



TeleWare Case Study



Northamptonshire is the UK's first Police Force to combine the advantages of Airwave technology and TeleWare's Personal Numbering solution to support officers' nomadic and flexible workstyle.

The initiative supports the "Three-Year Strategic Plan for Northamptonshire Police 2004-2007"

TeleWare is playing a key part in revolutionising communications within Northamptonshire Police. Using TeleWare's market-leading one number contactability solution and the O2 Airwave secure communications network, it's easier than ever before for Police Officers and staff to contact their colleagues within the Force, irrespective of current location.

TeleWare communications solutions are also being deployed by the Force to improve performance and reduce overhead costs in other areas of operation.

Northamptonshire Police began rolling out Airwave in November 2004 to support its police officers and specific groups of police staff. With Airwave technology, a single digital device replaces the old-style analogue radio sets used for closed user group police-to-police communications and also acts as a mobile phone and, potentially, a data terminal.

What is the Airwave Network?

O2 Airwave is a secure digital radio network dedicated for the exclusive use of the UK's emergency and public safety services. Airwave replaces the traditional analogue radio sets previously used by beat officers to communicate with fellow officers. The system's unique, multi-functional TETRA (Terrestrial Trunked Radio) handsets can act as a digital radio, mobile phone and data terminal in one - enabling police officers to access local and national databases, including records on the Police National Computer. Emergency buttons on the handsets allow users to call for urgent assistance.

For the first time ever, police can have radio coverage wherever they need it - even in radio 'cold spots'. And Airwave filters out background noise - ensuring clearer communications from the noisiest of environments, from motorways or school playgrounds to factories and night-clubs. Because all Airwave communications are encrypted, they cannot be scanned or monitored by outsiders, so helping police stay one step ahead of criminals. As police forces across the country adopt the service, Airwave will help neighbouring forces communicate seamlessly with one another on the same system for the first time.

This brief summary of the general capabilities of the National Airwave network is reproduced by kind permission of O2 Airwave

Intelligent Numbers Enhance Assessability

No matter whether a police officer is currently out on the beat or working at any one of the Force's many sites, or even an external location, colleagues can always phone them using the same number, their PERMEX (Permanent Extension) number. Using intelligent Number, the TeleWare Personal Numbering solution, as the clever bit behind PERMEX, an officer simply makes a short phone call and enters his or her PERMEX number and password in order to make themselves available for calls to their current location – a TETRA handset operating over the Airwave network or an ordinary landline telephone.

If the police officer has made them self unavailable for calls (typically, at the end of a shift), is busy on another call, or fails to answer within a specified time, calls are passed to the officer's voice mailbox and the caller can leave a message. The officer can be notified of the arrival of new voicemail via a text message to their TETRA handset. If the caller prefers, they can opt to speak with an operator instead of leaving a message, simply by pressing the 9 key on their telephone keypad when prompted.

During migration to the new communications service, the Force was able to make use of existing telephone numbers in its dial-plan, reassigning them as PERMEX numbers. TETRA handsets and TeleWare Personal Numbering service are being rolled out to approximately 1,650 officers and support staff across the Force.

Scalable TeleWare Platform

Key to the Northamptonshire Police deployment of Airwave is a TeleWare communications platform which provides personal numbering and voicemail services. Northamptonshire Police had, in fact, been using a TeleWare system for a number of years to provide internal voicemail services. The TeleWare system, a fully scalable platform connected to the Force's iSDX telecoms network via DPNSS, was extended to support the additional requirements.

Message Notification via SDS

Using the TeleWare solution, officers are automatically notified of the arrival of new messages via their Airwave handsets without having to dial in to enquire.

The Airwave Short Data Service (SDS) is similar to the SMS service widely used for texting on mobile phones. TeleWare has used SMS for some years as a means of notifying its users of the arrival of new messages (voice, fax or email) via a text message to a mobile phone. TeleWare was able to adapt this application to provide a similar notification service using the Airwave network SDS. A key difference between SMS and SDS is that messages sent to an Airwave device that is turned off are not automatically resent when the device is switched back on again. To allow for the lack of this feature, retry functionality was built into the TeleWare application. If a new message notification sent by the TeleWare system has not been successfully delivered after a given number of retries, the intended recipient can be notified by email as an option. This ensures that no messages remain undelivered indefinitely.



Multi-Applications Support

As well as complementing the Northamptonshire Police deployment of Airwave, the same TeleWare platform at Force Headquarters also supports a number of additional telephony applications, thereby maximising the Force's return on investment in this element of its communications infrastructure.

Wide Area Team Calls for CSU and Help Desks

TeleWare TeamCall® functionality is being used to route calls into Help Desk and Customer Service Units based in Northampton (Campbell Square), Wellingborough and Corby. This method of implementing wide area call centre type functionality offers several advantages over a traditional PBX hunt group solution which was previously employed.

- Staff can 'log-in' to a team and 'log-out' at any appropriate telephone.
- Team members can be changed or the team physically relocated without the need to reconfigure the PBX.
- Phones of absent team members don't ring unanswered.
- Peaks and troughs in call volumes can be smoothed by automatically load sharing between teams at different office locations to provide a more cost effective and efficient service.

A key advantage of this solution for the Force is the ability to provide continuity of service if an area is unmanned.

IVR Solution for Central Ticket Office

The Central Ticket Office (CTO) is responsible for processing all tickets given for speeding and other driving offences. Calls are received by staff at the CTO for a variety of different reasons – to pay a fine, to dispute an incident, to enquire about presenting relevant documentation at court, etc. To ensure that all calls are answered promptly and passed to the appropriate person or team, calls are answered automatically by a TeleWare Interactive Voice Response (IVR) solution. Callers are presented with a number of options and instructed to press the telephone key corresponding to their choice.

Sick Line

Staff needing to report in unfit for work can dial into an automated system where they respond to pre-recorded prompts giving the name, collar number, expected time off, etc. The caller's responses to the set of prompts are recorded together in a 'VoiceForm' and stored in a voice mailbox for subsequent retrieval and action by an administrator.

Future Development

Northamptonshire Police is committed to optimising the effectiveness of its resources to best serve its community. Their ICT staff expect to continue to explore other features of the TeleWare solution to gain further benefits for the Force and maximise their return on investment.

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