ALERTON®

BACnet® solutions in Europe's 10th busiest airport

The Istanbul Atatürk International Airport in Turkey is Europe's 10th busiest airport and among the top 40 busiest airports in the world in terms of total passenger traffic. Opened in January of 2000, this major international airport, was also one of the first airport projects in the world to have been undertaken as a Build-Operate-Transfer model.

TAV Airports Holdings, the leading airports operator in Turkey not only constructed but also operates the Istanbul Atatürk International Airport and its numerous extentions, the latest being slated for completion in 2010. TAV was established in 1997 as a joint venture between the Tepe and Akfen Groups, following their successful bid for the Istanbul Atatürk Airport International Terminal contract.

TAV Airports' vision is to become the leader and the pioneer airport operating company in its targeted regions (Eastern Europe, Caucasus, Middle East and North Africa) by providing reliable, integrated solutions with a focus on comfort and security for both tenants and guests. That's no small feat, considering the Istanbul Atatürk International Airport operates 24 hours a day, every day, with widely varying occupancies. It became clear that integration would play an important role in successfully controlling and coordinating its many systems such as heating ventilation and air conditioning (HVAC), chillers, lighting, passenger boarding bridges, baggage handling, and fire alarms.

Alerton's Turkish dealer, BTS (Bina Teknlojik Sistemleri) , applied to provide the complex building automation system for the airport and won. After the Atatürk Airport International Terminal contract was awarded, BTS recommended using BACnet to all the parties involved, since it best addressed the need to integrate the systems. The recommendation was accepted, despite little recognition of BACnet at that time in Turkey, so Atatürk became the first BACnet system in the country.

BTS used Alerton's BACtalk system, which uses BACnet at each level of the building automation system, to provide a powerful, integrated building management system for the Atatürk aiport operated by their customer TAV.

BACtalk proved to be a good choice, judging by the three major system extensions that were done over the last ten years. Spreading various extensions out over several years can create product compatibility issues – but not with the Alerton products. Hakan Ozbek of BTS revealed the following: "We used LSI global controllers in the first phase, then their successors-Alerton BTIs (BACtalk Integrators)- for the international terminal extension, then BCM (BACtalk control modules) for the domestic terminal. Now all three generations of global controllers operate over 15000 inputs and outputs in perfect harmony, which is good proof of Alerton's strong focus on backwards compatibility."

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ATATÜRK INTERNATIONAL AIRPORT ■ **CASE STUDY**   *Hakan Ozbek, Managing Director, Alerton partner BTS*

Hakan Ozbek, BTS' managing director said, "BTS was delighted to learn that Atatürk was voted the second best airport in Southern Europe in a 2009 survey by Skytrax (the independent research advisors to the air transport industry). We hear that passengers interviewed said a major reason for their positive opinion of Atatürk was the air conditioning. We're very proud of that and delighted to have played a major part in the airport's success"

In addition to Atatürk, BTS delivered three other major airport projects for TAV including Ankara, Izmir, Enfidha-Tunisia, which all use Alerton's BACtalk system based on BACnet. Enfidha Airport integrates not only BACnet but also OPC and Modbus. Additionally, BTS completed Hawler Airport in Iraq for another Turkish main contractor.

Project commissioning timeline:
1999 international terminal
2004 international terminal extension
2006 domestic terminal
2009 international and domestic terminal extensions

Project summary:
15000+ total I/Os
247000 square meter terminal space (international & domestic)
Carpark for 7000 cars

Integration details:
TRANE chillers (BACnet)
SIMPLEX Fire Alarm System (BACnet)
Airport Central Database (IX)

Project details:
220 air handling units (AHUs)
359 exhaust and supply fans
35 fan coil unit (FCU) zones
7 boilers
8 groups of chillers and cooling towers
129 circulation pumps
1312 groups of lighting controls
23 boarding bridges
34 moving walkways
24 escalators
56 elevators
46 automatic doors
38 access control doors