Hytera

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1993~2013

Hytera dispatch system

> Utilities
> Public Safety
> Transportation
> Commercial & Industrial

Professional Solutions
Improve your management efficiency

The increasing frequency of natural disasters and public emergencies poses a great challenge to government organizations like police, law-enforcement and firefighting. To better response when emergency strikes, a secure, reliable and efficient dispatching system is in urgent demand.
In an ever-changing world and ever-evolving working environment, highly-efficient resource deployment and quick response to customers is a must for every business group strives for survive and growth.

As a leading supplier of professional wireless communications equipments and solutions, Hytera is ready to help you conquer these challenges with Hytera dispatch system digital dispatching solution.

Hytera dispatch system a dispatching system developed on Hytera digital platform compliance to ETSI DMR open standard, is designed for efficient communication, management and dispatching of professional users. Characterized by C/S structure and modularized design and supporting VoIP, Hytera dispatch system delivers you an enhanced dispatching and deployment platform with tailored communications network and control center.

Key Features

On-line/off-line status reporting

The radio can be configured so that it will send its online/offline status to control station while the radio is power-on/power-off. This will allow application to monitor the status of all the radios in the system. The control station is also able to check the status of any radio with status query command.

Remote monitoring

Through un-muting the mic of a remote subscriber radio, Hytera dispatch system could be able to monitor the voice activities remotely without necessity to push the PTT button. This could be useful when the control center wants to listen to remote voice activities without pressing PTT, such as emergency handling.

All types of voice call

Hytera dispatch system supports all types of calls that meet your various dispatching operation needs, include private call, group call and all call. Every Hytera dispatch system dispatcher client console is able to dispatch up to 8 voice dispatching channels. Through these dispatching channels, Hytera dispatch system could receive all types of calls as well as trigger any type of call through user friendly and easy to operate user interface.

Voice Dispatching Screenshot

Multiple mappings support

Hytera dispatch system supports multiple mapping engines, providing multiple options for user to select based on their own usage requirement. These mapping engines support both online mapping, such as Google Maps, OpenStreetMap* and offline mapping, such as MapInfo.

GPS positioning

This feature is only available for subscriber radios which are fitted with GPS module. Each subscriber radio is able to obtain its location coordinate information via from this built in GPS module. Hytera dispatch system could retrieve location information of any radio either by requesting on demand the current position of the radio or by sending a Start Tracking Command setting up a radio to update the location information from the radio to Hytera dispatch periodically with configurable time interval.

Real-time tracking

This feature allows Hytera dispatch system to track the location of any radio units in real-time. Users have an option to display the location route on the mapping. The tracking interval depends on the location update interval configured in each radio and the channel loading of DMR system. Total number of location tracking activities can be activated at one time will depend on the mapping system and limitation of system resources.

GPS Positioning Screenshot

Radio kill & radio activation

Hytera dispatch system is able to kill a radio unit remotely when the radio unit is under illegal usage or being stolen. The killed radio is able to power on but not able to perform transmitting or receiving. Hytera dispatch system is also able to activate a killed radio when necessary.

Telemetry

Remote monitor and control a device connecting to a radio.

Location history and route playback

All location information of radios will be kept in Hytera dispatch system database for later retrieval and history location checking. Users are allowed to query history location information of a radio as well as playing back the location route of a radio within a specified time interval.

Speed Alarm

Alarm messages will be dispatched to the overspeed radios .

➤ Regions and geofencing

Users could define regions on the map as working region or restricted region for a predefined set of subscriber radios. Geofencing feature can also be enabled on each region. Once the geofencing rule is infringed (based on whether the region is a working region or restricted region) by any of the predefined set of subscriber radios, a geofencing alarm will be activated in control center and optionally a message will be prompted on subscriber unit.

➤ Import and export in batch

When a mass of mobile terminals or work groups are needed to add in, the Excel format can be firstly generated by inputting all information about the mobile terminals or work groups and then imported the Excel file into the system to improve efficiency. The user can also export the information about the existing mobile terminals or work groups as Excel files from the system.

➤ Text messaging

Hytera dispatch system is able to send/receive DMR standard text messages. A text message can be sent to a radio unit or a group message can be sent to a group of radios identified by group ID. Hytera dispatch system provides a user-friendly chat-based GUI for sending and receiving text messages. All incoming and outgoing text messages are stored in the database for later retrieval.
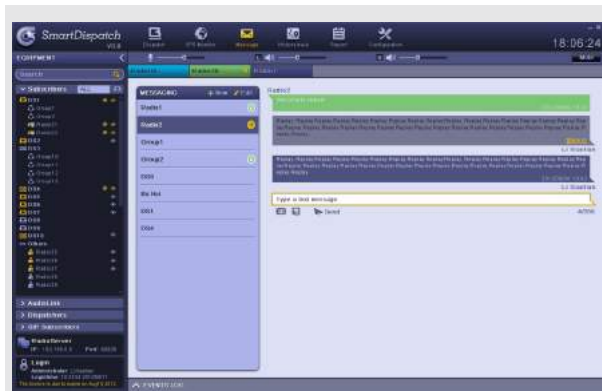
Text Messaging Screenshot

➤ Emergency alarm

When an emergency activated by any subscriber radio, the Hytera dispatch system will trigger an alarm. Optionally, the location information of the radio unit that triggers the emergency will be shown on the map depending on the validity of the location information of the radio by the time the emergency is triggered.

➤ Remark for call logs

You can add remarks to any call log.

➤ Voice recording & playback

All incoming calls and outgoing calls will be recorded in Hytera dispatch system server. This includes all types of DMR voice calls and PSTN interconnected voice calls. Users can retrieve recorded voice and play back at any time so that important conversation is not missed. All recorded voices easily can be searched through time, caller ID or callee ID.

➤ Reporting and statistic

Hytera dispatch system supports generation of various types of reports that meet the common needs. Such as calling report, radio status report, location tracking report, etc.

➤ Phone interconnect

Hytera dispatch system supports SIP standard protocol to integrate with standard IP-PBX to achieve voice interconnection between radios and PSTN public phone network. This feature allows radios to make call to telephones and vice versa, and also allows a dispatcher make/receive calls through Hytera dispatch system dispatcher client console.

➤ AudioLink

This feature allows users to patch talk groups, channels, sites and system together so that a seamless communication between all Hytera dispatch s ystem systems' radio users is established, regardless of frequency or if the radios are operating in analog or digital mode. Once the communication link is established, radios from different frequency band, different frequency channel can communicate with each others, and radio in analog mode also can talk to radio in digital mode. All these configurations can be easily configured through Hytera dispatch system dispatcher console.

➤ Dispatcher intercom

Support direct communication between dispatcher consoles through Hytera dispatch system. Users could choose either one to one intercom or broadcasting intercom easily from Hytera dispatch system client interface.

➤ Email gateway

Hytera dispatch system server integrates with SMTP and POP3 server. This allows users to send email from any email client to subscriber radios. Subscriber radios are also allowed to send text messages to any email address.

➤ Wide-area networking

The server, gateway and terminal can all be deployed through the wide area network.

➤ Enquiry by Keyword

You can enquire the message record by the keywords.

➢ **Database backup/recovery**

The database and recorded files are the core of the system; so the backup strategy should be formulated and the backup should be timely prepared in order to reduce risk and recover data when necessary.

There are two ways to back up the database:

 • Manual backup Manually set up the backup parameters and then execute the backup. The backup can be generated as a compressed file in the designated backup directory and the file will be named as Hytera_RDS_BAKyyymmdd_X.zip, such as Hytera_RDS_BAK20121224_0.zip.

 • Automatic backup

Automatically make the backup monthly or weekly. The system can automatically carry out the backup according to the backup launch time. The finished backup can be generated as a compressed file in the designated backup directory and the file will be name as Hytera_RDS_BAKyyymmdd_X.zip, such as Hytera_RDS_BAK20121224_0.zip.

➢ **Visualized dispatching**

The dispatcher call terminals displayed on the map, measuring the distance and space and also saving the vision with the map. The saved vision refers to the current saved map interface; when logging in the system the GPS can automatically open the previously saved map interface.

➢ **Automatic GPS Polling**

Server receives GPS automatically regardless of no any client subscription GPS.

➢ **Automatic GPS Subscription by Client**

When Hytera dispatch system clients logout, clients will remember the status of radios, eg, checkonline, tracking, etc. Once the clients login again, the status will recover the status of radios that of the latest client's logout automatically.

➢ **"Handle" Process for Emergency Alarm**

Hytera dispatch system receives automatically emergency alarms from radios. By clicking "Take" it means the dispatcher is informed of the emergency; and clicking "Handle" indicates the dispatcher has handled the emergency.

➢ **Repeater access**

The utilization of repeater can reduce the gateway number, lower the operation cost and expand the communication range. Hytera dispatch systemcan support single station mode and IP interconnection mode of the repeater.

➢ **Call reminder**

When the terminal channel is busy and the dispatcher cannot make through, a call reminder will be sent to the terminal to remind the dispatcher to call back.

➢ **Timing Message**

Message can be sent automatically at a preset time, eg, 1 day, 1week, 1 month etc.

➢ **OTAP**

Programming a radio over the air, eg, radio ID, radio Alias, color code, slot operation, Tx & Rx frequency, Rx group list, Tx contact name, etc..

➢ **Offline Radios Call & Message**

You can call offline radio and send a message to offline radios when the radios're online, they can receive the message.

➢ **Enable/Disable Unknown Radios**

Enable / disable unknown radios by ID.

➢ **Audio Encryption**

Audio Encryption between a radio and a dispatcher only for SELP vocoder in repeater mode.

➢ **Quick GPS**

GPS polling will be transmitted more securely and efficiently when quick GPS feature is enabled for the radio. Server receives GPS reports passively from radios and Client can query the GPS.

What's Specials

➢ **Modularity and flexibility for system deployment**

Hytera dispatch system is not a single module, but a group components that are able to build up a system with different size and topology based on customer system requirements and coverage requirements. It can be configured as a smallest single site system to a large multi-site, cross country network system. All these configuration can easily be done through remote configuration tool, one of the Hytera dispatch system components.

➢ **Multiple mapping engines support**

Users have options to choose their own preferable mapping engines based on their specific usage requirements. These mapping engines are, not limited to, Google Maps, MapInfo, Google Offline Map, OpenStreetMap* etc. We help customers to provide the mapping solution that best fit their needs.

➢ **Various access privileges**

Multiple levels of access privileges can be defined by users for access control. Based on each customer needs, each access level can be assigned only to selected radio units or entire fleet, or can be assigned to select sides or any side in the system.

➢ **Multiple and separate screen support**

Hytera dispatch system dispatcher console supports multiple views and splitting to multiple displays so that all information can be captured at a glance. This feature avoid dispatcher users to switch between different views all the time during their operation.

➢ **Multiple languages support**

Hytera dispatch system benefits worldwide customer by providing multiple languages support. The display language can be switched easily on the fly from the dispatcher console interface without necessity to reboot the application.

➢ **No recurring monthly investment**

With compare to most of the GPRS-based solutions for GPS position application, Hytera dispatch system relies on DMR communication network for GPS location transportation instead of GPRS protocol, and thus no recurring monthly investment.

System Requirements

Operating System	WIN XP sp3+/WIN7 sp1+
Server Operating System	WIN XP sp3+/WIN7 sp1+/Window Server 2008
RAM	$\geqslant$ 2.0G
One Voice Channel Bandwidth	>120Kbps
Database	MySQL5.1(Hytera dispatch system V2.5), Microsoft SQL2005/Microsoft SQL2008 (Hytera dispatch system V3.0+)
Multichannel Sound Card	M-Audio Delta 1010LT (Recommended)
Other	Microsoft .NET Framework 4.0

Typical Applications

➤ **Hytera dispatch system:** Professional version with client-server architecture supports multiple sides dispatching solution based on IP network.

➤ **Target markets:** Transportation, Utilities, Commercial/Industrial, Public Safety, Airport, Bank, etc.

➤ **Hytera dispatch system Topology:**
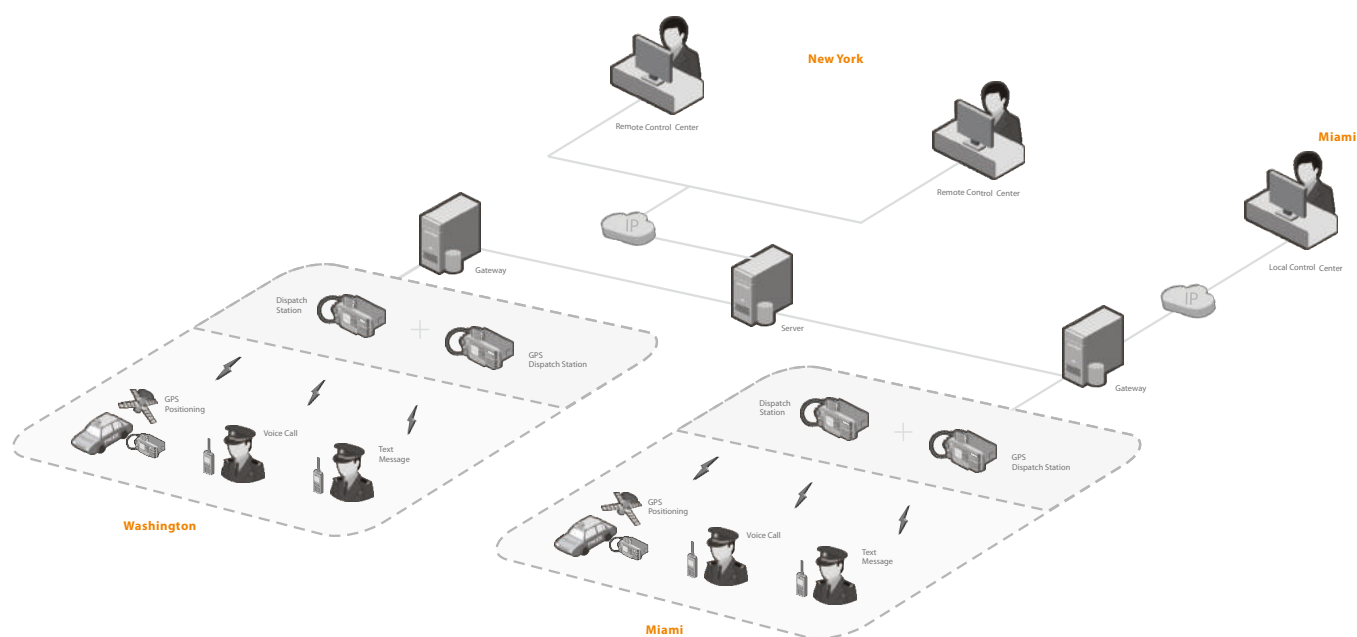
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