



## Case Study

### Railway junction of Palermo

#### **SURVEILLANCE AND VIDEO ANALYSIS FOR THE RAILWAY SECURITY AND THE PROTECTION OF COMPANY ASSETS**

Aitek provided the software for the acquisition, transmission, digital recording and analysis of video streams from more than 1200 cameras (fixed and PTZ Dome) installed at railway stations of the Palermo junction (Italy).





## Display of live images, recordings and alarms

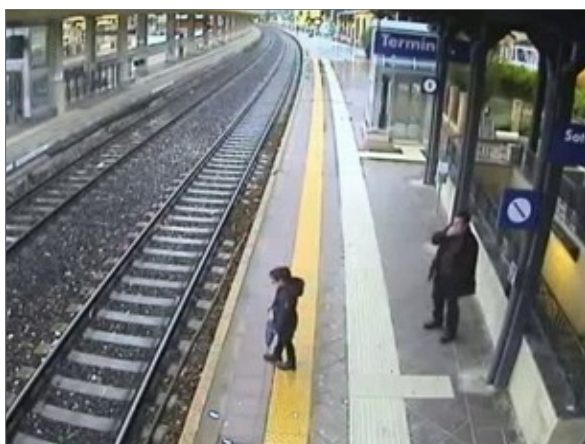
The video surveillance solution developed by Aitek is integrated with the **Centralized Rail Traffic Control System** (SCC) developed by Ansaldo STS (Finmeccanica Group) in operation at the railway junction of Palermo.

**SCC** is the most advanced platform for remote management of rail traffic that manages the trains circulation, the diagnostics, maintenance and public information. Within SCC, all the video surveillance functionality and alarm systems are managed by the **Aitek-AiVu platform**.

The transmission of video streams operates safely and reliably, without interfering with the transmission of all other information concerning the management of rail automation to the center. Aitek solution avoids to mix critical data for the management of the train circulation with data of the video by implementing a bandwidth limitation mechanism (preserving image quality) on every **AiVu-DVR** video device.

Beside this, to allow multiple users to access simultaneously images from a single camera, a Video Proxy software module has been implemented; this module gather all the requests related to a certain camera establishing a single point-to-point connection between the peripheral camera and central Video Proxy module avoiding then bandwidth saturation problems.

The Video Proxy module creates a unicast connection with the remote HDVR managing the camera, and broadcast locally the incoming stream to all users that requested that particular camera. The Video Proxy module also takes care of videorecording the incoming images, allowing then video retrieval on the SCC interface.



## Aitek's video analytics

The CCTV solution has been integrated with video analytics software modules controlling about **100 extra cameras installed at 13 different railway stations of Northern Sicily**. The same system is then serving two different supervising application: **SCC** for the circulation of train, and **SMS** for asset protection.

**AiVu-Smart Rail** video analytics platform may be used to draw "virtual" sensors onto images for real-time detection of dangerous situations and threats at stations and track-sides, such as yellow line trespassing, loitering, vandalism, track crossing, overcrowing, intrusion into tunnels and abandoned luggage.

These highly-sophisticated software modules automatically generate alarm signals that are promptly forwarded to the supervisory system for immediate action (e.g. the issuing of customer warnings and announcements).



## About Aitek

Aitek is a leading company in the design and implementation of innovative technological solutions. It designs and implements intelligent systems for transportation and traffic, video surveillance for security, digital signage for communications.

Since 1986 Aitek has consolidated its presence on national and international markets thanks to its continuing partnership with leading companies and its constant attention to technological evolution. Aitek is one of the few Italian companies to have been awarded by the European Union the prestigious IST Prize for technological production.

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