

## CASE STUDY

Public Safety • TETRA • 13<sup>th</sup> APEC Summit with TETRA system



# 13<sup>th</sup> APEC Summit with TETRA system Korea

13<sup>th</sup> APEC Summit was held in Busan, Korea on 18 & 19 November 2005



Motorola's TETRA system was the secure communications solution behind the 13<sup>th</sup> APEC Summit.

## BACKGROUND

The Asia-Pacific Economic Cooperation (APEC) Summit is a regional event where leaders of APEC member countries convene to make plans for progress on advancing free and fair trade, as well as to ensure regional security.

Busan, the second largest city in Korea, hosted the 13<sup>th</sup> APEC Summit over two days, 18 – 19 November 2005. At the time, Busan could already boast of a reputation for hosting significant world events, following the successes of the 2002 Korea-Japan World Cup and the 2002 Busan Asian Games. Even then, the Busan authorities were not complacent, being meticulous as ever in their preparations to ensure a high level of security for the safety of the regional delegates from the 21 APEC member countries.

Their preparation began way back in 2002 when the Busan Police Department decided to deploy Motorola's TETRA-based digital Trunked Radio System (TRS). Work began in three phases:

The first phase involved the construction of five relay points in Zone 1 in early 2002. The second stage required the building of an additional seven relay points in Zone 2 at the end of 2002, and the last stage involved the installation of two more relay points in Zone 3. Together, the three Zones would provide sufficient radio network coverage to ensure connectivity and communications in every corner of the Busan district.

Urgency for the implementation of a more comprehensive system was escalated after the existing infrastructure proved inadequate in the aftermath of the disastrous Daegu Subway fire in 2003. The tragedy prompted the Busan Transportation Department to implement a TETRA digital TRS system that would cover all 19.9km of Busan Subway's Line 3 (Daejeo to

## CUSTOMER NEEDS:

- An enhanced communications network system to be operated on a digital trunked radio system, leveraging on the Busan Police Department's existing system of high level communications security and robust communications functionality.
- A comprehensive system to facilitate rapid communications and response in the event of emergencies.
- To ensure the security and safety of VIP and public

## BENEFITS:

- Rapid nation-wide communications throughout Korea, instead of limited network coverage to Busan
- Extremely secure communications system
- Interoperability between agencies
- Increased range of transmissions for increased efficiency



Suyoung) and 17 stations. It was also part of a long-term plan to establish an interoperable nationwide government radio communications network for the various public safety agencies in Korea to elicit more efficient emergency response.

#### **MOTOROLA SOLUTIONS**

Motorola's solution was a network based on Motorola's TETRA (Terrestrial Trunked Radio) digital TRS technology which has been lauded for its superior performance with regard to optimum secure communication for international events since the 2002 Korea–Japan World Cup and the 2002 Busan Asian Games.

The existing system incorporates a three-step encryption system which prevents communications from being tapped or eavesdropped on. In addition, Motorola's TETRA system is programmed to transmit voice communication on a 1:4 division of frequency channel, allowing simultaneous communication with multiple police officers in emergency situations, as well as for preferential calls. It also facilitates intercommunications between police officers from other districts and the Busan Police

force through DMO mode (communication between units).

The timely implementation of the TETRA digital system for the 2005 APEC Summit in Busan came about when the Department of Administration issued jurisdiction to the National Disaster Relief Wireless Communication Network for the implementation of a sound communications and relief network to ensure the safety of citizens in the event of unexpected disasters.

The newly installed system not only enables voice transmissions but also data and GPS transmissions that can be used by various police task forces or government agencies.

Motorola equipment used for the 13<sup>th</sup> APEC Summit included a considerable inventory of thousands of TETRA portables such as the Motorola MTP850 and MTP700 TETRA portable radios, as well as the MTM700 TETRA mobile radio. Motorola also provided the communications network link to the seven major police departments based in Seoul, Gyunggi, Busan, Daegu, Daejeon, Gwangju and Ulsan.



**MOTOROLA**

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