



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

### The Customer

The client is a leading provider of end-to-end infrastructure, integrated voice and data communications, and information solutions and delivers mission critical secure two-way radio, cellular and wireless broadband systems to meet the needs of public safety, government, private, service provider and enterprise customers worldwide. Its Mobile Devices segment designs, manufactures, sells, and services wireless handsets with integrated software and accessory products, as well as licenses intellectual property to carriers and consumers. The company's Networks and Enterprise segment provides cellular infrastructure systems, including radio base stations, base station controllers, associated software and services, application platforms, and third-party switching for CDMA, GSM, iDEN, and UMTS technologies. The client is a Fortune 100 company with global presence and impact and had sales of US\$42.9 billion in 2006.

The end customer is India's largest integrated and the first private telecom services provider with a footprint in all the 23 telecom circles. The customer has a market share of 23.5% and an aggregate of 42.68 mn customers consisting of 40.74 mn GSM mobile and 1.94 mn broadband & telephone customers. The company since its inception has been at the forefront of technology and has steered the course of the telecom sector in the country with its world class products and services. The businesses at the company have been structured into three individual strategic business units (SBU's) - mobile services, broadband & telephone services (B&T) & enterprise services. The mobile business provides mobile & fixed wireless services using GSM technology across 23 telecom circles while the B&T business offers broadband & telephone services in 94 cities. The Enterprise services provide end-to-end telecom solutions to corporate customers and national & international long distance services to carriers.

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 network planning and design tasks during the rollout process.

### Business Challenge

The end customer is India's leading telecommunications provider and hence wanted a partner who could support the aggressive schedule, and adhere to the stringent quality



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standards. The client as an Original Equipment Manufacturer (OEM) was responsible for sticking to the demanding schedule and delivering on the same. It selected GTL because of its broad base of technical skills and, more importantly, its executive-level commitment to making the partnership work. The business challenge was to conduct RF planning and design tasks for 350 cell sites in Phase I and 150 cell sites in Phase II in Mumbai and Navi Mumbai which had to be done within the time frame of 9 months.

Following were the KPI's and Quality of service requirements of the customer:-

- CSSR  $\geq 96\%$ , SDCCH Drop  $\geq 2\%$ , Handover success rate  $\geq 98\%$ , Call drop rate  $\leq 2\%$ .

### Solution Delivered

GTL successfully completed the RF planning and design activities within the stipulated time period of 9 months. GTL perform the CW tests for all defined clutters and designed the model for various clutters (South Mumbai, North Mumbai, Suburbs, and Navi Mumbai). Subsequently, it developed RF models with standard deviation of -6dB by using Net Plan planning tool and conducted the pre-RF survey for the verification of Nominal Cell plan. The project team finalized Antenna Types, Antenna Height, Antenna Locations and Azimuth and performed the BSC/Clutter wise Drive test. As a final task, GTL conducted Acceptance Test Procedure (ATP) with end customer. GTL also provided a solution for the client's subscriber complaints and maintained the network quality by daily monitoring of KPIs.

### Value delivered

- The end customer was able to focus on its core business and customer-facing activities such as sales and marketing, provisioning and customer service, and transferred RF planning activities to GTL.
- GTL's network planning and design services free-up resources and reduce cost of in-house expertise .
- Accelerated Time to Market

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

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