



Security and Communication
Case Study Commend UK



M6toll

Midland Expressway Ltd



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Photos: Midland Expressway Ltd / Commend UK



Project Details

Customer

Midland Expressway Ltd

Project Type

To upgrade the existing system that has been in place for over 12 years. The main purpose of the upgrade was to enhance the existing system adding new features and functionality which will enable changes to be made to the operation requirements of the M6toll. The key requirements for the project:

- i) Replacement of EOL equipment
- ii) Implement improved call handling
- iii) Implement improved noise cancellation
- iv) Implement reporting service

Technical Data

2 x ComWIN GUI designed specifically for M6toll

2 x 21" Touch screen displays

1 x ComReporter

1 x ComRecorder

7 x GE300

6 x GEZ 300

7 x Digital master stations

92 x Digital 2 wire DSP intercom modules & 92 loudspeakers

7 x LAN cards

The Challenge

Commend UK were chosen by Midland Expressway Ltd to **upgrade and enhance the existing system in place at the M6toll**. The main challenge was to complete the project with **minimum disruption and down time** to the existing systems as the M6toll provides a 24/7 operation. Down time could cause considerable financial implications and potentially cause delays to traffic passing through the toll plazas.

An IP system using the clients network from the plaza's to the main control room providing high resilience (minimising single point of failure) combined with a digital solution using the existing cabling from the toll lanes to the plaza's was also required.

It was also key to **enhance the audio quality from the toll lanes to the toll plazas and the main control rooms in order to overcome the high traffic noise** generated by the adjacent motorway and the high levels of background noise created by diesel engines and particularly in the designated wide load lorry lanes.

The Outcome

The ComWIN front end GUI provides an extremely user friendly touch screen control desk which gives a visual display of the of the entire system. This interface enables the control room operator to effectively manage the estate. In addition to this, ComRecorder and ComReporter provide audio transactions and a management system.

The Solution

The existing end of life servers in the plaza's were replaced with a **new system of GE300's**. These servers were then networked back over IP to a new central GE300 in the main control room. The old analogue intercom stations in the lanes were replaced with new **2**



wire digital intercom modules utilising the existing cabling. The new system provides a number of features which are an enhancement to the existing system:

- 16kHz High Definition audio speech quality
- Background noise cancellation facilities in all lane intercoms
- Improved call handling via our specifically designed ComWIN GUI
- A reporting facility for the number of calls, call duration, call waiting
- System designed to provide redundancy in conjunction with the client network design, install an additional control desk and ComWIN facilities to provide redundancy and a second position during busy periods
- Recording facilities for all audio transactions
- Audio reassurance message at all lane intercoms to replace current tone indication
- Pre-recorded messages for automatic transmission to the integrated Public Address system

To maintain continuity and minimise system down time, the new control servers and the ComWIN control desks were installed and commissioned in the control room and the backup plaza to an operational state. This enabled the operators to receive training and familiarize themselves with functionality of the GUI. The first plaza's new server was installed running tandem with the existing server and commissioned to the main control server. The lanes intercom modules were then upgraded to digital units one by one and transferred over to the new server then left for a few days to prove full functionality and stability. The remaining plaza's and intercom lanes were then upgraded and transferred to the new system on an agreed schedule to accommodate the clients operational needs.

Short Profile of the M6toll

The M6toll is one of the most exciting developments in British transport history in many years. Since the M6toll opened in December 2003, it has grown from strength to strength and is recognised as the **key strategic through route in the West Midlands**; bypassing one of Europe's most congested motorways, the M6.

Midland Expressway Ltd (MEL) is a private company with the government concession to design, build, operate and maintain the **27 miles of the M6toll until 2054**. After this time the road will be handed back to the government.

MEL appointed a consortium of mainly British construction specialists to design and build the M6toll. At the time it was the largest UK road contract, worth £900 million.

MEL now employs over 130 people to keep the road running safely and successfully.





Security and Communication for Highways and Toll Stations

Products and Integration for a true end-to-end solution.



“ The intercom system is critical to our business and we had a very clear idea of what we wanted in order to provide better customer service, better sound quality, background noise cancellation (engines) and a Graphic User Interface to allow better supervision and improved reporting. Commend were the only company that could fulfil all these requirements, plus convince us that they could migrate from the old to the new without disruption of our services. We are very pleased with the functionality of the new system – and can report the migration did not affect one customer. ”

Colin Mabey
Director of IT & Systems

Real life makes for the best stories

How do Commend solutions cope with the tough real-life communication and security challenges at locations all over the world? Real-life answers to this question are provided by the many case studies on customer projects. - www.commend.com

Your local Commend contact person will be happy to answer any further questions regarding individual solutions.

Secure communication systems by Commend

Can you imagine a system that millions of people rely on every day, where every word counts? This is the world of Commend! Secure, reliable communication is our passion.

As global market leader with over 40 years' experience in developing voice technology, we have integrated video and interfaces to third-party equipment that complies with international norms and standards. Commend is the natural choice for hands-free voice communication systems all over the world.

Other Projects

Reading Station, UK

Vienna International Airport, Austria

Northumbrian Water Group, UK

A strong worldwide network.

COMMEND is represented the world over by local Commend partners, ensuring enhanced security and communication with tailored Intercom solutions.

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