



◉ Network Planning and Design for India's Leading GSM Operator

The Customer

The client is the world's leading mobile phone supplier and a leading supplier of mobile and fixed telecom networks including related customer services. It also provides equipment, solutions and services for network operators, service providers and corporations. They have a strong presence in India.

The end customer established its presence in India in 1994 by acquiring the cellular license for Mumbai. The customer is now the third largest cellular operator and second largest GSM mobile operator in India. It now has operations in 16 circles accounting for 70% of India's mobile customer base. With over 27.7 million customers, it is one of India's most reputed telecom companies. The customer over the years, has been named the 'Most Respected Telecom Company', the 'Best Mobile Service in the country', and the 'Most Creative and Most Effective Advertiser of the Year'.

To enable subscriber capacity to grow further, while ensuring OPEX remained low, the operator needed a technology upgrade for its core network. In March 2005, the customer was operating in the GSM 900 band and wanted to expand its network to accommodate the projected subscriber growth. In order to meet this growing demand the customer needed to swap the outdated ZTE Radio equipment with new state-of-the-art equipment, which could support all the different technology platforms such as GSM, GPRS, EDGE and also could be easily upgraded to 3G. The end customer selected the client as the OEM for the core part of their network. The client has had a long and fruitful association with GTL. Hence, GTL became the partner of choice for the client to perform RF tasks during the swap-out process.

Business Challenge

The end customer is one of India's leading cellular operators and hence wanted a partner who would help upgrade its network infrastructure, increase network capacity and prepare for its transition to 3G. It required a partner who could support the aggressive deployment schedule, and adhere to the stringent quality standards. The client as an Original Equipment Manufacturer (OEM) was responsible for sticking to the demanding schedule and delivering on the same. The business challenge was to complete swap-outs of 45 sites from ZTE to the client's equipment which included 342 new Ultra BTS and also conduct RF survey, LOS survey and Nominal Cell Planning for



417 new sites in Tamil Nadu. The customer wanted the optimized network to meet the challenging KPIs and also fulfill the criteria that post swap results should be better than the pre swap. Following were the KPI's and Quality of service requirements of the customer:-

- CSSR $\geq 94\%$, SDCCH Drop $\geq 2\%$, Handover success rate $\geq 94\%$, Call drop rate $\leq 2.5\%$.

Solution Delivered

GTL successfully rolled out 45 sites swap, 15 days ahead of schedule and completed RF Survey and LOS Survey of 417 sites within 3 months. The swap out process was completed during the night at the rate of 6 sites /day, without any negative effect on network quality or significant down-time. To ensure that the strict deadline was met, GTL brought strong project management skills to the operation, as well as its global experience of system integration.

GTL's scope of work included performing pre-swap and post-swap drive test for all 45 sites including performing drive tests for sites verification on swap night. After getting approval from the customer for database mapping, GTL started preparing a proficient database and neighbor list for the client, which was forwarded to the OMC for the implementation. As soon as swap sites were brought on air, our team conducted the site verification drive test at each site and all issues were immediately reported to the OMC for necessary action. After completion of swap out, a daily statistic report was generated to maintain the network quality and meet the stringent KPIs. GTL also performed RF tasks within its Scope of Work which included Nominal Cell Planning and RF survey, LOS survey and Drive Test for the customer's 417 new sites.

Value delivered

- The network upgrade has ensured that the customer is fully prepared for the transition to 3G.
- The smooth and trouble-free switch-over has enabled the client to enhance its network capacity and offering and grow its market share.
- Dramatic improvements in network efficiency were realized to enable the customer to profitably address its projected subscriber growth.

For further information on the case study and other service offerings kindly contact:

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