



# Melco Resorts & Entertainment

Integrated access control keeps thousands of staff moving  
in complex environment – case study



## In mid-2009, Melco Resorts & Entertainment Limited (SEHK: 6883; NASDAQ: MPEL) opened City of Dreams, Macau - a casino and resort complex that quickly become one of the world's premier entertainment and leisure destinations.

The complex brings together a collection of world-renowned hotel brands, including Crown, Grand Hyatt, and Hard Rock, along with a casino area of approximately 448,000 square-feet and over 20 restaurants and bars. Also comprising an audio visual multimedia experience, and 'The House of Dancing Water' - the world's largest water-based extravaganza showcased in the purpose-built Dancing Water Theater. These unique and innovative entertainment, shopping, food and beverage offerings realise the company's vision of bringing world-class integrated resort and entertainment experiences to Macau and Asia.



*Having thousands of staff moving around the site meant that effective people management needed to be a significant part of the security solution.*

With a large site encompassing multiple areas and a staff of approximately 13,000, Melco Resorts was looking for a robust security solution capable of protecting high-value assets while providing a reliable and flexible system to support daily operations. In the years leading up to the opening of City of Dreams, Gallagher worked directly alongside Melco Resorts, and security partner Certis Security (Macau) Ltd, during the design and construction phases. The Gallagher team were highly involved in discussions and developments relating to software customisations and the final commissioning of critical security areas.

Future-proofing was an important consideration of the security solution. "City of Dreams needed a system that catered well to growth, particularly in the areas of people management and access control. Gallagher provided us with the highly integrated and expansive platform we were looking for" said Kelly Billups, Director of Security Technology & Administration for Melco Resorts.

Part of the City of Dreams philosophy from day one was to operate a one-card, single service entity per staff member - not only for high-level security but across all system requirements. According to Billups, a lot of decisions around system choice were based on meeting the one-card philosophy. Utilising MIFARE Classic® card technology, 1,700 access controlled doors were set up across the complex.



Gallagher's ability to encode the cards with data from multiple system providers was crucial in delivering on the one-card policy. Along with Gallagher access data, third-party ASCII data encoding was also provided on the card for use by other on-site systems to achieve the objective of a single card philosophy.

The original system, comprising MIFARE Classic® card technology, is now being upgraded to the latest MIFARE DESFire EV1®\* across all Melco Resorts properties. MIFARE DESFire EV1 provides the latest generation data security and encryption ensuring Melco Resorts globally stays at the forefront of technology.

To further meet their one-card philosophy, Melco Resorts wanted a single card technology utilised across all three of their Macau complexes - City of Dreams, Altria Macau, and Studio City. In addition to enabling access across multiple properties, there was a requirement for a central monitoring system that could manage alarms escalated from any of the properties and register such alarms centrally in a main command structure.

### Fast facts

**Industry:** Entertainment

**Business type:** Casino & Resort

**Site size:** Altira Macau - 5,230 sqm

City of Dreams Macau - 113,325 sqm

**Number of doors:** 1,700

**Cardholds:** 44,000

Gallagher's multi-server technology delivers this, with seamless connection between all systems and across all sites. If communication between the facilities should fail due to a network fault or similar incident, each site's security system will continue to function independently. According to Billups, the multi-server system has resulted in reduced labour costs due to the consolidation of security administration.

The Gallagher system provides rapid response times to access requests ensuring the efficient movement of people in and out of areas. The instant dissemination of cardholder access and configuration data also ensures people have appropriate access delivered in real time. If cardholder access needs to be denied, this information is communicated and applied instantly across the site.

In order to provide Melco Resorts with an audit trail of security events, all site activity is logged in a secure database. In addition to door access activity, 5300 detection points are also monitored throughout the complex. Reports are generated using a simple wizard-based system which steers the report generator through a step-by-step process ensuring the relevant data is retrieved. The City of Dreams site required integration with a number of external systems and Gallagher's Command Centre central management software provided the platform to deliver this.

## CCTV

As surveillance is a key requirement for a casino, City of Dreams has thousands of cameras throughout the complex. A number of these cameras monitor critical back of house operations and are integrated with

Command Centre to provide additional layers of security and enable further administrative functionality.

## Electronic Key Management

A number of lower-level security points throughout the complex - which utilise traditional keys - integrate Command Centre with an electronic key management system. Keys are electronically released to personnel depending on their access permissions.

## In-House Elevator Systems

There are approximately 80 elevator shafts located throughout the City of Dreams complex. Two high-level interfaces (Schindler and Otis) provide communication to all elevators connected to Command Centre where access control groups manage access to each of the floors. This integration is particularly important for heart-of-house elevators where access can be highly restricted to only authorised personnel.

## HR system

An integration between City of Dreams Human Resources (HR) system and Command Centre was established. The active connection between the two ensures that basic personnel information is automatically communicated from the HR system to Command Centre without the need for manual intervention. Because of this, the process of updating cardholder information and assigning access to cardholders is a quick and simple procedure - a must for a database of this size.

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## Low-Level Interfaces

Where high-level (software) interfaces are not available, the Gallagher system connects with other services including: boom gates, motorised vehicle and pedestrian doors, and turn-styles, using what is commonly referred to as a low-level interface. A control relay in Gallagher's Command Centre platform activates the door or gate, and in turn the status of the door or gate (open, closed) is reported back.

## Hotel Guest Locking

The delivery of a high-level integration with a hotel guest-room locking solution is currently in development and will be a world first. Melco Resorts requirement is to seamlessly integrate hotel guest-room locks with the Command Centre platform in order to deliver high-level security across the entire complex. To deliver this solution, Gallagher is working with long-term partner Salto. The Salto integrated guest locking system is required to operate in conjunction with Melco Resorts high-security card encryption and encoding, while complimenting the hotel décor.

Melco Resorts and Gallagher maintain an ongoing relationship which brings together Melco Resorts evolving requirements and Gallagher's product development road map. "The relationship is key for us" said Billups, "having a team based in the region who meet with us regularly, and having a level of engagement over development is very important".

## Acknowledgements

Gallagher wishes to acknowledge our security partner, Certis Security (Macau) Ltd, whose ongoing support and involvement in the implementation of Gallagher products contributes to our successful relationship with Melco Resorts.

\*MIFARE Classic, MIFARE DESfire EV1 are registered trademarks of NXP B.V.

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