CASE STUDY
Transportation • TETRA • Delhi Metro Railway Corporation

Delhi Metro Railway Corporation
India
A Metro Rail operator jointly owned by the Government of India and the Government of National Capital Territory of Delhi

Delhi Metro is now equipped with Motorola digital radio communications system to improve its railway operations

BACKGROUND

The Delhi Metro Railway Corporation is a Metro Rail operator jointly owned by the Government of India and the Government of National Capital Territory of Delhi. The 1956 Indian Companies Act led to the formation of Delhi Metro in an attempt to remedy the chaotic traffic conditions in Delhi which led to an appallingly high average statistics of 5 dead and 13 injured persons per day.

Under the Act, the company was given license to construct 65.11 kilometers of metro rail tracks in Delhi by 2005. Delhi Metro Railway Corporation eventually took seven years to complete the railway lines connecting trains from Shahdara to Rithala, Vishvavidyalaya to Central Secretariat and Barakhamba to Dwarka.

Today, the Delhi Metro operates 3 fully operational metro lines. The newest Line 3, also the longest metro route in Delhi, remarkably took only 30 months to build. It stretches from Barakhamba to Dwarka and is incidentally also Delhi’s first underground metro line.

In their plans for upgrading, Delhi Metro ultimately implemented the Motorola TETRA-based radio communication system in 2000. Now, the 380MHz TETRA system extends across all three operating Lines (Line I, II, III) covering 59 stations, over 55 kilometers.

CUSTOMER NEEDS:

- To ensure a high standard of service, reliability and safety in train operations
- Equip its operations with a modern communications and train control system

“Motorola has a long and proven track record in providing TETRA systems to rail operators throughout Asia Pacific. Today, we are proud to be contributing to the communications infrastructure for India’s rail industry as we see our customer benefiting from the new system. TETRA’s open standard will prove to be a cost-effective investment for Delhi Metro.”

- Subodh Vardhan, Director of Sales, India, Motorola Networks & Enterprise.
MOTOROLA SOLUTIONS

Motorola commissioned the first TETRA rail system with Delhi Metro in 2002. Now, the 380MHz TETRA system extends across all three operating Lines (Line I, II, III) covering 59 stations, over 55 kilometers.

The new digital trunked radio system currently has 15 sites and more than 500 TETRA portables, fixed and mobile radios linked to the Central Network. It supports both voice and data services and is able to interface with other telecommunication subsystems like the public address systems and train control signalling systems.

More critically, it enables normal and emergency full duplex communications between trains, Operation Control Center and station personnel and security staff, to respond effectively in critical situations.

BENEFITS

- Cost effective investment
- Being the first railway system to have a TETRA system gives Delhi Metro an edge over the other railways