



## Editorial

>> Marc Cheves, LS

# SPAR 2011

**G**ene Roe, the editor of LiDAR News, and I attended the eighth annual SPAR, held outside Houston, and as always, it was well worth our time. A record 800+ attendees, 20 percent of whom were from outside the U.S., met and learned about the latest and greatest in laser scanning, photogrammetry, and 3D imaging. Under the banner of “Where 3D Innovators Connect,” the conference was chock full of the state-of-the-art.

Of the opening keynotes, my favorite was by Brian Mathews from Autodesk Labs. Mathews described a future in which 3D will be king. Interestingly, his first point was that smaller and smaller sensors would generate larger and larger databases, creating work for positioning experts and data managers. Because 90 percent of indoor spaces are unmapped, he said indoor mobile scanning would be huge. Amazing things are happening with 3D, much of which will be consumer-driven. But as Mathews pointed out, data is useless: people want information.

To get his read on the conference, I met with Tom Greaves, the conference organizer. In addition to being reinvigorated, re-enthused and re-energized, Greaves echoed some of what Mathews said: Cloud computing is already driving storage costs and processing time towards zero. Combining low cost 3D data capture with low cost cloud computing creates opportunity for many new applications.

Greaves went on to say that 3D is starting to deliver on its promises, and used another keynote, by David Lafferty, technology advisor from the CTO’s office at British Petroleum, as an illustration: BP reports saving \$50 million by using 3D imaging. Much of this work has been done by service providers, a group of companies rapidly growing to meet increasing demand. Greaves commented about how impressed he was with all the innovation he saw at the conference, and feels that the “faster, better, cheaper” delivered by 3D leads us back to economic growth. Even the politicians are starting to get it, he noted, pointing to President Obama’s mention of 3D in his recent State of the Union address.

Greaves mentioned several other significant items from the conference, including strides made in automatic feature recognition; major software companies “baking LiDAR” into their core products; FARO’s aggressive price point with its FOCUS<sup>3D</sup>; the new HDS7000 from Leica, which, because of its long range and Class 1 laser, presents a new range of possibilities; and augmented reality, which is playing out in handheld devices. For this, Greaves painted a world in which new measurements can be layered on top of a design, served up in real time on a smartphone or tablet fully informed by the device’s position and pose. “With the worldwide move toward assembling modules rather than constructing from scratch,” Greaves said, “the impact on construction productivity will be huge.”

Greaves mentioned the success of mobile scanning by pointing to the 10 mobile mapping systems parked outside the conference hall. When I asked what was the single most important thing about the conference, he said the call by Mathews for data standardization was high on his list too. Mathews asks, “Where is the JPEG for scanner files?” Greaves said there’s always a tension between innovation and standardization. We want manufacturers to innovate and to deliver new capabilities and in so doing deliver higher price/performance; we also want high levels of interoperability and delivery of standard outputs—sometimes these goals are at odds.

Greaves finished up by saying that the single biggest surprise at the conference was how the use of consumer products can drive 3D use. Products like Microsoft’s Kinect and smartphone apps serving up laser scan data point to Mathews’ remark that consumers will be the drivers much of the demand for 3D going forward. 

# THE American Surveyor

A FOOT IN THE PAST... AN EYE TO THE FUTURE

www.amerisurv.com

2011 Vol. 8 No. 3  
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**PUBLISHER** Allen E. Cheves  
allen.cheves@chevesmedia.com

**EDITOR** Marc S. Cheves, LS  
marc.cheves@chevesmedia.com

**ASSOCIATE EDITOR** Joel Leininger, LS  
**ASSISTANT EDITOR** Jacalyn Cheves  
**ASSOCIATE PUBLISHER** Jason Metsa

### CONTRIBUTING WRITERS

Dale Beeks	Jeff Lock
Joseph Bell, LS	Dan Martin
Joe Betit, LS	John Matonich, LS
Shawn Billings, LS	Jerry Penry, LS
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Wendy Lathrop, LS	Robert Young, LS
Thomas Liuzzo, LS	Rj Zimmer, LS

The staff and contributing writers may be reached via the online Message Center at [amerisurv.com](http://amerisurv.com)

**GRAPHIC DESIGN** LTD Creative, LLC  
**WEBMASTER** Joel Cheves

**AUDIENCE DEVELOPMENT** Edward Duff

**ACCOUNT EXECUTIVE** Richard Bremer  
**CIRCULATION** Mirta Ryker

*The American Surveyor* (ISSN 1548-2669) is published monthly by Cheves Media LLC. Editorial mailing address: 905 W. 7th St., #331, Frederick, MD 21701. Tel: (301) 620-0784.

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Subscriptions prices in the U.S.: Free for qualified professionals. Canada: 1 year \$56.00 US; international subscriptions \$72.00 per year (Airmail), U.S. funds prepaid. Back issues (subject to sufficient stock) are available for \$4.95 + S/H.

New subscription inquiries and all other address changes should be sent to *The American Surveyor*, P.O. Box 4162, Frederick, MD 21705-4162. Fax: 301-695-1538. Subscribe online @ [www.amerisurv.com](http://www.amerisurv.com)

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