zenitel

CASE STUDY
Transportation Solutions

Industry:
Rail Infrastructure

Solution:
Public Address and Voice Alarm

Organisation/End User:
Nagpur Metro Rail Corporation

Location/Country:
Nagpur, India

Period of Installation:
2019 - 2023

System Features:
VIPEDIA, V2000 and MPS microphones

Customer:
HEINRICH

Nagpur Metro – India's rapid transit system

Nagpur Metro relies on hardware from Zenitel for a dependable and sustainable operation, ensuring high system availability while minimising its environmental impact.

The Customer/End User

Serving the bustling city of Nagpur in Maharashtra, the Nagpur Metro is a vital transportation network managed by the Maharashtra Metro Rail Corporation Limited (MahaMetro). With a goal to alleviate congestion and enhance connectivity, MahaMetro strives to deliver and maintain a reliable, eco-friendly mode of transit.

HEINRICH India, a leading provider of rail audio solutions across India, and Telecom contractor Larsen & Toubro, were awarded the project to design and deliver an integrated state-of-the-art Passenger Announcement System (PAS) and Passenger Information Display System (PIDS) to realise MahaMetro's commitment to Nagpur.

The Requirement

HEINRICH's scope included integrated Public Address and Voice Alarm systems across 42 key locations, including 38 stations, the Central Operational Control Centre (OCC), Central Backup Control Centre (BCC), and 2 depots.

Given Nagpur Metro's status as one of India's busiest services, the primary focus for the client was offering high system availability to ensure seamless operations even in the event of a failure. This is because effective functioning of PAS and PIDS is crucial for providing timely train schedules, general announcements, and passenger alerts, aligning with the metro's commitment to enhanced service delivery.

Additionally, sustainability was a core consideration, necessitating the

adoption of eco-friendly technologies such as energy-efficient amplifiers to reduce the metro's carbon footprint and promote environmental stewardship.

Finally, with a focus on modern infrastructure, Nagpur Metro's design emphasises cutting-edge stations equipped with advanced amenities. These stations integrate audiovisual security and information features to enhance the overall passenger experience and ensure safety across the network.

The Solution

With the PAS scope, HEINRICH successfully deployed Zenitel's IP-enabled VIPEDIA range of products. The modular design facilitates deployment in an active architecture, eliminating single points of failure and maximising system availability. Amplification is handled by Zenitel's V2000s featuring hot-swappable D150 and D500amplifier cards, offering significant benefits in terms of maintenance and scalability. Plus, intelligent sleep technology lowered power requirements.

For seamless integration with the PIDS, HEINRICH leveraged Zenitel's VIPA-API interface. This interface also connects to HEINRICH's central control and monitoring system, providing operators with real-time control and monitoring of all 42 locations, with provisions for future expansion as the metro network evolves.

The Result

The successful and timely completion of the project, along with its subsequent operations, was a collaborative effort involving Maha Metro, HEINRICH, and Larsen & Toubro. First operations of the Nagpur Metro were inaugurated by the Prime Minister on 8th March 2019.

The population of Nagpur now benefits from the advanced functionality of the integrated PIDS and Zenitel PAS systems, ensuring a forward-thinking and passenger-centric rail service. This solution delivers reliability, safety, and efficiency, enabling the Nagpur Metro to realise its full potential as a sustainable and technologically advanced mode of transportation for the people of India. It is also hailed as the greenest metro rail in India, with Zenitel proud to have played a significant role in its success.

"This project was a significant achievement for Zenitel and Heinrich, adding to the hundreds of metro stations in India already relying on ASL brand PAVA hardware."

Why **Zenitel?**

Zenitel is well positioned to drive the future of intelligent critical communication solutions. Through our portfolio of IP products and solutions, with built-in intelligence and a focus on cybersecurity, we provide organisations with superior, scalable security and flexibility. Zenitel is the proven, preferred choice for environments requiring crystal-clear audio to ensure the protection of human life, property, assets and the management of critical activities. With interoperability at all levels, we seamlessly integrate with access control, video management and security platforms-

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