MatrikonOPC

Case Study:

Dubai Airport Expands Public Announcement System with MatrikonOPC

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"On time delivery and industry standards are important to our business. The MatrikonOPC reapid development product and successful integration by Orion Systems fit our requirements and tight timescale."

Luai Bahder, Technical Director, Smart World, Dubai

Background

Dubai International Airport is a major airline hub in the Middle East, and is the main airport of Dubai. Spread over more than 8,000 acres of land, Dubai International Airport is among the top 10 airports in the world based on passenger traffic. In addition, the airport is among the top 6 busiest cargo airports in the world.

Inaugurated on May 1st 1998 to alleviate congestion at Terminal 1, Terminal 2 caters to scheduled, charter and special interest flights during special occasions.

At present more than 50 airlines operate out of this terminal. The capacity of arriving and departing passengers is 1200 peak hours respectively. Recent expansions and refurbishment have increased the annual capacity to 5 million passengers (from 3 million). Terminal 2 is currently undergoing expansion which once complete will double its capacity.

Transfer of transit passengers between Terminal 1, 2 and 3 takes 15- 25 minutes.

Terminal 2 is home to Dubai's budget airline flydubai, which launched operations on June 1, 2009.

Benefits

Resolving a technical communications issue with an open, standard protocol was a key benefit achieved with the MatrikonOPC Genie Technology. Reduced cost and development/implementation time helped to bring the project in with positive results.

Challenge

SmartWorld, a next generation Information and Communications Technology (ICT) service provider, was selected as the main contractor for the Dubai Terminal 2 expansion project.

The RCF public announcement system at Dubai Airport Terminal 2 was required to integrate within existing Niagara Building Management System (BMS).

Niagara BMS has limited drivers for Public Announcement (PA) system, and RCF cannot communicate directly with Niagara BMS due to driver limitations. Development of new drivers was cost and time prohibitive.

Contract requirements specify the new RCG system must be integrated within existing Niagara BMS for control and monitoring. In addition, Dubai Airports required the fasted and safest path to achieve the integration.

Orion Systems successfully implemented the Matrikon OPC Genie Technology to integrate the PA system and the existing Niagara BMS.

Solution

Niagara BMS is an OPC compliant product and can exchange data with OPC Data Access (DA 2.0) and 3.0 servers. Orion Systems and MatrikonOPC investigated the RCF interoperability feature over a serial port. A set of commands can be sent over a serial port for monitoring and controlling RCF devices. No other type of interoperability was available, such as an SDK (software development kit) or API (application programmatic interface).

The MatrikonOPC Genie Technology was installed by Orion Systems. The solution was deployed on March 7, 2013.

Results

The MatrikonOPC rapid development product (Genie Technology) allowed the user to gain enormous confidence in the Airport Project Team after a success proof of concept. In addition, the project was able to achieve considerable cost savings and reduced development/ implementation time. With the OPC implementation, the result is an open industrial protocol and standard, resulting in vendor independency.

Here are the solution discussed in the case study:

MatrikonOPC Genie Technology

OPC servers can exist for anything that generates data, which includes serial devices. OPC Genie technology standardizes the way information is parsed within the protocols and converts it to OPC.

Instead of contracting companies to write custom OPC interfaces, Integrators can break up their protocols using preprogrammed Wizards. These Wizards enable Integrators to describe each proprietary protocol.

Once the Integrator completes the configuration wizard, the result is an OPC server that interfaces with a serial device – all achieved without programming. Since there is no custom source code to debug, Integrators can create their own OPC server, without programming, in a matter of hours where previously the task would take weeks of custom development time.

Download OPC Genie Technology

About MatrikonOPC (a division of Matrikon Inc.)

MatrikonOPC provides software to access device data using the OPC standard. Our promise is to help clients unlock the potential of their data and provide them with vendor-neutral training and superior client care. MatrikonOPC builds close relationships with our customers to gain a true understanding of their business and then attain operational efficiency from both a technical and business perspective. With offices in Canada, the United States, Europe, Asia-Pacific and the Middle East, MatrikonOPC provides local presence on a worldwide scale.

For more information about MatrikonOPC Universal PLC Server and other products and services, visit us online at www.MatrikonOPC.com.

About Orion Systems

Orion's technical leadership and technical and project personnel have unsurpassed capabilities as Systems Integrators and Managers of large-scale traditional integration rojects in the EMEA region both locally and internationally. They specialize in areas where they have exceptional integration and software expertise, including PLC-based Systems, Distributed Control Systems, Building Management Systems, SCADA, CCTV and Access Control Systems, Physical Security Information Management, and Laser and Robotics Systems.

For more information about Orion System, visit www.orionsystems.com.

Orion Systems is a MatrikonOPC Certified Integrator Partner.

5

Toll Free: 1-877-628-7456
Ph: +1 (780) 945-4099

E-Mail: Info@MatrikonOPC.com
Web: www.MatrikonOPC.com

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06/2013