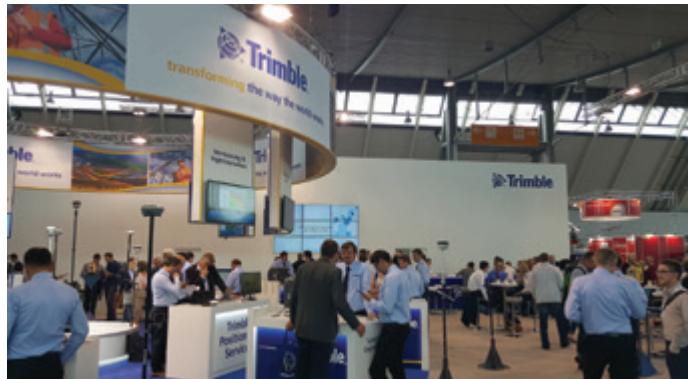




Andy Beckerson is Director of Business Development at KOREC ([www.korecgroup.com](http://www.korecgroup.com)) and can be contacted by email at [andrew.beckerson@korecgroup.com](mailto:andrew.beckerson@korecgroup.com)

# Another new era in surveying?

Andy Beckerson returns from this year's INTERGEO having glimpsed the future



INTERGEO provides a global forum for exhibitors and visitors

As I approach my 40th year in our industry, you will not be surprised to hear how many new eras in surveying I have lived through. Some of the major milestones include robotic surveying, GPS, RTK, contactless measurement, computerised processing and plotting and more recently, laser scanning, 3D modelling and of course UAVs. This brings me to this year's INTERGEO event in Stuttgart, our industry's largest trade fair, worldwide.

## Diary date

If you haven't been to INTERGEO, I recommend you make a diary date for next year's event in Hamburg ... and please don't regard it as just a German surveying exhibition. The technologies and services on offer come from all corners of the globe, with products often in strangely familiar colours and shapes, but not necessarily from well-known manufacturers with established reputations for quality!

As a networking event, INTERGEO is second-to-none and you may be surprised at how many geospatial professionals from the British Isles make the journey to find out what's new.

But back to the next new era of surveying. The methodologies and workflows of data collection by total station, GNSS, video, images, laser scanning, terrestrial and mobile are now becoming simpler, faster and more cost effective, delivering even more data points per pound. Yet there is a clear consensus, again voiced in Stuttgart, that the big challenge is still to be found in data processing - I refer you to a previous article regarding drones entitled "It's all about the data" for some further thoughts on this. Automatic edge detection, break-line detection, asset extraction and simply processing huge data sets is likely to usher in the next era of surveying.

## Eye catching

On a personal note, what caught my eye? Well positioning myself in certain areas of the exhibition halls, having just changed my mobile



The Trimble R2 GNSS receiver works with base station (RTK) and PPP corrections

phone service provider, and in the year 2015 still wondering why we can't have really good mobile voice communication everywhere, the potential of removing the mobile phone from an RTK solution became a very attractive idea indeed.

PPP, Precise Point Positioning, as an alternative to reference station based positioning solutions such as RTK, now frees us from the encumbrance of the mobile phone for delivering positional corrections to our GNSS receivers. PPP corrections can be delivered by satellite and this method has been used for positioning in agriculture and several other industries for some time. It typically provides an accuracy of better than 10cm, but with a convergence time (initialisation) of maybe 30 minutes. However, both the accuracy and the convergence times are getting more acceptable today for geospatial positioning.

New techniques and services are now able to provide accuracies to a 'couple of centimetres' with a convergence time in a 'couple of minutes'. So while PPP accuracies may not yet be good enough for engineering surveying, the era of high accuracy mapping without the encumbrance of the mobile phone is definitely upon us.

## Conundrum

This leads to the blurring of lines between surveying and mapping, typified by the introduction of the Trimble R2, a GNSS receiver that works with base station corrections (RTK) and PPP corrections such as Trimble RTX. This achieves horizontal accuracies of 1cm, 4cm, 30cm or 60cm depending on the position service used. In addition, it can be used with a variety of controllers and controller software depending on the geospatial application being carried out.

So INTERGEO next year, maybe see you in Hamburg?