

## Reliable Inspector's Assistant: Axis cameras at watch.

State Road Traffic Safety Inspection accomplished in the Sverdlovsk region with a 25 % decrease of accidents at crossroads.



### Organization:

Directorate of State Road Traffic Safety Inspection, (Ministry of the Interior) Sverdlovsk Region

### Location:

Russia

### Industry segment:

Transportation

### Application:

Safety and security, license plate recognition

### Axis partners:

UGMK-Telecom, Integra-S

### Mission

Due to the increase of accident rates on the roads in Verkhnyaya Pyshma, the directorate of State Road Traffic Safety Inspection in Sverdlovsk region made the decision to equip the most dangerous crossroads in town with video monitoring, to allow automatic recording of such traffic offenses as line crossing, running red lights, and driving the wrong way.

### Solution

Having examined equipment for video systems from several suppliers, the directorate of the State Road Traffic Safety Inspection in the Sverdlovsk Region, together with the vendor (Integra-S) and the integrator (UGMK-Telecom), chose Axis network cameras, which were determined capable of surmounting the technical difficulties of the project to a greater degree than other cameras. Thus, at various town crossroads, more than 40 AXIS P1357-E Network Cameras were installed.

Integra-KDD special software is used in the project; it analyzes the collected data for processing in the Center for Automated Recording of Traffic Offenses of the Directorate of State Road Traffic Safety Inspection in the Sverdlovsk Region.

### Result

The modern video monitoring systems have automated many routine processes for the workers at the Center for Automated Recording of Traffic Offenses of the Directorate of State Road Traffic Safety Inspection in the Sverdlovsk Region. The constant monitoring of critical objects of the town transport infrastructure with HDTV quality is ensured by the Axis network cameras, and the Integra-KDD program analyzes information content and records offenses, ensuring that the watch officer need only review the required photos to confirm the events recorded by the camera. According to official data, accident rates have decreased by 25% at the crossroads where such systems are installed.

**“We had to establish the system, which can automatically detect offenses at the town crossroads. As distinct from equipment of their competitor, Axis cameras turned out to be capable of capturing several traffic lanes at once and were able to ensure exact identification of license plates, even when positioned at a great distance from the object.”**

**Nikolay Likhachev, UGMK-Telecom project manager of the Director Service on Work with Companies.**

### Peculiarities of implementation

The equipping of the crossroads in Verkhnyaya Pyshma with video monitoring systems relates to innovative projects on the development of a safer town. Upon obtaining high-resolution pictures from the cameras, the Integra-KDD software has the capability to identify 95% of the license plates in the flow of traffic.

The directorate of State Road Traffic Safety Inspection in the Sverdlovsk Region, together with the installer, UGMK-Telecom, chose the equipment for the project from among several suppliers. As explained by UGMK-Telecom project manager of the Director Service on Work with Companies, Nikolay Likhachev, Axis specialists presented their solution the most precisely. In a technical sense, the 5-megapixel Axis camera turned out to be capable of capturing several traffic lanes with a resolution level that the competitors could not provide. Finally, at several crossroads, it turned out to be impossible to install cameras in the standard way (on rests near the road). The single variant was to install them at a significant distance at the nearest buildings. Axis cameras have coped well with the task, having maintained the required parameters of transmitting pictures.

More than 40 5-megapixel AXIS P1357-E Network Cameras, with a P-Iris system of maximum picture sharpness and protection from dust, rain, snow, and sun, were installed at various crossroads in the town.

The cameras are powered from the video monitoring system via Ethernet cable (PoE—Power over Ethernet technology), and the system itself is connected with a centralized operating center via a WiFi network.

### Cameras on guard

The main objective of the video monitoring systems implemented in the Sverdlovsk Region is detection, recording of offenses, and interaction with the Center for Automated Recording of Traffic Offenses. Thus, the camera systems eliminate the necessity of constant monitoring of the crossroads by the officers of the State Road Traffic Safety Inspection.

Data from cameras, processed by a special program, is immediately transferred to the Center for Automated Recording of Traffic Offenses and to the operator's monitor. Having received a signal about an offense, the operator can review the video material and make a decision on how to proceed.

Moreover, police officers use the archive of video records in order to find cars on the wanted list, and the representatives of the directorate of the State Road Traffic Safety Inspection use it in case of disputable traffic accidents. Video material from certain crossroads allows them to determine the truth of incident situations. Moreover, contrary to conventional wisdom, decrees are often issued in favor of the driver. For example, a car hit a pedestrian who was crossing the road in the wrong place, in spite of the driver's attempts to avoid the hit. Only review of the video allowed officials to relieve the driver from responsibility.

According to data of the directorate of the State Road Traffic Safety Inspection, upon completion of the project, the number of offenses committed on the roads has begun to decline. In many instances, this decline is associated with the information about the video monitoring system that was widely disseminated by the local mass media. Moreover, due to process automation, fine collections have increased, which will accelerate payback for the implemented solution. The statistics also indicate the same: within less than a year, the Directorate of the State Road Traffic Safety Inspection of the Sverdlovsk Region had collected about 30 million RUB and issued more than 25,000 decrees.

Today, UGMK-Telecom is implementing a similar project using Axis cameras in Kamensk-Uralski, Serov, and Pervouralsk.

