



FRANZ JOSEF STRAUSS AIRPORT IN MUNICH

TETRA DIGITAL TWO-WAY RADIO ENABLES OPTIMAL COORDINATION OF AIRPORT OPERATIONS



THE COMPANY: FRANZ JOSEF STRAUSS AIRPORT, MUNICH

Franz Josef Strauss Airport in Munich is operated by Flughafen München GmbH (FMG). The shareholders in the company are the Free State of Bavaria (51 percent), the Federal Republic of Germany (26 percent) and the City of Munich (23 percent). The airport went into operation on 17 May 1992. Handling almost 400,000 incoming and outgoing flights, 32.7 million passengers and nearly 230,000 tonnes of cargo in 2009, it is the second largest airport hub in Germany after Frankfurt (Main) Airport. The airport is the 7th largest in Europe and one of the 30 busiest airports in the world in terms of passengers. Located 30 km north-east of Munich, it enjoys an excellent reputation among travellers from all over the world and, in 2010, was again voted one of the world's best five airports and the best in Europe. 27,400 people are currently employed by the 554 companies and authorities with facilities and offices at the 1,560 hectare site making Franz Josef Strauss Airport the second largest place of employment in Bavaria.

COMPANY PROFILE

Company

- Flughafen München Franz Josef Strauß
- München, Deutschland

Sector

- Aviation industry

Motorola Products

- TETRA digital two-way radio system based on the Dimetra IP platform comprising five base stations and 1,700 handsets and mobile radios terminals

Benefits

- Smooth migration to TETRA digital two-way radio system and stable operations right from the start
- Reliable availability inside and outside of buildings
- Efficient communication thanks to background noise suppression
- Smooth extension of capacities as well as adding of users and features through flexible scalability
- Independence of default-endangered public networks



**Franz Josef Strauss
Airport in Munich**



Motorola MTP850

THE CHALLENGE

A high quality airport communication system

As the operator of an efficient hub for international and intercontinental air traffic, FMG is responsible for ensuring that operations in every area of the airport run smoothly. From handling passengers to loading baggage and cargo to the various essential airport services – all processes must be conducted quickly and effectively in order to satisfy both passengers and on-site business partners. In addition, FMG is responsible for security in all areas of the airport.

In order to meet these many and diverse challenges, FMG requires a modern communication solution, which meets the requirements of such a highly complex operation. In order to coordinate a large

number of interdependent tasks, it must be capable of integrating the different user groups such as services, logistics, the vehicle fleet, cargo, airport management and airlines. Furthermore, it must guarantee reliable voice and data transmission at all times.

The old analogue trunked system had been in use since the airport opened in 1992 and no longer represented state-of-the-art technology. It was becoming increasingly unreliable and caused high operating costs. Spare parts and support services were no longer available in sufficient quantity or quality. Moreover, the analogue radio handsets were large, heavy and consequently uncomfortable to carry. Their level of acceptance among staff was falling rapidly. It was for all these reasons that FMG decided to seek a suitable alternative to replace the old system. As well as providing a high level of reliability and voice and data communication capability, it was also critical that the new system should offer excellent availability both inside and outside the airport and a persuasive cost-benefit ratio.

THE SOLUTION

The installation of TETRA technology

In January 2007, after a Europe-wide invitation to tender, FMG selected a TETRA (Terrestrial Trunked



Radio) digital two-way radio system from Motorola. The system is based on the Dimetra IP platform from Motorola, can be scaled as required and has an end-to-end IP architecture. Five TETRA base stations and a comprehensive in-house antenna system provide strong coverage as well as reliable data and voice transmission throughout the airport. The system's sophisticated voice technology can even compensate for loud background noise, a frequent problem at airports. Moreover, the system can be integrated seamlessly into the airport's existing telephone and IT systems.

The equipment supplied includes Motorola MTP850 TETRA handsets and MTM800 mobile radios, which replace the large and heavy terminals used in the analogue system. They feature a satellite GPS positioning system, WAP browser and are extremely robust. A total of 1,700 TETRA terminals are in operation at Munich Airport. They are used by the facility management, security services on the apron, ground traffic, terminal services and many other areas.

The system was already operating in Munich by the end of June 2007. The previous analogue radio network was operated in parallel by Munich Airport until the migration to the new TETRA digital radio system had been completed for all users. The old system was deactivated in 2009.

“Motorola prevailed against stiff competition and not only convinced us of the high quality and operating efficiency of their solution but also offered the best price during the invitation to tender.”

Michael Zaddach,
Manager IT Service Division at Flughafen München GmbH

THE BENEFITS

A stable and flexible, scalable system

Thanks to the excellent cooperation between the project management and service teams from FMG and Motorola, the migration to the TETRA digital two-way radio solution proceeded smoothly and stable

operation was guaranteed for the system's users from day one. Since its introduction, the new TETRA digital two-way radio network has provided a high degree of reliability and availability both inside and outside the airport buildings. It therefore plays an important role in optimising the coordination of the many different operations at the airport.

“The secure data and voice transmission provides for efficient communication of users at any time.”

As the TETRA digital two-way radio solution from Motorola can be scaled flexibly, it is easy to expand capacity as necessary and add users and new features. The WAP browser integrated into the terminals provides reliable data communication – an essential feature for ensuring the long-term viability of the handsets. The integrated GPS receiver also means that personnel and vehicles can be easily located using the global satellite network.

Importantly, the system operates independently of public communication networks, which can be prone to temporary failures. It helps to quickly coordinate airport employees even in crisis situations. Finally, FMG also profits from the considerable reduction in operating costs compared to the previous analogue system.

Interview with Michael Zaddach, Manager IT Service Division at Flughafen München GmbH, on the introduction of TETRA digital radio at Munich Airport

Mr Zaddach, Munich Airport, has been using a TETRA digital radio system from Motorola for communication with and between employees as well as for data transmission since mid-2007. Has the move from analogue to digital radio paid off?

The switch from analogue to digital radio technology was absolutely essential to keep Munich Airport competitive in this area as well. As an IT and telecommunication service provider, our division



Michael Zaddach,
Manager IT Service Division at
Flughafen München GmbH

is responsible for meeting the very specific communication requirements of all the players involved in operating the airport. With the TETRA digital radio system, we now have a modern infrastructure, which is independent of public networks and allows staff to communicate securely and reliably wherever they are on the airport site.

Were there any problems during the switchover from analogue to digital radio?

The switchover to the TETRA digital radio system worked outstandingly well. In particular, we benefited from the long migration phase that lasted from mid-2007 to mid-2009 and during which we operated the old analogue system and the new digital radio system in parallel. This allowed us to introduce the new technology to the various user groups one at a time and thereby respond to user-specific requirements.

What are the consequences of the switchover to digital radio for the individual employees of the airport?

TETRA digital radio has brought some very practical benefits for the individual employee. The new TETRA radio handsets are smaller and lighter than their analogue counterparts and therefore much more comfortable to carry. However, they also offer

a large number of useful new functions such as dynamic group calling. This feature allows the group assignment of each individual handset to be changed simply through radio commands. This eliminates the need for radio handsets to be reprogrammed repeatedly when there are changes in personnel within a team. Users also benefit from the new TETRA radio handsets' sophisticated voice technology, which is capable of compensating for even the high levels of background noise common at airports and maintaining excellent audio quality.

What were the business implications of switching to the new technology?

Our investment in TETRA is thoroughly future-proof. Firstly, the individual components of the digital radio system are very robust and durable. Secondly, the network is flexibly scalable so we can expand it to meet our requirements. And thirdly, we have achieved a significant reduction in operating costs compared to the old system, which was very cost intensive.

For more information on how Motorola's MTP850 Radios can improve your field sales and field service operations, please visit us on the web at www.motorola.com/tetra or access our global contact directory at www.motorola.com/Business/XU-EN/Pages/Contact_Us