

# Stars in their eyes



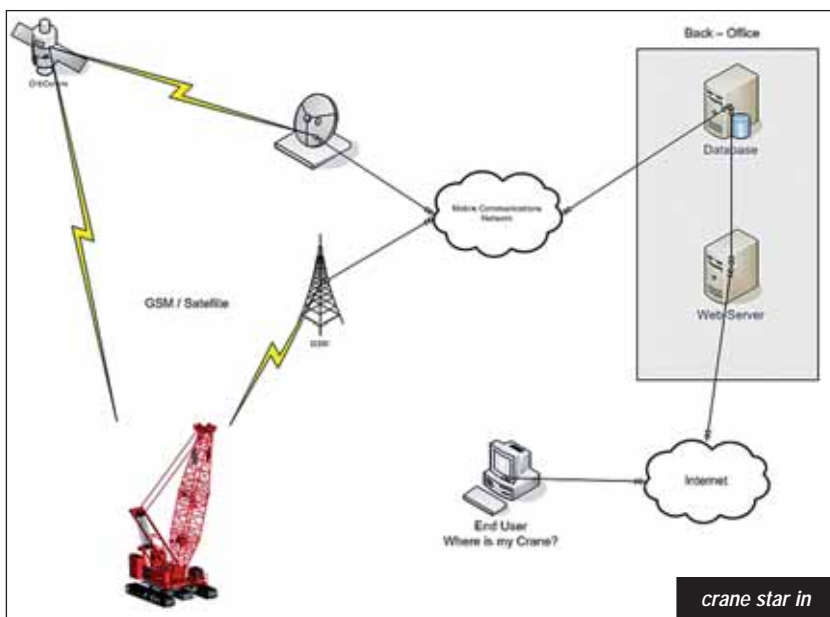
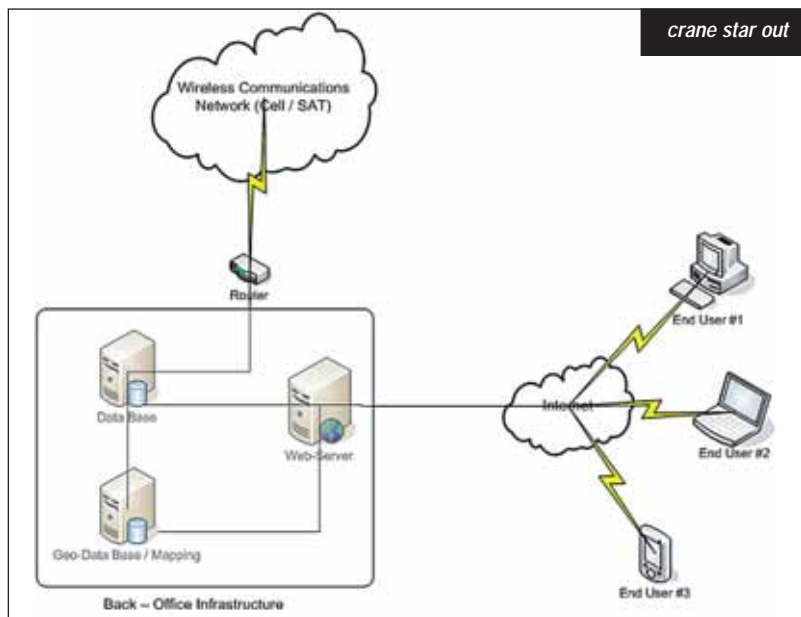
The CraneStar Terminal Control Unit - built to military specification.

In spite of several exciting new crane product launches at Intermat, Manitowoc's 'big launch' is reserved for a small aluminium box of electronics - CraneStar. The hardware is of course just a small part of this 'product'. But if the system delivers half of what Manitowoc expects, it could transform crane management and usage. Cranes&Access spoke to two of the team responsible for the product.

Ask most people what they understand by telematics and the most frequent response will be 'vehicle tracking systems'. The term, which simply combines telecommunications and informatics (IT) has been so misused that it no longer serves its purpose. Its true etymology from the Greek 'tele' - far away - and 'matos', a derivative of the Greek machinari - gadget/contrivance - perfectly describes the true meaning of long-distance transmission of computer-based information.

Tracking systems are now relatively

standard, although surprisingly not as widely adopted as one would have expected. Remote access to a machine's information systems - including diagnostics and usage - has been around for many years and is already in everyday use in the German access rental industry allowing companies to check usage, remotely diagnose breakdowns and check on location etc. The systems even allow owners to limit periods



of usage to normal working hours and modify this on receipt of a further payment. In the crane industry however while tracking systems have found some favour and the most sophisticated larger cranes have been able to dial into the manufacturers engineering department, the development of anything further has been limited. Manitowoc is set to change that with the launch of its CraneStar crane management system which will become standard equipment on all of its products that feature CAN-bus electrical systems. The basic CraneStar device - the Terminal Control Unit - will be the same for all models and simply interfaces with

the crane's on-board systems, particularly the Load Moment Indicator. It is a dual mode device beaming its information back by GPRS/GSM with an automatic default, in the absence of a signal, to a satellite connection. The system essentially answers the questions, where is my crane and how is it performing? To do this it links into a node on the cranes CAN-bus system and can track and trace any function for which there is a sensor, such as fuel levels, crane set-up information including tilt sensor, boom extension configuration, wind speed, engine hours and condition or any diagnostic fault codes. The device can be set to collect a specific range of information, although Manitowoc expects most customers will use the standard factory settings. It is then set to

transmit the data at a preset period, such as every hour and/or if desired, when a threshold is exceeded. The information is relayed to a server in a data centre where it is collected, sorted and stored ready to be accessed by the crane's owner.

In order to access the information all the crane owner needs is a regular computer with a web browser and connection. On accessing the web access point the owner registers and then uses a password to open his particular information. Owners can zone access to the information by department or person, so for example a depot might only be able to access the cranes based at their location. As part of the registration the crane owner agrees to provide limited access to Manitowoc, so that staff at its CraneCare call centres can help the owner's service engineers with trouble shooting.

We asked Scott Blair, Manitowoc's director of global telematics what was so special about CraneStar compared to other products on the market, including independent non OEM systems.

"Crane Star is the first system to be fully integrated into the crane and its Load Moment Indicator and designed specifically for the equipment and the application," he said. "It is also the first truly global system being delivered with a global SIM card, a crane can move between countries without the need to change passwords or cards or to register with local mobile communications suppliers. It is also designed to be 'future proof'."

Project manager, John Bittner, director of marketing for CraneCare Americas, adds: "The hardware, essentially the highly compact Terminal Control Unit, is industrial strength with a tough aluminium housing - no plastic in sight - built to military specifications and globally

certified. It is water resistant to IP67 and will even operate underwater for up to 48 hours."

#### The benefits?

In addition to the usual tracking and geo fencing applications owners can monitor fuel consumption, service intervals, load chart utilisation. For example contractors can monitor the percentage of the load chart or boom length used for specific repetitive applications, possibly leading to replacement with a smaller or more appropriate crane? The crane's information and diagnostics system can also allow office-based experts help field-based engineers solve difficult problems.

And what about being able to disable a crane or restrict its operation? Bittner and Blair were emphatic on this, saying that the subject had been discussed at length and the decision made not to fit such a feature, referring to the fact that in the highly unlikely event

that a hacker ever managed to penetrate the data centre he thought that they might be able to shut down Manitowoc cranes all over the world was just too unthinkable.

#### And the cost?

Manitowoc is making the system available without charge during the first three years of the cranes life and will make it available for a monthly charge thereafter. As to what that cost might be, the company says that given the first such contracts will not be signed until 2012 it is premature to say, as communication charges, the bulk of the cost, are changing all the time. It did say though that the charge will be fair and competitive.

The system will also be available for retrofit on all cranes equipped with CAN-bus, this includes a large number of Grove GMK All Terrains as well as Potain tower cranes and a some Manitowoc crawler cranes. If you are attending Intermat next week, stop by the Manitowoc Crane stand for a demonstration.

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