ROHILL

Gold Coast

Benefits

- Integration with signalling and control
- Data communications
- Dispatcher integration in control room

Client overview

G:link
Gold Coast Light Rail

Gold Coast is a coastal and modern city in south-eastern Queensland on the east coast of Australia.

Ranked 6th in Australia's largest cities with ca 600.000 people, Gold Coast is built around magnificent beaches where people come to surf, dive or snorkel.

Gold Coast is also perfectly positioned as a destination for business, study, sport, and events and receives around 12 million visitors per year.

The 1400 km2 city area includes three national parks. Also Australia's highest building is found in Gold Coast.

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Project challenge

In 2010, the GoldLinQ consortium successfully tendered for the Gold Coast light rail project. Construction began in early 2012 and had a big impact in the cities' property relocation and renewal.

The G:link light rail corridor opened for public in 2014 and now connects Gold Coast University Hospital, Griffin University, Southport, Surfers Paradise and Broadbeach. It provided transportation for the 2018 Commonwealth Games to be hosted by Gold Coast.

The line length is 13 km with double tracks with 16 stations and the system is designed to transport 75.000 passengers per day. Characteristic are the in-carriage surfboard racks.

Solution

The TETRA radio network solution is used to monitor the location of the trains and to communicate with the train drivers. It is built around a redundant TetraNode Industrial TETRA switch. The radio access network is built with seven dual carrier base station systems that are installed on strategic point along the track.

To support various data interactions with the trains the network utilizes secondary control channels to increase the control channel capacity for short data messages being the primary protocol used, in addition the network features single/multi-slot packet data capability.

The TetraNode network interfaces with the tram suppliers signalling and control systems using a SCHNOOR CAB Radio for audio interfaces for the driver and passenger compartments and managing all data connectivity. The SCHNOOR data messenger server will provide transparency for signalling, SCADA and positioning data and will manage the loading of the uplink control channel. The size and frequency will determine if the TETRA SDS protocol or TETRA packet data will be configured to transport the data messages.
A Rohill LDS Chameleon is integrated in the control room environment complemented with a TetraNode's voice-and data logging system to record all communications over the TETRA network.