Hong Kong Police

Hong Kong

The Police Force of Hong Kong, known to be "Asia's Finest".

In its bid to convert from analog to digital, the Hong Kong Police force collaborated with Motorola to develop CCIII – the Third Generation Command and Control Communication System – a state-of-the-art police command and control communications system adapted to Hong Kong's distinctive policing environment.

BACKGROUND

The Hong Kong Police Force (HKPF) has a force of 28,000 uniformed officers and a supporting civilian staff of 7,500. The HKPF runs a fleet team of 1,800 vehicles of all types from armored personnel carriers to motorcycles.

The existing command and control communication system (CCII) was introduced in 1990. It comprises an integrated radio communications system (commonly known as the beat radio system), the 999 emergency services telephone sub-system and the Enhanced Computer Assisted Command and Control System (ECACCS). The equipment of CCII will reach the end of its useful life by 2004.

HKPF successfully acquired a budget of HK$ 948 million in June 2001 to replace the aging system with the third generation command and control communication system (CCIII). The CCIII system includes an Integrated Communication System (ICS), which replaces the beat radio system, a 999 Emergency Telephone System (ETS), which replaces the 999 emergency telephone system, an Automatic Vehicle Location System and Geographic Information System (AVLS & GIS) which provides resources tracking and displays geographic information, a Mobile Computing sub-System (MCS) which provides computing facilities on police vehicles and inter-communication of messages among CCIII systems.

"A system of this nature is not a luxury. At this time of unease around the world, CCIII is a necessity. A communications system is an officer's life-line in the field. By providing the most advanced communications capabilities, an officer will be more secure in serving the public and fighting crime....Hong Kong Police are proud to be setting an example for the rest of Asia raising the bar by introducing new technology and equipment to provide effective operational support to frontline officers."

- Peter Yam, Senior Assistant Commissioner of Police

> "In Motorola we've found a reliable partner we can trust and who completely understands how we work. Today we salute your professionalism and dedication to helping the Hong Kong Police maintain our reputation as "Asia's Finest" by helping us to enter the digital age of police communications."
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> - Gordon Fung, Deputy Commissioner, Hong Kong Police Force

BENEFITS

- Rapid response to incidents through sophisticated command and control technologies.

- Better management of major incidents and emergencies enabled by an information-based decision support system.

- Enhancement of operational efficiency through satellite based tracking capabilities.

- Empowerment of field officers with wireless data applications that gives officers remote access to mission critical information.

- Confident field teams backed by secure and reliable communication system.

- Sophistication of system ensures that the Hong Kong Police stays ahead of policing trends.

- The highly secure digital trunking standard prevnts hacking, outside interference or monitoring of police radio traffic.

- A strong, reliable communications system that can perform well even in massive operations, as proven in the December 2005 WTO Ministerial Conference.

The tender was released in Feb 2002 and several bids were received from international as well as local companies by May 2002. After a comprehensive demonstration and detailed evaluation, the tender was finally awarded to Motorola Inc. in March 2003.

CUSTOMER NEEDS

- Expandable digital radio and computer infrastructure based on open standard.

- Extensive radio coverage that includes all areas essential for Police operations.

- Interference-free high-speed data channels to allow transmission of voice, data and images.

- Police vehicles equipped with Mobile data terminals that have the capability for both voice and data communications.

- Secured digitized transmission platform for protection against eavesdropping and unauthorized access.

- Geographical Information System (GIS) with the capability for electronic mapping and analysis of location related incidents information.

- Automatic Vehicle Location (AVL) System which, integrated to Global Positioning System (GPS) and GIS, tracks Police vehicles on electronic maps.

- Enhancement to existing ECACCS with user friendly Graphical User Interfaces and Chinese language capability.

- 999 emergency services telephone sub-system to manage flow of 999 calls between 3 Regional Command and Control Centers (RCCC).

MOTOROLA SOLUTIONS

Motorola provided a fully TETRA compliant Dimetra IP system operating in the 410-430 MHz band. Three master switches (zones), one for each Police Regions - Hong Kong Island, Kowloon and New Territories, are connected together to control approximately 100 cell sites. More than 10,000 radio terminals will be provided to the BEAT Officers, Police vehicles and motorcycles. 90% of these radios are MTP750 handheld radios. The Integrated Communication System (ICS) also included approximately 65 Microwave radios and 100 radio dispatching consoles.

The Automatic vehicle location system (AVLS) and the Geographic Information System (GIS) allows dispatchers to increase their speed and accuracy in identifying the location of emergency incidents and police resources, enabling them to improve the resource allocation management. Motorola had also provided four sets of high availability AVLS/GIS servers complete with server application software. Around 500 On-Board Positioning Units (OBU) were installed in police vehicles, and positioning technologies such as Differential GPS (DGPS), Dead Reckoning (DR) and Map Matching were deployed to ensure accuracy of the AVL system. The mobile computing sub-system (MCS) allows officers to access the necessary information from their radio handsets and mobile data terminals. Four sets of high reliability Premier MDC (PMDC) message switches, complete with server software, manage the routing of data information between the wireless users and the land-based networks.

Approximately 270 sets of MW800 mobile data terminals and ML800 ruggedized notebooks were

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- Gordon Fung, Deputy Commissioner of the Hong Kong Police Force. He acknowledged Motorola at the CCIII Completion Ceremony on 18 December 2006.

installed in police emergency response vehicles. Running on these ruggedized computers will be the Premier MDC client applications. The 999 emergency telephone system (ETS) manages the flow of emergency calls between the three RCCCs. With advance call taking features such as AutomaticbCaller Line and Address Identification, ETS enhances the efficiency of the call taking and incident handling process. Three sets of Digital PABXs with Computer Telephony Integration (CTI) servers and advanced Call Distribution Systems were provided together with approximately 240 digital telephone sets.

Motorola delivered on its promises – the system was ready on time, and within budget.

This CCIII solution garnered many accolades for the Hong Kong Police Force. The system won the Gold and Silver awards in the prestigious Hong Kong eGovernment ICT Awards 2006, under the "Most Innovative" and "Best Transformation" categories respectively.

The Hong Kong ICT Awards is organized by the IT Division of the Hong Kong Institute of Engineers, and aims to "recognize, promote and

commend the excellent achievements to which Hong Kong ICT professionals and organizations can contribute".

Beyond Hong Kong, the Hong Kong Police has also been highly appraised for its excellent use of wireless technology and communications to extend its services to the government and its community in Asia. This recognition is further affirmed at the inaugural Asia Government Technology Award held October 2007 where Hong Kong Police won the Wireless Government award for its CCIII system.

Mr. Clarence To, Assistant Chief Commissioner, Hong Kong Police receiving award from James Smith, publisher and chief editor of Asia's leading government IT media – Public Sector Technology & Management magazine

MOTOROLA