



# AIRPORT EXPANSION GOES WIRELESS

INNOVATIVE COMMUNICATIONS SOLUTION FOR STAFF MOBILITY



Croatia's second busiest airport, Split Kastela/Resnik has opted for Motorola's wireless broadband technology to allow personnel to link into the airport network and deliver critical data via their handheld computers.

Due to a major increase in tourism, the airport terminal and apron are being extended to accommodate the subsequent increase in aircraft traffic. As such, a flexible solution was needed that would ensure network coverage as a result of the ongoing construction.

Local systems integrator and Motorola partner, Lama proffered an option based around Motorola's point-to-multipoint (PMP) fixed wireless broadband technology that would address the airport's immediate needs and cater for future developments.

The network extension is used primarily by maintenance personnel who provide operational information such as refueling, luggage handling, passenger movements and critical aircraft system checks, prior to take-off.

## CUSTOMER PROFILE

### Company

- Split Airport Ltd.

### Technology Partner

- Lama d.o.o.

### Industry name

- Airports and Harbours

### Product Name

- Motorola WiFi Access Points
- Motorola Mobile Computers MC3574, MC 7596, MC 9060 and MC 9090
- Motorola AirDefense

### Key Benefits

- Network flexibility
- Low cost of ownership
- High capacity and scalability
- Secure communications

### Solution Features

- High throughput
- Long range connectivity
- nLOS and NLOS environments
- Reliable in extreme weather conditions

## CASE STUDY

SPLIT KASTELOVA / RESNIK AIRPORT, CROATIA

### THE CHALLENGE

Since opening in 1966 with a planned capacity for some 150 000 passengers, Split Airport has gone through several extensions and upgrades over the years and today sees well over a million visitors pass through its doors; particularly during the summer holiday period.

The current construction of the extension to the airport terminal and apron - due for completion in 2014 - has resulted in aircraft maintenance personnel having to operate in a constantly changing environment. The increase in mobility means there has to be widespread, robust signal coverage to allow seamless connectivity to the airport network.

An attempt to utilise existing wireless technology which had been deployed in and around the operating area was fraught with problems. A comprehensive site survey report indicated that the signal strength coverage was not only inconsistent across the expanse, it was also subject to interference due to weak signals in certain parts of the apron.

### THE SOLUTION

Lama introduced an innovative way of extending the WiFi network by using Motorola's PMP 400 Series high-speed wireless broadband solution and a solar-powered, mobile antenna system known as the 'Sun Stroller'.

It is essentially a flat-bed trolley with a WiFi Access Point and a PMP 400 Series Subscriber Module mounted on a mast, which connects to a PMP Access Point centrally located at the airport. This self-contained unit can be easily moved to a new operating area as construction work determines. Now users with Motorola handheld computers can connect easily to the airport WiFi network via the 'Sun Stroller'.

PMP 400 Series was recommended as it uses Orthogonal Frequency Division Multiplexing (OFDM) technology to deliver Near Line-of-Sight (nLOS) and Non-Line-of-Sight (NLOS) connectivity which is ideal for locations such as airports where large obstructions can limit wireless broadband access.

Delivering a throughput of some 20Mbps, the network connectivity range can be extended to a distance of up to eight kilometres.

To secure the network, Split chose Motorola's renowned AirDefense solution which provides around-the-clock monitoring, simplifies the task of managing multi-vendor WiFi network components, allows for remote troubleshooting and satisfies regulatory audit requirements.

### THE BENEFITS

The extensive construction project had the potential to cause serious disruptions to communications and adversely affect Split Airport's daily operations. However, through the deployment of the cost-effective PMP 400 Series fixed wireless broadband / 'Sun Stroller' solution, access to the airport network has been maintained and can be quickly re-deployed inline with construction demands.

"With a low cost of ownership - due to reduced power and ease of installation - the PMP 400 system is highly scalable and can accommodate significant growth in network demands, particularly with the anticipated demand for web and email access," notes Vjekoslav Svilovic, head of Lama's networking department. "As a point to multipoint system, additional mobile antenna can also be easily placed at other problematic sites across the airport precinct, to further extend communications coverage."

**"Our technical personnel play a pivotal role in ensuring apron operations run like clockwork so it is of paramount importance that reliable communications are maintained as we extend the airport facilities. The PMP 400 / Sun Stroller solution is an ingenious way of extending the network cost-effectively and securely."**

Remarkd Nikica Bogdanic, Technical Director at Split Airport

### KEY FACTS

#### Critical updates using wireless

Split Kastela/Resnik airport opts for Motorola's wireless broadband technology to allow personnel to link into the airport network and deliver critical data via their handheld computers. The terminal and apron are being extended to accommodate the increase in airport traffic, and as such, a flexible solution was needed that would ensure network coverage as a result of the ongoing construction.

#### High speed wireless

Lama introduced an innovative way of extending the WiFi network by using Motorola's PMP 400 Series high-speed wireless broadband solution and a solar-powered, mobile antenna system known as the 'Sun Stroller'.



For more information on how Motorola's wireless network solutions, please visit us on the web at [www.motorola.com/uk/wirelessbroadband](http://www.motorola.com/uk/wirelessbroadband) or contact us at [wns.emea@motorolasolutions.com](mailto:wns.emea@motorolasolutions.com)

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EMEA Headquarters  
Motorola Solutions, Inc.  
Jays Close, Viabes Industrial Estate  
Basingstoke, Hampshire  
RG22 4PD  
United Kingdom  
Telephone:+420 533 336123