

Talking to drivers

Summary

Buses stop at the city boundary, but radio waves do not. So, when public transport controllers use radios to talk to the vehicles in their town, the challenge is to ensure they can do so without interfering with their colleagues in the next municipality trying to do the same thing.



Challenge

ATDI was asked to plan and model a TETRA radio system in a European city to enable the local public transport company to communicate with the drivers of its buses and trams. The system had to work along virtually the whole length of the bus and tram routes as well as in other parts of the city despite the buildings in this dense urban environment causing clutter; and signals needed to reach both receivers on the vehicles and handheld mobiles. But, because the national spectrum regulator allocated the same frequency range to public transport companies across the country, it was essential that the radio network in the city in question was configured precisely enough so that it did not have an impact outside its own community.



Strategy

To achieve this, ATDI analysed the link budget and developed a network design based on the site locations of the existing analogue network. Then the company performed coverage analysis on the designated area and provided separate coverage plots for both handhelds and mobiles in respect of the proposed TETRA system. The plots were delivered and the coverage was depicted on a topographic map. In addition to this, a report was compiled covering the results and project work was produced. The report and the data were an essential tool for the network builders in the placement of base stations and efficient use of budget.



ATDI: helping to keep the city on the move