Roundup — Machine Automation at BAUMA

Bauma 2007 presented no remarkable breakthroughs such as we've seen at previous international shows.

It seems to us that after years of rapid advance, machine control technology has, for the time being, come to a slight plateau. The main players have all reached more or less the same level, everyone has cracked the Glonass nut, and everyone has achieved a significant gain in performance—there's no doubt that today's equipment performs a great deal more accurately than could be said of the gear available five years ago.

The very positive theme of Bauma 2007 was, to paraphrase it, "Well, now you have GNSS operating on your work site, we're here to show you how to get much more value out of it, in terms of secondary benefits."

Trimble's SCS900 Tablet Edition

Readers will be aware that we've long been admirers of SCS900. It's a software package that's very user-friendly, using a site's GNSS resources to allow the ordinary man on the job to calculate volumes, check and create layouts, and do a host of useful tasks that otherwise may have required a surveyor.

The software previously ran on a GNSS rover. The new Tablet Edition released at Bauma goes one better, putting everything onto a tablet PC something like a laptop, that can be car mounted. It extends the use of Trimble site positioning systems to construction jobsite supervisors, foremen and project managers who can now more effectively coordinate activities from a vehicle.

Typical tasks are to view, review, and edit designs—SCS900 provides easy access to the same digital design data that field crews (surveyors and machine operators) are using.

Real-time cut and fill displays on the tablet PC allow the supervisor to drive the site, measuring ground elevation and monitoring current cut/fill depths.

Tools in the software make it simple to organise side slope staking, compute volumes, and perform grade checking. The supervisor can virtually conduct site prep and checking activities from inside his vehicle.

SCS900 Tablet Edition also puts into the hands of a supervisor the simple and easy daily set-up of the site's GNSS base station.

Topcon's 'SiteLINK'

Topcon's SiteLINK comes from a different direction. It's a wireless communications mapping, data logging, reporting and asset management system with the ability to work with any make, model or type of job site machine, regardless of manufacturer and age.

This new technology is based on the use of "mesh radio networks" built on a standard Wi-Fi environment. A typical feature is that it allows easy-to-configure 'geo-fencing' functions, and serves as an all-embracing anti-theft system.

In its ADL-100 version for road building applications, SiteLINK allows the use of NavTeq road maps on an easy-to-read graphical display. The maps can be adjusted (zoom, navigation and various other display options) using simple function key commands on the operator's display.

In addition to monitoring fuel levels, oil pressure, temperature and hours of use via CAN bus or analog connections, data that can be collected, stored and processed for individual machines include:

- productivity (by various standards)
- geometry files
- real-time machine position and history with optional GNSS+ receiver hardware.
- percent of selected jobs completed.

Using Internet hookup, or mobile phone connection, Topcon's SiteLINK tracking and reporting software and controller can be accessed from virtually anywhere in the world—job site office, remote office location or even from a selected machine working on the site.

In other words, go home for dinner and still keep a close eye on all your equipment working on a variety of sites.

Topcon also released at Bauma two new 2D excavator grade control systems that fill a gap in their range.

2DXe is a very basic 2D system for those who are sure that that's all they'll want.

2DXi is also an affordable entry-level system, but by entering a password and fitting GNSS receiving equipment it can be quickly and easily upgraded to 3D.

Tommi Moves On

Many Australian contractors will have seen Tommi Kauppinen busy solving problems on their work sites.

Formerly head honcho at Axiomatic of Finland, Tommi was at Bauma in a new capacity and with a new T-shirt, as R&D manager for machine control at SBG, the GeoRog people.

As we reported earlier, SBG is now owned by the multinational Hexagon of Sweden, and has therefore become a sister company to Leica Geosystems, Scanlaser, and Mikrofyn. PK

Meet David Grant, recently appointed Trimble's regional sales manager Australasia for the Construction Division.