

CASE STUDY

Transportation

Berliner Verkehrsbetriebe (BVG), Berlin, Germany



SITUATION

The Berliner Verkehrsbetriebe (BVG), the service company responsible for the transportation systems in Berlin, is the most extensive German public transportation network of its kind. Incorporating underground, local trains, bus, tram and a recently introduced night-time metro service, the network density and the quality of the Berlin public transport system ranks the BVG internationally as one of the best metro transportation systems in Europe. Together, the nine metro lines run on 90 miles (144.9 km) of track and connect 170 stations. On weekdays more than 1.4 million people use the Berlin metro, amounting to 457.9 million passengers travelling with the BVG metro every year.

NETWORK DESIGN

With the introduction of the Euro currency on 1st January 2002, the BVG Berlin decided to retrofit all ticket vending machines to accept the new currency in coins and notes, as well as in cashless payments. With the help of touch screen interfaces, the machines are easy to use.

The BVG chose Corning for their passive network technology for copper and fibre optic applications. The Corning LANscape® Solutions product range was the ideal choice for the high demands of the BVG; robust and failsafe with a high degree of quality and availability.

In order to accommodate the BVG's planning requests, the installer Cegelec GmbH and Corning Extended Warranty Program (EWP) member mvk Infrastrukturservice GmbH laid rodent-proof outdoor cable from Corning with Corning SMF28e® single-mode fibres under the subway tracks. These high-quality optical fibres were spliced onto small form-factor connectors installed into E-2000 Splice Boxes. The E-2000 is a highly sophisticated connector for LAN and CATV applications. The extensive encoding system, which is distinct mechanically, is especially user-friendly. The connector can be used on both single-mode and multimode fibres.



The Corning Class E Copper System was used for the copper cabling. The Corning S/FTP 600/23 cable is designed for applications up to 800 MHz and meets Category 7 specifications. In order to meet the high mechanical demands of the BVG, four single cables were first stranded together and then given an extra sheath. This is a prime example of the flexibility of Corning and their readiness to meet customer needs.

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Corning wall-mountable patch panels were used for the distribution racks. Data cables were connected to modular 19" Corning patch panels with S250 modules. S250 modules are fully compatible with all modular LANscape systems and can be installed in many variations. The modules feature few individual components, a high packing density and individual shielding. The entire copper and fibre optic system was certified by the EWP partner with a 25-year system warranty.

CONCLUSION

By providing state-of-the-art networks infrastructure for the ticket vending machines, the BVG Berlin was able to execute a smooth transition to the Euro currency and offer its passengers state-of-the-art services. Corning solutions made it possible for the BVG to run their passive network safely and affordably for years to come. Four years after installation the ticket machines have not needed any updates and have survived the biggest test of all—millions of visitors to Berlin for the 2006 FIFA World Cup!

CORNING

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