



Interoperability – the holy grail of emergency response



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➤ *Richard Bobbett, Chief Executive, Airwave.*

It is well recognised that a co-ordinated emergency response relies on the ability to share information with the right people at the right time. Too often in the past, poor communication capability has hampered efforts to respond to major incidents. Richard Bobbett, Chief Executive of Airwave, explains how interoperability may be a simple and compelling concept, but implementation is less easy to achieve.

The introduction of Airwave as Britain’s first and only national digital communications service dedicated to public safety responders means that a more seamless approach to interoperability is now possible.

But how should public safety responders make use of interoperable communication? What approach should be considered on a local, regional and national basis? What are the practical implications?

A two-pronged approach is required. First of all, the technical capability needs to be in place. Secondly, procedural and cultural issues need to be addressed.

Technical capability – talk groups

To successfully interoperate, talk-groups (communication channels designated for particular users or events) must be correctly formed and managed. The 350 organisations using Airwave will have many talk-groups that they “own” and which are only available to them. They may allow other organisations to communicate

with them by giving access to their talk-groups – this is the recommended way of interoperating and gives flexibility for all situations.

It is well recognised that incidents may require communication between groups which do not normally work together. Airwave has planned for these situations by developing talk-groups specifically for inter-agency communications – IATs (Inter-Agency Talk-Groups) and MAMAs (Multi-Agency Mutual Aid Talk-Groups).

Each police force area has one dedicated IAT, available throughout the area served by that and neighbouring forces. Permanently enabled and available to every Airwave user, the IAT enables responders to talk to each other when required.

MAMAs are now available for use by organisations that work on a regional or national basis. Available nationwide to any agreed organisation, MAMAs are designed for joining up response to major incidents.

In addition, the police service has developed specific

Case study 1 – prisoner escort

Sergeant Nick Shaw is one of three Nottinghamshire Police officers to complete the NPIA's TAC course, and he regularly puts the training into practice.

Shortly after attending the course he arranged the Airwave communications between officers involved in a high profile prisoner escort across three counties.

Before Sgt Shaw and his colleagues were made aware of the interoperability capabilities of Airwave, they would have been involved in making complex arrangements to communicate with each other and the force areas through which the convoy was to pass.

However, by putting in place talk-groups for specific groups of officers involved in the operation, all were able to communicate seamlessly and effectively.

Sgt Shaw said: "The course really helped to raise awareness of what was possible in terms of the flexibility of Airwave to communicate in different ways with different groups. In the case of the prisoner escort it meant that we were able to co-ordinate the operation more effectively, monitoring the progress of the convoy at all times."

Case study 2 – major event

As one of London's biggest annual events, the Notting Hill Carnival presents a significant public safety issue.

The carnival takes place over an area involving two local authorities – the City of Westminster and the Royal Borough of Kensington and Chelsea. The introduction of Airwave has made it possible for the local authorities to interoperate during the carnival, using common talk-groups across and beyond the carnival area. The local authorities shared their talk-groups with one another and Brent Council invoked a MAMA (Multi-Agency Mutual Aid) talk-group so that they could inter-operate in case of emergency. This meant that they had many options to interoperate with each other and other public safety agencies such as the police.

"It was essential to know we could easily talk to each other across event and local authority boundaries without reliance on the public mobile network. This was valuable during routine event liaison across the local authority areas and we could also seek to involve other organisations such as the police if the need arose." Rob Walley, Civil Protection Manager, London Borough of Brent.



The NPIA's TAC course raises awareness of what is possible in communicating with different groups via Airwave.

talk-groups (police inter-service command and emergency services talk-groups) for interoperable communications at the scene of major incidents.

These are used to manage major incidents at silver and bronze command level, and are shared with the blue light emergency services and other partnership organisations.

In conjunction with the Cabinet Office Civil Contingencies Secretariat, Airwave has developed two talk-groups for use within each region as defined under the Civil Contingencies Act.

These will help responders work together during the response phase to an emergency. The talk-groups are open to all category one and two responders and partner agencies and access is managed through the Local Resilience Forum Telecom Sub-Groups.

Although the availability of these talk-groups is a major step forward, they will only prove effective if correctly managed. This means careful appointment and training of the personnel who can access the talk-groups.

Working together

Because in recent times a large number of Airwave's 350 customer organisations have adopted Airwave in order to benefit from interoperability, we have formed an independently-chaired group that champions the issue on their behalf.

The MAAUG (Multi-Agency Airwave User Group) represents the needs of a large number of Airwave users who have similar needs. Its aim is to act as the interface between various Airwave users and Airwave Solutions to deliver quality assured training and to share information with other non-blue light public safety organisations that want to use Airwave and, potentially, interoperate.

Rob Walley, Civil Protection Manager at London Borough of Brent, and John Hetherington, Head of Civil Contingencies, London Borough of Waltham Forest, jointly chair the MAAUG.

Tactical advisors

The National Policing Improvement Agency has taken a lead on the issue, setting up a specific team to encourage interoperability between forces. Their Force Operational Airwave Tactical Advisor (TAC) courses have proved highly popular, helping forces to set up the most effective communications during major incidents.



During the course, TAC advisors are informed of Airwave's tried-and-tested incident response process and are able to invoke detailed support. The TAC advisors can also advise how to access services such as extra radio handsets which are held by each force for use by other agencies in the event of a major incident, as well as Airwave's mobile base station and emergency response vehicle which can provide additional coverage. They are also trained in the use of different talk groups to enable them to set up effective multi-agency communications at the scene of an incident.

Best practice

Achieving interoperability need not be a lengthy or difficult process.



“Effective, resilient communications underpin multi-agency emergency response. Agencies need to continue to work together to ensure that their communications arrangements enable true interoperability – not only through technical means but also the procedures used in communication.”

Dr Nigel Brown,
Lead for Resilient Telecommunications Strategy, Civil Contingencies Secretariat, Cabinet Office.

Airwave works with a number of agencies which can assist in formulating interoperability arrangements: Emergency and Public Safety Interoperability Implementation Board (EPSIIB); Multi-Agency Airwave User Group (MAAUG); Defence Airwave User Group (DAUG) and the National Interoperability and Interworking Group (NIIG).

Our experience in understanding and defining the interoperability needs of a number of organisations and situations has resulted in some simple best practice guidelines known as the ten Cs.

The 10 Cs

- Consultation – define and consult with Airwave the users you would like to communicate with. Airwave works with a number of forums so can assist in this area
- Co-operation – define mutually beneficial needs between various user organisations.
- Co-ordination – work together to understand the variances between organisation and agree when and how interoperability would be used.
- Communication – define the method of communication to be used. Airwave users have a choice of communicating using talk-groups, secure telephony or by connecting one radio to another specific radio, known as point-to-point.
- Compatibility – consider the compatibility of your systems and implications of any changes.

- Costs – define the costs (including the costs of not interoperating) and consider safety, time savings and efficiency benefits.
- Capacity – incident response draws in first responders from all areas. This means that there will be a need for more capacity than usual in any area. While Airwave is designed with surge capacity available for these situations, all responders must consider the capacity and efficient usage of the system being used when planning their communications. Efficient interoperability can reduce capacity requirements.
- Culture – interoperability cannot be resolved by technology. It requires consideration of cultures and the roles and expertise within each organisation. Training and exercises would be important if interoperable communications are to be effective.
- Critical debrief – a commitment to ongoing shared learning is important. Constant review and debrief of training exercises and incidents is required to continue learning and improving.
- Call signs – when communicating it is vital to correctly identify yourself. No nationally agreed standards are yet in place so the use of plain speak and adherence to agreed protocols is advised. When planning interoperability it is advisable to consider call signs in use by the organisations involved to ensure there are no duplications, and also consideration must be made for those users that have no call signs.

In conclusion, interoperability cannot be resolved by technology alone – it requires consideration of cultures and the roles and expertise within each organisation. The Civil Contingencies Act requires responder organisations to work together. However, there can be frustrations when different organisations attempt to reach a common goal. These must be overcome to ensure that interoperability can be achieved.