

Mensura

Measured Solutions
Construction | Surveying | Mapping

This issue

- New releases from Trimble, GeoSLAM and senseFly
- “Service and support are key” Balfour Beatty VINCI case study
- Monitoring update
- K-Mobile - what’s new?



KOREC

Issue 20 2018

The Geospatial newsletter from KOREC

Intergeo 2018

With more than 19,000 visitors from over 100 countries, 640 exhibitors and a conference attended by 1,400 participants, INTERGEO, is an important date in the geospatial calendar. So of course, **KOREC** was out in force at the Frankfurt venue assisting on Trimble's impressive stand and exchanging ideas with visitors and exhibitors alike.

Whilst the show's conference looked at the themes of Digitalisation, Artificial Intelligence, BIM, Drones and Smart Cities, it's the exhibition floor where you can really get a feel for the way the industry is progressing. Our team reports that whilst there were few notable hardware releases from the big



▲ Plenty of evidence of the 4th Industrial Revolution (4IR)

continued overleaf....

New Releases!

Four great new products to end the year on - a new handheld scanner system with a longer range, greater intensity and improved colourisation and versatility from GeoSLAM, an enhanced Trimble R10 GNSS, a rugged handheld logger compatible with Trimble Catalyst and the latest senseFly fixed wing drone:-

ZEB-HORIZON 3D Mobile Scanner with handheld, UAV and backpack deployment

GeoSLAM has launched a new handheld scanner system with an even longer range, increased intensity and improved colourisation and versatility at this October's Intergeo event in Germany!

With a range of 100m, a collection rate of 300,000 points per second and an accuracy (environment dependent) of 1-3cm, the ZEB-HORIZON is suitable for a vast array of applications both inside and outside. It can even be used in remote areas with poor GPS such as underground or in forest environments.

The ZEB-HORIZON is as mobile and as easy to use as ever and can now additionally be mounted to a UAV for complete coverage of all features.

Trimble R10 Model 2 - an enhanced version of the market dominating R10

We thought it couldn't get any better but then along came the Model 2. Enhancements include:

- 672 GNSS channels for unrivalled futureproof GNSS constellation tracking, including GPS, GLONASS, BeiDou, Galileo, QZSS, IRNSS as well as the full range of SBAS
- Improved reliability against sources of interference and spoofed signals
- Increased battery life for around 33% more operating time in the field
- 6GB internal memory for storing more than 10 years of raw observations
- Even better equipped for Bring Your Own Device environments with Android and iOS support



▲ 100m range

continued overleaf....

Stop Press

KOREC to distribute latest Parrot technology, the ANAFI “out of the box” 180° 4K camera drone

Measured Solutions
Construction | Surveying | Mapping



KOREC

Monitoring Update

For over a year now, our Trimble monitoring system in Huntingdon has been running faultlessly using the Settop M1 communications hub connected to a Trimble Autolock Total Station.

With this setup, the data is transmitted via SIM to a PC running Trimble's T4D monitoring software which publishes the data to a web portal. The engineer can then log-in and manage projects from anywhere, and even view the site live through an easy to configure webcam service like the one we have just installed on our **KOREC** demonstration system.

With the M1 up and running in Huntingdon, we took the opportunity to have a QA session on this topic with the Monitoring Solutions Trimble Regional Sales Manager EMEA, Alberto Bushell:



▲ Simplifying setups with the M1

What does the M1 setup entail?

AB: The Settop M1 Monitoring Controller is an all-in-one device. Next to incorporated communication options like cellular modem, Wifi and Bluetooth, it is a router, a remote switch and a device server at the same time. Only one central power supply is required and all cable connections between different hardware devices become obsolete. It also includes the auto-start functionality that requires a specific cable between device server and total station if no Settop M1 is used. Reduced cables and hardware together with the nice web interface of the Settop M1 ensure an easy set up.

Aside from a simplified setup, what other benefits does the M1 bring?

AB: It can control the total station and ensures rounds are measured even in case there is a temporary drop in communication to Trimble 4D Control. Due to its large onboard memory it is able to buffer round information during communications outages. It works seamlessly with Trimble 4D Control software and guarantees full data integrity. The communication to Trimble 4D Control software can be established via a secured cloud service connection (IST Connect). This is especially beneficial if there is no static IP address for the Settop M1 available.

What would be the two main system priorities for the monitoring end user and how can the M1 contribute to these needs?

AB: Reliability: Monitoring operations require reliable solutions, the M1 ensures 24/7 operations during years and, in case of network failure, it can store data for weeks for later use in T4D.

Ease of installation: This plug&play solution offers an advantage on difficult installation environments and shorter intervention periods in areas with dense traffic.

Trimble offers many monitoring systems but what would you recommend for a good all round remote, real-time system?

AB: This really depends on the project, and what the customer needs. A real-time monitoring system would usually include Trimble 4D Control (T4D) realtime monitoring software which can take data from a range of Trimble Total Stations, GNSS receivers and geotechnical sensors like crack gauges and tilt sensors from a number of different manufacturers. The data from total stations can be received via radio (ideal on some compact construction sites where radio comms work well) or Settop M1 total station controller (if the instrument is too far away from the PC running T4D to use radios). If its remote, I would suggest a Settop M1 controlling a Trimble S7, S9 or the new S5Ti-M running alongside T4D. If additional sensors are required, we can scale the solution to suit.

If you could have three words to describe the M1, what would they be?

Comprehensive, robust and powerful!

To find out more about how easy and cost-effective it is to benefit from Trimble monitoring solutions, please do get in touch with **KOREC** monitoring specialist, Matthew.lock@korecgroup.com ■■■

Intergeo 2018 continued...

manufacturers (with the exception of GeoSLAM's ZEB-HORIZON), there were plenty of new players specialising in software and in particular, software tackling the processing, extraction and analysis of pointclouds and large datasets. This development will certainly result in a more streamlined workflow and consequently more intelligent data usage along with a broadening of end users and application areas, all requiring the ease of Field-to-Finish solutions.

Field-to-Finish is an area where Trimble has vastly expanded its capabilities for geospatial and the release of Trimble Business Center 5 is a clear example of this, bringing the survey and construction worlds together in software in a single solution.

Additionally, Trimble Access now has IFC model support for the use of important BIM information on site.

For further information on what happened at the show, visit Intergeo's useful YouTube news channel. ■■■

New Releases continued...



Trimble Nomad 5 - for professional field data capture

Trimble also used Intergeo to launch a new mapping product. The Nomad 5 is a fully featured handheld developed specifically for the rigours of field use. As well as being the perfect platform for our own K-Mobile data collection software, it's also fully compatible with Trimble Catalyst (subscription based software GNSS)

- 5-inch sunlight-readable touch screen
- Android™ 8.1 operating system
- Easy operation straight out of the box,
- Military (MIL-STD-810G) specifications for ruggedness
- All-day, user-replaceable battery

Plus, the Nomad 5 features a Trimble EMPOWER module bay which provides the ability to attach user-replaceable modules such as RFID/Barcode, GNSS (for sub-metre accuracy) or custom modules.

senseFly eBee X combining quality, efficiency and safety

Superseding all previous eBee models, the X brings several useful new features along with a significantly reduced cost for the RTK option. The eBee X has been launched with the promise that "it's not about the drone," but instead about overcoming business challenges... and indeed eBee X options include a camera to suit every job! Here's what we like:

- Expanded choice of cameras – The eBee X includes a range of revolutionary new camera options to suit every mapping job allowing you to customise your eBee according to your application
- Suitable for challenging sites – Built-in space-friendly Steep Landing technology (35° approach)
- Even more rugged – Optimised airframe design and ultra-strong underbody
- Significantly lower cost for RTK option
- Endurance Extension option – Unlocks a flight time of up to 90 minutes (versus of 59 minutes by default). Whilst not strictly relevant in the UK, this could be with less restrictions



a maximum endurance useful abroad when flying

Trimble Business Center 5.0 - now a combined product

...And of course Intergeo gave us Trimble Business Center 5.0, a new product that combines all of the capabilities of Trimble Business Center and Business Center – HCE products into a single solution that meets the needs of the Geospatial / Surveying and Civil Construction Markets.

Call **KOREC** now to book your demos of the GeoSLAM ZEB-HORIZON, Trimble R10 Model 2 or eBee X. ■■■

First eBee X in the UK goes to Tri-Tech Ltd!

senseFly's newly launched eBee X provides exactly the functionality that Ted Harland, Managing Director of Yorkshire based Tri-Tech Ltd, requires for demanding quarry surveys and aerial mapping projects.

For Ted Harland, it's always been about choosing the best instrument for the job and Tri-Tech surveys has invested in a surveying fleet that makes that entirely possible by including cutting edge technologies such as Trimble's R10 GNSS and SX10 technology for ground-based work and rotary drones for aerial projects.

Although satisfied with the performance of the rotary drones, Ted was keen to find a solution that would be better equipped for his primary areas of aerial work, namely larger scale mapping projects and quarry surveys where conditions can be particularly windy with landing space at a premium.

The recently launched fixed wing eBee X has proved to be the perfect solution offering new technology that includes a more rugged build, the introduction of built-in space-friendly Steep Landing technology (35° approach) and a range of camera options for customised applications. Ted opted for the S.O.D.A. 3D for the best results on vertical faces/buildings and the Aeria X RGB photogrammetry camera for day to day mapping projects.

However, for Ted, the practicalities of delivering quality, timely data to his clients dictate his investment decisions and he stresses that the senseFly eBee X is a fully integrated 'off the shelf' product fully supported by **KOREC** and that these factors played a large part in his decision. ■■■



▲ Ted Harland, on site with his new **KOREC** supplied eBee X

Customer story

“Service and Support are key”

Balfour Beatty VINCI chooses KOREC for M6 scheme



▲ Laurent Ciais

We're seeing a shift towards a more sophisticated sales environment in which service, support and a personal approach play a key part in the buying

process and in some cases, they are the deal makers and breakers. Laurent Ciais, Survey Manager at Balfour Beatty VINCI, agrees.

At the end of 2011, Balfour Beatty VINCI, a 60:40 joint venture, was selected to deliver a smart motorway package worth up to £607.4m. Work would see the JV undertake smart motorway upgrades to a 10 mile stretch of M5 Junctions 4a to 6 in Worcestershire; a 12 mile section of the M6 Junctions 2 to 4 in the Midlands, and a 32 mile stretch of the M4 Junctions 3 to 12 in London and Berkshire.

Responsible for the survey work and instrument acquisition on the M6 section of the scheme is Balfour Beatty VINCI Survey Manager, Laurent Ciais, who has over 30 years of worldwide motorway construction experience. The M6 improvements began in December 2017 and are due for completion by the end of 2019 with work including the upgrade of 20km of the M6 to four lanes.

Laurent approaches each project with a simple premise which dictates how the survey work will be handled: "Every job has challenges, what are the challenges of this one?" In the case of the M6, there were few technical demands but plenty of the usual issues of working on a narrow site, busy with machines and people and of course live traffic.

For Laurent, the smooth running of the project would be assisted greatly by the careful selection of the instruments

and software that the team would use. He required instruments that were reliable in tough site conditions, offered user friendly workflows and above all were well supported by the supplier. Unimpressed by the support from a previous supplier, Laurent contacted UK Trimble distributor KOREC and was pleased to be visited the next day by his area's KOREC Regional Development Director who demonstrated a range of instruments and set Laurent up with a one month free trial of Trimble Business Center, (office software for processing and

"The problems are rarely big, but they can cause bottlenecks if not dealt with fast. KOREC has been excellent at responding to our requests, quickly and thoroughly."

Laurent Ciais
Balfour Beatty VINCI

handling optical, GNSS, and imaging data). Although new to TBC, Laurent felt that it was the only software he'd seen that was both user friendly and offered all the functionality he required.

His decision to go with Trimble would entail his team familiarising themselves with a range of Trimble instruments that included S7 and S5 robotic total stations, R10 and R8s GNSS systems, VRS Now (Trimble's real-time correction service) and a DiNi Level.

Service and Support are key

Confident that the Trimble instruments would perform reliably, Laurent's main concern was that both he and the team would be well

supported throughout the duration of the project and that KOREC was equipped to deal with support requests promptly, something other manufacturers had been unable to. This would be a deal breaker.

KOREC works by providing both office support and dedicated local support for on-site visits. Two KOREC technical support specialists were therefore introduced to Laurent on-site to establish a good, early working relationship as were KOREC's Field Support Manager and Support & Training Manager. In addition, Trimble has an excellent TBC community that

Laurent felt was an excellent resource and something that would benefit him wherever he was in the world.

Delivering support – 8 months in

8 months into the project and Laurent reports that the support and technical back-up from KOREC has been everything he wished for. "The problems we come up against are rarely big, but they can cause bottlenecks if not dealt with quickly. KOREC has been excellent at responding to our requests, quickly and thoroughly. It's not unusual for us to receive a personalised video showing how to carry out a particular function because the KOREC team appreciates that this is a far better way to share information than over a lengthy phone call. This also makes it easier for me to pass on information to my team – something they really appreciate. I wouldn't describe the KOREC support managers as just being product specialists, they are also specialists in surveying with a true understanding of how a site functions and how, as we familiarise ourselves with Trimble, we wish to get more out of our equipment. In this area KOREC service has been second to none with tips and suggestions on how we can speed up our workflows and extend our use of TBC."

Laurent continues, "What's been particularly pleasing is that there has been no fading away of this support, it's as good today as it was the day we took delivery. KOREC works as a team which means whether we deal with a sales consultant, the admin staff in the office or the field support or training managers, they all know exactly where we are at and there's always someone to help."

Two-way process

For KOREC, the relationship with Laurent and the Balfour Beatty VINCI team has been a useful indication that recent changes to the support offering are meeting the needs of a more sophisticated sales environment in which service, support and a personal approach play a key part in the buying process.

The KOREC team has valued Laurent's input, which has been fed back to Trimble in the USA, and will lead to useful updates in future versions of TBC.

On this project Balfour Beatty VINCI has been supported by Richard Selby, Training and Technical Support Manager, Tim Leah and Tom Williamson, Geospatial Technical Support. ■ ■

Personalised support

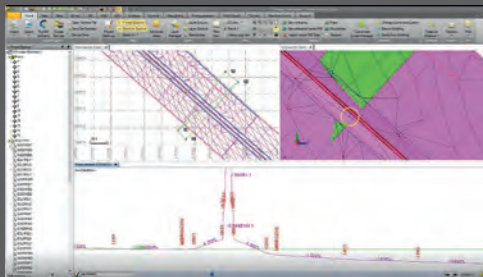
KOREC works hard to meet each customer's support query in the way that best suits them. In the case of Laurent, personalised videos have proved particularly useful:

Case 1:

Laurent needed to take an updated surface design adjacent to the carriageway and change it in such a way that it could be staked as a slope using Trimble Access Roads. KOREC was able to do this by converting their surface design to a Corridor in TBC and then exporting it in GENIO format. In the GENIO file it was then possible to make a couple of small edits to the string names to make it compatible with slope staking in Access. This was illustrated in a 10 minute video.

Case 2:

The Balfour Beatty VINCI team needed to find the coordinates for where two surfaces intersect. This was shown in TBC by using the create CAD Point function to display a cross section of the surfaces at a specific chainage and then use the Plan View and Cross Section Views to extract the Easting, Northing and Level of the intersection position. The video was 4 minutes long.

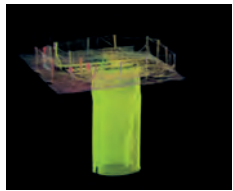


▲ Setting out superspan gantries from both northbound and southbound

KOREC News

K-Mobile Updates

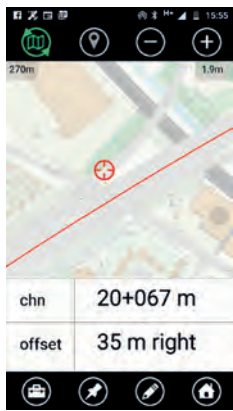
The K-Mobile team is nothing if not accommodating and most of all they enjoy problem solving, no matter how large, or in this case, how small! Here are four of the latest challenges that they've been tackling, and don't forget, the principles of each of these solutions are transferrable across many industries and applications.



My client has specifically asked for 3D models of manhole chambers. The project is very time critical so how can I collect that data and share it with them quickly and easily?

We now have full integration with the handheld ZEB-REVO scanner! Just click on an icon and your scan data becomes part of a fully automated process which means the pointcloud can be viewed and turned in a browser, measured from and cut. This means that you won't be handling vast data sets or need specialist processing and handling software.

Leading drainage company Enviroflow is the first in the country to adopt this solution for a 7 week project.

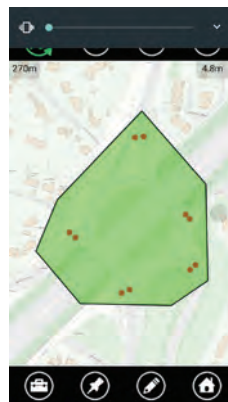


Help – no one delivering goods or visiting us on our motorway site can find us!

Large road construction projects are all referenced by chainage so we've developed a really useful little function that's now included in all versions of K-Mobile. Designed to provide users with a free dynamic chainage display on any linear job, it's ideal for deliveries and visitors who can be provided with access via a link.

We're collecting information on traffic light conditions but have to open up each individual record to tick a 'fully functional' box. When we have 20 sets of working lights on an intersection this can take 20 minutes. How can we speed up this process?

Welcome to 'lassoo assets'! It does exactly what the name says and can be used on any asset type allowing for a time saving 'batch' approach to changing a field. In this case we developed 'lassoo assets' as a useful add-on to K-Mobile, making the process 20x faster. This is just the sort of small development the K-Mobile team can undertake in less than a day!



How can I QA check the offset measurements from my laser rangefinder

With the rise of Trimble Catalyst (software based GNSS) running on tablets, we're seeing increased usage of the TruPulse laser rangefinder for offset measurements as an alternative to the Trimble GeoExplorer with its built-in laser. The K-Mobile team has responded accordingly by enhancing the form that pops up automatically when a laser measurement is taken. You can now store any laser measurement and the coordinates of where you are standing as attributes. Two positions – ideal for QA purposes!

Although developed for handheld lasers, this feature works with any NEMA style Bluetooth device such as sonar devices and radiation detectors.

What would improve your productivity? Please contact the K-Mobile team on 0345 603 1214. ■ ■

KOREC Webinars

Well worth visiting is our archive of KOREC webinars, all to be found on our KOREC Group YouTube channel. Latest additions include:

- Customising K-Mobile field data capture software with a focus on the complex demands of the drainage industry
- Trimble Access/Connect "Ask the Expert" parts 1, 2 and 3 with QA sessions and plenty of tips
- Monitoring for everyone
- All about the Trimble S5 Robotic Total Station and Locate2Protect (tracking technology)
- Trimble Robotic Total Stations, FieldLink software for 3D setting out and Trimble Connect
- The Trimble SX10 – beyond the hype ■ ■

KOREC sale

Fantastic winter deals on Trimble R10 kits (up to £3k trade-in), R8s + VRS Now (from £45 per week) and the Trimble S5 Total Station (up to £4k trade-in). Call for details. ■ ■

KOREC photo competition

Congratulations to the most recent winners of our monthly photo competition: Eamon Mac Auliffe of Ncw Surveys (left) and Jamie Howe of Atlantic Geomatics (right) with the two great images below. We still have two more winners to announce before the end of the year and of course our overall 2018 prize. Just email your photo of KOREC supplied technology to marketing@korecgroup.com or enter via Twitter by using the hashtag #KORECphotocompetition ■ ■



▲ Eamon Mac Auliffe (above) and Jamie Howe (right), KOREC prize winners!



KOREC 2019 Calendar

Featuring many of our photo competition winners, the new KOREC calendar will be available soon. Request a copy from your KOREC consultant. ■ ■



Rail Update

Trimble has launched a new Overhead Line Extraction tool for Gedo Scan Office software. It is now possible to determine the height and stagger information from the pointcloud automatically, at a chosen interval, at the catenary masts and at selected positions. This latest highly productive automated tool sits alongside the automated rail extraction utility – perfect for measuring adjacent roads which may have been inaccessible at the time of the survey, and the shape-tracing tool – perfect for creating features like the platform edge or cable troughing.

Look out for our upcoming rail update webinar where these features and more will be discussed. ■ ■



Technical news

RTX update information

To ensure continued data integrity and authenticity Trimble Advanced Positioning will be updating the Trimble RTX real-time correction streams to AES Encryption. To accommodate future RTX technology enhancements and future network coverage expansion, Trimble will also be changing RTX satellite beams. The changes will provide customers with faster convergence times, greater access to the CenterPoint RTX Fast Network and increased service reliability.

All devices that are compatible with Trimble xFill and Trimble RTX must be running firmware versions that support the encrypted streams and be configured for the new satellite beam.

This is version 5.20 for R2 – R10 receivers, 3.30 for SP60-80, 3.33 for R4, 5.37 for R1 and v6.7.18 for a Geo7x.

The new beam will be available from 01.12.18 and the old beam turned off on 01.07.19. It is important that you update your receivers firmware to the minimum required and configure it for the new beam by 01.07.19. We will be issuing a video which will show the steps required to update the firmware and configure your receiver for the new beam."

New S-Series firmware

Firmware, H2.5.200, is now available for the Trimble S5, S7 and S9 Total Stations.

Contact us:

For further information on any of the products or services mentioned in Mensura, please contact your nearest KOREC Sales Consultant or visit our website

T: 0345 603 1214

IRE: 01 456 4702

E: info@korecgroup.com

www.korecgroup.com

Stay in Touch

