

Early in 2001 Munich International Airport installed the Sound Alert **Localizer®** evacuation system at its car parks. **The Localizer®** system was installed on one floor of each of the four largest car parks having a total capacity of 11,000 cars

The brief

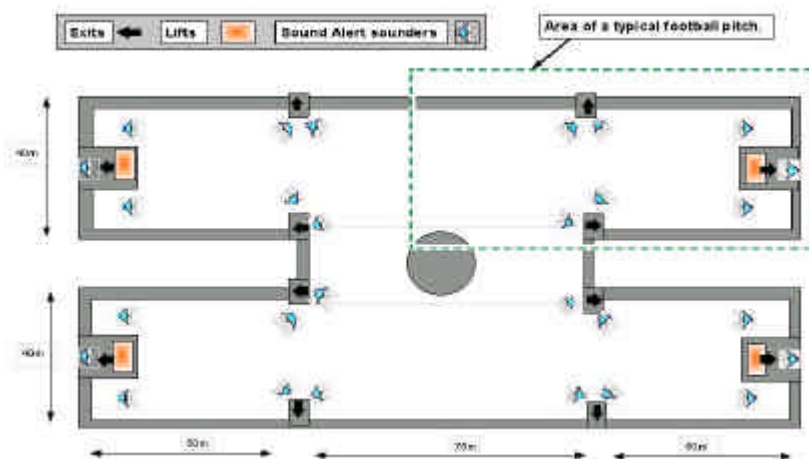
Munich Airport were required initially to install a voice evacuation system on the first three floors of each car park but, as passenger numbers continue to increase rapidly, an evacuation system was also needed for a further floor for each of the car parks. The Sound Alert system was seen as a lower cost solution offering improved performance and safety. After some investigation planning permission was obtained for the Sound Alert Directional Sound Evacuation system to be installed.

Key criteria for operational effectiveness:

- ❑ Current illuminated signs are not easy to see at a distance – maybe 25M ranges – and the system needed to draw attention to the location of exits – even in smoke.
- ❑ Passengers in the building can be exposed to several sound beacons at the same time and it was essential that it must be clear which one is which, and obvious which way to go to reach an exit.
- ❑ The system needed to be independent of language.
- ❑ The system had to work without special training of passengers.

The Installation.

Each of the car parks is a large H shaped building, consisting of two wings joined by a central ramp area, with large atriums between the wings. There are 12 exits on each floor leading out to stairwells and each exit is marked with an illuminated "running man" green cube. Whilst each floor vents into fresh air all the way around the edge, there is no forced ventilation to remove smoke and, therefore, smoke can remain near to its source for some time. Spontaneous combustion of tyres following high speed driving on autobahns in hot weather is the most common cause of actual incidents. Due to the very large open spaces and reverberation each car park floor required 28 directional sounders controlled by the main fire/building management system having battery backup in the event of mains failure.



Commenting on the system, Herr Wuehle, Section Manager: Alarm Systems, Munich International Airport said

"We were excited when we learnt of the new Sound Alert system since it is able to help people find their way out quickly even in bad visibility. We are constantly trying to improve our safety systems and see this as an important new technology in evacuation. We see good potential for this new system in airports and look forward to working with Sound Alert on future projects."

Munich International Airport is rapidly expanding with 23.1million passengers and over 300,000 takeoffs and landings in 2000. Consequently a second terminal including car parks is currently under construction and is due to be in operation in the spring of 2003.

The new terminal will have a capacity for 18 million passengers a year and 6400 parking spaces. The construction costs are expected to be in the region of DM 1.7 billion.



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