



ENTERTAINMENT COMPLEX ADVANCES COMMUNICATIONS WITH DIGITAL CLARITY, COVERAGE AND RELIABILITY

MORE CHANNELS AND NEW DATA FUNCTIONALITY ENSURE FUTURE EXPANSION



Iconic Crown Melbourne, one of the largest integrated hospitality establishments of its kind in the world, has always relied on Motorola Solutions for its mission-critical, site-wide radio communications. But after 18 years, the venerable Motorola SmartNet analogue radio system was showing its age. Limited support, end-of-life equipment, and annual repair bills initiated an extensive tender process in 2012 to find a bedrock communications system for the future.

Once again Motorola Solutions was named Crown's preferred choice for its TETRA system: an all-digital advanced radio communications solution that improves on every aspect of the incumbent solution and adds important usability features and scalability for the future. The new system has already delivered significant enhancements, including better coverage and call clarity, expanded channels, and improved user management, and promises to further reduce time to deliver a return on investment (ROI) with the introduction of future data integration functionality.

CUSTOMER PROFILE **CROWN MELBOURNE LTD**

Industry Name
Hospitality

Technology Partner
CA Bearcom

Product Name

- TETRA Scalable System (DSS)
- Master switch office (MSO)
- Transceiver system (MTS4 and MTS LITE)
- MTP850 handsets
- MTM800e desk mount units
- MCC7500c IP dispatch console

Solution Features

- Compact rugged devices
- Radio user assignment/radio user identity (RUA/RUI)
- Excellent clarity and coverage
- Multiple channels per frequency

Key Benefits

- Improved coverage/quality
- Future data functionality
- Improved user management and identification
- Multiple, scalable communications channels

CASE STUDY

Crown Melbourne Limited



THE CHALLENGE

Crown Melbourne is Australia's leading integrated entertainment resort attracting approximately 18 million local, interstate and international visitors each year to its 560,000 square metre entertainment complex. The property features 1,600 guest rooms across the complex's three hotels – Crown Towers, Crown Metropol and Crown Promenade Hotel – in addition to the Palladium, which is Australia's largest ballroom, a world-class convention centre, more than 70 restaurants and bars, including many of Melbourne's finest, international designer boutiques, 14 cinemas, two nightclubs and a live entertainment theatre. Crown Melbourne was built at a cost of AU\$2 billion in 1997 and in the period 1997 to 2014 a further AU\$2 billion will have been spent to further enhance Crown Melbourne, including building Promenade and Metropol hotels, expanding the Mahogany Room and further enhancing the restaurant precinct in Crown Melbourne. Crown Melbourne is one of Victoria's leading tourism icons.

As a world-class entertainment complex, Crown is a unique and challenging environment for radio communications, with a mix of high and low traffic (and noise) zones. By 2012, Crown's Motorola SmartNet analogue radio system had reached the end of its life. Equipment began to fail more frequently, call quality was not as good as newer radio systems – particularly where coverage was less than optimal – and although the system's reliability was never in question, the maintenance bill was increasing annually.

Moreover, since the analogue radio system used one full frequency for each simultaneous voice conversation, future expansion was blocked by the lack of available radio frequencies in Melbourne. "Digital gave Crown more features and expansion potential with our current fleet of 800MHz frequencies," said Kevin Naismith, management information systems, Crown Melbourne.

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Kevin Naismith, management information systems, Crown Melbourne Ltd

“The real ROI will come as we introduce additional functionality in phase two. That’s when selected handsets will become extensions of our VoIP telephone system, for example, we’ve already reserved 200 direct in-dial extensions for this expansion. Data enhancements will also mean the handsets will become more interactive.”

Kevin Naismith, management information systems, Crown Melbourne Ltd

THE SOLUTION

Crown Melbourne is equipped with a Telstra DAS (distributed antenna system), providing radio coverage throughout the majority of the sites. Prior to initiating the TETRA project, a full analysis of the DAS was undertaken. Two Motorola transceiver systems (MTS) LiTE were selected to shore up any coverage shortfalls, coupled with additional coaxial cabling and antennas where necessary.

Signal readings were evaluated continually over a 12-month period, ensuring the user experience wasn’t affected during the transition stage to the new digital system. Fleet mapping was then introduced to ensure every department was clear on the deployment strategy. An in-house fleet map template was established to ensure every possible programming feature was addressed, an exhausting exercise that proved well worthwhile.

Detailed floor plans and schematics were drafted and posted in strategic areas for instant identification, making it easier for technical staff to identify faults and carry out routine preventative maintenance and enhancements, if required.

“After naming Motorola Solutions as the preferred choice for its TETRA DSS system, Crown was keen to continue the 18-year relationship with CA Bearcom mainly due to their experience in large system implementations,” said Naismith. “CA Bearcom’s service and engineering staff continue to bring expertise and support to our RF environment, this was crucial for a smooth transition to TETRA and for the future phase implementations.”

Rollout of the Motorola TETRA DSS system was split into two phases, the first of which – a like-for-like replacement that minimised disruption to the business while ensuring a smooth transition to the new equipment – was concluded in November 2012.

The new MTP850 TETRA handsets enhanced voice clarity, but also featured radio user assignment/radio user identity (RUA/RUI) functionality that allowed specific users to log in and out of their individual handsets, making it easier to manage shared handsets between teams and to locate users onsite. RUI combines with the handsets’ built-in duress button, so in the event of a user being unable to talk in an emergency situation, one press of the duress button relays specific user information to Crown’s operations centre.



CASE STUDY

Crown Melbourne Limited



The second phase, which is under consideration and scheduled for the future, will introduce additional future-proofing functionality, including VoIP integration with Crown's Cisco Unified Call Manager – reducing the cost of mobile calls within the complex; and data delivery to handsets.

"Phasing the rollout allows technical staff and users to become more familiar with the system's features and capabilities to determine which features are important and cost-effective for the future," said Naismith. "Despite the tight deadlines, the first phase was completed on schedule thanks to the hard work and extra hours committed by Crown, Motorola and CA Bearcom."

THE BENEFITS

The benefits of the new digital system have been evident since day one of deployment:

- The radio handsets are lighter, with longer battery life, allowing users to complete a full shift on a single charge.
- Voice quality and clarity is significantly improved, as is coverage. This is particularly noticeable in areas with significant background noise, such as nightclubs and bars, and as users move between noisy and quieter environments.
- Crown integrated some of its internal paging system with the new handsets – a 'straightforward add-on' according to Naismith – reducing the number of physical devices staff need to carry with them.

- User identity gives control staff immediate feedback in the case of emergency.

"The real ROI will come as we introduce additional functionality in phase two," said Naismith. "That's when selected handsets will become extensions of our VoIP telephone system, for example, we've already reserved 200 direct in-dial extensions for this expansion. Data enhancements will also mean the handsets will become more interactive. Establishing a detailed roadmap for the present and future will aid in securing the funding for these features in the future."

Perhaps the biggest benefit comes from the scalability built in to the system. Crown plans to deploy two additional MTS LiTE devices to replace the remaining existing ageing bi-directional amplifiers, giving it better and more stable coverage throughout the site. Coupled with the ability to split one digital frequency into four simultaneous voice conversations – one reserved for the control channel – this gives Crown the resources it needs to better utilise its allocation of frequencies in the congested 800MHz space, further reducing costs and improving efficiencies.

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