



Editorial

>> Marc Cheves, LS

THE American Surveyor

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

www.TheAmericanSurveyor.com

Volume 4, No. 4 May 2007
© Cheves Media LLC

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

CONTRIBUTING WRITERS

Dan Beardslee, LS	Thomas Liuzzo, LS
Silvio A. Bedini	Jeff Lock
Dale Beeks	Dan Martin
Joseph Bell, LS	John Matonich, LS
Joe Betit, LS	Thomas G. Merrill, LS
J. Anthony Cavell, LS	Jerry Penry, LS
Cathy B. Costarides, LS	Al Pepling, LS
Paul Cuomo, LS	Mark X. Plog, LS
James J. Demma, Esq., LS	Walt Robillard, Esq., LS
Dr. Richard L. Elgin, LS, PE	Fred Roeder, LS
Fred Henstridge, LS	Gavin Schrock, LS
Chuck Karayan, LS	Angus W. Stocking, LS
Gary Kent, LS	Patrick Toscano, LS
Wendy Lathrop, LS	Rj Zimmer, LS

The staff and contributing writers may be reached via the online Message Center at www.TheAmericanSurveyor.com.

GRAPHIC DESIGN LTD Creative, LLC
WEBMASTER Joel Cheves
ACCOUNT EXECUTIVE Richard Bremer
rich.bremer@chevesmedia.com

The American Surveyor (ISSN 1548-2669) is published January/February, March, April, May, June, July/August, September, October, November and December by Cheves Media LLC. Editorial mailing address: 905 W. 7th St., #331, Frederick, MD 21701. Tel: (301) 620-0784.

The American Surveyor is a publication of Cheves Media LLC, 905 W. 7th St., #331, Frederick, MD. No part of this publication may be reproduced in any form without the express written permission of the publisher. Opinions and statements made by the writers and contributors do not necessarily express the views of Cheves Media LLC.

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.TheAmericanSurveyor.com

Made in the United States of America



Proud Member of:



Are We Using Cannons to Hunt Sparrows?

The laser scanning industry is showing great growth, and many surveyors are already taking note. Although much of the recent SPAR laser scanning conference in Houston was outside the realm of land development surveying, there were many sessions that would have piqued the interest of land development surveyors. The industry is showing great growth: according to conference organizer Tom Greaves, in 2002, there was less than \$80 million in scanning revenues. Last year, revenues reached \$275-300 million. Last year, more than \$88 million in hardware was sold. Estimates place slightly less than three thousand instruments in use, with more than half the purchases occurring in the last two and half years. Greaves caveated his remarks by saying that not all of the manufacturers report their sales, but because SPAR is so wired into the industry, I believe their numbers represent a valid educated guess.

Doug Eberhard, CTO for Parsons Brinckerhoff, led with the first of several excellent keynotes. Going beyond visual modeling with 3D design, the large leading edge design firms have moved on to nD and supermodels. 4D adds the element of time such as scheduling, and 5D adds automatic quantity takeoff and cost estimates. Interference and clash detection are the most valuable byproducts of modeling. Those in land development, for example, would greatly benefit from a model that shows underground utilities. Eberhard stated that supermodels as deliverables will mean the end of 2D drawings.

Bolstering Eberhard's remarks on the need for better, more intelligent models, Martin Fischer, director of the Center for Integrated Facility Engineering at Stanford University, focused on infrastructure. He pointed out that design takes too long. Referring to the world's ever-increasing hunger for raw materials, Fischer warned that we cannot sustain infrastructure building with current methods. Fischer contends that non-farm productivity is up around the globe, but construction productivity is down. While highly developed nations take progress for granted, the rest of the world wants to turn on the lights, too. Fischer used a German phrase to illustrate the idea that our current design tools are not sustainable: *Mit Kanonen auf Spatzen schiessen* or, using cannons to hunt sparrows. As an example of a new tool, Fischer mentioned BuildExact, a system that can use a model to drive a total station or a laser instrument.

A round table discussion yielded ideas that may encourage the adoption of scanning technology for existing firms. Thirty-six percent of those questioned said that laser scanning will most likely be implemented when the "inside people" (most often older management) can see solid examples of its success in solving problems, and not as just an excuse for implementing new technology. Motivation was another major factor: with the public sector, scanning is much less about lowering costs and shortening schedules, and more about safety. For the private sector, it's mostly about preventing a catastrophic problem on a project.

It seems to me that the next big thing in land development is the implementation of 3D design. Of course, we surveyors will benefit from being able to use these models to do our layout work. Imagine being able to know what's underground, and moreover, query it. Laser scanning, as Gene Roe pointed out in the last issue, is one of the tools we can use to feed the creation of these 3D models, and shows like SPAR point the way and show how it's being done. 