GENE ROE

Looking Forward and Back

We are entering a busy time of the year with work, conferences and of course, the holidays. There are a number of key industry conferences including the BIG one InterGEO and the combined SPAR Europe/ELMF. There is the CyArk 500 Annual Summit, MAPPS' International Conference, FARO's 3D Conference, Trimble Dimensions and Autodesk University, just to name a few more.

In addition Bentley Systems will be hosting the Be Inspired Awards as part of the Year in Infrastructure 2014 Conference. This is a personal favorite of mine as you literally get to see and hear presentations on over 50 of the top projects worldwide—it is inspiring, if you love civil engineering as I do.

I trust you will agree that we have an interesting and diverse set of articles in this our seventh issue of the year. From supporting wildlife migration corridor studies in the tropics, to the incredible high precision lidar surveys of the world's leading auto race tracks and test courses, to assessing landslide potential in the U.S. Northwest. The one that I think everyone will agree is the most unique, however is from Sibyl Bucheli, Craig Glennie and Aaron Lynne who are using 3D laser scanning to better understand the decomposition of the human cadaver—wow.

Shifting gears, to say the least, I would be remiss if I did not mention what I think is the leading news story of 2014 in our 3D industry, the announcement of the "Lidar Puck" by Velodyne. This is a game changer. It's a 16 channel lidar sensor aimed at robotics, unmanned aerial vehicles and automation applications that is being introduced at the breakthrough price of $7,999. It's going to be tough to top the impact of this product on our expanding industry in 2014.

I, along with many others owe a debt of gratitude to Ralph Grabowski, who in the 1980's launched one of the first electronic newsletters in the AEC industry—*upFront.eZine*. Ralph has written over 140 books on all topics related to CAD. He is a true CAD industry pioneer—thanks Ralph for all that you do to keep people informed.

Ralph recently recapped a presentation made by Francis Bernard in Montreal, Canada about the history and sales techniques of Dassault Systemes. Dassault's flagship product, CATIA, is a leading design CAD software that is used extensively in the aircraft and automotive industries. Mr. Bernard is thought of as the "father of CATIA."

It turns out that in order to compete with Computervision and upstarts like Autodesk Dassault decided to promote the use of 3D CAD as a way to transform their customer's business. The roots of that philosophy can be traced back to the early 1970's when the software was first used by Dassault's parent, Dassault Aviation to design two new planes 100% digitally in 3D. I would be willing to bet that if I had asked you how long 3D design had been in use that most people would have

LIDAR news

www.lidarnews.com

2014 Vol. 4 No. 7

PUBLISHER Allen E. Cheves
publisher@spatialmedia.us

MANAGING EDITOR Gene Roe
editor@lidarnews.com

GROUP EDITOR Marc S. Cheves, LS
marc.cheves@spatialmedia.us

CONTRIBUTING WRITERS
Stephen Clancy
Dr. Srini Dharmapuri
Jeff Fagerman
Lewis Graham
Bill Gutelius
Ted Knaak
Michael Olsen
Jarlath O'Neil-Dunne
Michael Raphael
John Russo
Karen Shuckman
Ken Smerz
Nick Palatiello
Paul Tice
James Wilder Young

The staff and contributing writers may be reached via the online message center at our website.

GRAPHIC DESIGN LTD Creative, LLC
WEBMASTER Joel Cheves
AUDIENCE DEVELOPMENT Edward Duff
MEDIA RELATIONS Richard Bremer

LiDAR News Magazine is published 8x annually by Spatial Media LLC. Editorial mailing address: 905 West Seventh Street, #331, Frederick, MD 21701. Tel: (301) 620-0784; Fax: (301) 695-1538.

Subscribe @ www.lidarnews.com

Made in the United States of America

SPATIAL MEDIA

said between five and maybe ten years at the most. This was almost 50 years ago!

How is it possible that we are just now beginning to see the use of 3D becoming mainstream, or are we? I think we are, but we still have at least the rest of this decade to go before it will become accepted as standard operating procedure. It's another example of how long it takes for change of this magnitude to occur within organizations versus the time it takes for a new technology to be developed.

Over the past few months I have had conversations with close friends who are industry veterans about the integration of CAD and GIS. In 1984 a small group of us were working on the sharing of data between AutoCAD and PC Arc/Info. We code named this project ArcCAD, but we didn't have access to the source code of both products to really make this happen. Three years later Esri introduced ArcCAD, but it never achieved its full potential.

I am pleased to report that progress is being made, however, but we are still a long way from the kind of integration and data interoperability that is truly needed. One example of the successful integration of a variety of data types is a project that just received a Special Achievement Award from Esri. Congratulations to good friend Gary Volta and his team at SGC for pushing the envelope on this project.

So what is all of this leading up to? I think this is all evidence of the fact that we are lacking a concerted vision, a roadmap, a blueprint (have you ever seen a blueprint?) for our industry. We have seen tremendous change and productivity gains in some areas (not construction), but the more important question is what could we have achieved with a plan that would allow the end users to shape and influence the future, rather than letting the technology take us wherever it decides it wants to go.

One impressive attempt to address this situation is a just released report entitled, *Built Environment 2050.* The authors were selected by the UK's Construction Industry Council who I think is leading the world on BIM implementation and related topics. This author group was purposely chosen to reflect the younger generation of emerging leaders in the architecture, engineering and construction professions. The report is a must read for anyone interested in the future of this industry.

In the report they identify four waves corresponding to the decades between now and 2050. Time does not permit a discussion of each of these, but Wave 1, the current decade is being described as the period where we finally make the transition from analogue to digital and I would add from 2D to 3D. As we have seen the technology has been there for nearly 50 years. Hopefully the will and the mandates, such as those in the UK to use BIM on public projects, will force this to happen.

The value that I see in *Built Environment 2050* is the opportunity it offers all of us to influence the future direction of our professions. Much of this report is about human resources, what they term the "culture of integration," not new technologies. We have more than enough technology. What is lacking is the willingness to truly change the human dynamics of the business models that are built on antagonistic roles and relationships rather than collaboration and transparency.

Let me know what you think,

Gene Roe, LS, PE, PhD
Managing Editor & Co-Founder
LiDAR News Magazine