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Preparing for a new era

Andy Beckerson explores the issue of resistance to change in the surveying industry and the importance of new technology delivering on its promise

Some technologies come and go with minimal impact on our industry while others, after some early adoption resistance, have become widely accepted. The introduction of Robotic Total Stations is one such technology, with the initial resistance being the fear of walking away and leaving the instrument on its own. This resistance was overcome by the sheer financial benefits of one-person surveying. However, the recent rise in the theft of these units does pose questions as to how we can combat this drawback because the risk of loss in some scenarios undoubtedly outweighs the financial benefits.

On the other hand, early versions of using twin intersecting lasers for setting out never quite got off the ground. Offering single-person setting out, using the accepted technology of lasers in construction as opposed to the surveying total station, required an 'unbelievable' calibration routine that needed a surveyor or engineer to understand it, completely negating the reason for the introduction of the technique of 'simple setting out for the construction operative'. Not one of the greatest of innovations in the construction industry!

Customer-ready?

So, what of today in the geospatial segment? Have we fully moved away from paper to 3D models and virtual reality? Well no, because some of our customer's customers are still not ready to accept those deliverables although it could of course be argued that there is no deliverable in virtual reality!

While 3D models are more and more acceptable, do we know of anybody who measures a 3D model but delivers a 2D paper plan? Of course, we do! One would think that a 3D laser scan with images is a simple, straightforward, quick and cost-effective method with which to collect the data and that this, alone, would be reason enough to adopt the technology. It's here where the manufacturers are being accused of de-skilling our industry, but the skill is what you do with the data in the modelling and analytics back in the office.

You could apply the same analysis to surveying areas with UAVs. However, while the agriculture industry has adopted UAV technology with a passion, the uptake in the geospatial industry appears to be more cautious, despite this being a highly cost effective method of rapid data collection, albeit with more legislative boundaries to negotiate.

New kid on the block

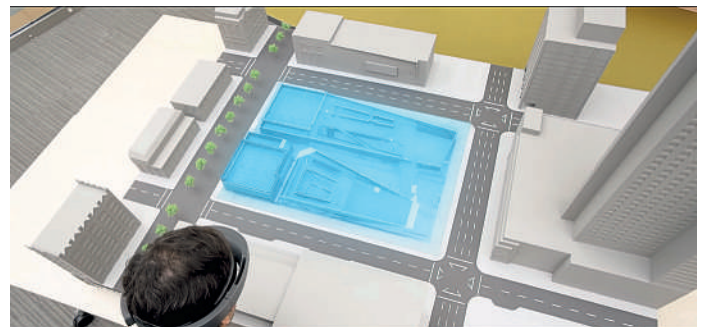
What about the relatively new kid on the block, Virtual Reality? I believe we are some way from having an acceptable geospatial deliverable and, as mentioned above, what is the deliverable? Now here is an interesting thought, what's the revenue model for a technology that doesn't have a deliverable?

It could be a subscription-based service with recurring revenue; now that's got to be an interesting proposition. While this could

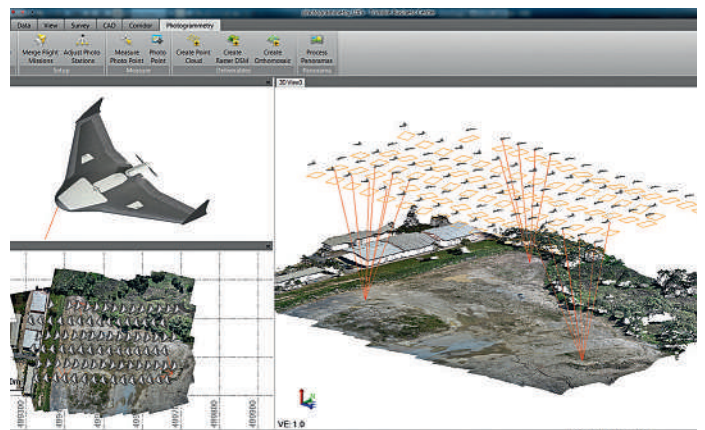
work with collaborative development in the building and project management environment, with editable models viewed by more than one person in many geographical locations, how does our geospatial industry utilise this with its customer base?

Trimble, with the Microsoft HoloLens, is breaking ground here and the recent investment into the company Improbable, incidentally making it a 'Unicorn' company - a start-up company worth over one billion dollars, shows that somebody believes there is an enormous potential in VR for many industry sectors. But in general, our geospatial industry is struggling to take advantage of this technology.

One notable exception is Seeable, a sister company to The Severn Partnership, which creates, among other VR offerings, interactive training, 3D and BIM visualisations and 360° VR tours. But it still goes back to the customer's customer and what they really require. Would a dxf be preferable to a VR 'view' and what is going to be the driver to change the requirement of the market?



HoloLens: breaking new ground



Example of a UAV deliverable