



MOTOTRBO™ ENABLES TAIPEI FIRE DEPARTMENT FOR CRITICAL COMMUNICATIONS WHEN SECONDS COUNT

FIRE DEPARTMENT OF NEW TAIPEI CITY GOVERNMENT DEPLOYS MOTOROLA DIGITAL RADIO SYSTEM



The essence of public safety is speed and mobility. Emergency service officers must be equipped to do their job quickly and efficiently when seconds count. With their new MOTOTRBO™ digital radios and IP Site Connect, the Fire Department of New Taipei City Government expands city-wide coverage to ensure swift response to an emergency.

CUSTOMER PROFILE

Users

- Emergency Command Centre, Rescue Brigades, Special Search and Rescue Brigade, Rescue Squadrons and Rescue Teams
- Taipei, Taiwan

Industry

- Public Safety

Key Benefits

- IP Site Connectivity
- GPS Tracking
- Superb Clarity
- Expanded Capacity & Coverage
- Audio Accessory with Superior Digital Audio Performance



SITUATION: COVERAGE GAPS HINDER CRITICAL COMMUNICATIONS

The New Taipei City comprises 29 districts and forms the largest metropolitan area of Taiwan. It is the most populous city with nearly 4 million people. The city's Fire Department shoulders the sole responsibility for all disaster rescues and public safety services. The department operates an emergency command centre with over 3,500 employees working in their special search and rescue brigade, 9 rescue brigades, 18 rescue squadrons and 67 rescue teams.

The city covers a substantial stretch of Taiwan's northern coastline and surrounds the Taipei Basin. The vast mountainous terrain coupled with its high-rise buildings cause communication dead zones that severely weaken radio signal and limit radio coverage. Its growing cityscape poses a great challenge for the Fire Department's conventional analog radio system.

SOLUTION: MOTOTRBO DIGITAL TECHNOLOGY AND IP SITE CONNECT FEATURE ENABLES EXPANDED REACH OF THE CITY

After a meeting with the Motorola Distributor, Span International Corp Ltd - vice president Miss Lin and senior engineer Mr. Weng where all the benefits of the MOTOTRBO IP Site Connect digital system were explained, the Fire Department decided on a phased migration of its conventional analog radios to the Motorola Professional Digital Two-way Radio System.

Compared to analog solutions, MOTOTRBO is based on a Time-Division Multiple-Access (TDMA) platform. This feature provides better frequency utilization to offer twice the calling capacity on a single frequency spectrum. The Fire Department could support more radio users without increasing equipment and costs.

DIGITAL RADIO MIGRATION TO ACCELERATE PERFORMANCE IN CRITICAL COMMUNICATIONS

In 2009, the Fire Department implemented the MOTOTRBO IP Site Connect digital system comprising MOTOTRBO XiR P8268 Portable radio, PMNN4040 remote speaker microphone, MOTOTRBO XiR R8200 Repeater, MOTOTRBO XiR M8268 Mobile radio, and MOTOTRBO XiR M8268 Base Station. More than 950 portable radios were deployed.

"MOTOROLA is the world's leading brand and manufacturer of professional radio system. We have good experience using Motorola professional radios for the past 10 years. Their support services and good maintenance of the Fire Department's radio system has

proven to be reliable. So when we were considering to switch to digital radio system, their MOTOTRBO technology is our first choice," said Mr. Fan, technical specialist, Fire Department of New Taipei City Government.

Today, two of the Fire Department's rescue brigades and 400 users have been equipped with MOTOTRBO digital radio. They enjoy full radio coverage through two sets of MOTOTRBO repeater which are linked up through the IP Site Connect system. This digital feature of MOTOTRBO has linked adjoining coverage areas to create a reliable wide-area communications network. It has effectively improved radio coverage in the dead zone, allowing the emergency service radio users to communicate with their team members and the command centre wherever they are.

MOTOTRBO SUPPORTS SPECIAL APPLICATION FOR USEFUL FEATURES

SPAN International also deployed TrboSPAN® despatching application in the MOTOTRBO radio system, enabling the Fire Department's despatching operator to track their radio communications more effectively. The operator could track and display radio user's location through Global Positioning Service (GPS) or monitor/record the radio conversations.

The TrboSPAN® application provides multiple windows that can perform several events at the same time. The operators in the command centre could coordinate the efforts of the emergency service teams in many disaster scenarios and locations.

"We have developed TrboSPAN® to leverage on MOTOTRBO digital capability and deliver more features for our MOTOTRBO users. Through this useful platform, the Fire Department is able to increase its efficiency and management of rescue missions, thus preventing the unnecessary loss in any disaster," said vice president Miss Lin, Span International Corp Ltd.

The MOTOTRBO Mobile radio has four programmable keys at its front panel. Each key could be programmed as a shortcut to send pre-set messages. Using this feature, the ambulance and rescue officers could report the site status back to operator very quickly. Compared to the traditional way of audio reporting, reporting by pressing the key has gained more precious time for the rescue officers and avoided miscommunications. Text messaging on the MOTOTRBO portable radio is also easier with localisation in the native languages. The emergency officers working in the New Taipei City are provided with Chinese text messaging capability.

CASE STUDY
FIRE DEPT OF NEW TAIPEI CITY GOVERNMENT



UNSURPASSED DIGITAL CLARITY AND ROBUST ACCESSORIES

Another unique feature of MOTOTRBO is its digital noise cancellation capability. With good radio coverage, the emergency service teams no longer have to stop and find a clear signal. Crystal clear audio ensures that messages get through the first time and reduces the opportunity for error.



The use of Motorola Remote Speaker Microphones has delivered very clear command in the emergency scene. These audio accessories boast a revolutionary windproofing feature that helps lessen background noise from high winds and other severe weather conditions. In addition, these remote speaker microphones are waterproof, which helps the fire-fighting and rescue teams to communicate without any compromise even in water-prone areas.

TESTED IN ACTION

On 22 April 2011 at 8:19pm, a large explosion occurred in a firecracker warehouse located in the Wu-Gu district of the New Taipei City. From as far as 10 kilometres away, many could hear the thunderous blast. The intense fire caused heavy smoke and ignited the firecrackers which were stored in the warehouse, resulting in rapid explosions and blinding flashes.

Relying on their MOTOTRBO radios equipped with MOTOROLA audio accessory, the Taipei fire-fighters swiftly mobilised rescue work. Through the clamour, the fire-fighters' safety depended on the clear, intelligible audio in their radio communications. Thanks to the superior digital audio performance in the audio accessory, the fire-fighters could hear their conversations clearly, even in those challenging fire situations.

PAVING MORE IMPROVEMENTS FOR THE FUTURE

The Fire Department has made future plans to equip four rescue brigades and cover the whole city territory in the next three years. By the year 2013, they would have implemented 10 sets of MOTOTRBO XiR R8200 Repeater, 1000 MOTOTRBO Portable radios and 400 MOTOTRBO Mobile radios for the entire force of rescue workers, and 150 units of MOTOTRBO Base radios for dispatching command centre and the local control centres.

"If we have any emergency in the city, we need the ability to communicate immediately with all of our rescue and emergency personnel, and not have to worry about the quality of the communications system," said vice-captain of 1st battalion Mr. Kau, "MOTOTRBO is there to help ensure we stay on top of any situation and resolve it well."

For more information on how MOTOTRBO™ Digital Radio can deliver reliable and clear communications, please visit us on the web at www.motorolasolutions.com/ap/mototrbo

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