Zetron Coordinates Communications with World's Longest Trains

Submitted by: The Sage Partnership
Monday, 15 October 2012

Eight Zetron DCS-5020 Digital Consoles feature in a R3.6m upgrade to the 861 kilometre freight line which transports over 60 million tonnes of iron ore every year between mines in the Northern Cape and the deep water port of Saldana in South Africa. More than three and a half kilometres long, with eight locomotives and 342 wagons, the trains* that carry the export iron ore on the line are the longest in the world.

Rail operator Transnet Freight Rail is deploying the Zetron consoles in two new state of the art control centres from which the operation of trains and maintenance of the track will be coordinated. Two Zetron DCS-5020 Digital Consoles have been in operation at the line's original train control centre since 2010.

Explains a Transnet Freight Rail spokesman: "Our entire purpose is to serve our customers and to provide the most efficient transport of iron ore to the Port of Saldana. Our own investment programme is a response to customers' continuing development of their own infrastructure, which means we must be ready to carry even more iron ore every year. We first deployed two Zetron DCS-5020 consoles in 2010 and they have made life so much easier by bringing a large percentage of radio and phone traffic to a single place where it can be monitored and coordinated."

"When it came to planning the new control centres, we knew we needed a further six consoles in order to bring all communications under centralised management, and we went for the make and type that has been serving us so reliably."

Zetron's partner, Global Communications, will help Transnet Freight Rail install the two existing and two new DCS-5020s in its new train control centre, and four new DCS-5020s in its 24/7 operations room. The consoles in the train control centre will enable operators to coordinate radio traffic with trains across the entire length of the route from mine to port, and with trains joining the line via its interconnect with the wider South African national rail network.

The consoles in the 24/7 operations room will link operators with track maintenance specialists who necessarily carry out much of their work during the night. All the Zetron DCS-5020s will be networked, enabling every operator position to monitor all seven radio networks associated with the export iron ore line, and six positions to monitor a MPT1327 trunk network. Each console will also access a wireline phone hotline.

"This arrangement will give us an unprecedented overview of our entire communications, says the spokesman. "It will enable us to run our operation even more efficiently and even more safely. That's good for our customers, it's good for us, and it's good for our employees too.

Opened in 1976, the 861 kilometres of track between Sishen and Saldana carries no passengers, serving solely as a bulk freight artery for the South African economy. This year it is expected to carry some 67 million tonnes of iron ore, the majority of which will go to steel-hungry export markets including China and other countries around the Asian basin.

Thirty-nine trains per week, each with a total mass of 34 200 tonnes make the 23 hour journey from mine to port, returning empty to be refilled and begin the cycle over again. The route is single-track with by-pass loops to enable trains to pass in opposite directions. Trains leave the mine at an altitude of 1,295 metres, climb higher still for 42 kilometres before descending to cross the Orange River. For the next 300 kilometres the line traverses a flatter, largely uninhabited landscape before turning south at the coast for the final 100 kilometre leg to Saldana.

Zetron DCS-5020 Digital Console systems are deployed widely throughout the world in public safety, transportation and utilities control rooms, and in mobile applications. They enable small to medium sized operations control rooms to combine telephony with both digital and analogue radio control, supporting combinations of up to 30 resources including up to 16 screen-based operator consoles. Distributed processing gives the DCS-5020 flexibility, scalability and robustness, delivering the high degree of resilience required for mission-critical 24/7 applications.

About Zetron

For over 30 years, Zetron has provided mission-critical communications solutions for customers in public safety, transportation, utilities, manufacturing, healthcare and business. With offices in the U.S.A., UK, Australia and numerous field locations, Zetron supports a worldwide network of resellers, system integrators and distributors. This gives Zetron a global reach as well as a local presence in the regions it serves. Zetron is a wholly owned subsidiary of JVC Kenwood Corporation. For more information, visit www.zetron.com.

*Hi-res image of ore train available from Kevin Fiske (contact details below).

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