FIREWORKS TIMING SET BY TWO-WAY RADIO!

Customer
Optical Audio Productions Pty Ltd

Industry
Event Management

Need
- A communications system for all stakeholders, including emergency services

Benefits
- A reliable communications system
- Capacity to integrate with customer's own specialised technology

The benefit of the MOTOTRBO system is its capacity to integrate with OAP's specialised technology to build a system that accommodates very specific needs.

Founded in 2007, Optical Audio Productions Pty Ltd (OAP) has provided high quality audio visual systems to many major events and festivals in Australia and overseas. One long-term engagement has been the provision of an "integrated theatrical communications system" for New Year's Eve in Melbourne.

An integrated theatrical communications system means reliable communications between event coordinators, emergency services and other stakeholders, and includes elements such as coordination with music, lighting and – in the case of New Year's Eve – the timing of the fireworks display!

In preparation for the event, OAP supplied their design to Motorola Solutions Rentals, which provided the two-way radio infrastructure and handsets. OAP then integrated Motorola equipment into their Clear-Com digital matrix system to create a backbone communications system.

"The benefit of the rental service is that we can access new stock, as it's simply not possible for us to maintain a large amount of radio gear and keep it updated regularly," says Jason Read, technical director.

Keeping emergency operations informed

On the night, OAP manages communications for the Melbourne emergency operations centre (MEOC) which houses all emergency services and other stakeholders, including Metro Trains, Yarra Trams, City of Melbourne and multiple security companies. All activities are coordinated via a Clear-Com digital matrix system with multi-channel panels available to each stakeholder in the MEOC. These consoles, which interoperate with MOTOTRBO mobiles, keeping everyone informed and in constant contact.

For the event, a MOTOTRBO Capacity Plus system is installed within Eureka tower, providing access to 18 channels. Approximately 500 MOTOTRBO DP4801 and 60 GP328 handsets as well as 25 DM3601 mobile radios are deployed to staff on the ground such as area wardens, crowd marshals, security staff and others, ensuring that everyone involved is using the same system.

Even Triple Zero calls made from the celebration area are routed to the MEOC, so emergency services and key stakeholders can determine the best response based on crowd movements.

As well as managing communications for the MEOC, OAP also manages Channel 7's broadcast links, the soundtrack distribution for the fireworks and city-wide FM broadcast.

Integration of third party technologies

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One such technology added to the MOTOTRBO system is OAP's "show call" feature – a semi-duplex channel. This enables all users to hear simultaneously when this channel is used.

"It's a great way to utilise the system. Even if one person speaks during the show call, everyone can hear both sides of the conversation. It doesn't cut out either voice," explains Read.

Firework timing instigated by radios

Even the timing of the fireworks is determined by technology uploaded to the MOTOTRBO system. The fireworks are sent up from 30 different sites around Melbourne's CBD: 24 of which are located on the top of buildings while six are ground sites.

The program of fireworks in the display is triggered remotely via the repeater on Eureka Tower. A "fire code" is sent to the repeater, which is received by the radios located at each fireworks site. Once received, each radio transmits this signal to the relevant fireworks control box, telling them when to fire.

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