



We Can Do Better

Welcome to the [ILMF 2013](#) edition of *LiDAR Magazine*. This year's ILMF event will be at the familiar Hyatt Regency in downtown Denver from February 11–13. The agenda includes a keynote by Lawrie Jordan, founder of ERDAS and now Special Assistant to Jack Dangermond, President of Esri. This is certainly confirmation of the importance that LiDAR—derived information plays in the emerging 3D GIS—**geospatial** information systems world. (Isn't it time we move beyond **geographic** information systems?)

In addition to a number of interesting articles and columns in this issue, for those unable to attend the European venues last fall we have provided a recap of both ELMF 2012 and SPAR Europe. As we always try to do I believe this issue provides a wide selection of topics that hopefully helps to broaden your horizons and find new opportunities in our growing 3D business ecosystem.

As I am writing this I am a couple of days away from attending this year's 92nd Annual Transportation Research Board conference in Washington, D.C. With over 11,000 attendees from around the world it is fair to say that this is the most important transportation industry event of its kind. There is some hope with the new [MAP-21](#) legislation that there will be more funding to address the decaying transportation infrastructure in the U.S. As mentioned in the last issue and repeated here for emphasis [Section 1304](#) of the legislation authorizes up to 100 percent federal financing for projects that contain innovative technologies such as “digital 3-dimensional modeling.” The door is open.

My TRB presentation this year is titled, “*No More Stovepipes: A Unified Transportation Data Model*.” On the surface this may not seem like a very interesting or important topic, but I believe this is essential to the future of our efforts to transform transportation agencies and their supporting ecosystem, such as engineers and contractors from the paper-based, 2D world of the past 100 (maybe 1,000?) years to the digital 3D world of the 21st Century.

As any geospatial professional will tell you, it's all about the data. If you agree with this statement then the first step is to create a data model. Virtually every market that Esri serves has a publicly available data model. In fact Esri has a series of [web pages](#) where they are seeking input on a variety of transportation models, but the work is far from done.



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In fact the process of creating a data model is not easy work. Getting all of the groups to identify their data processes and requirements requires a lot of cooperation and interest. Add in the technical challenges of trying to unify the CAD, GIS and business intelligence data formats and you begin to realize the scope of this effort.

I used to wonder how people could be so short sighted as to create an application to just serve their specific needs—myopic I thought—but as I sat in on a number of presentations at last year's IHEEP conference I had a bit of an awakening. The goal of these DOT professionals was not to create a stovepipe application (at Texas DOT they are referred to as “cylinders of excellence”) it was to solve a problem they were having and in general to automate a repetitive, usually tedious workflow. They just wanted to be more productive and if they waited for IT or some central group to provide the application it was not going to happen.

Now if they had the benefit of an approved, unified data model that would have allowed what they were doing to be shared with other departments in their agency I believe they would have taken advantage of it. Some might say that in general, departments are loathe to share their data for fear of that data being misused or corrupted. This is certainly true for the surveying profession. It's a legitimate concern, but this is going to have to change (I think it has started) if the benefits of geospatial information are going to be fully realized.

Collecting highway inventory data with a mobile data collection system will be of value to virtually every department in a transportation agency. In order

to centrally manage and share that information requires a detailed unified data model and the top down support of senior management. There is nothing like a mandate from the commissioner to transform the way an agency does business. If that is what is needed, so be it.

As this is the first issue of the New Year I would be remiss if I did not include at least a brief reference to a few predictions for 2013. John Russo founder of [ARC](#) and the [USIBD](#)—United States Institute of Building Documentation was willing to share a number of his ideas in an [article](#) in a recent *LiDAR News* eNewsletter.

One that caught my attention was, “The opportunity exists for a progressive thinking software developer to shake up the market...” As I look at our industry versus metrology and manufacturing it is painfully clear that we are maybe 5 to 10 years behind in terms of systems integration. Granted that their universe is much smaller and predictable than the Built Environment, but I don't think the basic research is being done to really automate the benefits of laser scanning for the masses.

Until we can provide intelligent 3D objects, as opposed to point clouds the utility of laser scanning will be a fraction of its true potential. I would like to hear your thoughts on what can be done to get this research or maybe startup funded. We have to make this happen.

Regards,



Gene Roe, LS, PE, PhD
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