

ACCESS SOLUTIONS: AIRPORT SITE PROFILE

Guangzhou Baiyun International Airport

Scalability for vast expansion is a crucial pre-requisite for one of China's largest airports.



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As the Chinese economy continues to advance, transport volume is growing quickly. The flexibility and scalability of Gallagher access means it will keep pace with this airport's vast expansion.

GUANGZHOU BAIYUN INTERNATIONAL AIRPORT

Guangzhou Baiyun International Airport, formerly known as Canton Airport, is one of the major gateways to China. It is the largest airport in the southern part of the country, and serves as the operational base for China Southern Airlines. The airport is currently the second busiest in China based on passenger flow, and the third largest based on cargo movement. The new airport, which demanded the relocation of 20,000 people to make way for the new buildings, will handle more than 75 million passengers and 2.17 million tons of cargo annually.

The schedule for this ambitious project began in early 2000 with the first phase completed in 2002 when the new airport was up and running. The total project, however, may not be completed until 2010. The first phase encompassed design of a 3,500,000ft² central passenger terminal complex, two runways and associated roadways and parking facilities. The second phase includes designs for an additional runway and expansion of the terminal, and the third phase will include another central ticketing terminal and 50 additional gates. The project is also likely to involve a railway to and from the city. Given

the volatile international environment, security at airports is critical, with access control being a key factor. Access points to air traffic control operations, maintenance, crew lounges, baggage handling, concessions, and catering require strong control.

integration platform was selected as the central management system for access control and intruder alarms, and is extended with integration involving CCTV, alarms, fire, and elevator control. For example, an automatic response is required for fire alerts, to unlock

Guangzhou Baiyun International Airport is the first airport in China to be designed and built on the hub concept.

An airport is a logistical environment, and the system needs to be monitored to allow airport security to respond to priorities immediately with detailed, real time visual and factual information, particularly for key areas and gates.

Requirements of the site included access control and alarm functionality, with a record of events and movements for full traceability. The Gallagher security

certain exits. For energy efficiency, the Gallagher system is interfaced to Building Management Systems to control lighting and air-conditioning. Such flexible integration is achieved using the data available via the OPC alarms and events interface.

Residing on the existing Wide Area Network, using TCP/IP, the Gallagher system features peer-to-peer



communications so if communications with the head end need to be taken down, those on the airport using the system are not affected. This means should the airport experience network communications problems, security and access control of the site won't be compromised. Multiple workstations access the database to manage cardholders, events, check on the status of doors, override doors, and trace activity. System division is used to enable the airport to be divided for management and monitoring purposes.

With over 20,000 cardholders, cardholder management had to be efficient and allow for changes to be applied easily to groups of cardholders. The Gallagher system manages cardholders by groups for cardholders who share the same access requirements. A cardholder may belong to one or more access groups to get their full access privileges. The Gallagher system controls over 320 doors, and includes 108 boarding gates to aircrafts, 130 gates for employees, 12 doors to aircraft hangars, and elevator control.

A Gallagher Intelligent Door Terminal (IDT), using Philips® Semiconductors contactless Mifare Standard technology

is on each door. The IDT is a card plus PIN reader, and has a back-lit dot-matrix LCD, enabling prompts, time and date, and feedback to be displayed on the screen. Intruder alarms can be set and unset by authorised cardholders using the IDT.

Superior data protection is provided by the Gallagher proprietary format through data encryption and unique encoding on the card. Encoding issue levels and region codes in the Gallagher format ensures that even across global card databases, the card data is unique. Mifare technology allows for multiple applications to reside on a single card.

Layers of security are achieved and extend from card, PIN, and PhotoID. In certain areas voice recognition is required, which is achieved with the digital intercom integrated into the IDT. There are 13 'Gallagher Challenge' workstations, used to double-check the identity of cardholders passing through a nominated door via visual comparison of a cardholder image against a live image from a third party system.

Exit readers have also been installed to facilitate anti-passback. The anti-passback feature prevents a cardholder from re-entering an Access Zone if they

have not made a valid exit from that zone. In addition to the extensive features within the Gallagher Command Centre, software other attributes were scrutinized, which involved mainly the technology behind the system, and the life and credibility of the system. For the life of the system to be inline with expectations, it had to be proven in other large sites of market leaders, and scalable for anticipated growth of the airport. Future expansion could see the system grow to be in the vicinity of 200,000 cardholders, and 2,000 doors.

The Gallagher system has been designed as a premium system for large sites as they grow to multinational enterprises spanning the globe. It is capable of supporting an unlimited number of cardholders and access controlled doors. An unlimited number of workstations can be established for operators to access the system according to their privileges and system division.

With the scalability, technology, encryption, and credibility demanded by airports, the Gallagher system has been duly applied to this dynamic industry, with Guangzhou Baiyun International Airport being a key example.

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To find out more about the security system that companies put their faith in every day, contact your nearest Gallagher office, or visit us on the Internet at www.gallaghersms.com

We'll be happy to provide further information about our company and details of the products we have available to deliver your enhanced security.

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