

# Cairo International Airport

## Intelligent Ramp Management System

### Challenge

Cairo International Airport needed a new context-aware data and communications system, including a wireless data-based ramp management system, to meet the demands for international service standards, accommodate an increase in air traffic movement and provide a high level of passenger service. Employees also need to handle an additional 11 million passengers once the airport's \$400 million redevelopment project reaches completion.

### Solution

Context-aware technology from Appear Networks and the Cisco 2710 Location Appliance identifies the location of authorised ramp personnel via their Wi-Fi devices. The Appear Context Engine automatically displays applications on a user's device according to the user's profile or job function, type of communication terminal, time and location.

### Business value

Ramp accidents are estimated to cost the industry up to \$2 billion per year, while ramp delays represent an additional burden of \$150 per minute per aircraft to an airline's bottom line. Cairo Airport's target reduction time of six minutes per aircraft turnaround could generate an estimated saving of **\$45 million per year.**

### About Cairo International Airport

Cairo International Airport (CAI) is one of the region's most important transport hubs. With 14,000 workers on site, taking care of almost 10 million passengers per year, the Cairo Airport Company is investing \$400 million in infrastructure and technologies, including an intelligent ramp management system, to meet the demand for international service standards and increased air traffic movement?



### Improving Operations

Ramp management at CAI is a critical business process which includes, amongst others, activities such as aircraft marshalling, baggage handling, passenger/crew transfers and refuelling. Inefficient information transfer can lead to costly delays in ground handling operations or even ramp accidents. Furthermore, ramp delays represent an additional burden of \$150 per minute per aircraft, amounting to millions of dollars at the end of the year for airline operators.

Existing information systems, often based on simple one-to-one voice communication systems (push-to-talk) do not provide an accurate view of the status of current operational processes. As such, CAI wanted a context-aware wireless ramp management system that could meet the airport's operational and business needs. A solution was needed that could improve operational decision making, clarify the status of operational procedures and minimise costly and unnecessary delays.

### A Context-Aware Ramp Management Solution

The solution is based on the Appear IQ wireless platform – which enables context-aware services and applications – and Cisco System's Unified Wireless Network architecture. Integrated into the ramp management system, the solution manages content and delivers real-time relevant information and applications. Using context, the Appear software can dynamically react to the changing needs of ramp workers and ensure that they always have access to the right information when they need it and without them having to request it.

Once deployed, the platform can also supply airport workers with updated access to passenger and flight information, special catering orders, security issues and other aircraft maintenance information.



## The Value of Context

- Context ensures that ramp employees have a common and updated overview of the entire operational process. Information, content and applications concerning the airline, ground handling and fuel status are intelligently managed and distributed.
- Context ensures that ramp performance is improved. Relevant information and applications are pushed to the relevant ground crew such as the status of fuel trucks, machinery or nearest maintenance crew.
- Context ensures better reporting, monitoring and data flow. Applications and services dynamically change according to the context of the ramp workers. Ramp workers will receive information relevant to the ramp, aircraft or task.
- Context ensures better resource planning and management. Key personnel and vital equipment can easily be located. Ramp employees can for example be automatically notified of the real-time status of essential equipment needed for specific tasks.

## Unique Features

- Ability to leverage other context parameters *in addition* to location, such as user profile, device type, aircraft status / time
- Combination of several positioning technologies in order to locate devices indoor, based on WLAN and outdoor, based on GPS
- Capability to manage multiple positioning technologies and set the priority between them depending on availability and expected level of accuracy
- Dedicated API (Application Programming Interface) to retrieve information from any external content management system
- Distributed and open architecture that allows for fast and easy integration with large complex back-end systems

Cairo International Airport was looking for more than an Information Technology Systems contractor. We were looking for long-term partners committed to continuously finding state-of-the-art, cost-effective solutions to meet Cairo Airport's business needs."  
**General Mohamed Fathy Fathallah, Chairman, Cairo International Airport Company**



### Appear IQ Technical Benefits

- Appear Context Engine ensures intelligent data distribution
- User-friendly "Click & Run"™ Interface
- Device-independent – can operate with a heterogeneous fleet of terminals (laptops, tablet PCs, PDAs)
- Secure application push or synchronization in accordance with transport operator regulations
- Support for multiple context parameters from the wireless network, including real-time network visibility
- Support for voice, video and data applications
- Multi-service common-use infrastructure with the Cisco Unified Wireless Network
- Flexible, scalable and reliable platform

### Appear IQ Business Benefits

- Up-to-date real-time information pushed to the right person, at the right time, at the right place
- Increased efficiency and communications between management and key personnel
- Improved productivity, monitoring and reporting on the ramp
- Better security and improved response times in cases of emergency
- Improved customer service with updated information concerning service disruptions, scheduling, routing and destinations
- Reduced costs, improved punctuality and increased innovation

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Offices across Europe and North America

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