Case study: Shenzhen University Games get top grades

World's second largest sporting event turns to TETRA systems for radio communications

The World University Games — second in size only to the Olympics — are often called the "Small Olympics." The games, also known as the Summer Universiade, are held every two years under the auspices of the International University Sports Federation, or FISU.

This year, 8,000 student athletes from 152 countries attended the 26th Summer Universiade in Shenzhen, China. Aimed at young intellectuals, the programme includes chess as well as physical sports. Students train rigorously to compete in the Universiade's 24 sports contests — from archery and aerobics to water polo and weight lifting.

Providing secure radio communication at major events like the Universiade is also a rigorous undertaking. This year, organizers turned to TETRA systems from Cassidian for stable, reliable and efficient communications services throughout the 12-day event.

Major event security teamwork

For the games, two teams joined forces. You might call them All Stars:

- **The Shenzhen Police 350 MHz Emergency Command Digital Trunking Network** is the largest 350MHz public security TETRA network in China. It's also the first TETRA network in China that's fully integrated with all public safety command and control centres. It provides services to the governmental, public security safety and the Game Organizing Committee.
- **The Shenzhen Metro 800MHz TETRA network** is the largest metro integrated TETRA network in the country. It helps protect the 2 million passengers each day who ride the five metro lines running through the whole of Shenzhen city.

Together, these networks formed the Cassidian TETRA radio system for Shenzhen Universiade.

The 350MHz system included:

- Three DXT3 switches
- Around 90 TB3 base stations
- More than 100 dispatching workstations

The Universiade network enabled smooth, secure communications throughout Shenzhen's 2,000-square-kilometer metropolitan area. Providing major event security for events of this size could have brought a lesser network down:

- Nearly 32,000 subscribers from Shenzhen's government authorities used the networks.
- Engineers registered more than 1.84 million calls from the radio network on the day of the opening ceremony — a new record for the games.
- During busy times, the number of calls topped 140,000 an hour.

But the network never wavered.

Radio communications in major events

Command and control personnel at the central control room had access to live video feed from surveillance cameras. They used the feed to assess the need to alert public security officers, police, fire brigades or first-aid medical workers about a given location.

The feed also covered many of the linked event facilities, including:

- 41 competition venues
- 22 training venues
- associated hotels

"We are proud that Cassidian contributed to securing an event of such importance," says Galvin Wong, head of Cassidian PMR activities in Asia-Pacific says. "Seamless communication during the 2011 Shenzhen University Games shows that the TETRA network enables true co-operation between agencies in one of China's most congested metropolitan areas, home to almost 15 million people."

Good planning and teamwork

Successful major event security involves countless hours of planning and experienced players. But the Cassidian team has had lots of practice: The company also provided secure TETRA radio systems for the Beijing Olympic Games in 2008 and Guangzhou Asian Games in 2010.

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