

Customer Success Story



London Underground

Control Systems for Power Distribution





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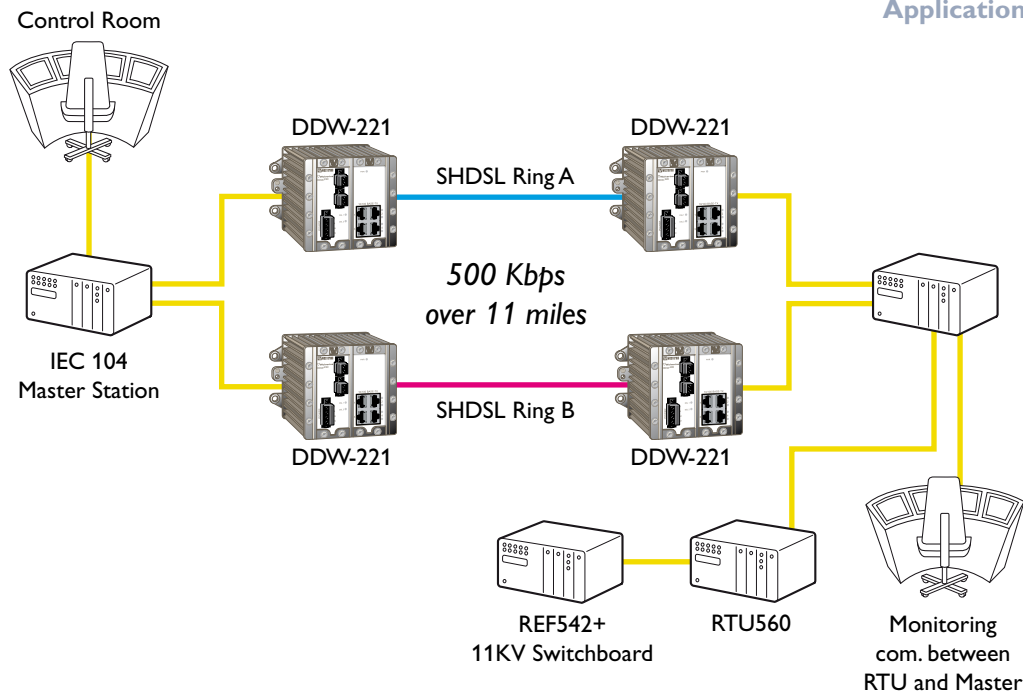
There are ever more demands being placed on the old Victorian London Underground system, more people than ever from tourists to people who work in the capital are using the Tube. In 2009 and for the third year running, passenger figures were more than a billion and this is set to grow substantially particularly in 2012 London's Olympic year.



This of course not only means more trains, but also facilities to enable customers to travel in comfort. Consequently, new rolling stock is being delivered complete with air conditioning to provide a more comfortable environment for those using the London Underground. Additionally, better tunnel and platform ventilation is being considered to further facilitate this.

As passenger numbers increase, the need for longer and more frequent train services becomes self-evident, hence more and more sophisticated track side equipment is required to keep the underground running efficiently and safely.

All this improvement sets a trend for electricity demand to increase proportionately over the short to mid-term. London Underground have as a result set about upgrading all services that it supplies with the help of many leading utility specialists and product suppliers.



One such supplier (ABB) were approached by London Underground to provide Remote Terminal Units (RTU) for telemetry control and monitoring of the primary plant, owing to their strong functional compatibility with the HOST SCADA system.

The new RTUs, which support an array of TCP/IP based open protocols, also support remote downloads for configuration over established TCP/IP links, negating the need for site presence once installed. However, this raised a problem, how to transfer Ethernet traffic without going to the expense and disruption of laying miles upon miles of Fibre optic cable.

The Wolverine product range from Industrial Data Communications Company Westermo made this possible. The SHDSL Technology provided by Westermo made it possible to re-use the existing pilot communications infrastructure running the length & breadth of the Underground to transfer Ethernet traffic at speeds of up to 5Mbytes over long distances (e.g. +/- 15Km). In total, 35 pairs operating in redundant ring configuration, are being installed as part of the SSR Power upgrade project to the Metropolitan and Circle lines and are currently set to come into service in December 2010.





A product range to meet every demand

Westermo provides a full range of data communication solutions for such demanding applications as railways, aeronautics, defence, water treatment, substation automation, roads and tunnels. The staff at Westermo can provide the highest levels of service and technical support to help our customers to choose, configure and install the best solution for each specific application requirement. Our knowledge goes far beyond our own product range; we have a unique competence regarding your environment whether it is on a train, in an aeroplane, on the seabed or in a substation. To ensure a close relationship with the customer, Westermo has a local presence in more than 35 countries. The Westermo product line includes more than one thousand different types and versions of our modems, switches, routers, time servers and converters.

DDW-22x Ethernet Extenders

The DDW-22x is a set of three Ethernet Extenders in the Wolverine series with different function levels. The units utilise SHDSL technology over twisted pair cables to establish a high-speed remote connection between two Ethernet networks. All three units have a built-in four-port switch and extended type approvals and depending on which unit you choose there are also features like FRNT/RSTP redundancy protocol, Serial to IP conversion and much more.

- ⌘ Up to 5.7 Mbit/s data transmission
- ⌘ Up to 15 km (9.3 mi) on twisted pair
- ⌘ FRNT/RSTP redundancy protocol
- ⌘ Extensive line protection
- ⌘ Wide temperature range (-40°C to +70°C)
- ⌘ Galvanic isolation and transient protection

