



Improving quality of living at Hong Lok Yuen estate with MOTOTRBO™ digital radio solutions



“Our decision for switching over to digital technology and opting for MOTOTRBO solutions was made easier when we considered the customer satisfaction, high reliability and top-notch technology capability we could achieve. Investing in the start of a technology life cycle makes both financial and operational sense.”- Pieter Lam, Deputy General Manager, Kai Shing Management Services Limited.



The Hong Kong New Territories cover 796 sq km between Kowloon and Mainland China, and are a contrast of hilly woodlands, sandy bays, new towns and lively markets. Located in the northern part of the New Territories is the Tai Po district, an old market settlement which has been developed into a bustling satellite town.

For over 25 years, Tai Po is also ‘home’ for the thousands of families and residents living in Hong Lok Yuen, an exclusive private estate of over a thousand bungalows and semi-detached houses with leisure facilities of swimming pools, tennis courts and country club amenities.

This gated property covers six kilometres of country-side boundary flanked by railway tracks, a river and large public park. Security is imperative to protect the privacy and safety of its affluent residents, many of whom are senior executives, influential businessmen and expatriates. High levels of service are also required to ensure estate facilities are well maintained with high standards of quality.

Managing this sprawling upscale estate is Hong Lok Yuen Property Management Company Limited, a sister company of Kai Shing Management Services Limited. In June 2008, they became the first private property management company in Hong Kong to leverage the latest in digital radio technologies by deploying MOTOTRBO™ radio solutions.

The Challenge: Providing a Large Area of Coverage for Reliable and Secured Radio Communications

Hong Lok Yuen presents a massive task for boundary surveillance and property maintenance which is made more difficult with its wide land area and hilly terrains. The security crew has to be despatched in several patrolling groups to cover the entire parameters. The engineering crew has to communicate quickly and efficiently with one another to coordinate timely repair and maintenance works.

Radio communication has helped the different departments and employees to reliably coordinate their work, and in the last ten years, Hong Lok Yuen has been deploying the GP300 and GP328 professional radio series from Motorola to get the job done. So when the time came for upgrading their analog radio system, Kai Shing chose to switch over to the digital technology instead.

Customer Needs :

In property management, it takes constant communications even in noisy conditions to maintain efficiency and ensure the responsiveness necessary for delivering high levels of customer satisfaction. Instant communication means

- Better repair and maintenance coordination
- Instant updates of ground and building operations
- Enhanced safety and security
- Quick coordination and response to emergencies
- Tracking and immediate location of employees
- Increased staff efficiency with reduced operational costs and higher overall service and tenant satisfaction

Benefits

- Increase calling capacity and lower equipment costs with TDMA technology
- Consistent audio quality over a greater range with error-correction technology
- Background noise suppression technology for better hearing quality in noisy environments
- Longer talk time with 40 percent longer battery life per charge
- Stronger security and flexible communication with an individual, sub-groups or all users
- U.S. Military Standards 810 C, D, E and F for demanding operating conditions
- European Telecommunications Standards Institute (ETSI) Digital Mobile Radio (DMR) Tier 2 standard



“Our service standards and quality expectations demand that we continually seek innovative ways to improve service to our residents,” explained Pieter Lam, Deputy General Manager of Kai Shing, which was why they chose MOTOTRBO, Motorola’s professional digital system that is revolutionizing two-way radio communications.

MOTOTRBO Seamlessly Enhances Service with Superior Audio Clarity, GPS Location Tracking and Longer Talk-time

Clearer audio quality provided by digital technology means that the work crews are able to connect with one another and communicate more efficiently, ensuring emergency issues are resolved on-the spot. They are able to enjoy improved voice quality even at greater distance. When signal strength drops off with distance, MOTOTRBO’s digital error-correction technology accurately delivers voice communications with virtually no loss over the entire span of six kilometres within the estate.



Motorola Solutions: Leverage on MOTOTRBO Digital Two-Way Radio System to Expand Channel Capacity and Provide Enhanced Functionality

When Kai Shing turned to Motorola’s leading distributor - C.A. Sheimer (H.K.) Limited for a product demonstration of MOTOTRBO’s digital features, they were immediately impressed with its expanded channel capability and enhanced functionality. An on-site demonstration was also presented to the Residents Association of Hong Lok Yuen, strongly convincing the evaluation committee of the superior benefits of digital technology.

To replace their old analog radio system, Kai Shing deployed 55 sets of MOTOTRBO digital portable radios which were supported by MOTOTRBO repeaters. They designated 45 sets for voice communications and 10 sets for Global Positioning System (GPS) location tracking services made available by the innovative digital solution.

MOTOTRBO provides enhanced functionality such as static and noise rejection to allow better hearing quality in noisy operations. As a private estate, Hong Lok Yuen maintains its own sewage plant. Despite the noisy environment created by the waste processing and filtering systems, the engineering crew could communicate with each other within the plant and regularly update the control centre using the MOTOTRBO system. The digital platform of MOTOTRBO also enables location tracking for the Hong Lok Yuen crew via built-in GPS so that their location could be displayed on the dispatcher’s monitor for more efficient coordination and personnel management.

The biggest MOTOTRBO advantage for Kai Shing was the increased channel capacity, enabling them to increase the number of users using existing frequency channels. The Hong Kong territory imposes a strict regulatory quota of licensed spectrum, which makes it difficult to increase the number of frequency channels as and when the need arises.

The digital radio provides improved battery life: estate crew receive 12 hours of operation with a standard Lithium Ion battery – that is about 40% more operating time than with analog radios. Because batteries are used more efficiently, talk-time is extended, so personnel spend more time getting on with their work and less time returning to base to recharge their units or pick up fresh batteries.

MOTOTRBO system utilizes Time-Division Multiple-Access (TDMA) digital technology which enables two virtual channels within a single licensed repeater channel, providing twice the calling capacity than the analog system. As compared to the past when 60 to 70 users utilising the channel could congest radio traffic, the same channel can easily accommodate 120 users. Since two conversations could be held simultaneously and seamlessly by a single repeater, Kai Shing could also divide users into different talk groups on the same channel. The security team has its own talk group, so do the engineering crew, club-house staff and the different departments working in Hong Lok Yuen estate.

Advantage of Hassle-free Deployment within a Month

As MOTOTRBO system comes in rack or is wall mountable with automated battery back-up support for easy installation, Hong Lok Yuen could launch the new digital radio coverage within a month from the time of order, system testing and commissioning. The switch-over from the old analog system to the new digital platform took less than half an hour, simply by replacing the system repeater while the antenna remains unchanged.



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