



Solution for GSM-R 900 coverage

Long Cell GSM-R 900 MHz

Application

- GSM-R deployment
- Railway and tunnels coverage

Key Features

- Exclusive Patent
- Single cell of up to 40 km
- Only one optical fiber
- Only 1 BTS every 40 km
- A 2nd Long Cell GSM can be coupled

Benefits

- Excellent inboard QoS
- Cost effective alternative to exclusive BTS solution
- 90% less handover

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To reduce GSM-R deployment cost

The coverage of the high-speed train lines with BTS doesn't allow sufficient Quality of Service inboard. For sufficient power inboard, the cell width cannot exceed 5 km, and the handovers are very frequent because of the speed. The mobile phone calls are poor quality and cut unexpectedly.

The "Long Cell GSM-R 900" extends the cells with an exclusive patent. From a main BTS, through optical fiber, up to 7 repeaters are installed along the railway, to create a single cell up to 40 km length with a constant power level. By reducing the risk of handovers and by improving the power level inboard, the QoS is incredibly enhanced.

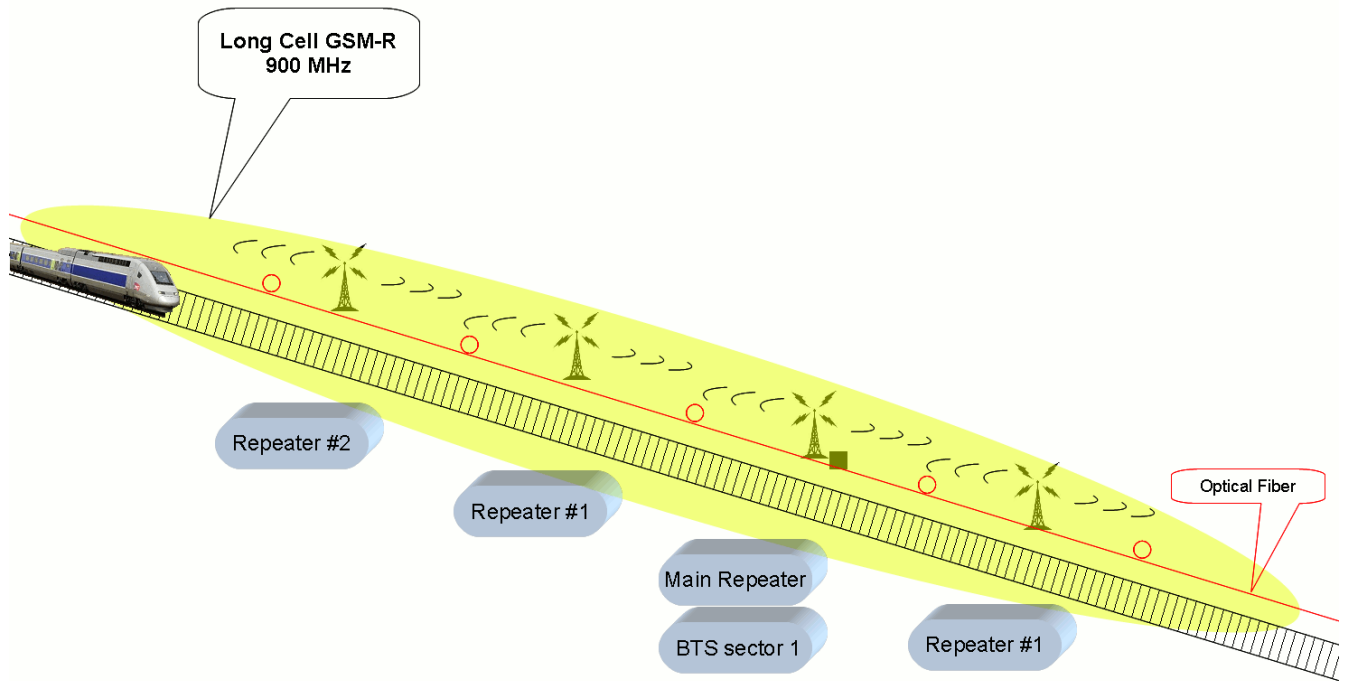
This combination of repeaters permits to reduce dramatically the number of BTS, and then, the total cost of deployment, for a better Quality of Service. The benefits are double : better QoS and better total cost.

The complete system can be monitored with the embedded WEB/SNMP server. Remote access is available through GPRS or GSM-R modem. All "Long Cell" systems installed along the railway can be monitored simultaneously with the optional OMC VisiOmc™ of SELECOM.

A second "Long Cell GSM/UMTS 900" can be installed on the same infrastructure to cover the railway with GSM/UMTS 900 standard.



Schematic of the "Long Cell Railway"



Synoptic of the complete system "Long Cell Railway"

