

5 Questions to... Dale Lutz



The July 2014 issue of GIM International is dedicated to capturing and processing Lidar point clouds. Dale Lutz is co-founder and vice-president of software development of Safe Software, a producer of FME technology which is used to convert Lidar data into other point cloud formats. GIM International invited Lutz to answer 5 questions, mainly focused on point clouds.

Which problem does your company's product help to solve?

In two words: data movement. We like to say that FME equips our users to create harmony between data and applications. FME lets them connect data from literally hundreds of data formats, protocols and web services. But it goes beyond straight conversion and gives you tools to transform the structure of your data exactly how you need it. The one that makes our users probably the happiest is the ability to automate mundane tasks so that they can focus on their real jobs. When it comes to point clouds, FME is probably most commonly used to convert Lidar data into another point cloud format like LAS or ASTM E57, or any number of formats that we support across GIS, CAD, Raster, Database, etc. FME is also utilised for all sorts of transformations including tiling, clipping, thinning and more.

You have recently introduced a cloud solution of your product. What is the expected position of this product in the market?

Yes, FME Cloud is our newest offering. It's essentially a hosted version of FME Server. What's nice about FME Cloud is that it lets you get set up quickly with very little overhead. It's also extremely easy to scale up and down, which makes it ideal for grinding through extremely large datasets – e.g. Lidar data as one example. Overall, it is a way for organisations to automate all sorts of tasks: to update maps or databases, send notifications or text messages, the list goes on.

Data is increasingly stored in spatial databases, processed with tools like FME and visualised in web viewers. Given this development, what do you expect the future role of traditional GIS software to be?

The boundaries between traditional GIS and web-based viewers are beginning to blend together. Already we see major GIS providers offering cloud-based solutions such as Esri's very powerful ArcGIS Online. Applications also tend to work better when they live close to the data that they run on. As more and more data is hosted in the cloud – especially with web services like Dropbox, Twilio, Salesforce, etc. – we expect users to begin to move how they work towards the cloud as well. Already in some cases, like with some of Autodesk's products, you can be running an application on your machine but the rendering is happening in the cloud without causing interruptions.

Your latest release offers improved support for point clouds. How important are point clouds to your clients' business?

We've seen a lot of interest in our Lidar support, with clients using it in many different ways. For example, some utilities use FME to bring together CAD and Lidar data so that they can detect where vegetation is encroaching on power lines. Armed with that information, they can then dispatch a crew to trim back the vegetation. In another case, planning authorities use FME to monitor water levels to assess possible risk of flooding. They can generate PDFs or interactive maps of potentially impacted areas and help with facilitating disaster response, guiding zoning and property development, and more. Furthermore, a major railway is using FME to monitor assets and conditions along the tracks in order to meet regulatory requirements. In short, it is clear that point clouds are increasingly becoming critical in the operations of many of our customer organisations.

The biggest challenge in point cloud processing is to automate recognition. What are your ambitions in this respect, and any other ambitions for the next 5 years?

On our roadmap, we've been looking at ways to make it easier for users to perform feature extraction, potentially via a partnership with another vendor. Elsewhere in the land of point clouds, we're looking at ways to provide increased performance for transforming point clouds. FME can already grind through millions of points very quickly, but as with all things, we want to make it even quicker, especially as datasets grow ever larger in size. Finally, if there's one thing we know at Safe, it's that the world loves formats. Therefore, if a major new point cloud format emerges in the coming years, we will look to add support for it as well.