

112 Lorca emergency services. Mobile video surveillance systems in emergency vehicles.



Organization:
Lorca Civil Protection

Location:
Lorca, Murcia, Spain

Industry segment:
Government

Application:
Mobile video surveillance

Axis partner:
ACISA

Mission

Many local governments face challenges associated with reductions and budget cuts that prevent them from investing their optimal resources in personnel and equipment. In the absence of all the resources that would be desirable, the municipal government bodies must make efforts to effectively manage their operations and provide appropriate levels of service to citizens. Today, public safety is a priority issue for local government bodies. And the local emergency bodies must work with other government bodies communicating and sharing information. The renovation of old systems with equipment and applications based on IP networks facilitates this process.

The municipality of Lorca (Murcia, 90,000 inhabitants) has a vast territory of more than 1,600 km², which makes it one of the largest in Spain. This includes urban, industrial, agricultural and livestock exploitation areas, and forest and mountain areas. The need of the municipal emergency services to cover and address any impacts on

an area so varied and wide, led them to search for innovative solutions based on the use of IP-based video. When it comes to emergencies, it is essential to optimize the available resources. Sometimes several incidence notices must be handled simultaneously, so having accurate information of what is happening at each remote location and knowing exactly what is needed to resolve the situation may improve the efficiency and effectiveness of the 112 Emergency Service.

Information appears to be the best ally when attending an emergency warning. But if it were possible for this information to display in an audio-visual format to be used to coordinate all emergency services in the region, it would become very valuable. The search for a system that allowed them to use video images as common and valuable information in order to optimize the effectiveness of their services was launched as part of the Mirror Eyes project, promoted by the Emergency Department of the Autonomous Region of Murcia.

"Axis products respond and adapt perfectly to this type of project. The image quality they provide and their resistance and optimization make the product very interesting for these applications."

Ricardo Villalba, Head of Lorca Emergency, Murcia 112.

Solution

The 112 Emergency Service forwarded their concerns and needs to ACISA SL, a company specializing in the development and implementation of integral technology solutions. Acting jointly, ACISA and the 112 Lorca service specified a technical solution based on the implementation of network cameras capable of movement and powerful zoom capabilities on top of emergency vehicles.

The project began in March 2008; simple tests were conducted which helped in advancing and achieving objectives. The installation on the roof, for example, requires proper protection support and custom-sealed and air-conditioned housings given that the cameras must withstand temperatures between -30 °C and 70 °C. They tested different systems for data transmission until the ideal one was identified. Several operators were consulted, and an exhaustive search for cameras was conducted in order to find the one that provided the sharpest image and the most accurate zooming capabilities. The coordination between ACISA and Murcia 112 allowed the product to be refined to perfection and nine months later, in December of that same year, the SASCER system (Audio-visual Monitoring and Remote Scenario Control System), was displayed at the HOMESEC fair at the International Exhibition of Homeland Security.

The final solution was presented at the fair on a 4x4 vehicle which responds to the need for adapting to different environments and terrains. The camera installed on its roof is an AXIS 214 PTZ, a high performance camera for professional surveillance and remote monitoring. It combines a high quality day/night camera with a powerful image stabilizer and the flexibility of vertical and horizontal movement and zoom functions that can be carried out remotely by operator control. The images from these cameras in MPEG-4 format are sent through a 3G Motorola handset to Lorca's emergency control center and the emergency services coordination center in the region of Murcia. Also, the camera can be easily controlled from the vehicle's terminal.

The software used for managing and viewing the cameras has been developed by ACISA; this software is constantly scanning camera signals and the instant a camera is detected, it connects directly to it. Recordings and broadcasts are streamed.

Result

The effective collaboration between the 112 emergency service and ACISA Murcia, has allowed the exceeding of initial expectations. Currently, there are six units operating SASCER in the region of Murcia and the experiment has attracted international interest.

When an alert is received, a vehicle equipped with the SASCER system is sent; this vehicle leads and performs the initial intervention. The AXIS 214 PTZ Network Camera transmits the event's images to the Emergency Coordination Center so that the occupants only need to park the vehicle facing the scene of the emergency. The Coordination Center assesses the event and decides to what extent it has to enforce the notification with ambulances and the fire department, or conversely, they may order the return of activated services. In this sense, the information of the cameras is also very useful for correcting errors, establishing management protocols for the training of 112 staff, and for policymakers to acquire precise knowledge of the events and be able to inform citizens and media immediately.

The range of possibilities open by the concept of widespread use of security emergency images is impressive. The intention is to bring imaging to more vehicles such as ambulances, boats, UAV devices (Unmanned Air Vehicles), and even place them on firefighter helmets.

