun@usgs.gov).
- The newly revised *Manual of Photogrammetry* will be published in 2004 and available at the conference in Denver!
- Two newly revised volumes of the *Manual of Remote Sensing* will also be published in 2004.
- There has been a change in the ASPRS advertising representative/salesperson. Potomac Media has been replaced by The Townsend Group.
- Upcoming conference dates/locations: 2004 Annual Conference in Denver May 23-28; 2004 Fall Conference in Kansas City, MO September 11-16 (or 12-17); 2005 Annual Conference in Baltimore March 6-11; 2005 Fall Conference (Pecora) in Sioux Falls, SD (mid-late October)

On another note, I thought the conference in general was excellent. Some of the workshops had to be cancelled due to lack of pre-registration, but, otherwise, sessions and exhibits were well-attended. The NEXTMAP announcement by Intermap created a lot of buzz, as did many of the gee-whiz visualization demos. Of course, being a government-type, I thought the discussion about the new National Digital Elevation Program (NDEP) guidelines for LIDAR was very valuable. These guidelines should provide a valuable resource for those acquiring or contemplating acquiring LIDAR data.

—submitted by Kari Craun

News From The Mt Oread Student Chapter

The Club is pleased to report that the '03-'04 academic year is off to a blazing start. As our second year of as an organization progresses, we are continuing to define ourselves and identify and meet the needs of our members. Here are some highlights.

Western Air Maps, Inc. hosted seventeen enthusiastic Club members on September 17th for a guided tour a WAM facilities. There was never a shortage of questions as Scott Perkins and crew explained the inner workings of their operation. It was a truly fascinating experience. Thank you Western Air Maps!

KU Open House on September 20th was a great success. Club members showcased their work and interacted with the general public. It was a fantastic opportunity to educate visitors about exciting applications of geospatial technologies and refine our skills for communicating complex ideas in simple, easy to understand language.

In the spirit of Lewis and Clark, fourteen adventurous souls embarked on an expedition of discovery up the Missouri River Valley to the EROS Data Center in Sioux Falls, SD on the 23rd and 24th of October (see article in this issue for details). We would like to offer special thanks to ASPRS Central Region and Ed Martinko of the Kansas Applied Remote Sensing Program for their generous support! *In a nutshell, a fabulous trip*.

The Club is cosponsoring this year's KU Campus GIS Day Symposium, to be held November 19 in Lindley Hall. See the flyer on page 5 for details on guest speakers.

In addition, there will be a Student Illustrated Paper Competition and a panel discussion, hosted by **Jerry Dobson**, which will explore GIS initiatives, data and resources, curriculum, and facilities across the KU campus.

For more information on these and other events, please visit our website at www.kars.ku.edu/asprs .

Mount Oread Student Chapter Treks to EROS Data Center

Sioux Falls, here we come!

Far off the beaten path, deep within the agricultural lands of South Dakota there exists a large government facility in the most unlikely of places…the middle of nowhere?

Although many club members had visited the EROS Data Center *virtually*, most had never actually had a "close encounter of the third kind". Determined to dispel the myths and separate fact from fiction, we planned an expedition to coincide with KU's fall break, recruited a crew of fourteen, and set about making the necessary arrangements.

With lodging, travel, and tour details confirmed, we departed Lawrence the morning of October 23rd. Most of the drive was up the Missouri River floodplain with the gorgeous autumn scenery of the tree-covered hills and loess bluffs of Missouri, Iowa, and Nebraska. Upon our late afternoon arrival at *Linda's Old Country Bed and Breakfast,* located in the historic Cathedral District of Sioux Falls, we had a chance to relax and explore local attractions like the Senator R.F. Pettigrew Museum, the beautiful St. Joseph's Cathedral, and the Tuthill Park disc golf course. We rounded out the day with dinner at Minerva's Restaurant, a local favorite for excellent steak or seafood.

Linda's Old Country Bed & Breakfast…our home.

An early morning homemade breakfast, served on old colony Depression glass by our B&B hosts Vince and Linda, was a great way to start the day. After saying good-bye to Stinker and Spooky, the two cats who had the run of the house, we headed off to our final destination – EROS Data Center. We were greeted at the remote facility by Tom Loveland, our official EDC host for the day, who ushered us into a comfortable conference room to begin the morning's series of technical presentations.

The first presentation was given by Brad Reed, a KU alumnus, who spoke about the use of satellite imagery to investigate vegetation phenology. He covered many of the complexities of deriving vegetation phenology metrics and detailed some of the techniques and algorithms employed in producing useful information from MODIS and AVHRR imagery. Jason Stoker followed with an intriguing presentation on state of the art LIDAR data collection and processing, new and potential uses for LIDAR data, and other interesting facts about elevation datasets. Zhong Lu gave a captivating presentation about cutting-edge applications of radar interferometry and its applications for seismic studies and volcanic deformation research.

Minerva's - it doesn't get much better than this.

We then gathered in the auditorium with EROS staff for presentations by the KU crew. Professor Steve Egbert began with a brief history of research at the Kansas Applied Remote Sensing Program, followed by a technical presentation by KU Ph.D. candidate Brian Wardlow entitled "An Overview of Crop Mapping Activities Using Time Series MODIS 250 Meter Data." Recent KU Ph. D. graduate Sun Park wrapped up with his talk entitled "Application of MODIS Thermal IR Data to Drought Monitoring in the Central Great Plains." These types of exchanges are vital to maintaining working relationships throughout the remote sensing community.

After a brief "general public" oriented tour of the main lobby and Landsat data archiving area, we were treated to a behind the scenes look at some of the Center's work areas by Tom Loveland. One of the club's goals in taking trips like this is to expose students to a variety of work environments, which is an important factor in deciding what career opportunities are in line with individual preferences and expectations. The general consensus was that EROS, where the ideals of collaboration, the free exchange of ideas, and an open door policy are standard operating procedure, would be a great place to work.

Time to get down to business.

Tom Loveland then gave an intriguing presentation about his research using archived Landsat imagery to track U.S. land cover changes and trends over the last 30 years. His emphasis on the story behind the change reinforced the importance of local and regional knowledge and national and international trends when interpreting land use change. Also, his strong commitment to quality assurance emphasized the value of professional ethics and integrity. We concluded with a presentation by Brian Davis on his GeoWall visualization project, which uses a dual-projection, polarization filtering system to render scenes of geographic imagery in crowd-pleasing 3-D space. We enjoyed a virtual tour of the Grand Canyon and explored a 5 km resolution terrain model of the earth, including ocean floor.

Brian Wardlow explains ongoing MODIS research at KU.

With minds full of new ideas and understanding, and even more new questions, we departed this amazing place, realizing that we had only scratched the surface.

The Mount Oread Student Chapter would like to thank the Central Region ASPRS and Kansas Applied Remote Sensing Program for their gracious financial and

Wavin' the wheat, it's a Jayhawk thing.

logistical support, making our trip to EROS Data Center a memorable success. It is with the support of these and other forward-thinking organizations that students, the future leaders of our industry, are able to explore geospatial technology outside of the classroom setting while interacting with professionals who use the technology in their everyday work.

Hey, I can see my home town!

By Matt Ramspott and Kevin Dobbs
Photos by Matt Ramspott and Geoff Folker

Expedition Crew: Joel Bogart, Kevin Dobbs, Matt Dunbar, Steve Egbert, Geoff Folker, Jude Kastens, Ryan Lash, Iwake Masialeti, Monika Moskal, Elizabeth Montgomery-Anderson, Sun Park, Matt Ramspott, Carleen Roberts, Brian Wardlow.

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