Project reference

Beijing Metro

Customer
Beijing Metro (China)

Integrator
ShenZhen Keybridge
Communications Co Ltd.

Technology
IP-based video network

Market
Transportation - Transit

Challenge
Upgrade the Beijing Metro
surveillance system

Solution
Siqura codecs Siqura
switches

### A mega metropolis's quest to carry the olympic torch for transit.

Beijing Metro is a rapid transit rail system that has served downtown Beijing and its outlying suburbs since 1969. Today, its four separate lines (Lines 1, 2, 5, and 13), traversing more than 122 kilometers, help about 2.6 million commuters get to their destinations every day. At more than 31 kilometers long, Line 1 is the longest east-west subway line in the system. Line 2, known as the "Loop Line," was built on the site of the original Beijing city wall and spans more than 23 kilometers to form a full loop around the city.

Network challenge
Anticipating the passenger surge that the 2008 Summer Olympic Games was sure to cause, Beijing Metro decided to upgrade two of its oldest and most used lines: Line 1 and Line 2.

Beijing Metro's primary requirement was to modernize the existing station security systems with the latest and most reliable surveillance technology. This improvement project would affect 28 Line 1 stations and 20 Line 2 stations.

Both the scope and the schedule of this rather extensive project were highly demanding. The undertaking entailed, first of all, that the 1,669 cameras on the network transmit DVD- quality video over an SDH network core to multiple control rooms. The latency of these video streams could not exceed 200 milliseconds and the compression configuration needed to be set to minimize bandwidth levels. The network also had to be managed by a single, system-wide video management software solution. In addition, the software application would have to support Mandarin Chinese in its user interface, and the project had to be completed in time for the Olympics.
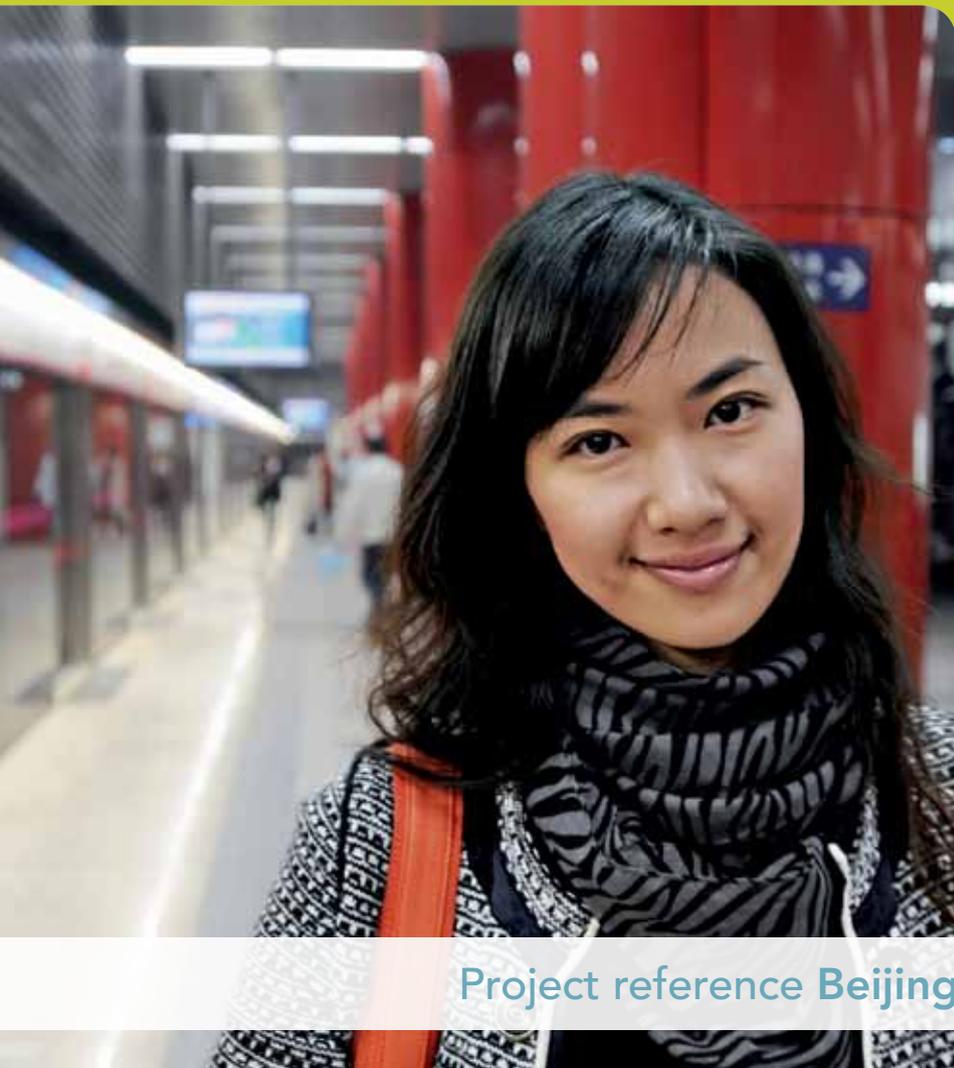
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Network solution

Aware of these intensive obligations, Siqura, a leading global supplier of advanced video surveillance solutions and the manufacturer of Siqura® Surveillance Solutions, and systems integrator ShenZhen Keybridge Communications accepted this challenging project.

Initially, Siqura programmers built a customized application using the recently improved Siqura MXTM software development kit (SDK) to work around the bandwidth limitations of the SDH core network. Siqura then engaged a translator to allow operations in the software application to be carried out in Mandarin Chinese. Siqura's field-hardened codec solutions are capable of operating in temperatures ranging

from -40° C to +70° C. Beijing Metro deployed these robust encoders in all its stations and connected them to the SDH network core via Siqura XSNetTM Ethernet Switches. Back at Beijing Metro's Control Room, Siqura decoders were installed to deliver selected video streams to analog monitors, as necessary.

Ultimately, Siqura was able to meet both the customer's SDK integration and language translation requirements within the tight schedule allotted to this wide- ranging project. The kind of support offered to Beijing Metro and ShenZhen Keybridge Communications is emblematic of Siqura's commitment to close cooperation with local integration partners to help achieve time-sensitive project requirements.

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