Axis enables remote monitoring for Guangdong-Jiangxi Expressway.
True remote monitoring with network video.

**Mission**
The Guangdong Segment of Guangdong–Jiangxi Expressway is located in Heyuan City, which stretches across 136 km throughout the city. It is a completely closed cross-road expressway designed with dual four-lane carriageway and the designated driving speed is 100 km/h. An analog video monitoring system had been adopted for expressway monitoring in the past. But with the current requirements for sharing real-time expressway and toll-station information, as well as IC card interaction, the system quickly showed its limits. Such requirements could indeed only be met by a network video solution.

**Solution**
The company decided to use 75 Axis network cameras and video encoders (the latter to migrate the analog system to network video), combining network video information with IC card plate information via the fiber network of the toll station. The system was also combined with the toll information collector and could interact with card punch. When somebody is paying, the camera is triggered for recording so as to monitor whether the actions of the collector are appropriate. As a result the monitoring center can keep track of toll attendant behavior and the vehicle flow of each toll station. This also enables better management of information flow.

The system is provided by an Axis Application Development Partner (ADP) in China. The video solution has enabled remote management of the electronic information monitoring system.

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**Organization:**
YueGan Expressway

**Location:**
HeYuan city GuangDong Province, China

**Industry segment:**
Transportation

**Application:**
Remote surveillance and vehicle flow management

**Axis partner:**
Shenzhen Jiana Communications Co., Ltd.
“A major advantage of the Axis system is that it is very flexible, allowing customized deployment, integration and interaction according to actual conditions. This is definitely a better system than the previous analog one.”

The engineering party of the project

Result

The previous system only enabled the management of the toll stations. The monitoring could only provide auxiliary roles and complete management of vehicle flow was not possible. The new system can not only enable surveillance of the vehicles, but also management of vehicle flow, as well as statistics of vehicle flow information and peak load shifting. It can shift any emergent traffic peak and enable any necessary shunts. Electronic plate information report has played a decisive role, greatly saving working time, cutting down costs and saving on storage space. The solution has great flexibility and can be deployed according to the actual situation of various toll stations. Finally, the expressway company’s ability in handling incidents was greatly improved, offering assistance to decision-making for follow-up tasks.

The head of the information department of the expressway company said: “Our objective is to implement a high-quality network-based information monitoring system enabling the monitoring management center to invoke the IC card numbers of each toll station and watch the video on one platform, thus improving the security level and enabling network-based decision-making. The Axis network video solution has completely satisfied our requirements. The flexibility and convenience of the network monitoring system makes deployment based on the actual situation of each toll station possible, meeting the different requirements.”

Flexible distributed solution meets requirements

The engineering party of the project said: “A major advantage of the Axis system is that it is very flexible, allowing customized deployment, integration and interaction according to actual conditions. This is definitely a better system than the previous analog one and the video integration with IC card is enabled with less effort. The distributed solution and centralized information management and statistics can completely meet the users’ demand.”

Better scalability and upgradability

The IP-based video solution makes system upgrading very easy. The plug-and-play network video equipment can start operating once it is connected to the network, which has provided convenience for the gradual upgrading of the company’s system.

The head of the monitoring system of the expressway company said: “Such high integration and interoperability allows us to open toll stations according to the business demands.”

Saving time and space

The application of Axis IP-Surveillance technology has not only saved time, but cut down the cost of auxiliary facilities, cable and construction. The network-based structure requires no complicated cables as in the previous analog system and the new system deployment requires no dismantling of the old front-end facilities, which has greatly shortened the implementation period of the entire renovation project.

One after another row of cameras or matrix can be exempted, the video information can be stored in digitalized storage medium and the retrieval is very convenient. The video encoders installed in the machine room can save about 2/3 space compared with the previous device.

The remote video network function has also expanded the functional scope of the security department as video monitoring is free from geographical limit, which has greatly increased the headquarters’ remote management ability.

The head of the company’s monitoring system said: “We have seen the great advantages of IP-Surveillance, which has not only saved time and reduced workload, but also made management easier. Therefore, it is the way to go.”