PROJECT

Project Area
SECURITY AND AUTOMATION

Created for
ITALIAN AIRPORT

Requirement
INSTALLING AN ACCESS CONTROL SYSTEM
WITH BIOMETRIC READER

CLIENT PROFILE

CLIENT:
AIRPORT
SECTOR:
TRANSPORT

The top ten position for the Italian Airport is assured by its 5 million passengers in 2007 and the estimation of 9 million passengers for 2015. Its offer includes direct flights from all major Italian airports and low cost indirect flights in several European cities such as Amsterdam, Barcelona, Cologne, London etc.

ZUCCHETTI
SOFTWARE & ICT SOLUTIONS

REQUIREMENT

The estimations of a significant growth in passenger traffic lead the Italian airline to undertake an ambitious modernization project that regards the expansion of the current boarding-stop area to a surface of 15000 m2, 10000 m2 for the commercial areas, 14000 m2 for the operative areas of the airplane companies, the extension of the second track, 7000 parking spaces, new access roads to the airport.

Therefore it is necessary to introduce a higher security level, in line with The National Security Program or with the current international context.

The access control system had to respond to precise features:

• pedestrian access control;

• vehicular access control;

• biometric technology.

ACHIEVED PROJECT

The system's complexity depends on the number of passes it has to control or on the various control types which have to be performed according to the particularity of each passing.

The project regarded the integration of software and hardware components for access control.

HARDWARE

It was necessary to install 96 access control terminals with a biometric system for fingerprint reading, completed with a proximity transponder for reading smart cards.

To increase security and access speed it has been decided to match the user's print with the RFID MIFARE badge which memorizes fingerprint template data according to privacy rules. Therefore the insecure data banks containing all subject templates are avoided.

SOFTWARE

The system is managed ON-LINE through Zucchetti Web Access Management that allows controlling in real time access authorizations (permitted by the host) or access point statuses (open, closed, in alarm). The possibility to connect online approximately 100 access points through a mixed Ethernet/RS485 network allowed a substantial wiring cost reduction.

The software allows the differential management of the following functions:

a) system management;

b) alarms and anomalies signaling;

c) management maintenance with installation signaling creating events files with anomaly codes and signaling non functioning components.

The Windows 'user friendly' interface is particularly intuitive thanks to the graphic representation of the system components and their functional status (damaged – disabled – alarm) displayed on the installation plan.

Zucchetti Web Access Management presents the following features:

• password access and user smart card reader;

• management of users and entities' identification data with input modification and cancellation functions with a non modifiable events log;

• creation of parametric lists for users and events, with the possibility of customized settings for personalized prints;

• parametric multi-criteria research on key bases chosen by the user;

• access areas and timetable management with the possibility of administrating various levels of user groups authorization, configuration and definition with authorizations and the possibility to customize every user property;

• access control terminal management with the possibility of "setting" via software the readers and control types to be performed, receiving in real time the alarm signals;

• maintenance management notifying the anomalies in the installation planimetric scheme; system maintenance database;

• management of access authorization requests within the airport through a Web Site page and a 7 level authorization Workflow program.

ACCESS TYPES

Every pass has a controlled gate with an appropriate alarm installed. In case of an incorrect passing or if the gate remains open over the estimated time, the alarm will activate itself at the passing point and also on the software in such a way that the system manager will be informed about the anomaly. The accesses are divided in 2 macro areas: Pedestrian and Vehicle.

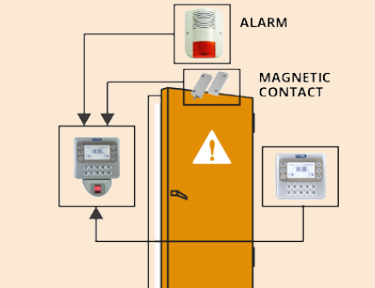**The Pedestrian passing points** are subdivided in 6 types:

1. The office entrance/ exit:
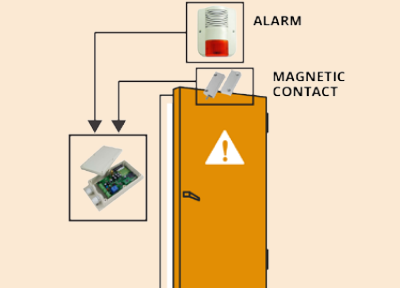entrance by means of RFID + fingerprint
exit by RFID
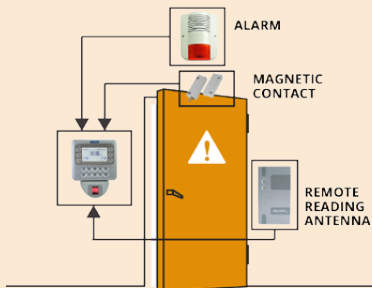
2. Entrance/ exit security area:
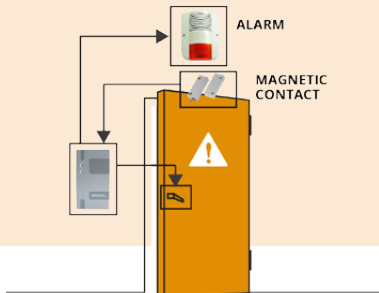entrance by RFID + fingerprint
exit by RFID + fingerprint

3. Emergency gate:
entrance by means of software command
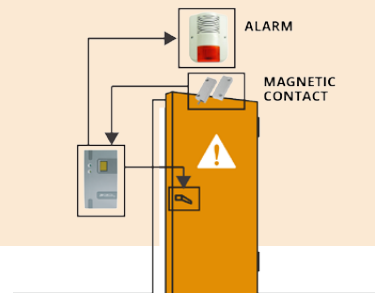exit by software command or anti panic bolts

4. Secondary Gate:
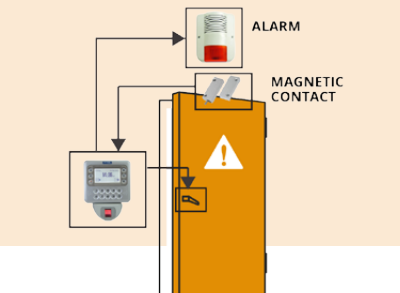entrance by RFID
exit by manual command

5. Secondary emergency gate:
entrance by RFID + fingerprint
exit by manual command

6. GATE (boarding aircrafts):
entrance by RFID + fingerprint
closedown by manual gate

Besides pedestrian entrances, vehicle entrances control has also been requested for drivers and vehicles. An identification system for the license plate and access card has been installed to meet this demand. The vehicle must stop in front of the parking entrance barrier, where the license plate is identified through a special infrared camera (OCR decoding system for extracting an alphanumeric code). The driver must approach his/her MIFARE card to the appropriate reader as his identity will be recognized and matched with the vehicle data. Only in case of a positive identification of both driver and vehicle access is granted. At the exit only the MIFARE card is required.