

Client

The Airport Authority
Hong Kong (Owner)

G.E.C. (Hong Kong) Ltd.
(Contractor)

Location

Hong Kong

Services

- Provision of traffic control and surveillance systems
- Detailed engineering and software design
- System integration and implementation, testing and training

Date

1997

Key Personnel

Rex Lee, P.Eng.

Perry Craig, P.Eng.

Richard Chylinski, P.Eng.

The Hong Kong Airport Traffic Control and Surveillance System project was winner of the 2000 International Road Federation Global Achievement Award and recipient of a 2001 Award of Excellence from the Association of Canadian Consulting Engineers.

The New Hong Kong Airport Traffic Control and Surveillance System

Scope of Services

The airport in Hong Kong is built almost entirely on reclaimed land off Lantau Island, and once was accessible by ferry only. To cater to vehicles arriving at this busy airport, an advanced Traffic Control and Surveillance System (TCSS) was needed as a key component of ground traffic operations. Using modern technologies and innovative concepts, Delcan developed a system that provides efficient traffic management and seamless operations.

Project Description

Delcan's TCSS incorporates several sub-systems for traffic management including an Incident Detection and Diversion System (IDDS) which allows operators to monitor major airport roadways for abnormal traffic flow conditions, respond to incidents, and implement control procedures. The advanced design of the IDDS ensures that dangerous road conditions are promptly identified and mitigated. In addition, the IDDS monitors the status of TCSS equipment, communication links and the central computer system.

The IDDS employs data from video cameras and embedded loop detectors to determine the occurrence of an incident or congestion. The IDDS incorporates a comprehensive alarm system that offers immediate and detailed information on the health of the entire system.

All messages are prioritized to illustrate different levels of alarm status. The IDDS is integrated with various airport systems, including the CCTV surveillance system, building management and security, the time-of-day clock, the airport operational database, the departure guidance system, departure curb traffic signals system, and the main communications networks.

Results

This synthesis allows for cost-effective design and cohesive operations.

