



What's Old is New Again

LMF 2014 provided a great start to the New Year—with attendees from 30 countries and over 50 exhibitors. The conference focus now shifts to **ASPRS 2014** (American Society of Photogrammetry and Remote Sensing) which is being held in Louisville, Kentucky, March 23–27, 2014. This should be an exciting event, for a number of reasons, not the least of which is the increasing, renewed interest in photogrammetry as a low cost alternative to 3D laser scanning, but I think the real excitement is likely to be on the topic of unmanned aerial systems—UASs. I have some new thoughts on this—see below.

It should be noted that the ASPRS has a new Executive Director, **Michael Hauck**, who I know will be a positive force for change and growth. During his presentation on Monday he proposed the idea of **certification** for LiDAR professionals. In a breakfast meeting with Michael the following morning I pledged the support of LiDAR News to help solicit input on this important topic, so please let us know.

While editing a number of articles for this issue it struck me that one of the really positive benefits of the use of laser scanning to document as-found conditions is that in many cases the project involves the reuse of either an abandoned facility or one that could use an update. It's nice that our industry is involved with this "recycling effort" as it usually good for all of the potential stakeholders, not to mention the environment.

A couple of articles in this edition fall under the heading of "closing the loop," for lack of a better name. I think the most impressive uses of laser scanned data occur when the information is directly used to guide field operations, as opposed to let's say digital surface modeling or clash detection. One of these is custom fabrication of architectural elements such as curved curtain walls, ceilings or in the Holland article, an interior sculpture. The reduction in waste on these types of projects as a direct result of laser scanning is impressive.

Vegetation management is another example of an application where the point cloud data is used to drive field operations. Ville Koivuranta explains how his company, **Sharper Shape**, based in Finland is able to support decision making and field operations on a tree by tree basis which also benefits the utilities, their customers and of course the environment. There's a recurring message there.

Another benefit of being in the position of getting to read a number of inspiring articles is that it helps me to spot the early trends. I realize that this is a small sample, but all the more reason to

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take notice when I see two independent, veteran authors both identify the same emerging technology. In this case it's small unmanned aerial systems, as [Lewis Graham](#) refers to them, or sUAS's. More particularly in this case it's the [eBee](#) from senseFly.

There is no question that UASs are going to be the hot product category for this year and beyond. Up until this week I have been of the belief that the FAA (Federal Aviation Administration) is overreacting to the potential problems that could come from the widespread use of UASs, but the [warning](#) this week by the FBI (Federal Bureau of Investigation) concerning the shining of lasers into the eyes of pilots has really caused me to stop and think.

With almost 4,000 events reported just last year it is a sad reminder of the fact that a small percentage of people can ruin it for all the rest of us. If a person on the ground can point a laser at a low flying aircraft then I can easily imagine that this same group would love to get their hands on a UAS. I don't think I need to describe the types of illegal activities that they could dream up.

Lewis Graham is of the opinion that the FAA will likely approve the small (< 2Kg) UASs relatively soon as these could do very little damage if they were to hit something or someone, but I am concerned as I am sure the FAA is that these could be used as platforms for dangerous activities. In this case I think it is "better to be safe than sorry."

On a final more encouraging note, for those of you who remember back to the early 1990's the convergence of high resolution commercial satellite imagery and GPS produced a number of ventures that were supposed to have spawned a major new industry—precision

agriculture. Although the mega-farms are making use of the approach it never quite lived up to the hype, but that may be changing according to a recent [report](#) from CoBank.

CoBank economist Luke Brummel notes that while precision agriculture has been around for years, the recent rise in crop revenues, coupled with new technology, has accelerated growers' interest in utilizing these products and practices. That interest has prompted a growing number of farm cooperatives to create their own precision agriculture programs in order to better serve farmers. I am glad to hear that.

The reason I mentioned this was a recent article on a research project involving the use of laser scanning to support detailed 3D analysis of crop growth. BOOM—it hit me the combination of precision agriculture and 3D laser scanning which could be called "3D Agriculture" has enormous potential. Turns out this is not just a research concept. One software industry source tells me he is working with a customer on this very concept.

Now imagine adding into this workflow the use of a low cost sUAS, once we can safely do that and it would seem that the agriculture market is going to be fertile ground (terrible) for a very large application of 3D technology.

So whether it's old buildings, photogrammetry or precision agriculture it seems like "what's old is new again."

Regards,



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LiDAR Magazine

LIDAR news

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has it covered.



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