



Mobius partners with East Ayrshire Council

In 2008 East Ayrshire Council made a successful funding application for £1.2m to Strathclyde Passenger Transport to implement Real Time Passenger Information (RTPI) on main bus routes within the region. As it was a joint initiative, the project required the co-operation of a number of stakeholders including East Ayrshire Council, North Ayrshire Council and South Ayrshire Council as well as Stagecoach West Scotland, the main operator on the designated routes.

The three Ayrshire Councils also adopted the Traffic Signal Priority system which changes traffic lights to green as a bus approaches a junction. This helps to ensure services run on time and increases efficiency.

RTPI encourages people to use and have confidence in public transport. Accurate signage and time-tabling, updated in real-time, gives passengers reliable information to help them plan their journey and know they are in the right place. However, if the system is inefficient or susceptible to malicious attack then public confidence is quickly eroded.

The system operates via data transmitted between three points; the auto vehicle location unit on the bus, the server at the control centre and the displays at the bus stops. This can be done using Mesh technology, Digital Public Mobile Radio (DPMR) or GPRS.

Due to budget considerations and concerns relating to the cost of ongoing running and maintenance AECOM's recommendation to East Ayrshire Council was for a GPRS system. This was chosen as it would prove to be the most cost effective in the long run.

Using innovative technology VixACIS supplied a full RTPI system which included comprehensive back office and GPRS communications to provide a live data feed from the 100+ vehicles in the region. Communications provision to each RTPI displays is via a public GPRS network using SIMs provided by Mobius Networks using the highly reliable Vodafone network. The system also had

to meet disability guidelines and therefore RNIB React units were installed in each passenger information site.

By choosing Mobius Networks, East Ayrshire Council have Vodafone's preferred distributor of Machine to Machine (M2M) data SIMs as their partner. This gives the Council added security for a number of reasons. Mobius offers a Private Mobile Network with no internet access. This ensures that each connection is isolated, secure and protected from the threat of attack that occurs on the open internet.

Council budgets can be set with greater confidence because Mobius have a unique arrangement with Vodafone and are the only partner to receive billing information to the byte. Other companies present the total bill to customers with no detailed breakdown. Also, Global Estate Manager (GEM) allows East Ayrshire Council to see how much data its SIMs are using in real-time. They can set a limit for each SIM and if one exceeds it then Mobius will send an email to the Council. The activity and performance of each SIM is visible to the Council and to Mobius.

On appointing Mobius Networks to supply the M2M data SIM cards and Private Network, Alan Vass, the Project Leader at East Ayrshire Council said: "I have every confidence that Mobius will deliver a quality service to the Council's RTPI system. It is important to know that Mobius have already been involved successfully with other Authorities in RTPI and UTMC projects."

THE CHALLENGE

East Ayrshire Council wanted to introduce a robust Real Time Passenger Information system (RTPI) on two of their strategic bus routes. They were looking for a system with proven security and reliability which would allow them to keep tight control of their budget.

THE SOLUTION

AECOM were appointed to provide a full management and consultancy service which would offer best value for ongoing communications and maintenance costs. They specified a GPRS system with Mobius Networks being nominated as the provider of a Private Mobile Network and infrastructure via Vodafone. The Council also appointed VixACIS, a leading provider of intelligent transport products, to deliver the system.

THE BENEFITS

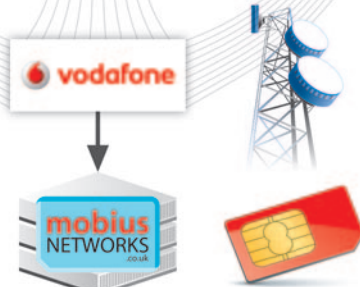
By using the expertise of Mobius Networks and Vodafone, East Ayrshire Council were confident they had a reliable partner that was established in RTIG. Vodafone has invested £400m in network capacity to ensure wide, consistent and reliable coverage to keep pace with demand.

Mobius were already a trusted supplier of M2M SIM cards for the traffic counters, parking availability and pay and display signs. For this new contract Mobius value added service would also provide:

- Real time report monitoring
- Fixed IP through Mobile Private Network with no internet access
- Detailed billing platform



RELIABLE AND SECURE CONNECTION VIA VODAFONE NETWORK



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THE PROCESS

Information about the progress of the bus journey and arrival times at each stop travels between the AVL unit on the vehicle, the server and the on-route signs using GPRS. Data is only pushed when needed rather than the continuous 'question and answer' process used in non-Mobius systems.

Mobius and Vodafone use specific Access Point Names to channel the data through dedicated data pipes to Mobius-hosted servers. Each unit then handshakes with a unique username and password, is allocated a fixed IP address and then pushed through to the destination.

- A Mobile Private Network keeps mobile devices off open internet access
- Mobile fixed IP supports true bi-directional data
- The Vodafone network has the capacity to handle the huge demands created by increased mobile data usage

For more information about how Mobius, Vodafone and RTIG can cut costs and improve services

www.mobiusnetworks.co.uk
www.rtig.org.uk

