

## CASE STUDY

# LANCASHIRE CONSTABULARY

The first digital voice and data application over TETRA Airwave in the UK



Lancashire Constabulary employs around 5000 police officers and support staff and nearly 400 special constables. Each of the six territorial policing divisions has their own communications and call handling centre with a total of over 200 operators. A further communications centre is used for fallback and training purposes.



### The Business Issues

The ability to communicate quickly and effectively is vital for any police force, in particular during major incidents. When it came to review the outdated analogue radio system used within the control rooms, Lancashire was selected to trial the new national digital voice and data radio service, Airwave, launched by the Home Office in 2000 and the associated "showcase applications" that were going to be developed.

Lancashire Constabulary was the first force in the UK to use Airwave as the main radio communication scheme force-wide. At the same time, the Force decided to renovate their control centres and improve efficiencies, using an Integrated Communication Control System (ICCS) that was compatible with Airwave.

### "The increased efficiencies provided by the APD's solution are significant!"

Tony Wilby, Airwave Service Officer

### The Solution

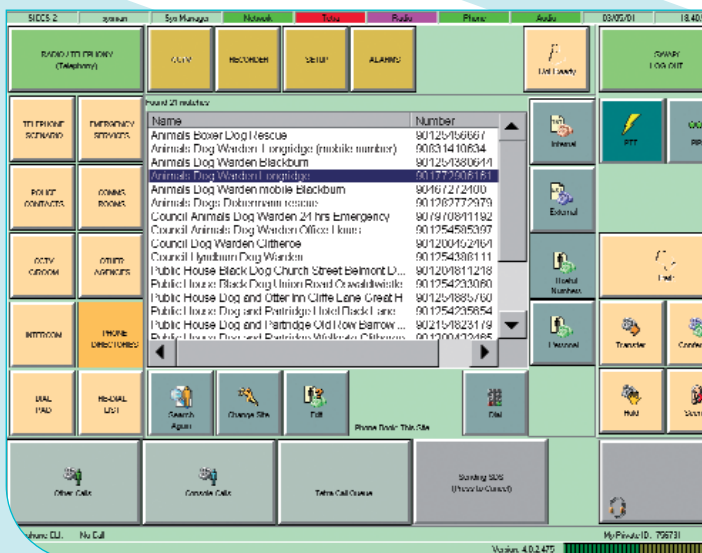
After tender, Lancashire Constabulary selected APD Communications as the partner of choice to modernise its control room processes. CORTEX™, APD's Integrated Communication Control System, was the first in the market to merge radio despatch, telephone call handling and video monitoring into a powerful networked communications tool. It was also the first one to run over the Airwave network, providing seamless access to voice, video and text communications whilst linking to call handling and command and control systems.

CORTEX at Lancashire was set-up to enable role-based access to the functionality on the system. Indeed, control room operators with distinct roles have access to various functions. These include radio dispatchers, radio and group calls, as well as links into external telephony. Officers and control room operators were not only impressed with the reliability and robustness of the service, but also with the ability to cut out background noise, the emergency button feature and enhanced encryption capabilities. The integrated telephony and radio system allows the operators to contact officers on the beat with Motorola Airwave-enabled radios, using 'push to talk' technology.

Through the implementation of CORTEX the management of communications between control room and officers has been enhanced. Voice quality is significantly improved and coverage has been increased. In addition, using the instant record/playback facility, a supervisor or operator can quickly listen to a message again, allowing operational decisions to be made near real-time.

With CORTEX, the time required to log incidents and consequently the despatch time is reduced. CORTEX provides the flexibility for communications managers and supervisors to efficiently re-deploy and respond to events as soon as they happen.

And by having a fully integrated system for each operator, there is no longer the requirement for several PCs on each desktop. This not only saves on the cost of the initial purchase of hardware, but also removes associated support and maintenance costs. Each operator has access to TETRA radios, CCTV, telephone and Intranet from one machine.



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The main benefit is that CORTEX has been designed for users by users. The system is so user-friendly that training time has been reduced so control room staff are quickly operational. With the use of integrated directories and the ability to pre-populate fields for incident reports, less time is spent collecting details over air. Tony Wilby, Airwave Service Officer, says: "The increased efficiencies provided by the APD's solution are significant. Previously we were using paperbased systems which lead to delays and slow responsiveness. The ability to organise major events such as party political conferences has improved tremendously. Thanks to APD, Motorola and using Airwave, we already have the radio infrastructure in place with sufficient talkgroups available to cover any event without the need to spend in some cases months of preparation which was the case prior to the introduction of the new systems."

**"The benefits for individual officers are immediate in terms of safety and increased flexibility as well as access to information."**

Tony Wilby, Airwave Service Officer

Using emergency buttons on their radio, officers can alert control room operators very quickly, providing peace of mind when out on the streets. In addition, CORTEX offers many levels of fall-back, so in an emergency situation or in the event of hardware failure, communications are retained. This ensures that officers on patrol will always have communication links with their control rooms.

The implementation of Dynamic Group Number Allocation (DGNA) is substantially increasing the Airwave functionality of the system by allowing operators to manage dynamic talk groups and control access to create effective operational groups. This is essential to maintain maximum control in an emergency situation where a number of officers may need to communicate with each other directly rather than going through the control room.

### The Future

Following the successful improvements in the control rooms, Lancashire Constabulary has implemented data solutions over Airwave, in addition to voice applications. APD also provided the Force with Automatic Vehicle Location and mobile data applications, allowing police officers on the beat to access the Police National Computer and make queries onto the local and national police systems using terminals in their vehicles. This relieves congestion in the control room and gives them instant results.

New projects are being planned by Lancashire Constabulary to look at other technologies that can be exploited to improve operational policing on the Airwave service.

### Benefits Summary

- Improved communications
- Improved responsiveness and response time
- Reduced cost
- Increased efficiencies
- Enhanced incident management

### Technology

**APD Solution**  
CORTEX  
INCA Vehicle Location and Tracking  
Co-Ordinator Fleet Management  
APD Mobile Data

### Network

TETRA Airwave from 02

### Partners

TETRA hand-portables from Motorola  
Hardware from Lynx Technology

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