



## Dublin Port Tunnel

The €752m Dublin Port Tunnel opened to traffic on December 2006. Spanning 5.6 km of motorway and acting as a link between Dublin Port and the national motorway network, Dublin Port Tunnel is the largest ever civil engineering project in Ireland. Featuring a twin bore tunnel of 4.5km in length and with a height clearance of 4.65m, the tunnel is one of the largest urban tunnels of its kind in Europe.

### Security requirements...

The prestigious Dublin Port Tunnel required a comprehensive and fully integrated security management solution to integrate various security systems together. The goal was for a single security management system located at the main on-site control room, to centrally monitor and control the entire tunnel - creating a safe facility and environment for tunnel users.

## CASE SUMMARY

### Location:

Dublin, Ireland

### System:

#### CEM:

AC2000 SE (Standard Edition)

## Solution...

To meet client's requirements, the highly secure CEM AC2000 SE (Standard Edition) access control system was chosen. Installed by ADT Dublin, the AC2000 SE system not only provides the tunnel with advanced access control, but also provides integration with intruder alarms and a large central Supervisory Control and Data Acquisition (SCADA) system.

AC2000 SE is a powerful security management system that offers access control, alarm processing, photo badging and a high level of external systems integration. AC2000 SE not only controls access in/out of the tunnel's "Plaza Toll Area", but also controls vehicle gates with loop detectors for traffic monitoring. Its integration capabilities made it the ideal choice for Dublin Port Tunnel as AC2000 SE directly feeds access control and intruder alarm information into the central SCADA system. This provides a single software solution and offers a central means of monitoring the entire tunnel site.

## Single control system...

"Due to the scale of the project, the tunnel required a high-end security solution that incorporated CCTV, intruder alarms, intercoms, and central monitoring via a single SCADA system" commented Donal Colfer, System Sales Consultant, ADT Dublin. "CEM Systems not only met client requirements for access control but also conducted major software development to allow data from intruder detection panels to be passed via the AC2000 SE system to the SCADA system for monitoring purposes" Colfer continued.

## Central Alarm monitoring...

When abnormal events or situations are detected, the AC2000 SE system transfers alarms to the central SCADA system which is controlled and monitored 24 hours a day, 7 days a week by tunnel operators.

Using pre-defined access control and response procedures, tunnel operators act accordingly and have full jurisdiction of the tunnel. In many cases, responses to access control events are automatic requiring no input from the operator eg. Tunnel barrier opened after staff card swipe. Other events/alarms presented by the SCADA system may require the operator to confirm information before a change in settings is implemented eg. Intruder alarm in Toll Plaza area.

"CEM has the reputation in the industry for providing highly reliable, distributed and customised security management solutions," commented Andrew Fulton, Business Development Director of Tyco Fire & Security's CEM products. "This proved fundamental in ADT's choice of the AC2000 SE system as the solution incorporated distributed hardware intelligence using S9020 IP controllers with an internal database. CEM also customised software within the AC2000 SE system to meet the specific Galaxy Intruder Alarm project requirements at Dublin Port Tunnel".

## Distributed Intelligence...

To control doors at two remote operational buildings five miles apart, ADT installed CEM S9020 intelligent IP controllers with onboard databases, creating layers of distributed intelligence and resilience. The system

critically continues to operate in the event of host communications being temporarily lost. This ensures that tunnel operators maintain full jurisdiction of the tunnel at all times. This feature also offered Dublin Port Tunnel a second layer of monitoring and control as it acts as a failsafe in the event of temporary disruption/maintenance to the main SCADA system.

With a comprehensive security solution installed, Dublin Port Tunnel became fully operational and open to traffic in December 2008. Working in partnership, CEM and ADT successfully secured one of the most important infrastructural project sites in the history of Ireland.

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*Donal Colfer  
System Sales Consultant,  
ADT Dublin*