Quick access to rail assets

by Edward Toh

Regional Rail Link, Australia's landmark rail infrastructure project, will shorten journey times for passengers by removing the major bottlenecks in Victoria's rail network that cause delays. Addressing problematic congestion on the railway involves untangling metropolitan and regional tracks on the routes through the western region of Melbourne into the heart of the city.

An expanded network, providing more reliable train services for commuters, will feature 90 kilometres (56 miles) of new track and dedicated regional lines from West Werribee Junction to Deer Park, then along the existing rail corridor from Sunshine to Southern Cross Station. The government project also includes two new railway stations at Wyndham Vale and Tarneit, rebuilt stations at West Footscray and Sunshine, and a major upgrade to Footscray railway station. Regional Rail Link is being delivered through six work packages and includes the Rail Systems project team, responsible for the delivery of signalling, train control and communications technology.

Accuracy for compliance

The collection of accurate location and attribute information covering new infrastructure is a key responsibility for the Rail Systems team and a major part of any project on the scale of Regional Rail Link. Accurate positions and GIS information of all assets installed on the rail network are collected and documented. All field data are transferred to an Asset Retirement Obligations (AROs) asset management system to make them accessible to employees and external contractors.

C.R. Kennedy Survey Solutions, the exclusive distributor for Leica Geosystems in Australia, supplied Zeno 5 hardware and software solutions by Leica Geosystems that ensure the team meet contractual requirements to accurately record the exact location of each newly installed asset.

Streamlined processes

With support and guidance from C.R. Kennedy, and working with the GNSS reference network, SmartNet Australia, field teams used a Leica Zeno 5 GIS data logger with a Leica GG03 GNSS SmartAntenna to collect all asset information to real-time centimetre accuracy. Zeno's integrated 3.2 Megapixel camera

gives the user the additional ability to enrich the GIS data with a visual record.

The rugged Zeno 5 handset, hot swappable battery and colour sun-readable touchscreen is aiding efficiency as workflow can continue without interruption, throughout a full working day.

When fieldwork is completed the collected data is easily transferred to the GIS database in one simple step using Zeno's "EasyIn" transfer routine for processing in Zeno Office. The data can be exported back to the field, when required, using the "EasyOut" tool.

Zeno's automated streamlined processes are helping the project team to capture richly attributed information with greater precision and in less time. Strategic and everyday operational decisions that rely on authoritative GIS data can be made with confidence with Zeno's fully transparent audit trails and workflows that enforce data integrity.

Reducing future maintenance costs with accurate GIS data

Using Leica Zeno tools for this new infrastructure project will also help asset managers to keep maintenance costs and downtime to a minimum for years to come. By accurately capturing assets, from metre to survey grade accuracy, field engineers will be able to quickly and easily pinpoint the precise location of assets for routine condition checks and repairs, logging the changes on a definitive database that can be accessed and understood by employees at all levels. ■

Find more information about the Regional Rail Link project at: www.regionalraillink.vic.gov.au/

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