

Securing Vodafone base transceiver stations (BTS).

Video surveillance over 4G LTE using Axis cameras ensures safety, security and productivity.



Organization:

Vodafone

Location:

Italy

Industry segment:

Critical infrastructure

Application:

Access control, remote monitoring, safety and security

Axis partner:

Sierra Wireless

Mission

Vodafone needed a surveillance solution capable to protect its base transceiver stations (BTS) from sabotage, theft or natural elements. The solution had to consider several challenging conditions, such as the remote location of the majority of the sites, topography and weather-related conditions, and include access control and identification of personnel.

Result

The security management of BTS has reached a higher level, with visual support improving access control, and alert functions allowing the correct action to be taken in case of intrusion.

Solution

The solution included reliable detection, access control and remote site management. By enabling integration of various protective components and simplify the management process, the system is prepared to manage different events that might occur, no matter of its complexity.

“By integrating human surveillance with IP video surveillance technology, staff can be optimized and the expert staff can prevent and respond quickly to incidents rather than spend all their time monitoring or travelling to unmanned locations, which is even worse if it was for a false alarm.”

Dr. Paolo Sciarappa, Security Manager, Vodafone Italy..

Some infrastructure is so vital that its output is needed for the functioning of everyday life. Telecommunications networks are a critical component of the economic and social infrastructures in which we live. Each day, well over three billion people across the globe rely upon these systems, as their primary means of connecting to the world around them.

When you are responsible for the security of a telecommunication network, you need to be prepared for all sorts of threats. Everything from incidents such as theft to terrorism and natural disasters can cause production interruptions and system vulnerability such as antennas, shelters and substations.

With Axis surveillance solutions based on 4G LTE network, it is possible to protect against these challenging situations – and ensure the communication services run as smoothly as possible.

Challenging conditions

BTS is vulnerable to different risks such as sabotage, theft and of course natural elements. The protection of these vastly numerous sites is a real challenge because the majority are located in very remote areas.

The security measures have to be deployed and have to address different locations, topography and weather-related conditions.

Those measures have to detect people approaching these sites to monitor their behavior and intent, and provide a clear visual understanding that is essential for both the safety and the security of the installation. In case of intrusion, the security interventions have to be justified and proportionate to the risk.

Access control and identification is fundamental to manage the complexity of BTS network. There are in fact multiple personnel that require access to the shelters including management and maintenance staff. Therefore, the requirement of people identification is not only about security systems but also access control efficiency.

Image details for forensic purposes

The adoption of Axis network video solutions make it possible to perform reliable detection combined with effective access control. The integration among cameras, sensors and the video management system enables a higher level of ability for remote site management. Image quality provides a high level of detail for forensic purposes.

Due to the complexity of variables in terms of different events (authorized and unauthorized) that might occur, it is important that the system integration is flexible in order to connect different protective components and enable simple management processes.

Sierra Wireless AirLink® gateways connect the remote organizational assets over 4G LTE to the central control monitoring stations.

Increased security

A widely distributed network of BTS can be handled by the security manager with a new level of control. The security manager can manage access control with visual support, can be alerted in case of someone approaching the site and can take the correct action in case of intrusion.

The cooperation between Axis and Vodafone makes it possible to reach a performance level that matches the project objectives. The image quality obtained, even in such challenging environmental conditions, offers a detail level superior enough for submission to law courts as evidence if required.

