

Hytera Provides Efficient Dispatch for Railway IP Interconnection Solution for Guangzhou-Shenzhen Railway Police

User
Guangzhou-Shenzhen Railway Police, China

Market segment
Transportation

Project time
2011

Products
RD98X Repeater
PD78X Portable Radio



Project Background

In China, the railway undertakes most of passenger and freight transportation tasks and plays a backbone role in transportation. The smooth operation of the railway plays a very important role in enhancing national economic development and maintaining social stability as well as meeting travel demands of the people. The safety of the railway system is closely related to the livelihood of the people.

Guangzhou-Shenzhen Railway is on the frontline of China's reform and opening up and economic construction. Railway Police, as an important part of the railway system, is responsible for maintaining the stability and safety of the railway.

Analysis of Demands

In daily operation, the railway polices can't do their works without the support of an effective wireless communication system. However, the previous communication system for the police stations along the railway was not enough for unified dispatching and coordination. It was hard for the conventional repeater connection solution to realize interconnection of all transit stations for the far distance among them. Meanwhile, it was also difficult to realize unified dispatching and quick response if only the public network communication was available.

Based on rich experience in the professional wireless communication field and profound understanding of the actual demands of the railway system, Hytera introduced a DMR digital communications solution with IP interconnection for the Railway Police, which proved to be effective to solve the tough problems of interconnection and interoperability.





Solution of Hytera

In 2011, Hytera developed a DMR digital communications solution with IP interconnection for Guangzhou-Shenzhen Railway Police. In this solution, the digital IP interconnection base stations are deployed along the railway and the station located in Guangzhou acts as the control center, responsible for central dispatching management.

The IP interconnection system consists of three main parts:

1 dispatching center

The dispatching center can call and manage wireless dispatching for all network users. Meanwhile, with its simple and user-friendly operation interface, it facilitates the operation for the leaders and command personnel.

15 base stations

The base station includes basic base station equipments, power supply, antenna system and other components. The 15 base stations are established to realize wireless signal coverage and transmit the signals so that the terminals can have clear voice communication; at the same time, it enables the receive and transmission of voice and data signals for the terminals. In this way, interconnection and interoperability within the network can be achieved.

Network link

Utilize the existing IP network link to realize whole networking for the interconnection of multiple base stations, achieving interconnection and interoperability of all sites and providing voice and data transmission channel for the network.

In case that an area can't be covered by the base station signals, Hytera provided the repeater to cover it in consideration of many factors such as the network security, investment cost and easy construction. And BDA (Bi-directional amplifier) were installed among the base stations along highways and railways to enhance the system coverage and eliminate technical problems caused by base station switch, helping users to realize full coverage in a more cost-effective and efficient way.

Project Results

The completion of the project can provide more comprehensive and efficient communications supports to Guangzhou Railway Police with functions as follows:

All call. The leader of the public security bureau uses digital walkie-talkie to call the whole railway and then all radios within this network response to it unconditionally and receive a good voice.

Calling by classes. The leader of the public security bureau can communication with all team by directly to call the team number of this police station, If a temporary grouping is required, temporarily set the writing-frequency of digital walkie-talkie so that the sub-team is written into a unified team number. In this way, it can realize flexible and temporary grouping.

Complex call within the police station. Other team members within the police station are equipped with digital walkie-talkies and such members can be grouped within this station. Daily digital walkie-talkie used by the director can call the entire team members. All Call refers to that all persons in the individual police station can communicate with each other.

Voice from Customer

"Digital IP interconnection technology brings us superior digital voice communication and realizes functions as individual call, group call, equipment remote monitoring, dual time-slot communication and text message transmission. The system enjoys the communication advantages of quick response and powerful functions. It also can help to save the scarce frequency resource and perfectly meet the wireless communication needs of the railway."



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