Eskom Distribution
South Africa

Case Study

THE CUSTOMER

Eskom is South Africa's primary electricity supplier and supplies some 95 percent of the country's electricity requirements – more than half of the power generated in the whole of Africa.

Eskom is responsible for the generation, transmission and distribution of electricity from its 24 power stations, with a combined nominal capacity of 40,585 megawatts and over 16442 miles of transmission lines.

SITUATION

Maintenance and repair of Eskom's huge electricity transmission network requires an efficient communications system capable of covering the vast areas supplied with electrical power, allowing for rapid deployment of repair crews when required.

Eskom has its own radio infrastructure, made up of a conventional all-informed radio network that covers all of South Africa. The network is divided into seven regions, with each region having a central control point to which all repeaters in a region are connected via various bearers.

Before the introduction of the mobile data system, all job dispatching was done via voice communications. There was no vehicle-location system in use – such a system would have allowed a service unit closest to the job-site to be dispatched.

RESPONSE

The SMK mobile data system (specifically developed for Eskom) was designed and built by the Research and Development division of Emcom Africa, which is the exclusive South African distributor for Tait Communications.

The mobile data system is made up of a combination Mobile Data Terminal (MDT)/ enhanced control head, a radio controller/modem and a GPS unit fitted to Tait mobile radios, which have specially modified firmware.

Eskom's existing radio communications infrastructure was used without modification except for the addition of modem arrays at the control points.

Eskom's existing Tait mobile radios were retro-fitted with the mobile data equipment as required, and a number of additional complete new mobile radio units were supplied to make up the 2,000 required.

The computer-aided dispatch system used by Eskom was linked to the new mobile data system, allowing automatic job allocation and recording of job progress milestones. Vehicle position information was also made available to Eskom's GIS system, allowing more efficient allocation of technical resources.

OUTCOME

After the system was made operational, Eskom reported that voice traffic on the radio network was drastically reduced and efficiency of job turnaround increased by some 40 percent. Misunderstandings between dispatcher and operator have also been significantly reduced thanks to text dispatching. A noticeable improvement in customer satisfaction has also been recorded.

In addition, operator security was increased by having a panic facility available should the need arise.

MORE INFORMATION

For news, product specifications, comprehensive technical information and contact details of your nearest Tait service facility, please visit www.taitradio.com

CUSTOMER PROFILE

Eskom Distribution is South Africa's primary electricity supplier with over 3.6 million customers, including major wholesale customers in municipalities, aluminium smelters and railways.

APPLICATIONS

▶ Mobile data

BUSINESS BENEFITS

▶ Increased efficiency of job dispatching

▶ Reliable feedback of job progress

▶ Increased operator safety

▶ Reduced voice traffic

PRODUCTS USED

▶ Tait mobile radios with modified operating firmware

▶ Emcom SMK-series enhanced control-head with Mobile Data Terminal function

▶ Emcom RFM-series radio modems with radio-control facility

▶ GPS-based automatic vehicle location

www.taitradio.com