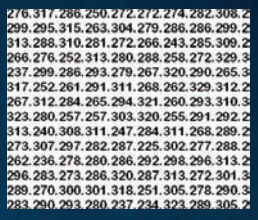
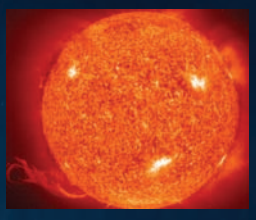


Better safe than sorry: the case for data encryption is clear.



The benefits of fused intelligence against terrorism.

Information management for civil contingency responders

BAPCO Journal

Volume 15 Issue No 1 • January 2009 • £3.50

Satellite dilemma

Can the costs be justified?

FiReControl countdown

Concerns that won't go away

SUNGARD PUBLIC SECTOR

Enhanced Despatch Solutions

An Integrated and Cost Effective Enhanced Despatch Solution

The SunGard DS2000 Compact Integrated Communication Control System (DS2000C) is designed to provide a cost effective solution for smaller control rooms.

Benefits and features

- Easy to deploy integration application
- TETRA wireless connectivity using Fixed Mobile PEI
- Telephony, Radio, CCTV and Web app support
- Single touch screen control of multiple communications technologies
- Patch and connect as required
- Simple integration of all systems
- Increased operator efficiency
- Economic and cost effective solution

THE QUEEN'S AWARDS FOR ENTERPRISE: INNOVATION 2008

TETRA

For more information contact - info.uksolutions@sungardps.com or visit **www.sungardps.co.uk**
SunGard Public Sector Limited, Methuen Park, Bath Road, Chippenham, Wiltshire, SN14 0TW
Telephone +44 (0) 8456 041999

Contents

Cover image: www.blackcoffee project.com

Information management for civil contingency responders
BAPCO Journal
Volume 15 Issue No 1 • January 2009 • £3.50

Editor Jose Maria Sanchez de Muniain
Tel: 01935 816030 **Email:** jm.sanchez@hgluk.com
Staff Writer Dan Worth
Tel: 0207 973 6620 **Email:** d.worth@hgluk.com
Advertisement Sales Manager: Kasia Brzeska-Reffell
Tel: 020 7973 4769 **Email:** k.brzeska@hgluk.com
Advertisement Director Emma Sabin
Tel: 020 7973 4641 **Email:** e.sabin@hgluk.com
Production Corinne Savage
Tel: 0207 973 4713 **Email:** production@hgluk.com

Graphic Designer Inderpal S. Patti
Tel: 0207 973 4608 **Email:** i.patti@hgluk.com
Managing Director Graham Bond
Tel: 020 7973 6645

For subscriptions queries please contact
Tel: +44 20 7973 6694
Fax: +44 20 7233 5052
Email: customer@hgluk.com

recycle
When you have finished with this magazine please recycle it.

Published by **Hemming Information Services** 32 Vauxhall Bridge Road, London SW1V 2SS

Durham and Darlington FRS is FireLink first

County Durham and Darlington Fire and Rescue Service is the first FRS in Great Britain to complete installing FireLink, the new digital radio communications equipment.

FireLink will give the fire service the ability to communicate with police and ambulance command centres on the same radio network.

The FireLink radio and communications system is part of the £1billion investment by Communities and Local Government to improve FRS capability to deal with all types of incident, including major emergencies such as industrial accidents, severe weather or terrorist activity.

Fire Minister Sadiq Khan said: "With 100 vehicles now fitted with Firelink equipment, County Durham and Darlington Fire and Rescue is a pioneer in using the new digital radios in Great Britain.

"The new Firelink communications equipment means that when the new control centres are operational, it will be possible to effectively deploy the nearest available and suitable fire appliance or special rescue vehicle to an incident. This will result in greater resilience, information and incident support for firefighters, and a better service to the public – for both day to day and major incidents." FireLink system has been installed in England's current FRS control rooms.

Keen to share GIS

The latest poll on the BAPCO Journal website submitted by Chief Information Officer Andrew Watson of the British Transport Police asked the question, "How interested would you be in sharing common geographic information (eg gazetteer systems, service assets, incident locations etc) on a common system with other blue light services?", and drew an unprecedented number of responses.

The results were as follows: very interested 61 per cent; quite interested, 14 per cent; not interested: 25 per cent.

Clearly the rise of GIS is something that is becoming a major part of the emergency services contingency role.

President's address

The next year presents all of us with some interesting and for some, very personal challenges. As I look back over the last 16 months there have been a few lifetime firsts for me. I have never witnessed a run on a bank as happened at Northern Rock in late 2007, nor a collapse of confidence in the financial sector with the impact this had on countries such as Iceland and especially those commercial investors which included police forces and local authorities. We now hear allegations of a $50 billion dollar fraud, perpetrated in the US but having worldwide impact including UK local authorities.

All of this means that 2009 will be one where the public sector revisits its current plans for spending, especially in the high value contract area of IT and communications. If, as I suspect, reprioritisation takes place, this in turn will impact upon the level of business activity enjoyed by suppliers which has real consequences for jobs, investment, support, research and development and sponsorship.

BAPCO enjoys a relationship with both sides. We thrive on the contribution we make through our members in the area of developing technologies, accredited standards and broader user influence. Our commercial membership is key to ensuring that the market place is fully understood and that personal relationships can develop in an appropriate atmosphere of jointly enhancing the capability of civil contingency responders. I sense that this brings added responsibility on those of us who work within BAPCO to ensure that we bring our professional expertise and commitment at a time where there is considerable concern on how we survive the next twelve months.

We will be focusing upon making confident decisions which will deliver clear business benefits at a realistic price, a good example of this inaction was the APCO/NENA conference which I recently attended in Ottawa as BAPCO President.

Two presentations were exceptional. The first involved Inspector Lance Valcour from the Canadian Police Research Centre. He spoke on improving public safety interoperability. He demonstrated incidents that had incurred in Canada and that clearly would have been better managed had appropriate capability existed for the respective blue light services to speak with each other. His thoughts clearly mirrored the work which I knew was taking place in England, led by Superintendent Paul Kinsella at the NPIA who had presented a paper at one of our regional conferences.

The two parties are now in discussion with each other and there are clear opportunities to learn and develop solutions that can be internationally tested in the field and from which we can continue to learn and develop policy and practice.

I was also interested to listen to another presentation involving Voice over Internet Protocol (VoIP) and the difficulties being experienced in Canada and America where it appears licence providers of this technology will not be under any obligation to provide the emergency services with location data. Some colleagues may recall that principally as a result of one of our BAPCO members we convinced Ofcom that under the universal service directive, location information had to be provided wherever technically possible.

This will inevitable enhance the quality of information being received in emergency service control rooms although I suspect that some of the present providers of this technology may still argue that the cost to adhere to such a principal is excessive and they should only be obliged to comply where it is financially reasonable to do so.

Finally, I must tell you about the opportunity I had to ride in a General Motors vehicle equipped by OnStar with state-of-the art telematic systems. Many will be aware of the enhanced capability brought about by this technology, but in particular I was fascinated by the ability of the provider to remotely disengage the accelerator of the vehicle when requested to do so by a following police car.

I have absolutely no doubt that over the next 10 years this will be a common feature of every new car which is sold and will have just as much impact as other speed moderation devices currently being developed. The police service finds itself often having to make critical risk decisions when pursuing vehicles, unfortunately some of these incidents end in tragic circumstances or leave members of the public and the perpetrators of the crime with serious injuries. This technology will have a huge impact upon safety, reducing the risk of the pursuit phase and enhancing potential for a safer outcome.

I take the opportunity of thanking BAPCO permanent staff for their continued support and also wish the BAPCO membership and the readers of this magazine, a New Year which brings you good health and happiness.

Ian Readhead, President.

Airwave rolled out on the Tube

Policing Minister Vernon Coaker has unveiled the roll-out of Airwave in London Underground. The project – delivered five months ahead of schedule – will enable London police forces to better protect the public by responding to major incidents and events wherever they are on the network.

The system in London Underground allows police officers to move seamlessly from above to below ground without having to make any changes to their radio settings. The system has proved invaluable in large scale events such as New Year's Eve, the Notting Hill Carnival and football matches. "Crime is down on the Underground and with the roll-out of Airwave, passengers can feel even more confident that every effort is being made to keep them safe as they travel around the capital," commented Vernon Coaker.

Airwave in the London Underground works in conjunction with London Underground's own communications system, Connect. The dual system allowed NPIA to deliver this initiative cost effectively, quickly and efficiently. Tony McNulty, Minister for London said: "One of the key lessons from the London bombings of 2005 was the need to enhance the resilience of responders' telecommunications systems and communication underground. I am therefore delighted to see that this system is now fully in place, ahead of schedule, with the result that London is even more resilient and better prepared ".

Funding secured for digital DNA

Napier University have secured funding of £199,879 to help pre-commercialise a unique digital fingerprinting and analysis technology that will help companies and other organisations crack down on computer fraud.

The patent-pending technology, codenamed "digital DNA", is based on a novel collecting and analysing technique that identifies sequences in user access of data, leaving behind a digital fingerprint which will help in digital forensic investigations.

Jamie Graves, a research fellow at Napier's School of Computing, explored the concept of digital DNA throughout his PhD. Now, along with his PhD supervisor Professor Bill Buchanan he has secured the two-year funding under the Scottish Enterprise Proof of Concept programme to develop the project through to commercialisation. "What we have is effectively a timeline of user access to data," said Graves. "Within that, we can essentially search for sequences that relate to the activity of users in accessing the data and any changes made to it."

The digital DNA uses a particular metric that offers a far higher degree of proof probability that a certain person was behind any changes made to data. Criminal gangs and unscrupulous insiders are growing increasingly aware of the potential rewards of data theft and other computer crimes. But court prosecutors are seeking higher levels of proof when it comes to prosecuting data crime.

Presenting the FiReControl case

Fire Minister Sadiq Khan has laid out the national case for the new linked network of control centres for the Fire and Rescue Service and has said the Government remains committed to paying the set up costs of £380million before giving the new network to England's Fire and Rescue Authorities.

As reported here in the Nov/Dec issue (page 6) the FiReControl project has come under fire from the Fire Brigade's Union (FBU) and this was backed by the Chief Fire Officers' Association.

The announcement was made by Fire Minister Sadiq Khan in a Written Statement to Parliament announcing the publication of the business case: "The Government is investing £380m in FiReControl and remains strongly committed to it. Good progress has been made on a number of fronts, including the completion of eight new highly resilient Regional Control Centre buildings, the establishment of eight Local Authority controlled companies which bring together all relevant local partners, and the development of a strong network of regional project teams working to ensure the project is a success in their areas." The Department has also published a revised timetable for the change over to the new network. Sadiq Khan added: "I am determined that we build stakeholders' trust and confidence as we move forward. I am grateful to all of our partners for their commitment and for working so closely with each other and with us to make this project a success."

Avon FRS prepares for regional integration with VISION FX

Avon Fire & Rescue Service have selected the latest version of command and control incident management system from Fortek Computers, VISON FX, to manage an increased number of inbound calls as it prepares to integrate with Devon and Somerset Fire and Rescue.

The solution will enable Avon Fire & Rescue Service to handle inbound calls on behalf of Devon and Somerset Fire & Rescue Service's two control rooms, in addition to its own usual call volume, during operator training for the proposed Regional Control integration.

VISION FX will enable data from all three control rooms to be prepared for integration into Regional Control, making the transition to the new system quicker and easier once it goes ahead.

Award for NPIA Chief Officer

Chief Information Officer in the NPIA, Richard Earland, has been recognised for his work bringing cutting edge technology to the police service by being awarded the accolade, IT Leader of the Year, at British Computer Society awards ceremony.

Earland's work has included the completion of the roll-out of the first national police radio system Airwave, and supporting forces in their delivery of handheld computers to officers across the country has been vital in improving the ability of the police service to access, manage and share information.

Commenting on his award Earland said, "I am very pleased to accept this award. I see it as a recognition of the great work a huge number of people across the NPIA and the police service have done and are doing."

Strathclyde chooses WorkPlace for duty system

Strathclyde Fire & Rescue Service have chosen WorkPlace Systems, a supplier of workforce management systems, to support the development and introduction of a five-watch pilot system and to provide a duty management system to ensure resources are delivered in the most efficient and cost effective manner possible.

After a consultation period that included speaking to a number of Fire and Rescue Services, Strathclyde decided to work with WorkPlace Systems to deliver a pilot five-watch roster system in two areas.

WorkPlace Systems will also provide a system to match resource availability to known workloads through demand/availability processes. Brian Sweeney, Chief Fire Officer, said, "WorkPlace Systems was the best choice because firstly it demonstrated continued success with other fire and rescue services in reviewing their duty systems, and secondly the software was an ideal fit to our needs."

Scottish Ambulance manages risk with Datix

Scottish Ambulance Service has selected Datix Patient Safety and Risk Management software to ensure timely recording and management of patient safety, risks and incidents

The Datix software was chosen for its ability to be easily customised and the software will be used to record incidents and manage the risks associated with providing an ambulance service.

Paul Gowens, Head of Risk at the Scottish Ambulance Service said, "One of the main reasons was Datix's flexibility, which has meant we can customise it to meet our requirements. Datix is also widely used in the NHS, other ambulance services and throughout Scotland.

"This gave us the additional benefit of being able to benchmark our reports against other NHS Boards."

Fire Support and FRA to take forward £46m PFI

The Fire and Rescue Authority (FRA) has agreed that Fire Support is the company it would like to appoint to take forward the £46 million private finance initiative project that will see seven fire stations rebuilt as well as the building of an additional three stations in areas where the FRA has determined there is a need for additional resources.

All stations have been designed with a community facility and state of the art operational facilities. Stations crewed around the clock are also to include fitness facilities that can be used by supervised groups. Chief Fire Officer/Chief Executive Peter Dartford said, "We are leading the way in the UK Fire and Rescue Service with these purpose-built community embracing fire stations. Our current fire stations were built at a time when we were almost solely a reactive service just responding to emergencies, they were certainly not built for the pro-active service we are today or the service we are going to be in the future – sitting at the heart of the community."

The contract will be officially signed in June this year with building commencing the following month.

News in brief

Microbus has announced that initial orders for its vehicle demountable PC Linx have hit £1 million. The first order for 200 units is to go to Lancashire Police. The built-in car power management system and programmable keys on the docking station allow the operation of the "blues and twos" and other peripheral devices even when LINX is out of the car. The built in TETRA Radio Card also provides full communications over the TETRA network even when LINX is removed from the car.

The Federation of Communication Services (FCS) has launched the FCS Installer Training and Accreditation Scheme (FITAS). Aimed at installers of all types of communications equipment into vehicles, the quality assured accreditation scheme goes live this month. FITAS has been developed in response to industry demand and aims to set a new standard for individual and company-based installers throughout the UK. FCS Installer replaces the Current Silver Award Scheme that was established in 2002.

Lowe Electronics of Matlock, Derbyshire, UK and its associated company Lowe Communications Ltd of Wigginton, York, has been acquired by Safety Communications International (SCI), of Brussels, Belgium, a fully owned subsidiary of Turret Oy of Finland. Turret Oy is a privately held company having investments amongst others in communication companies in the field of professional two-way communication, including SAVOX Communications Ltd (Finland), Con-space Inc, (Canada) and Ixonos Oyj (Finland).

arqiva

Mission Critical Communications

Private Mobile Radio Services

Design, installation, commission and management of digital and analogue radio networks.

Mobile Data Solutions

End-to-end solutions encompassing in-vehicle and personal devices utilising digital radio, GPRS and 3G bearers.

Outsourcing and Managed Services

Traditional maintenance to fully managed services, covering terminals, control rooms and network infrastructure.

Secure Telecommunications

Dedicated telecommunications networks utilising microwave links, leased lines and dark fibre.

To find out more about Arqiva's public safety group call 0845 650 4020, email public.safety@arqiva.com, or visit www.arqiva.com/publicsafety

Is there a future for satellite comms?

Since 7/7 the pressure has been on emergency services to secure the most advanced communications technology – a difficult task during an economic crisis. Are satellite communications therefore an expensive luxury? John Severs examines the dilemma.

"In addition, in terms of delivering on a per-meg basis, it is cheaper than most other mobile bearers with service levels and locational delivery guaranteed."

David Savage, CEO, Excelerate.

Satellite is far more expensive than 3G and offers a level of service that may only rarely need to be used. And for managers looking to cut costs, a move away from satellite is perhaps attractive. However, an assessment of the way satellite communications are used may be a more profitable option in terms of both level of service and costs.

Tom Wheeler, technical manager at Tariam Satellite Communications, admits that satellite communications services are an expensive option. "In the current economic environment, everyone rightly has an eye on costs. The problem is the words 'cheap' and 'satellite' cannot readily be used in the same sentence for business grade services. This is because the cost of the satellites and the sophisticated infrastructure has to be passed on to the end customer, as well as the site equipment and basic connectivity. So when you are paying for your airtime and hardware, you are paying for a share of those costs as well. Satellites are expensive to build, launch and run, and the corresponding services are of the highest quality, as this is what the sector demands, and so it's hard to make the services cheap."

As a result, many businesses opt for mobile telephony and 3G options. Tareq Khamis, managing director of Prime Satcom Consulting, admits that satellite faces competition from these cheaper alternatives, but he is confident satellite is the right option in the public safety sector. "Within communications technologies, there are obviously a lot of products around, but if you are looking for something transportable, then you are really only looking at a satellite versus mobile telephony battle. Obviously, mobile telephony is cheaper, but you also have to consider the quality of service: how reliable it is, can you can be sure that wherever you are you will always have a service available, and if you do have a service, how good is that service and how much bandwidth does it offer.

"Mobile telephony is basically a terrestrial system so uses a terrestrial network. This means that if there is a problem with the local network, your communications are going to be interrupted. In flooding emergencies and major terrorist events, terrestrial networks are very vulnerable. Satellite technology is almost on its own in offering complete 100 per cent availability – guaranteed bandwidth to a specified level that is always available. So is there anything cheaper than satellite that offers a comparable service? No. But is mobile telephony cheaper? Yes, it is, but you will have to live with its inadequacies."

These inadequacies, he says, centre around the issues of bandwidth and coverage, with not enough of either available. Wheeler agrees. "3G and mobile phones can appear to be a cheaper alternative for remote site communications, but as soon as you get to the point where you're in a mission critical situation or remote location, the GSM service is just too inconsistent. Users in remote sites find 3G isn't widely available, and consequently broadband speeds aren't possible.

The GSM mobile networks have been developing a secure GSM network for the emergency services and military, which is now in place, but ultimately if the terrestrial core goes down, the services are very vulnerable. Satellite then, tends to be more reliable than GSM and it can offer better bandwidth. A lot of companies that come to us test 3G and find that it doesn't offer a business grade, supportable service and discover that satellite is really their

only option for the level of performance they require."

The problem, of course, is that the level of coverage satellite offers is not always required. Indeed, a lot of the time the standard of service satellite offers goes above and beyond what is needed. Hence, to someone trying to balance the books, it appears less than cost effective and the 3G option a more efficient service in terms of finance. However, David Savage, chief executive of Excelerate, believes you have to look at the bigger picture: "If it is just sat there doing nothing, it could be viewed as being expensive if one were to completely ignore the business continuity, resilience and civil contingency benefits. But who can do that? Also, when you consider all the applications that can be run over the satellite link, and that it is the only way of guaranteeing that bandwidth will always be available, it is very cost-effective. In addition, in terms of delivering on a per-meg basis, it is cheaper than most other mobile bearers with service levels and locational delivery guaranteed."

Khamis adds that a greater understanding of the way in which satellite communications are supplied and used can make it a much more cost-effective product. "Companies perhaps need to put more thought into why and how they are going to use satellite communications. The first approach is always, 'We need something for emergency incidents', and then they worry that they may be paying for something expensive that they may not need to use. In response, we point out that there are other things you can use the service for, such as there might be a local community event and the satellite equipped vehicle may be hired out to provide Internet connections to stall holders or the general public. Gloucestershire Fire Brigade found that they could use the system as a back up for their Remsdaq systems at their fire stations. You suddenly find, when the technology is installed and at your disposal, that you can use it for multiple applications. And, of course, you can share it with other regions and services. You could hire it out, which could bring in much-needed revenues. If you are paying for it, you may as well make it work harder for you.

"In terms of other options, you can obviously opt for back-up services where you pay less per month, but then you have to pay more per bit per second per hour when you actually do use the service. It is also possible for two services to share a link. A fixed satellite link is provided and shared via wireless technology. That is very much a localised and specific set-up, used for a specific purpose. You can take a vehicle which receives the satellite signal out to an incident and then other emergency services working at that incident can tap into the satellite network and use it through the wireless connection. Whether they pay for the privilege is something that the emergency services would have to decide for themselves."

Finding applications with which to occupy a satellite service, however, is not going to be a priority for busy public safety professionals. Admittedly, some of the applications are useful and would bring in cash, but for many, extra resources would have to be brought in so an organisation can co-ordinate the additional usage. A more advantageous and popular option would be for the technology itself to become cheaper. The general opinion is that this is not that easy. However, a shift in the type of technology being used may offer a future solution.

Excelerate's satellite solutions are used by the Italian Garda (opposite page) and the Royal Berkshire Fire and Rescue Service.

Tariam's Wheeler explains: "One of the key factors limiting bringing down the price of satellite communications is the current technology and available satellite capacity in the required spectrum. The vast majority of the satellite capacity for voice and data (IP) communications over Europe, Africa and the Middle East is on Ku band. However, we are just launching the first services on Ka band in Europe. Because of the way the Ka spectrum works and the higher frequencies involved, this means we can put up to ten times more data over our network. It is massively more efficient in terms of what we can do, and so we can pass that cost reduction on to the end customer.

"At the moment, there is really only one satellite over Europe providing Ka band and there's little spare capacity on it, but a new Ka band satellite will be launched in 2010 that will give us substantial more capacity and will enable us to make these reduced cost Ka services more widely available. Ka band equipment is smaller, cheaper and simpler. As a result of the higher frequencies used, dish sizes are smaller. From the other perspective, much higher levels of bandwidth can be made available over relatively small and inexpensive equipment. So, over the next few years, the cost of airtime and hardware will reduce significantly, but realistically we won't see commercial enterprise- and government-level Ka-based services being made available much before Q1 2011."

The likelihood is that public safety sector budgets are going to get smaller before they get bigger and, as a result, managers in charge of communications are going to find it increasingly hard to justify money spent on satellite communications. However, by understanding the possibilities satellite offers in terms of applications available, shared link ups, and the hiring out of the service, they could form a compelling argument in its favour. In addition, the onset of Ka band networks with the promise of lower costs could tip the balance away from the cheaper 3G and GSM options that some claim will be vulnerable in the event of a major incident.

"Companies perhaps need to put more thought into why and how they are going to use satellite communications. The first approach is always, 'We need something for emergency incidents', and then they worry that they may be paying for something expensive that they may not need to use."

Tareq Khamis, Managing Director, Prime Satcom Consulting.

Innovative solutions for multi-agency communications

Efficient and effective communications remain high on the agenda for the public sector despite the current economic climate. What has changed is that there is now increased emphasis on de-risking the procurement process, maximising the value and ensuring that budgetary and time constraints are met.

"Another innovation from Excelerate Technology is a new generation of dual thermal CCTV cameras that provide emergency services with a clearer view of events when attending major incidents."

The move to interoperability and multi-agency communications is inevitable and the technologies that can enable emergency services and other responders to work together in a joined up way already exist. However, no single solution can provide the required level of reliable and resilient communications. The only way to achieve this objective is through a combination of matched technologies that can be easily integrated to enable easy and effective intercommunications.

Excelerate Technology is a leading ISO9001 accredited developer, supplier and maintainer of specialised satellite and wireless-based broadband solutions that improve incident management and enable emergency services to achieve interoperability and share information to meet their responsibilities under the Civil Contingencies Act. In the world of mobile broadband, Excelerate Technology pioneered the initial concept of providing access to high-speed broadband using automatically deploying satellite platforms fitted to command and control units used by the UK's emergency services. The company is now the acknowledged expert in this field with more installations than all its competitors put together.

Whilst there are many potential manufacturers and suppliers that claim to provide a complete solution to meet any requirement, they are unable to match Excelerate's experience, expertise and track record of delivering successful solutions. This view was endorsed at the highest level when Excelerate Technology was appointed technology supplier nationally for the Department of Health's HART programme, delivering a new generation of civil contingency vehicles equipped to provide high levels of real-time information and resilient communications to enhance patient and victim care at major incidents.

excelerate
DATA VIDEO VOICE INTERNET VIA SATELLITE & WIRELESS

At BAPCO 2009, Excelerate will be demonstrating a number of recently completed vehicles outside the main entrance to enable visitors to see what a multi-agency command village might look like at a large scale incident and how interoperability can be delivered. They will include a 15 ton major incident command unit belonging to Royal Berkshire Fire and Rescue Service using the same common platform as the HART vehicle. It is configured to allow greater on board conferencing with a specially designed operational area that will increase RBFRS's resilience in the event of their central control rooms ever being compromised, allowing the mobile unit to take over as part of their business continuity strategy.

The vehicles on display will showcase many innovative solutions developed by Excelerate Technology that are now in daily use throughout the UK and Europe enabling a range of cutting-edge voice, data and video solutions to be rapidly deployed regardless of location. For example, Excelerate was the first UK-based company to design and install fully converged private GSM solutions, enabling vehicles to carry their own GSM network delivering full telecoms capabilities in situations where either none exist or are unavailable. Excelerate remains one of the few companies with the expertise to make this work properly.

Another innovation on display will be ECMS (Excelerate Communications Management System), a powerful solution developed by Excelerate to provide satellite and GSM-based VoIP (Voice over IP) PBX switching functionality. This enables commanders to use VoIP handsets as fully featured extensions of any HQ-based PBX and use the mobile satellite links to route calls under normal conditions when the vehicle is stationary. Significantly, ECMS also enables different voice devices including UHF and VHF radios, mobile and VoIP phones to be patched into each other as well as providing real-time voice recording of all voice communication channels.

Mobile satellite is the enabler that will deliver data to

mobile command and control vehicles and achieve a Common Operating Picture comprising a range of data from all responders and emergency teams. It enables STEPS (Strategic Emergency Planning Software), GIS and other specialised applications to be run wherever the vehicles are deployed. Emergency plans can be updated, viewed and shared remotely in real-time using on-board satellite links to keep every level of the command structure informed wherever they are located. These vehicles can be equipped with wireless networks that enable personnel using PDAs, laptops mobile phone and data terminals to access tactical plans, live video streaming or information from STEPS anywhere within a 100 metre range. This range can be extended almost indefinitely using self-powered, rapidly deployable mesh wireless nodes – another of Excelerate's operational innovations. For maximum resilience, vehicles can communicate directly with each other as well as their appropriate HQs and other locations.

Another innovation from Excelerate Technology is a new generation of dual thermal CCTV cameras that provide emergency services with a clearer view of events when attending major incidents. Designed for rapid deployment, they combine a high resolution optical zoom camera with a sensitive thermal imaging camera in the same remote head for operation around the clock.

Thermal imaging can be selected with the press of a single button to provide a wide-angle view of the current scene. Heat sources are highlighted in white with brightness and colour according to heat and the temperature of the item in the centre of the screen at any time is displayed. The optically flat glass window is distortion free, giving brighter and clearer images at higher zoom ranges helping, human presence to be identified in thermal mode at over 450 metres. What is more, high quality, interference-free images can be delivered at distances of up to 2km using COFDM Video and UHF telemetry. Live video streams can be viewed on any of the large or small screen monitors by Silver Command Staff in the command and control centre operating at the scene of an incident or streamed via secure satellite links to a secure video server for online access in virtual real-time by authorised personnel using internet-connected PCs anywhere in the world.

The ability to deliver broadband to vehicles via satellite regardless of location is now well established. A current focus is how to integrate a wider range of technologies that will enable additional benefits to be derived.

For example, Royal Berkshire Fire and Rescue's Sprinter was designed to not only deliver rapid response command and control facilities at smaller incidents, but also be used for community service programmes at schools and shopping centres across the region. These programmes can be scheduled in advance, enabling the usage of the vehicle to be extended rather than sitting idle waiting to be called out to attend the next category 'A' incident.

Powys County Council has also enhanced the delivery of its Youth Information Service with two new purpose-built vehicles equipped with the latest satellite-based communications equipment. These vehicles will also enable Powys to meet their obligations for civil contingency within existing budgets. Their Chief Executive Mark Kerr commented: "These new vehicles not only significantly enhance our Youth Information Service, but the built-in satellite communications capability enable us to deploy the vehicles anywhere in the county at short notice to provide communications support in the event of a local disaster. They will also provide us with an essential fall back should our central facilities be compromised."

Excelerate Technology is committed to working closely with users to turn ideas into reality in the most cost effective way and understands that in the real world, it is operational personnel not engineers that have to manage these increasingly complex communications networks. It is with this in mind that the company has recently completed a major programme of investment at its HQ at St Mellons, Cardiff where a new R&D and project engineering centre has been built. This new facility will be a centre of excellence where new products and solutions, particularly those delivering interoperability between the blue light services, will be developed at an even faster rate. It also provides additional capacity to efficiently handle an increasing number of projects from retrofitting existing vehicles through to a complete, single source solution for building bespoke mobile command and control units.

Excelerate Technology Ltd
Willow House, Pascal Close, St Mellons
Cardiff CF3 OLW
Tel: 0845 658 5747, Fax: 08700 516792
Website: www.excelerate.info
Email: nicolas@excelerate.info

"These new vehicles not only significantly enhance our Youth Information Service, but the built-in satellite communications capability enable us to deploy the vehicles anywhere in the county at short notice to provide communications support in the event of a local disaster."

Mark Kerr, Chief Executive, Powys County Council.

FiReControl concerns

The UK's 46 control rooms are to disappear, to be replaced by nine regional "super control centres". However, it would appear that there are many serious concerns surrounding this wide-ranging project, writes Ann-Marie Knegt.

Control room operators are facing an uncertain future as FiReControl will result in a number of redundancies.

The FiReControl project has been introduced by the UK Department of Local Government and Communities as part of the solution to create a critical national infrastructure, which enables England's FRSs to deal with massive disasters, including floods and terrorism events.

The aim of the project is to enhance capability, increase resilience and improve efficiency by replacing the 46 current control centres by nine Regional Control Centres (RCCs), which are all connected via a secure and resilient data network based on three data replicating servers. The principle behind the idea is that all existing data and information is nationalised and shared between FRSs, enabling a standardised and unified response according to the same operational procedures for the whole of England. It will also enable a precise allocation of all available assets and resources in an area.

However, resistance against the project is persistent from within the Fire Service, as there will be considerable redundancies. Another concern is that local knowledge – essential for a firefighter's job – will be lost in the system.

In addition, it seems that the £380 million project that promised considerable savings is to go over budget as well as experience considerable delays. Several news sources state that the project is now nine months behind schedule, and Communities and Local Government Minister Sadiq Khan has blamed the delays on fixing "a number of difficulties with the information and communications technology." He also commented, "The full national network of nine will be operational from spring 2012." This indicates a five-month change in schedule at the end of the project.

A major area of concern with the project revolves around testing. With a solution of such a grand scale and complexity as FiReControl, testing and retesting of the system is an essential part of the development. Recently the main contractor for FiReControl (EADS), identified a hardware improvement for one of the main replicating servers. This improvement is considered essential in order to make resilient network future proof. CLG has been slow in responding. Until it gets back with an answer the contractor is hindered in continuing work

The new Regional Control Centre in Taunton is soon to be operationally ready.

and testing the system. Another reason for the rescheduling of FiReControl is that it is directly linked to sister project FireLink, which itself is reliant on external circumstances. FireLink is replacing each fire and rescue service's current main scheme radio technology with a single-wide-area communications capability in England, Scotland and Wales. Several people have criticised the lack of integration between the two projects. Without FireLink, the resilience of connectivity is compromised between the Regional Control Centres and the Mobile Data Terminals (MDT), due to be installed in every fire appliance.

Concerns

The UK Fire Brigades Union is also very concerned about the project, and one of its main objections is that the local knowledge that drives the job of a firefighter will get lost in this huge national network.

Aligned Assets, the subcontractor responsible for the collation of all existing data within the FRSs, collects and incorporates all essential information that is classed as local knowledge, including hazard plans, hydrant locations, and access. The company developed a Data Capture Tool Kit, which is being successfully used to capture all information from 30 of the 46 English Fire Brigades. Eight out of the nine RCCs have now been built, and EADS DS is now installing and testing all sub-systems, including the redundant servers, fire station end equipment, the video walls, as well as MDTs. These tests have proven that local knowledge can be captured in a meaningful way. It will be available on a national scale in a common data format, enabling any control room operator in any of the nine RCCs to access this information and pass it on to the relevant appliances.

View from the Fire Brigades Union

BAPCO Journal met Rose Jones from the FBU (Fire Brigades Union) at the recent Emergency Services show. She works as a control room operator herself and is Brigade Secretary for West Midlands Fire and Rescue Service. She strongly feels that England's FRSs have been left in limbo. "Everyone who works in control rooms feel they have been left out in the cold and they don't know where they are going with their lives at the moment."

Jones has several objections against FiReControl. She does not think the project will result in a better service for the public and she is very concerned about losing local knowledge. "We think there will be difficulties understanding regional accents, and this might initially cause delays in turn-out. We also fear that once a call gets into the system and it cannot be handled by the originating RCC, it will just end up spinning around from control room to control room."

The FBU has been against the project since its inception, says Jones, and is urging CLG to scrap the projects, and utilise the implemented technology in a different manner. Several years ago the FBU put a proposal forward which entailed that if the Department was going ahead with the project, there would still be sub-control centres that would feed into the main system. Jones still sees this as a possibility, because she believes that the up-and-coming system will not allow the fire brigades enough control to manage their incidents properly.

What Jones is most afraid of, however, is that the system is not going to do what the operators expect it to, and that there will be many teething problems, which may cost people's lives.

Future challenge

A major challenge for England's Fire and Rescue Service is that the current 46 control rooms are not just used for emergency call handling, but also for additional business processes taking place within the fire service, such as internal communications and administrative calls. Under FiReControl the RCCs (Regional Call Centres) are only meant to deal with emergency call mobilisation, not with the other functionalities that keep an FRS going. This means that England's brigades are being forced to review their internal structures, resulting in reorganisation – a huge task.

Another issue that has come to light is that many FRS personnel don't realise that FiReControl is not an Integrated Command and Control System, as it does not replace the command functions needed for an incident. Instead, it is a call handling and mobilising system that aims to provide a way of controlling and allocating resources under common agreement and a uniform protocol. FiReControl has been designed to meet massive call surges that occur when disaster strikes, so any control room operator can make the right decision based on a standardised protocol, enabling a quicker, unified and targeted response.

Lack of communication

A project such as FiReControl can only work realistically when the end user – in this case the FRS – is involved in the process, especially as the only way to conserve local knowledge is for those end users to bring the information into the new national system themselves. Connecting all England's fire services on one large network to enable a standardised response could be seen as useful, seeing that not all of the FRSs have the same material and equipment, and there are some considerable differences in the resources.

FiReControl is extremely ambitious and complex, and it is going to be rolled out, no matter what. Much work has been carried out and much money has been spent on it. It is felt by many that CLG should have communicated the purpose and progress of the project much better from its inception, because there is still a great lack of understanding within the English fire service. *BAPCO Journal* attended a presentation about the system's technology by Ian Griffiths, Project Director of FiReControl for EADS DS, at the BAPCO exhibition in May 2008, where he was inundated with questions, which he was not in a position to answer. Representatives of CLG were in the room at the time, but did not come forward with any clarity. Many believe this venture will only be successful if the Government clearly communicates what it is trying to achieve, what the benefits are and how they intend to deal with areas that concern the end users.

View from the ground

All you want to know about a Regional Control Centre – and a little bit more. Jane Farenden, Senior Operations Business Manager at West Midlands Regional Control Centre, writes a brief overview of what a Regional Control Centre is attempting to deliver.

Fed up with dry acronym laden articles about the Regional Control Centre? Me too.

Confused about the so called benefits that a Regional Control Centre will deliver? You are not alone.

For those of you who want to read a technical or political précis of a Regional Control Centre, stop now and move on – this article is not for you!

My name is Jane Farenden and I have worked for the Fire & Rescue Service for 32 years most of that time in various Fire and Rescue Service control rooms. For the last four months I made a choice to second to the West Midlands Regional Control Centre Team.

Given my recent experience this (I hope) is a brief overview of what a Regional Control Centre is attempting to deliver. If I slip into jargon forgive me, after 30 years of Fire and Rescue training it's a hard habit to break.

FiReControl

FiReControl is a three-pronged programme designed to proved world class call handling and mobilisation capability while enhancing resilience across all of England's 46 Fire Rescue Services. These prongs are:

- New Dimensions: delivering new capabilities to the Fire & Rescue service to enhance its capability to respond to major incidents.
- FireLink: delivering a state of the art new digital radio system to improve resilience and interoperability in communications.
- FiReControl: delivering a national network of nine fully resilient networked control centres to more effectively handle all types of incidents.

West Midlands Fire Services Regional Control Centre

The West Midlands Regional Control Centre is based in Wolverhampton and is typical of the nine regional centres being commissioned. Geographically it covers the five West Midlands Fire & Rescue Services; Hereford & Worcester; Shropshire; Staffordshire, Warwickshire & West Midlands.

Located just off junction 2 of the M54 on Wolverhampton business park, the building was completed in December 2007 and is run by a Local Authority-controlled company. The senior management structure currently includes a chief executive, two operational business managers and an HR advisor.

Scheduled to take its first calls in October 2010 it will handle just under 200,000 calls per annum with 35 control positions as the standard.

The region protects a population of approx. 5.3 million that is just over 10 per cent of the country's population

and includes cities such as Birmingham, Stoke on Trent, Coventry, Shrewsbury, Worcester and Warwick.

The region has a number of industrial sites as well as large rural areas and 14 per cent of England's motorway links. This mix of risks across the region is typical of the regional mix you will find across all of England.

The benefits of the nine networked centres

The regional centre in Wolverhampton will first and foremost be responsible for handling calls generated within the West Midlands Region. However in times of high volumes of calls (for whatever reason) then West Midlands calls can be answered in any of the other eight centres, and West Midlands vehicles will be mobilised remotely. In addition, calls from other regions could be answered by teams based in Wolverhampton.

Very importantly all nine centres will have common technical capabilities and business processes ensuring that anyone in any of the nine controls centres can mobilise quickly, efficiently and accurately.

The proven technology will give all Fire & Rescue Services 12 key operational benefits ranging from mobile data terminals in all vehicles to full premises-based gazetteer.

So who benefits?

- Firefighters: who will be better equipped, informed and prepared.
- Control Room Staff: who will be better informed and equipped to answer calls and mobilise quickly, accurately, efficiently.
- Members of Public: most importantly the public can look forward to a world class and consistent level of service from the fire and Rescue Services anywhere in the country.

Is it a project that has had its challenges? Yes! Are we there yet? No! Can it be delivered professionally, and will it show benefits and be worth the investment? Absolutely.

Jane Farenden can be contacted on j.farenden@staffordshirefire.gov.uk

"Messing" with lives?

A former Control Operator in one of the larger shire fire and rescue services in the UK writes to BAPCO Journal about the regionalisation of control centres and its potential effects.

"The money and costs are a secondary issue – it is the safety of the firefighters and general public alike that must be prioritised, and with the regional control centres it is a serious and genuine concern that standards of fire cover are going to be severely compromised for various well publicised reasons, ultimately costing lives."

Former Control Operator, name and address supplied.

I vacated my position in the control centre two years ago, in order to avoid the inevitable re-location in a regional control centre, redundancy, or re-deployment in a new role within the Fire Service in which I would need re-training. This was following six years of dedication and commitment to a job where I believed my future would be. As it happens, I am now extremely happy in a new non-fire service employment.

A selfish, "I'm all right Jack" attitude it may seem, but that is far from the truth. The Government is messing with people's lives. I have many friends who still work within control centres and they are extremely worried about how they must adjust their lives in order to fit in with what they believe is an extremely unsafe regionalisation policy.

It seems that it will be going ahead of course, although the "go live" date is constantly being extended – at an outrageous expense I hasten to add.

It is about time that the Fire Minister, Mr Sadiq Khan, realised that his Department is playing with people's lives. Clearly, the control staff are most affected but equally as significantly there are dangers that firefighters may be exposed to when regionalisation takes place. And consequently the general public – who can expect a far from satisfactory fire service should they be required to deal with an emergency – would have their lives put at risk.

The saving grace is that the Opposition apparently intends to shelve regionalisation plans should they be elected back into Government, and as such, one could hazard a guess as to where my vote will be going.

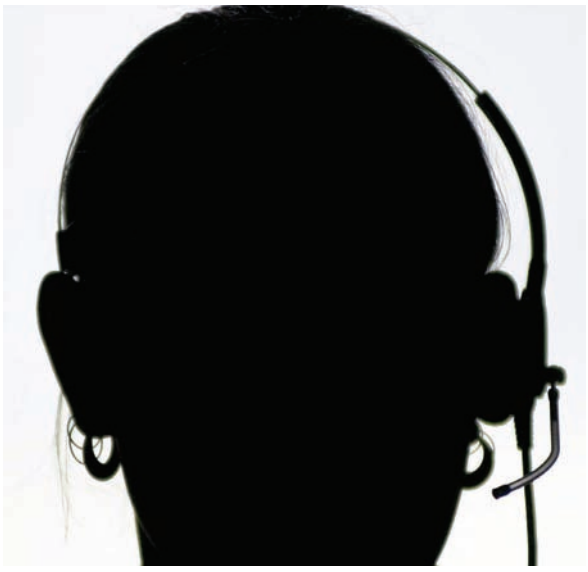
The Fire Minister has suggested that some control centres in the UK are often overloaded with fire calls, and take too long to initiate secondary control centres, and thus a regionalised control centre would help to alleviate this problem.

I doubt it, and if that is the reason for this project, reducing the current 46 control centres to nine – yes just nine – then it has been a fruitless and costly process. How can spending so much money be justified when the country is now in recession?

I am sure that many of your readers will be aware of the astronomical costs. Not the £100m originally budgeted for, not the additional funding provided by the taxpayer taking costs up to £360m, but now a whopping figure forecast to be in the region of £869m.

Where then has all this expenditure been directed*?

- £92m+: additional staffing, regional directors, press officers, "change co-ordinators", project assurance staff, redundancies, relocations and staff redeployment.
- £55m+: management consultants
- £27m+: paid to regions to cover the additional staffing and associated costs of setting up the project
- £22m+: civil servants, contractors, agency staff, consultants amongst others



- £342m: rental costs for the nine regional control centres (not including London, conservatively estimated at £60m)
- £190m: IT costs for the first eight years (Government quote, although more realistic quotes top £213m)

The money and costs are a secondary issue – it is the safety of the firefighters and general public alike that must be prioritised, and with the regional control centres it is a serious and genuine concern that standards of fire cover are going to be severely compromised for various well publicised reasons, ultimately costing lives.

To replace many experienced control operators who have local knowledge of the area and the major risks within those areas, with untried and untested technology, is fraught with danger, and poses many risks to the firefighters and the public of the UK.

I believe that not one person is going to benefit from such a wasteful project. And consideration must be given to reviewing the whole process, and taking the stance that Scottish Fire Services have done, who are to remain with their current system, and avoid any related cuts.

Having said that, the money has to come from someone's budget, and as a result will most likely affect other areas within the structure of the fire service where the money could be better spent. There is a significant worry that frontline services may be cut in order to pay for the project. An urgent independent review must be considered before it is too late, and before any more of taxpayers' money is wasted. Although the Government has pledged to provide "resilience" payments to cover the increased costs of the regional control centres, the payments are for three years only, after which cuts will have to be made elsewhere in order to cover the costs.

** Figures published by the Fire Brigades Union, August 2008.*

→ Does your CAD technology give you the power to respond?

Intergraph's leading I/CAD system has the flexibility and scalability to meet your public safety and security challenges.

For the last 20 years, Intergraph has delivered specialised solutions for public safety – improving emergency response and protecting the lives of 500 million people around the globe.

Our customers include emergency services organisations from Toronto to Mumbai, Ambulance Trusts covering one person in four in England, some of the world's largest airports and metro systems, national border security and major events spanning the Winter Olympics, the Pan-American Games and 2008 European football championships.

We welcome the opportunity to put our experience to work for you.

Create a Safer World®

INTERGRAPH

To learn more about how Intergraph can help you create a safer world, call 01793 492437, e-mail sgi-uk@intergraph.com or visit:

www.intergraph.co.uk

Crime on the e-maps

Following a pledge by the Home Secretary last year, the pressure was on for England and Wales police to place interactive crime mapping on its public-facing website. This was eventually achieved with varying degrees of success – which is why Pitney Bowes MapInfo has published a guide to UK public crime mapping. We talk with Ian Broadbent to find out more.

"One of the problems with mandates like this is that people tend to approach its implementation as a tick-box exercise, and we have seen some examples where the standard is quite basic"

Ian Broadbent, Pitney Bowes MapInfo.

Crime in Focus, the best-practice guide to UK public crime mapping, aims to highlight the possible pitfalls of "crime online", and to recommend key principles that will fulfil the needs of the community and related stakeholders.

What crime mapping shouldn't be about, emphasises Pitney Bowes Strategic Industry Manager (Policing and Crime Analysis) Ian Broadbent, is simply ticking a box. "One of the problems with mandates like this is that people tend to approach its implementation as a tick-box exercise, and we have seen some examples where the standard is quite basic. If forces want to genuinely reduce fear of crime and engage the public, we believe there are better things that can be done."

Currently, forces are implementing a variety of systems some of which are comprised of basic functionality and are not informative to the public. Although this response is initially disappointing it may, further down the line, lead to a clearer understanding of the issues. It could also lead to having to start from scratch again. "Our idea is to work in partnership with forces to ensure their solution is fit for purpose and provides the public with reliable informative crime data about the area. We also aim to ensure solutions are future proof."

The *Crime in Focus* report highlights a number of potential pitfalls, where things might seem straightforward at first sight, but which can result in a misleading view of a location's crime statistics.

The time at which crimes are committed is one such issue. If crime data is not split between daytime and night time profiles, the resulting combined data will give a false picture. The locality will appear to be dangerous in the day (when it is not), and relatively safe at night, which may also not be true. Major railways stations like London Paddington, Gare du Nord or Madrid Atocha are cases in point, where drugs and prostitution at night replace daytime commuter crowds.

Then there is the issue of defining location of a crime. While burglary has a distinct location, says the report, "What about a personal theft, undetected by the victim until some minutes after its occurrence, or possession of drugs, which is not detected until a search is performed at the police station? In each of these two latter examples, location will be ascribed to a place (the middle of a park, the centroid of a police officer's beat, the police station address, respectively), which is to some extent divergent from the real location of the offence."

Getting it wrong, says Broadbent, could have unforeseen repercussions. Neighbourhoods wrongly branded as having high levels of crime could lead to public dissatisfaction and higher insurance premiums. "If you highlight that there have been 30 crimes reported in an area, but not the number of houses for example 2000 on an estate or the time period over which the crimes have occurred and that all 30 crimes have been detected, then you are not only failing to reduce fear of crime but misleading your audience. Crime mapping used properly with appropriate data can send out a positive message."

Implementing a fit-for-purpose crime mapping solution need not be an arduous task, explains Broadbent, with a typical project taking three or four weeks.

Crime in focus: key challenges

For a copy of the report Crime in Focus, email Sally_skidmore@mapinfo.com.

Key challenges include:

- Incompatibility of different administrative geographies
- Accurate recording of location of crime
- Under-reporting of certain crimes
- Capturing and visualising time of crime
- How to express crime – sheer volumes or per capita
- The impact of crackdowns
- Overlaying detection data
- The impact of seasonality and special events.

As a result, police forces need to consult widely with local government and politicians, social and emergency services, business and consumer groups, in order to come up with a crime mapping solution that both fulfils the community's needs and presents crime data in context, so that users are not misled.

Since crime mapping needs will develop over time, forces are advised to invest in modular software solutions that can be built up gradually from a simple initial application, in the most cost-efficient way possible.


Samdale
Digital Mobile Radio Communications Specialists
Coverage & Performance Surveys
Network Optimization
Application Development
RF Propagation Studies
Survey Systems
Consultancy
Training
ISO 9001 REGISTERED FIRM
TETRA
sepura SOLUTIONS PARTNER PROGRAMME
Championing the cause of Public Safety worldwide
Web: www.samdale.com ~ Tel: +44 (0) 1621 878690 ~ Fax: +44 (0) 1621 878699

Mobile data in 2009

In November the House of Commons Home Affairs Committee put forward a report calling for further investment in mobile data. BAPCO Journal spoke to a number of key players in the industry to find out what they believe the future holds for mobile data in 2009.

"During 2009 I think we'll see a consolidation in the use of mobile data and a rise in the number of applications that are developed for the devices."

Peter Harris, Wireless Access division, Arqiva

Roger Marsden, Client Director Mobile Data, Airwave Solutions

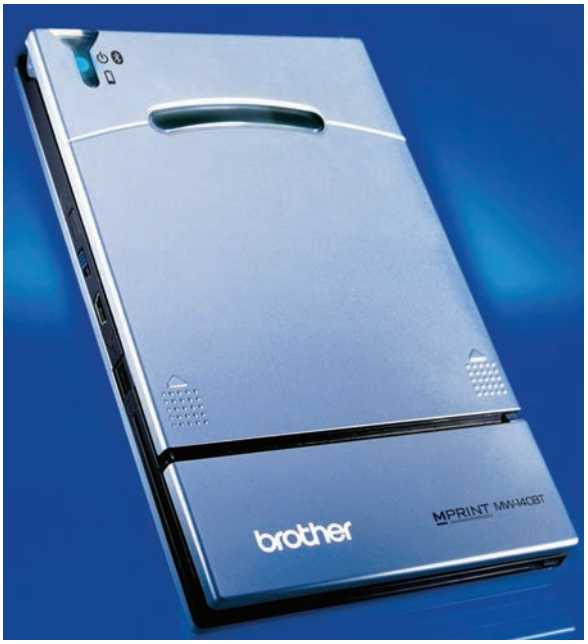
We believe that 2009 will be the year where forces consolidate their positions and start to recognise that police mobile information is about much more than just technology. Indeed, to get true value from their investments, forces will concentrate increasingly on the real end-to-end business benefits. To achieve this they will need to identify all their key operational processes and then design mobile information deployments around them.

On the technology side there is an obvious and growing requirement to transmit and circulate both moving and still images from the front-line to colleagues. Handheld ANPR is now becoming a realistic possibility and the move towards mobile fingerprint recognition will deliver very significant benefits. However, the real challenge for our industry will be for device manufacturers and application suppliers to combine all of this functionality onto a single device. Another natural progression to this will be true seamless mobility with devices and applications being able to switch between the most appropriate available bearer networks. This type of technology is starting to grow in vehicle-based deployments, but the availability of this technology on hand portable devices is not far off.

Airwave's key area of focus in 2009 will be paperless policing. The recent part acquisition of Kelvin Connect has enabled the launch of our Fusion programme, which combines secure frontline mobile support tools with an extensive option of truly paperless end-to-end processes. The key elements are elimination of obsolete and paper-based processes, which remove the need to complete multiple forms and wasteful re-keying of information.

Another key priority in 2009 will be to ensure that all of our police mobile data customers achieve successful rollouts for their front-line users.

Several police forces have moved quickly into mobile technology deployments using enterprise/consumer devices and solutions. In many cases these choices appeared to be technology driven eg speed of deployment, perceived lower costs and apparent ease of integration. However, there appears to be a growing realisation that some of these devices and applications are not able to deliver these true end-to-end benefits. Several forces moved quickly into solutions using smartphones or BlackBerry type devices but we are now seeing front-line operational users actually challenging the technology they have been given. It is simply not practicable to gather things like witness statements or lengthy forms using thumb style keyboards. Forces are now starting to realise that in order to deliver real business benefits the deployment of technology has to be underpinned by a fundamental review of end-to-end processes.



Peter Harris, Head of Mobile Data at Arqiva's Wireless Access division

During 2009 I think we'll see a consolidation in the use of mobile data and a rise in the number of applications that are developed for the devices. For example there have been trials for the use of fingerprint technology on devices to provide better identification of individuals and this could be something that becomes more widespread through the year. In March the Metropolitan Police will be rolling out PDAs and MDTs from Arqiva force wide and we are providing both the devices and the gateway through which they are hosted with our partner Detica. This level of roll out underlines the size and scope of mobile data and the increased frontline use of such devices.

In Scotland, Strathclyde Police are also using PDAs provided by Arqiva to interrogate databases and provide information for incidents. The benefit of using these devices is that it provides increased effectiveness and an increased quality of service. Additionally the Strathclyde Police PDAs are equipped with an e-notebook solution that allows officers to upload their data at the station when they end their shift, which ensures data is always gathered and stored correctly before an officer logs off.

Roy Hawes, Commercial Director, Beat Systems

It comes as no great surprise – indeed it is a relief – that the report published by the House of Commons Home Affairs Committee has called for further investment in technology in the police sector, and has outlined the view that mobile

devices need to become a standard piece of kit for officers.

Make no mistake the introduction of mobile data is as radical to policing as the introduction of hand radios to foot patrol officers. The recent funding for mobile data has without doubt, helped enormously in providing an improved police service. The report has identified the main criteria; however, history provides evidence that the development and adoption of technology might not always provide the benefits available.

There is a danger that forces will attempt to develop solutions themselves to achieve political aims that are often not in the best interest of the public. Past experience has demonstrated such developments have not always been a success, and the true adverse impacts financially and operationally are disguised via positive political spin.

There are further challenges, forces seeking to select their mobile data route need to be sure of their supplier. The best advice can only be to choose the safest risk-free route – a supplier with the greatest references and track record as evidenced by forces themselves.

It must be stressed however, that the introduction of new technology, in particular mobile data, is the start of a new journey for forces. They must remain sure of their route, true aims and objectives and most importantly select their supplier wisely.

Michelle Molloy, Brother UK

The introduction of mobile technology has made a huge impact on UK police forces in terms of reducing paperwork and increasing the amount of time police officers can spend on the beat.

The calls for further investment can only help to increase these benefits in 2009 and will enable police forces to streamline back-office procedures to help officers become truly mobile.

The majority of mobile data can be collected electronically using a handheld wireless device, and transmitted back to HQ securely. However there is a need for certain data to be printed off – for example issuing fines or penalty tickets on the spot to members of the public. Simply equipping officers with mobile devices may help them complete more admin on the move, but if they have to carry bulky printing equipment, or worse, have to return to HQ to pick up printed notices, then efficiencies will be limited. The British Transport Police and Lothian and Borders Police Force are both using mobile printing devices supplied by us to help in this area. Andrew Watson, Chief Information Officer from the British Transports Police underlines the benefits it is having. "The ability to print is key to success. Since the introduction of printing stop forms we have seen a 93 per cent increase in the number of stops – and it has not created any additional paperwork."

It's important that managers consider robust and comprehensive mobile strategies for 2009 that include a mobile printing element. The police will certainly welcome the push for additional funding, but it's critical that this money is put to the most effective use.

Richard Blake, Sales and Marketing Director, Microbus

We anticipate 2009 will be one of the best years for us in the sector of mobile data. The emergency services are now fully aware of the benefits of the technology and the technology itself has reached a level where it is now the most efficient way for data to be gathered and entered.

The duplication and integration of data on form and databases now means officers can drastically reduce the amount of form filling they have to do where two years ago the systems hadn't quite been perfected. Being able to do this on the beat or in-vehicle is obviously a massive improvement and saves valuable time on patrol and in the station for front line officers. These benefits are now well known to the police, for example we have 1,700 officers using our mobile data technology in the Met.

Steve Reynolds Chairman Mobile Data Association

The recent announcement from the House of Commons Home Affairs for more investment in mobile data is something we at the MDA think is very positive and shows the value of this technology in the future.

The important thing for the future of mobile data is for the emergency services, and especially the police, to make sure they operate best practice when acquiring devices and don't rush anything. The private sector is able to buy PDAs for their staff from the shelf and leave it at that, but the public sector has a far greater responsibility to ensure they have the right technology and issues of security are addressed before going live.

On this note the MDA also thinks it's important for forces to make sure they communicate with one another – letting each other know what works and what doesn't. There is some reluctance among forces to communicate but there must be a dialogue on these issues for the benefit of all concerned. By making mobile data a standard issue for police, as it is fast becoming, Command and Control management can move away from having to worry about the deployment of police resources, to dealing with public security issues at any major events.

Graham Baker, Senior Manager of EMEA Public Sector Sales, Research In Motion

Public sector organisations can get the most out of their smartphone deployment by selecting the right devices, as well as appropriate mobile applications, according to their mobile workers' job function and preferences. It's not about simply giving every mobile user the same device and that being the end of it.

For many years, RIM has been focusing on the importance of mobile applications to ensure that data sent over-the-air is appropriately conveyed to the end-user. It's no good giving everyone the same device; different roles require different data access. For example, road traffic officers having access to the DVLA driving licence database saves invaluable time both for them and the public as information can be checked at the roadside. But for community support officers it's far more important to have access to real-time data like photographs of missing children or wanted criminals, as this is more relevant to their role on the streets.

Worldwide we provide the BlackBerry solution to over one million government and public sector customers so we are well aware of the challenges facing front line officers, and the funding coming from government is important to meet these challenges.

"The important thing for the future of mobile data is for the emergency services, and especially the police, to make sure they operate best practice when acquiring devices and don't rush anything."

Steve Reynolds, Mobile Data Association.

Do you need a reliable and future-proof mobile data solution with proven business benefits?

Microbus's range of mobile data computer hardware is specifically developed to provide first responders with crucial information where and when they need it.

Designed with the user in mind, they feature large daylight-viewable touchscreens, a wide range of integrated connectivity including TETRA, 3G, GPRS, HSDPA, Bluetooth, WiFi and GPS, and provide an ideal platform to access data on the move and run your Windows® applications.

Cost-effective, reliable and robust, our computer systems deliver proven business benefits that could help your organisation.

Benefits

- Reduce paperwork and administration
- Increase efficiency and effectiveness
- Reduce communication errors
- Improve resource management

TETRA

For more information call +44 (0)1628 537333
or visit **www.microbus.com**

Microbus

BAPCO

THE BRITISH ASSOCIATION OF PUBLIC SAFETY COMMUNICATION OFFICERS

Notice of annual general meeting

This is preliminary advice that the 16th AGM of BAPCO Ltd will be held at 16.15 hours on Wednesday 22nd April 2009 at the Business Design Centre, Islington, London.
At this time the Association is seeking candidates and nominations for the following Elected Officer posts:

- President Elect
- Vice President

Candidates and nominations for office (which must be formally proposed, seconded and agreed by the nominee) from the Active Membership classification should be submitted in writing before 12 midnight on 10th March 2009 (either letter or e-mail: execd@bapco.org.uk) to: Executive Director, BAPCO Ltd, PO Box 374, Lincoln, LN1 1FY.

For more information please contact the Executive Director, Ken Mott, on 01522 575542 or at the e-mail address quoted above.

Agenda

1. Minutes of the Fifteenth AGM
2. Matters Arising
3. Report of the Executive Committee for year ending 31st December 2008
4. Financial Report for Fiscal Year 2008
5. Resolution to Amend Constitution and Bye-Laws
6. Nominations for Life Membership
7. Election of Officers for 2009/2010

(i) President Elect
(ii) Vice President

8. Business Plan for 2009
9. Budget for 2009
10. Annual Subscription rates for 2009/2010
11. Appointment of Solicitor
12. Appointment of Accountants
13. Any other Business applicable to an AGM

BAPCO Central Contacts

President
Ian Readhead
president@bapco.org.uk
☎01962 871148

President Elect
Olaf Baars
president.elect@bapco.org.uk
☎ 0118 932 2226

Vice President
Alan Murray
vice.president@bapco.org.uk

Past President
Ray Trotter
past.president@bapco.org.uk
☎ 01234 408999

Chief Executive
Ken Mott
execD@bapco.org.uk
☎ 01522 575542

European Projects Manager
Paul Hirst
europrojects@bapco.org.uk
☎ 01462 811650

BAPCO Marketing and Administration
Tracey Mott
admin.manager@bapco.org.uk
☎ 01522 543244

BAPCO Conference & Exhibition
Lucy McPhail
l.mcphail@hgluk.com
☎ 020 7973 6635

CAG Chair
Dave King
chair.cag@bapco.org.uk
☎ 07740 158267

BAPCO WEBSITE
www.bapco.org.uk

BAPCO Regional Contacts

South East Region
Chair: Shaun O'Neill
chair.se@bapco.org.uk
☎07785 925450
Secretary: Craden Moulds
info.se@bapco.org.uk
☎07766 088847
Executive Member: Tim Marjason
exec.rep.se@bapco.org.uk
☎07876 034252

South West & South Wales Region
Chair: Peter Prater
chair.sw@bapco.org.uk
☎07793 883049
Secretary: Tracey Quinn
info.sw@bapco.org.uk
☎07738 419652
Executive Member: Keith Phillips
exec.rep.sw@bapco.org.uk
☎07861 238302

East Midlands & Anglia Region
Chair: David Seelhof
chair.em@bapco.org.uk
☎01508 492744
Secretary: John Blundell
info.em@bapco.org.uk
☎01603 506441
Executive Member: David Seelhof
exec.rep.em@bapco.org.uk
☎01508 492744

West Midlands Region
Chair: Rick Abbotts
chair.wm@bapco.org.uk
☎0121 445 5894
Secretary: Abdul Rashid
info.wm@bapco.org.uk
☎01926 423231
Executive Member: Maurice Worsell
exec.rep.wm@bapco.org.uk

North East Region
Chair: Terry Johnson
chair.ne@bapco.org.uk
☎07850 498501
Secretary: Gordon Ross
info.ne@bapco.org.uk
☎07774 896400
Executive Member: Kevin Robson
exec.rep.ne@bapco.org.uk
☎07912 388868

North West & North Wales Region
Chair: Derek Wignall
chair.nw@bapco.org.uk
☎01772 410889
Secretary: Jim Irving
info.nw@bapco.org.uk
☎01768 865536
Executive Member: Jim Irving
exec.rep.nw@bapco.org.uk
☎01768 865536

Scotland Region
Chair: Colin Dalziel
chair.scotland@bapco.org.uk
☎0141 242 0297
Secretary: Alan Beattie
info.scotland@bapco.org.uk
☎07909 535018
Executive Member: Brian Carlin
exec.rep.scotland@bapco.org.uk
☎07905 656403

The event of the year

It may only be January but thoughts are already turning to the BAPCO Show in April, to be held at the Islington Design Centre in London. Last year's show attracted over 1,000 visitors and over 120 exhibitors from across the emergency service, Local Authorities and Government departments concerned with contingency planning and resilience. Dan Worth reports.

"The BAPCO show is always something we attend because there is always lots on display, lots to see, and plenty of opportunity to tell people about what we do and how we can help them."

David Green, Director of Public Safety, Arqiva.

As well as the show there will be two days of varied and important conference talks covering everything from the challenges of the 2012 Olympics to the rise of satellite communications and the ever-popular BAPCO dinner on the Tuesday night. Hugely successful and inspirational paralympic athlete Dame Tanni Grey-Thompson is the keynote speaker prior to the dinner, and after dinner events include a comedian and a casino.

A word from Ken Mott, Executive Director, BAPCO

"The 2009 BAPCO Conference is the 10th anniversary of the launch of the conference and exhibition and during those ten years public safety services and civil contingency has faced many challenges, challenges that could well be exacerbated in the current downturn.

"Therefore promoting interoperability and the sharing of information for planning across civil contingency response authorities, "blue light" emergency services and related agencies is a crucial requirement for improving public safety/civil contingency services delivery. With this in mind the BAPCO conference is designed for emergency services professionals and all practitioners involved in the provision and use of communications and information management technologies in civil contingencies/emergency incidents.

"A new dual stream conference format for 2009 will deliver more variety and a greater choice of topics and sessions for practitioners to choose from as well as a more educational focus (delegates will receive a certificate confirming their attendance at this key learning event).

"The parallel sessions are Resilient Communications, Communications Centres, Next Generation Networks and Operational Data. Emergency services professionals will be able to explore how technology, both current and emerging can assist in meeting the ever changing user requirements, increased inter-agency communications and demands for a service that requires resilient systems and established protocols for information sharing in the event of civil emergencies and incidents."

Views from the exhibition floor

Arqiva will be exhibiting at the show and David Green, Director of Arqiva's Public Safety group, underlines the importance they place on making sure they are there.

One area Arqiva will be emphasising is the use of TETRA by emergency planning officers and local government. Green explains: "We have access to spectrum which can be used by those who need resilient communications at a critical time – not just emergency planning officers but also those in mission critical infrastructure areas like the utilities and nuclear power generation."

Exhibiting for the first time at the BAPCO Show will be Sure Business – a trading name for Cable and Wireless International. The company will be demonstrating mobile SIM card products that operate across all the UK networks, ensuring that users always stay connected. Simon Last-Sutton from Sure says: "For people working in high-risk jobs, or on their own, such as probation officers, gas utility workers, police community officers and so on, these phones offer the guarantee of being able to find any signal on any network if it's available. This gives those in the public safety sector increased security for themselves and for the public at large. The risk of needing to make a call and finding the phone has no signal is drastically reduced."The technology is known as Strongest Signal Roaming (SSR).

Excelerate, a supplier of satellite and wireless-based data, voice and video solutions, will be demonstrating a number of recently completed vehicles outside the BAPCO 2009 main entrance. Visitors will see what a multi agency command village might look like at a large scale incident, and how interoperability can be delivered.

The vehicles on display will include the 15-ton major incident command unit belonging to Royal Berkshire Fire and Rescue Service that uses the same common platform as the HART vehicle and is configured to allow greater on board conferencing.

Another innovation on display will be ECMS (Excelerate Communications Management System), a powerful solution developed by Excelerate Technology to provide satellite and GSM-based VoIP (Voice over IP) PBX switching functionality. This enables commanders to use VoIP handsets as fully featured extensions of any HQ-based PBX and use the mobile satellite links to route calls under normal conditions when the vehicle is stationary.

Significantly, ECMS also enables different voice devices including UHF and VHF radios, mobile and VoIP phones to be patched into each other as well as providing real-time voice recording of all voice channels.

Fortek – dinner sponsor

One of the aspects of the BAPCO Show that is always popular is the dinner held to mark the opening of the show. This year, for the second time in a row, Fortek is sponsoring the dinner. "Sponsoring the dinner is something we are always very happy to do because we think it's such an important part of the show," commented Louise Godliman, Client Services Director. "The conferences and exhibition are both very informative and useful but the dinner is great way for people to be able to have an informal chat about issues in the industry, network and let their hair down and have some fun as well."

QLikTech is appearing for the first time at this year's BAPCO show and its public sector team is already looking forward to it, said MD Andy Honess.

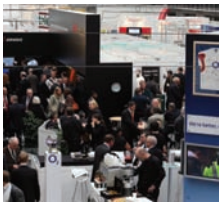
QLikTech is already making progress in the public sector and 2009 looks set to be a busy year. Guests from Devon and Cornwall Police, Gwent Police and the NHS will be on hand to explain the benefits of the services QlikTech provide – the stand promises to be very interesting.

These services primarily concern providing business intelligence and performance management software that can handle everything from crime records to HR data to financial systems for management purposes.

SunGard Public Sector has been attending BAPCO since its inception and the association's annual exhibition and conference is always the first marketing event in the schedule. David White, Marketing Manager at SunGard said: "For us BAPCO is a 'must attend' event. It allows us to introduce new products and features, update our current customers, meet new prospects and network with other competitors, partners and suppliers and because of that it's a very healthy show."

This year SunGard has launched a new version of the DS2000 ICCS known as the DS2000 Compact. It is aimed at the smaller control room and is suitable for new entrants to the market, such as port authorities, rail networks, industrial plants and local authorities in addition to smaller operations within traditional blue light agencies.

Matthew Palmer, Product Manager for the DS200C is convinced that this new version of the market leading DS2000 is destined for great things. "The DS200C is designed for smaller operations and control rooms and will allow operators to easily patch between different technologies simply by using the touch-screen interface." SunGard will also be featuring their Event Management solution and a new multi-media management solution aimed primarily at the police.



First time exhibitor Sure Business will demonstrate its Strongest Signal Roaming technology, which chooses the best coverage on any mobile network in the UK, be it Vodafone, O2, T Mobile or Orange.

A real visit to a virtual NWAS Control Room

Jim Irving, Secretary, North West and North Wales Region of BAPCO, reports on a visit to the new North West Ambulance Service Control Room for Lancashire and Cumbria.

"The clock starts ticking on all calls as soon as the 999 telephone call hits the control room telephone exchange, and for red calls this means a response time of eight minutes for 75 per cent of calls – a real challenge in rural areas where travelling a long distance may be necessary."

Jim Irving, Secretary, North West and North Wales Region of BAPCO.

On Wednesday 12 November 2008, 17 members of the North West and North Wales Region (and guests) visited the new North West Ambulance Service (NWAS) Control Room at Broughton, near Preston, hosted by Sector Manager Graham Curry (a member of their Regional Committee and past president of BAPCO) and Peter Ballan, the Control Room Manager.

They were honoured to be only the second visitors to the control room (they were preceded by the Chair, Mary Whyham) on the introduction of the new control CAD C3. Graham Curry and Peter Ballan explained that a new command and control system had just gone live the previous week, so they were somewhat apprehensive about visits so early in the system's life.

Virtual control room

The building was formerly an NHS Direct Contact Centre, and it now houses a control room that has been designed to be one of three in the NWAS area. Eventually all three control rooms will form a virtual control room, enhancing the resilience of the service provided to the public in the North West. The other control rooms are in Manchester and on Merseyside.

It was good to see that the building's design had taken account of the welfare of the staff employed there. The building has three areas; one for call-taking, one for dispatch and one for the command centre and backup/resilience room, which can be brought into use in the event of a problem at one of the other two control rooms.

The resilience room is in a permanent state of readiness and can be activated as soon as the necessary staff have arrived. An impressive equipment room even has a colour-coded carpet to assist service engineers identifying where equipment is located. Two other equipment rooms are similarly configured. But just to show that the tried and tested pre-technology days have not been forgotten, there is also a "chalk and talk" class room.

With a maximum of 38 operator positions it was good to see that the probabilities of expansion had been catered for already.

At present the control centre manages 90 ambulances, 25 cars, one motorcycle and two helicopters (which operate in daylight hours only).

Typically, 75 ambulances, 20 cars and one motor cycle would be available to respond in an area which stretches from the Scottish Border in the north, to Ormskirk in the south, the Irish Sea in the west, and the Pennines in the east. Peak demand times are between 0700 and 1000, 1600 to 1900, and 2200 to 0200.

The call-taking and dispatch rooms both have natural light from windows, while the central area housing the resilience room has been provided with "sun tubes" to introduce natural light into the room.

At present the Broughton room is only servicing Lancashire, with responsibility for Cumbria being transferred there in February next year. On the subject of Cumbria, it was encouraging to see a display showing Cumbrian idioms on the wall, hopefully ensuring that when a call is received talking about "deeking a marra bein bad", it would be understood that the caller was referring to seeing his friend was looking ill.

C3 Command and Control

Peter Ballan explained the various items of software used to serve the public, including the new C3 Command and Control system. This was introduced because the current Cumbria control room was already using this enhanced version and it was not backwards compatible.

As one of the member attendees worked in the Manchester Control Room, the differences in the systems used in the three area rooms were highlighted. Different systems, for instance, are used for auto-populating screens with telephone number and location. So in addition to servicing larger areas the control staff in NWAS will all have the additional challenge of adapting to different computer facilities, as the rooms all go live.

The relatively new target response times (AKA "call to connect") set by the Government – where the 999 call starts at the time the call hits the switchboard – have meant extra operators have had to be employed. We can readily assert therefore that these are changing times for our colleagues in NWAS.

We wish them every success in their endeavours as it may be our lives in their hands, and trust that the triaging software which grades call for help into red, amber and green, continues to be effective.

The questions presented by the triaging software require "yes/no" in order to simplify getting good answers from anxious callers. We learned that this method has been used in some parts of the world for 30 years.

The clock starts ticking on all calls as soon as the 999

BAPCO

British Association of Public Safety Communications Officers

MEMBERSHIP APPLICATION

1. PERSONAL DETAILS

TITLE	
FORENAME(S)	
SURNAME	
POSITION HELD	
ORGANISATION	
MAILING ADDRESS	
POSTCODE	
BUSINESS TELEPHONE	
FAX	
HOME ADDRESS (If different from above)	
POSTCODE	
EMAIL	

I agree to BAPCO sending information to me regarding its events, products and services. BAPCO will not pass on any information to other companies or third parties ❑

2. CATEGORY OF MEMBERSHIP APPLIED FOR

ACTIVE ☐ ASSOCIATE ☐ COMMERCIAL ☐ INTERNATIONAL ASSOCIATE ☐

OFFICIAL ORDER NO

Please send further details of Corporate Membership ❑

3. ORGANISATION TYPE

Please tick one item that best describes *your* organisation

PUBLIC SECTOR AREA SERVED		ORGANISATION TYPE		COMMERCIAL	
Parish	☐	Law Enforcement	☐	Manufacturer	☐
District	☐	Fire / Rescue	☐	Distributor	☐
County	☐	Ambulance / Medical	☐	Dealer	☐
Regional	☐	Emergency Management	☐	Maintenance	☐
National	☐	Local Authority	☐	Consultant	☐
Private	☐	Central Government	☐	Network Provider	☐
Other	☐	Public Utility	☐	Training	☐
		Other	☐	Personnel	☐
				Other	☐

BAPCO MEMBERSHIP APPLICATION

BAPCO
British Association of Public Safety Communications Officers

4. POSITION RESPONSIBILITIES

Please tick the item that best describes *your* responsibilities in each area:

POLICY & PROCEDURE

- ❑ I approve/develop policies and procedures
- ❑ I oversee implementation
- ❑ I have a limited role in implementation
- ❑ I do not have a role in implementation

PURCHASING

- ❑ I approve purchases of products and services
- ❑ I select specify products and services
- ❑ I recommend products and services
- ❑ I do not have a role in purchasing

PERSONAL TRAINING

- ❑ I approve training programs
- ❑ I develop/purchase training programs
- ❑ I implement/teach training programs
- ❑ I do not have a role in training

5. MEMBERSHIP CATEGORY & FEES (Select One)

❑ ACTIVE MEMBER

Persons employed or contracted by a public safety agency or a department of central or local government responsible for the provision of public safety services, or are retired from such a position, who are directly responsible for, or retired from, the management, specification, design, installation, maintenance, operation and use of public safety communications and information systems, are eligible for this category of Membership

£40.00 per annum

❑ COMMERCIAL MEMBER

Those persons, in business or industry, who receive compensation in any form for services rendered or products sold, are eligible for this category of membership.

£40.00 per annum

❑ ASSOCIATE MEMBER

Those persons, who otherwise meet the requirements of Active Membership, may, at the applicant's discretion, select this category of membership, and, those persons not meeting the requirements of any other category of membership that share the Purpose and aims of the Association, are eligible for this category.

£28.00 per annum

❑ INTERNATIONAL ASSOCIATE MEMBER

Persons who are not citizens of the United Kingdom that share the purpose and aims of the Association are eligible for this category of membership.

£50.00 per annum

Details of Corporate Membership can be obtained from: ExecD@bapco.org.uk

6. PAYMENT INFORMATION

Total amount due £ _____

- ❑ Individual or
- ❑ Organisation is paying for Membership.
- ❑ Personal cheque enclosed.
- ❑ Official purchase order No. _____ enclosed.

7. OPTIONAL INFORMATION

How did you hear about BAPCO?

❑ Co-worker ❑ BAPCO Journal ❑ Sponsor

❑ Other _____

Gender: ❑ Male ❑ Female

Date of Birth: Day_____ Month_____ Year____

8. APPLICANT'S STATEMENT

I hereby apply for membership in the appropriate class of **BAPCO,** and agree to abide by the Constitution and Bylaws of the Association. I understand that by joining I also become a member of the BAPCO region serving my area and that my subscriptions are payable annually, based on my first day of membership.

SIGNATURE _____ **DATE** _____

TEL: 01522 575542	WHEN COMPLETED PLEASE FORWARD THE WHOLE FORM (WITH APPROPRIATE ENCLOSURE) TO: BAPCO, PO BOX 374, LINCOLN LN1 1FY	FAX: 01522 575542 (Remember to fax both sides of the form)

FOR OFFICE USE ONLY

RECIEVED
REGION
MEMBERSHIP No.

CERTIFICATE SENT
RENEWAL DATE

telephone call hits the control room telephone exchange, and for red calls this means a response time of eight minutes for 75 per cent of calls – a real challenge in rural areas where travelling a long distance may be necessary. Amber calls have to be responded to in 19 minutes (for 95 per cent of calls), and green calls in 60 minutes.

Ninety per cent of the communication with response crews employs mobile data. Once a crew reaches hospital with a patient they can download the data they have recorded on their on-board computer onto a smart card, which can then be used to import that vital data to the hospital's system.

Three generations of public service

BAPCO may only be 15 years old but it is interesting to note that tradition is alive. John Burnside, the current Chief Executive of NWAS, was the first president of BAPCO in 1993, having served as the chair of the founding group prior to that. As already mentioned, Graham Curry, one of our hosts, is a past president and on our visit to Broughton we were joined by two more generations of one family with links to BAPCO.

One of my predecessors as Regional Secretary was the late Gareth Wilkinson of Greater Manchester Fire & Rescue Service, a life member of the Association. Present on the visit were his twin brother Stuart (who was also in the Fire Service) together with his son, Glynn (a Greater Manchester Policeman) and his daughter, Lorna (who works in the NWAS Control Room in Manchester). Both Stuart's children had to organise their work shifts to attend. Their uncle Gareth would have been as proud of them as I am sure Stuart is now, and the Region is happy to be associated with such a wonderful family tradition – long may they continue to serve.

We hope to be able to arrange more of visits of this type in the future as they seem to be of interest to you our members. If you have any suggestions for Regional Meetings please let the writer have them. It is also good to report that some members in the North Wales area of the region, despite the potential travelling distance involved, have expressed an interest in participating in regional activities. We hope that others who live closer to the centre of the region will also participate.

Closing on a very positive note we are pleased to report that with 72 attendees, the recent roadshow held at Barton Grange (near Preston) attracted the highest number of attendees for the three shows. We welcomed three members from "over the Border from the north", and trust that they found the risk worthwhile.

If you have any suggestions for Regional Meetings, please contact jim Irving on 01768 865536, email info.nw@bapco.org.uk.

Unleashing GIS power

In 1854 John Snow proved that a water pump in Soho, central London, was the cause of a cholera outbreak. He did so by plotting the deaths caused by cholera on a map to prove to the authorities there was a link between the location of the pump and the proximity of the victims. Since then mapping has become an integral part of work undertaken by emergency services. The ESRI UK Conference on October 29 illustrated how far mapping has come since 1854 and the benefits of the latest technological advancements.

The award-winning Queen Elizabeth II Conference Centre is a purpose-built venue uniquely situated in the shadow of Big Ben, Westminster Abbey and the London Eye.

Anthony Hamber, Hitachi Consulting

Anthony Hamber of Hitachi Consulting discussed the role of a number of prototype GIS applications developed within the National Offender Management Service of the Ministry of Justice to assist with the management of offenders. As Hamber explained, offenders have several specific addresses in their profile including, home address, next of kin and release addresses. Other addresses relevant to offenders include locations such as police stations, courts and probation offices and with over 894,000 escort movements between prisons, police stations and courts a year, the need for a system that can manage and process such geographic information is becoming increasingly significant.

Using geocoded addresses on a map-based system allows relevant information to be processed and displayed in a clear and understandable way. Additional functionality also can be exploited, as Hamber explained. "Using the shared digital mapping service means you can set up victim exclusion zones on the map outlining where the offender may not enter, usually an area where the victim lives. These zones can be stored centrally and called up as required. You can also overlay transport routes onto the map so if the offender claims they have to travel through an exclusion zone on public transport to visit their family or place of work, you can determine if this is true."

Hamber's final point centred on the need for a common symbol set for these maps so they can be easily shared and viewed by other stakeholders without the need for training.

Major Waleed Alhamadan – Ministry of the Interior, Bahrain

Major Waleed Alhamadan began by explaining the role of his department, "the preservation of homeland security and public safety and law enforcement," adding that the use of mapping technology was helping with this role. Major Waleed Alhamadan also explained that the increasing rise in population and therefore increased building and living spaces in Bahrain had made the need for geo-spatial data even more important.

Major Waleed Alhamadan demonstrated the use of ESRI software on his system and how both control room staff

and vehicle operators could access data on roads, traffic flows and locations of other vehicles to provide a coordinated response. The system had been implemented over the last two years and was a first-time system, so there hadn't been the problem of replacing legacy systems.

DCI Simon Jones – Leicestershire Constabulary

DCI Simon Jones from Leicestershire Constabulary spoke about Project Mercator (named after the Flemish cartographer) and their use of GIS in the fight against serious and organised crime.

DCI Jones explained that through the use of maps they had been able to better understand the workings of the organised crime network in their area and the patterns. DCI Jones explained that mapping software from ESRI called Pictometry had given them a big advantage by allowing them to scope out buildings for heights, widths, and entrance and exits, without having to travel to them. With cocaine routes into Loughborough originating in Spain, DCI Jones explained they had worked with Spanish police to tip them off about a factory where they believed the cocaine was coming from and so passed on information on the building without having to even leave their control rooms.

The use of maps also made it a lot easier to present information to others. DCI Jones explained this by showing a map of the drugs route through Europe and the links between gang members by their locations on a map. He added that this ability was an important stage in the policing process: "It's not enough to have knowledge of something, you need to turn that knowledge into intelligence before you act on it. Using intelligence means you may not go straight for the first person you suspect but act on the information you have to follow it through to a more worthwhile conclusion."

DCI Jones' final point concerned the help of the public. "Maps are a great way of getting the public to give information without them knowing it, or compromising an operation. We can take information we receive and plot it on the map and build a view of the area. This in turn allows better deployment of officers and technology."

Ian Oldfield and Peter Bleakley – Metropolitan Police

The next talk of the session looked at the use of GIS systems to help detect the possible locations of criminals based on their patterns of offending. Ian Oldfield and Peter Bleakley from the Met Police explained how they had developed this with a prototype ESRI-based model called Interactive Offender Profiling System (IOPS).

With almost a million crimes recorded in London every year and many more calls for service, the Met's need for accurately mapped data is very high. Bleakley pointed out that despite the widespread deployment of Mobile Data Terminals (MDT) in police vehicles in London, they were still only linked to its Command and Control system. Other police forces had expanded the information available via such mapping terminals to include real/near time intelligence to assist officers in making the best use of emerging geospatial intelligence tools, to display crime hotspots and criminal locations.

Oldfield explained the nature of criminal behaviour lent itself to being plotted on a map and the information could be used to build up a picture of where the criminals might be found, based on anchor points such as their home or work. Research showed offenders travelled out from these anchor points, revealing their links to a geographical area. The IOPS system is built on ESRI software and compatible with the Met's Command and Control system, although the two are not yet linked.

Further studies involving solved cases and research on an offenders' "mental map" revealed that features such as rivers, canals, major highways and railway lines could often create a "mental barrier" constraining the offender's movements. GIS helped to bring all the components of criminal activity and constraints together to enable the police to locate likely offenders.

Gary Birchall – South Yorkshire Police

The next talk looked at the use of applications on GIS to bring extra value. The Crime Analyst Toolbox is one such application being used by South Yorkshire Police. Birchall started by saying the value of maps had always been known, citing the use of pins in maps that had often been associated with traditional policing but explained that by using technology this could be improved on massively.

The improvement came when three doctors from the University of Sheffield came to the police with the idea of mapping the crimes on the system. As a result the university secured a grant from the Home Office and had computer systems designed to implement these tools.

The system allows data to be input, plotted, analysed and manipulated to highlight patterns of when crimes are most frequent with regards to times, dates and locations to give officers an increased understanding of the nature of the crimes they are dealing with. The system was designed to be simple to use and training takes only two days.

Andrew Watson – British Transport Police

Andrew Watson spoke on the topic of improving UK policing through Geographic Information (GI) from his perspective both within the British Transport Police (BTP) and also as the ACPO lead on the subject.

Watson explained that when crimes are reported spatial data was the most abundant type of data, with around 94 per cent of it including time, date, location and so on. Utilising data as much as possible was a key part of policing and GI is a great way of doing this.

Watson continued by looking at the rise of investment in mobile data terminals and how these could be linked in with GIS to bring addresses and maps together. This led on to his point that access to GI had to be simple to use, run and update so that people could adapt to using it regularly.

Watson then looked at the real policing benefits of linking maps with handheld devices. He showed a map of Camden tube station that included instructions for areas to be cordoned off and where traffic should be re-directed. He then made the point that relaying this same information by voice, probably before officers arrived on the scene, would mean it would be forgotten, or confused, and not result in clear or coherent policing. But by having it on a screen, clearly marked with instructions, officers could work far more effectively. A final point outlined the need for a common symbology, as touched on by Anthony Hamber, so all officers understood what was meant by certain symbols.

"Maps are a great way of getting the public to give information without them knowing it, or compromising an operation. We can take information we receive and plot it on the map and build a view of the area."

DCI Simon James, Leicestershire Constabulary.

Secure and encrypted

"A lot of forces will convert their recordings to standard digital files but one of the disadvantages of using open standards is that anybody can read them."

Paul Collins, CyberTech.

Paul Collins, Business Development (Public Safety), at CyberTech, talks to BAPCO Journal about encryption in the context of telephone and radio communications capture for the emergency services. The case for encryption is loud and clear.

It is hard to believe but according to Paul Collins of CyberTech, a high tech company with 20 years of experience in software for digital storage and analysis of telephony and radio communications, the vast majority of police recordings are not encrypted.

This is at the time where the loss of data is becoming increasingly embarrassing for the public sector, with a whole raft of incidents highlighting the need for the utmost data protection. In the latest incident, IT company PA Consulting had to relinquish its £1.5m Home Office contract after loosing the details held on a computer memory stick of thousands of criminals.

In the 12-month period to April last year, the Ministry of Justice lost information affecting more than 45,000 people, in some cases revealing their criminal records and credit histories.

In another incident, the Ministry of Defence lost an unencrypted laptop containing 620,000 personal records as well as information on 450,000 people named as referees or next-of-kin by would-be servicemen and women.

The encryption conundrum as regards the emergency services, explains Collins, is that while technology has moved on in leaps and bounds – and by this he is referring to how audio files are created and stored (eg in WAV or MPEG formats) – the encryption of those files has not. "A lot of forces will convert their recordings to standard digital files but one of the disadvantages of using open standards is that anybody can read them."

This was not such a problem in the days when incident recordings were stored in a locked room with restricted access (contrary to many police dramas), but it is when ease of access and local networks are the norm. "Rather than going to a locked room, officers want to access these files from their desks. So you have a trade off – ease of access at the cost of security."

256-bit encryption

The fact is that it is possible to have ease of access and security and many emergency services such as Yorkshire Ambulance and Gloucestershire Constabulary have proved it so.

The solution, explains Collins, is to encrypt all WAV files at the point of origin, and ensure that only personnel with the right electronic key can read them. Without the key, he adds, it would take a hacker with a laptop 100s

of years to break the Advanced Encryption Standard (AES) 256-bit encrypted code.

AES, incidentally, is a block cipher adopted as an encryption standard by the US government and is the first publicly accessible and open cipher approved by the National Security Agency for top secret information. 256 bits is the highest security provided by the AES.

"Each recorder we sell has a particular key, and there are two keys – both of which are necessary to read the file. First there is the key on the physical recorder, and secondly a key that is held by the customer. An officer leaving the Service with a key will be unable to replay files just with one of them."

The deciphering process and data retrieval, explains Collins, all happens "under the bonnet", and what an officer actually needs to do to access audio files is the standard user name/password log in procedure.

Modern data capture and encryption solutions such as CyberTech's are not limited to just jumbling and un-jumbling data. They also move the possibility of evidence being tampered with to a point far beyond the safety of the old locked room of yore.

Each recording has a unique identifier, a "fingerprint" that allows users to quickly see if a file has been replaced/tampered with. "It is like a watermark, and if somebody replaces a file of the same length with different data then it will be obvious, even if it has the same file name." CyberTech's solution also provides a full audit trail of who has played a particular file, and even who has searched for it – potentially useful in an internal investigation.

Collins explains that such an encryption system usually comprises a number of licences and a physical hard drive (the recorder) that interfaces with a telephone line, radio system or CCS system.

Most police authorities record directly from the CCS, which means recordings can also be made of radio calls made by police officers to the control room. "Some forces also record conversations made between officers in talk groups.

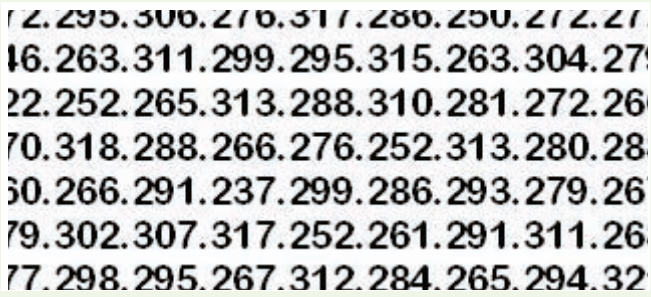
To record these conversations it is necessary to connect the system to Airwave. This can be useful for evidence if needing to provide proof of who was talking to whom at a particular time, as the software also tags the identity of the TETRA terminals."

Installation at a location usually takes less than five days, and training on the system can be provided via the internet. And if the recorder has IP access, adds Collins, secure connections can be made from any computer in a similar way to telephone banking.

The benefits of encryption by far outweigh the potential consequences – not to mention public embarrassment – of not doing so. When it comes to encryption, the message is loud and clear to all.

"First there is the key on the physical recorder, and secondly a key that is held by the customer. An officer leaving the Service with a key will be unable to replay files just with one of them."

Paul Collins, CyberTech.



Encryption of the future?

While it is technically feasible (if virtually impossible) to break 256-bit encryption, the encryption of the future may be technically and theoretically impossible to break.

Quantum cryptography is based on the Heisenberg Uncertainty Principle, which says that you cannot measure quantum information without changing it.

So basically, an eavesdropper to a quantum encrypted line – which uses photons – would disturb the communication.

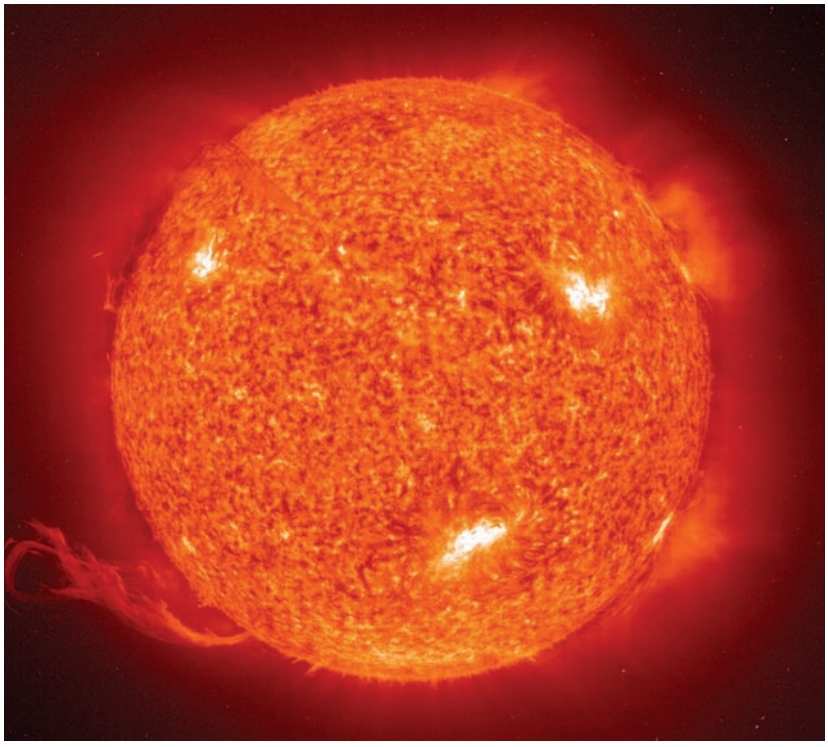
The world's first network protected by quantum encryption was revealed in a conference in Vienna last year, the result of an EU-sponsored project called SECO-QC.

The demonstration network connected six Viennese locations using 200km of fibre optic cable.

In the Vienna demonstration, when an intruder did try to listen in on the quantum exchange, photons became scrambled, and a rise in the error rate at the node detectors signalled the attack. The system automatically shut down without being compromised.

"Fused intelligence" for fighting terrorism

Peter Ship, Intelligence Specialist at crime and intelligence software provider Memex, discusses the benefits of Data Fusion Centres in the ongoing fight against terrorism.



In any terror emergency, there are three simple objectives – prevention, detection and managing the aftermath – and the key to achieving all of these is relevant and timely information.

Data Fusion Centres are a fresh concept in the US in gathering and analysing information, integrating a variety of Government agency and private sector information and intelligence to provide a more accurate picture of potential risks. The US's approach of identifying the best analytical tools on the market and utilising these systems has allowed them to form an information sharing network which is ahead of the UK. Whilst the same tools are used in the UK, they are as yet to be used across fused data and therefore have yet to provide the benefits seen in the US.

In the UK, the demise of CRISP (Cross Regional Information Sharing Project) in 2007, the interim solution until the PND (Police National Database) is completed, due to existing data problems means the UK will not have a fully functioning information sharing network until at least 2010, despite increased terror threats.

Although the current measure INI (IMPACT Nominal Index) is proving itself to be an invaluable tool in the UK police's armoury, by improving their ability to manage and share information, there is still some way to go to realising the ultimate goal of the PND.

In contrast, the US is flourishing with fusion centres stretching from Arizona to New York and there are many more planned. The Georgia Bureau of Investigation (GBI) is one of the most recently established centres embracing information sharing technology. Seven law enforcement agencies, serving 2.5 million residents, use the system which allows for the submission of tips and leads, intelligence and case management functions thus providing a robust platform for information sharing.

However, operating in an atmosphere of trust and security while managing intelligence, incident reports, public records and other types of secure information from numerous agencies is a daunting challenge. The technology can allow law enforcement agencies to gather and analyse intelligence at the highest level but it is the political concerns of obtaining, holding and using information that makes it more difficult to share.

Both the UK and the US have a raft of legislation dealing with retention of data and privacy which all intelligence sharing networks must take into consideration when an agreement is made to fuse data across different agencies and private organisations. However, many private sector organisations have a wealth of experience in managing information and their knowledge and expertise in this area can offer many benefits to the law enforcement industry.

As well as the support of expert knowledge, the technology also needs to meet the legal requirements of data retention. Intelligence gathering software offers many security processes to ensure agencies remain in line with legislation and guidelines, including allowing system administrators to set security levels for users and records.

At user level, permissions can be granted for access to different levels of information depending on what is required. This can be segregated by teams or departments depending on the investigation and gives each of them different levels of access. Every action by a user is recorded and audited such as editing and creating records, which allows organisations to understand the information they have and analyse it more efficiently.

The software also allows every record to be given a security level depending on the sensitivity of the information. The ability to assign covert or overt security to records ensures that each agency can mange their own information more securely and prevent data misuse. However, although users are unable to find covert records in a search, the notification of the search which is sent to the owner of the record can often be the first sign of a link between investigations highlighting the benefits of a shared information system.

Data Fusion Centres create an environment of trust by

encouraging the use of agreed protocols of non-disclosure contracts between law enforcement agencies and also between any involved private sector organisation.

Risk assessments are also carried out so organisations can assess how much risk is involved in sharing their information helping them to decide what data to share. These actions ensure that everybody involved understands what information is to be shared, why it is shared and who owns the information.

However, the major benefit of Data Fusion Centres is that one overarching memorandum of understanding is created between all agencies involved encouraging trust and providing more information for analysis. This is an attraction for private sector organisations who can often be put off sharing sensitive information if they are apprehensive about data being leaked to competitors. Current procedure in the UK requires the creation of a memorandum of understanding each time an information sharing partnership is agreed, which is a significant barrier in the willingness of law enforcement agencies and private sector organisations to share data.

The increased need to manage vast amounts of information across the country due to the added requirement of community information means that unlike Data Fusion Centres, the PND in the UK can never be the whole solution as it has limitations on the kind of information available to search over.

A more flexible system is required to allow each force in the UK to access and share data and I would prefer to see a phased approach through regional hubs akin to the fusion centres in the US, to accommodate each area of the UK and improve analysis.

Currently, strategic analysis only takes place within individual agencies before the information is shared making it harder to identify any gaps in the data.

An information sharing network also requires to take data from other sources, both regularly and as required for specific investigations. The importance of regular feeds from the likes of London Transport is evident but there is also a need to access data from other sources. The NHS link in the Glasgow Airport attack is an excellent example of why fused data between all sectors is important.

Encouragingly, police in the UK are improving their current systems and processes to gather and use data more effectively thus improving the sharing process. However, this also highlights the need for efficient, structured business processes within police and law enforcement agencies to enhance the use of intelligence gathering IT. Good technology with properly trained investigators and analysts behind it can begin to bridge the information-sharing gap. However, users also need to understand what the software is for and how it works in order to maximise the benefits of having the access to the data. Otherwise it will be a wasted instrument in the fight against terrorism.

"Encouragingly, police in the UK are improving their current systems and processes to gather and use data more effectively thus improving the sharing process."

Peter Ship, Intelligence Specialist, Memex.

BCM on a shoestring

In the current economic climate businesses are operating in a world of risk and uncertainty, and senior management want any form of corporate expenditure to be justified. Many organisations seem reluctant to invest in a business continuity management (BCM) plan at the current time. For Chris Jones, CEO of PageOne this is the wrong attitude to take as he explains how unplanned events can needlessly have a devastating impact on any business.

"The good news is that an effective, resilient and far-reaching BCM plan can be implemented on a shoestring so long as the right measures are put in place."

Chris Jones, CEO, PageOne.

Disasters such as fire, damage to stock, illness of key staff or IT system failure can all make it difficult or even impossible to carry out day-to-day activity. That is why an effective BCM plan should be seen as a crucial requirement for any organisation.

For those organisations without a BCM plan in place, unplanned events can have a crippling effect on their business operations and for smaller organisations it could even go so far as to paralyse them. In addition, organisations who fail to implement a BCM plan lay themselves wide open for further internal problems of their own making; employees are fully entitled to sue if they are endangered whilst on the job and the last thing anybody wants is to be subjected to extra costs such as a lawsuit in a period of belt-tightening. Therefore, in the midst of a financial crisis it is more important than ever to draw up contingency plans detailing how you plan to be able to commence work at the earliest possible opportunity should a disruption occur.

The good news is that an effective, resilient and far-reaching BCM plan can be implemented on a shoestring so long as the right measures are put in place. The key is getting your priorities right; don't worry about the smaller things but instead focus your time and money on protecting the people, equipment and information that matter the most. The practical measures suggested below can help you draw up an effective business continuity plan which costs very little money and will pay for itself many times over should the worst case scenario occur.

In terms of your staff, begin by identifying the key people without whom your business could not function and ensure that you have a resilient form of communication in place for employees that will work even throughout a crisis. For example during the 7/7 bomb attacks on London, mobile phone networks were overwhelmed, but relying on a resilient messaging system continued to allow emergency teams to maintain communications. The next thing to consider is to put together a complete list of contacts for your staff, customers and suppliers. A comprehensive strategy for communicating urgent information to the right people at the right time is essential in order to protect reputation but the increasing number of employees taking advantage of flexible working hours or remote working arrangements can make this rather challenging. There are however inexpensive solutions out there which can help. Here at PageOne, for example we offer Areyousafe, a real-time staff check-in and acknowledgement service. In the event of a crisis it allows employees to verify their status and location by calling a dedicated phone number. It will offer you and your employees peace of mind and could even be a lifesaver should a major disaster occur.

Once the above measures have been taken, go on to create a BC "how-to" document giving step by step instructions on what to do and how to do it for all core processes. That way, if a member of staff leaves suddenly or has to take time off work at short notice, another member of staff should be able to take over their duties. Again, this must be reviewed and updated as and when procedures change if it is going to be of use to you in a crisis. As a final step ensure you have backed up all core documents and that they are stored and accessible off-site. They're no good to you if they exist but you have no way of getting to them! Remember, in order to get back up and running quickly you will need access to everything you would require to set the business up all over again. Once all of these measures have been implemented take the time to keep the plan up-to-date and make sure your employees know about it. An out-dated BCM plan is, in many ways, worse than no plan at all as it gives the illusion of protection without actually providing any.

Any incident, no matter what its size has the potential to negatively affect your ability to offer an appropriate level of service to your customers. A BCM plan is a form of prevention, and prevention is always better than cure.

OMMUNICATION

something?

The **BAPCO Journal** is delivered **FREE of CHARGE** to all **BAPCO Members.**

If you are a member and would like to receive a copy of the journal please complete the form below.

Non-Members wishing to receive a regular copy of the Journal should complete the attached subscription form.

☐ **I am a BAPCO Member** and wish to register for my free subscription to the **BAPCO Journal**
BAPCO Registration Number _____

☐ **I am not a BAPCO Member** & would like to subscribe to the **BAPCO Journal**

Payment

UK Payment	1 year	£28	2 Years	£50
Overseas Payment	1 year	£35	2 Years	£62

☐ Please invoice me

☐ I enclose a cheque made payable to Hemming Group Ltd.
(Cheques must be drawn against a sterling account)

☐ I enclose a purchase order. No. _____

☐ Please charge our credit card: ☐ VISA ☐ MasterCard ☐ Maestro/Solo

Card No. _____ 3 Digit Security No. _____

Expiry. _____ Issue No. Maestro/Solo _____

Your Details

FIRST NAME: _____

SURNAME: _____

JOB TITLE: _____

ORGANISATION _____

E-MAIL: _____

ADDRESS: _____

_____ POSTCODE _____

TEL: _____

FAX: _____

SIGNED: _____ DATE: _____

(Order is not valid unless signed)

32 Vauxhall Bridge Road, London, SW1V 2SS

+44 (0) 20 7233 5052

+44 (0) 20 7973 6694

customer@hgluk.com

Olympic challenges

Dave Hughes, Utilities Practice Director at ABeam Consulting, discusses ways for forces to prepare for the unprecedented challenges that the 2012 Olympic Games will bring.

"There are a few collaboration champions in the UK already – in the South West of England, for example, five forces are working together to improve efficiencies by sharing certain back-office functions and front line policing operations."

Dave Hughes, Utilities Practice Director, ABeam Consulting.

Lord Coe, chairman of the organising committee for the 2012 Olympic games, recently brushed off criticism that the country will not be well-equipped enough to deal with the unique security challenges arising from the Games. Security is apparently at the top of the organisers' agenda – more than £800 million of the overall £9.4 billion budget has been allocated to ensuring the safety and security of athletes, sports fans, and members of the public.

While the Met will take the lead role in controlling policing for the Games, all security services will play a vital role in their own right across the UK. Many police forces outside of London that will host some of the events have kick-started preparations already to be able to overcome effectively any hurdles that the Games will put in their way. Dorset, for example, home of the Weymouth and Portland National Sailing Academy which is hosting the sailing events, has already completed a high-tech Olympics operations room equipped with the IT systems needed to manage resources, and communicate and share intelligence with the Met and other security services.

Yet, many other local police forces across the UK will find the Games a massive burden on resources. Even though extra financing has been ploughed into policing and other security services by the organisers, some forces are yet to put the necessary resources aside and start preparations for the games. So, how can forces meet the particular challenges of the Olympics while ensuring that the quality of day-to-day services won't be jeopardised?

Undoubtedly the biggest policing challenge posed by the Olympics is resource management. This is not so much a question of finances, but of how forces can use the resources available to them as effectively as possible and to the benefit of the public. The pure scale of the Games will prove problematic. It will be difficult to estimate how many officers will be needed to support each event taking place across the country. And, while prominent police presence will be essential to ensure the safety and security of everyone involved in the Games, forces need to be able to handle their other, day-to-day policing operations also.

Collaboration between forces will be an effective means of reducing the burden on local forces in those areas in particular that will be hosting major events and are likely to attract huge numbers of spectators. There are a few collaboration champions in the UK already – in the South West of England, for example, five forces are working together to improve efficiencies by sharing certain back-office functions and front line policing operations. Similar initiatives are needed in other regions to help forces deal with the varying demands posed by the Games.

During the Olympics the ability to shift resources quickly from one site to the next, depending on where support is required, will be crucial. All forces should introduce robust mobile working practices by 2012 to ensure a sufficient police presence on the streets and that any issues can be dealt with as soon as possible, on site.

While mobile devices and other new technologies can deliver many benefits for officers, it is worth bearing in mind that any technology roll-out can pose its own challenges for forces with already limited resources. Following Dorset's lead, many forces have highlighted the need to upgrade their communications, intelligence and other IT systems ahead of the Games.

The training of not only regular officers, but also temporary and community support officers brought in specifically for the Games, will require a great deal of time and resources from individual forces. Furthermore, according to the National Policing Improvement Agency, a high number of officers are expected to retire between now and 2012. At the Met, for example, as many as 40 per cent of officers will reach retirement age in the next four years. There is now additional pressure on forces to fill vacancies and the skills gap, so time needs to be dedicated to bringing everyone up to speed with new working processes to make the most of any new investment.

Admittedly, the resourcing challenges that the Games will pose for forces across the country are many. Nevertheless, forces should not be apprehensive but instead grasp these opportunities to truly transform their day-to-day operations towards front line policing. The advantages of adopting more effective ways of working through collaboration, and a complete rethink of IT through the introduction of new intelligence and communications technologies, can provide a lasting positive legacy for police forces as a direct result of the Olympics.

Preparing for an ICCS

As a follow up to November's article on Integrated Communication and Control Systems the BAPCO Journal spoke to Duncan Swan from Analysys Mason, a leading consultancy firm in this sector, to get his expertise and experience on some of the key issues in this highly technical area.

What are the trends in the market regarding ICCS systems?
ICCS systems have matured significantly since their first inception back in the late 1980s and early 1990s. In the early days the key objective was to provide a means to bring together all of the disparate radio and telephony systems with a single interface to present audio and other functionality to an operator. Times have moved on with the disparate radio systems generally being replaced by a single radio solution – Airwave in the UK – and more complex and feature-rich digital telephony solutions.

Today, the communications world is dominated by IP-based technology. There is a clear shift towards the use of Voice over IP (VoIP) in the make-up of ICCS solutions with the old PCM-based switches becoming redundant. We are seeing solutions that support virtual communications control room environments – distributed ICCS – where dispatch and telephony functionality can be supported in virtually any location that has appropriate network connectivity. Further, the functionality itself is being distributed – voice is just another application – with the core requirement for any ICCS-type solution being an integrated user interface with common information and audio presentation.

Telephony solutions offer advanced call distribution functionality and early doubts about the robustness of VoIP-based solutions for mission critical communications are being swept aside. Radio solutions fall into the same category where more advanced digital presentations are available in control room environments. And for both radio and telephony there is a growing reliance upon integrating call handling and dispatch solutions into other back office applications including GIS, resource and Command & Control.

What has to be considered when looking at ICCS?
Key considerations today centre around the need for mission-critical communications to be scalable, robust and resilient.

These solutions need to continue working during the onset of major incidents and to survive the failure of network components or a complete outage to a communication control facility. Above all else, to be designed in such a way that the loss of any single element is not catastrophic. It is also important that ICCS-type solutions can support integration with other communications control applications including Command and Control, GIS, voice recording and call logging, and mobile data, and that this integration can be achieved across a number of locations to support the concept of virtual control rooms.

What must be addressed before an IP-based implementation?
It is key that, in moving to an IP-based solution, careful consideration is given to network requirements including critical elements such as sizing and grade-of-service. The legacy ICCS architectures can also have issues with telephony integration, as most current products do not necessarily integrate with all telephony solutions or potentially offer limited feature sets. Care is required in ensuring specifications are robust and sufficiently detailed. It is also important to consider support for ICCS solution in-life and understand fully the implications for software upgrades both of the core product itself, but also for those elements to which it is connected. In a mission critical environment down-time must be minimised.

What are the benefits of ICCS?
ICCS-type solutions have one overiding benefit for emergency service users in their ability to provide a single user interface to handle radio, telephony and, in many cases, video. Through web-based applications they can also provide information portal functionality with access to phone books, radio subscriber databases, and real-time subscriber information (such as radio talk-group membership, site affiliation, current subscriber status and asset databases).

What do you recommend people be aware of?
Care is required in the procurement of ICCS solutions; there certainly is no "one-size fits all" solution currently in the market place. Requirements should be stated in output-based specifications that clearly detail those systems that the ICCS is to integrate with; and it is important to determine clear lines of demarcation. If the user is to provide an underpinning IP based network then it is important to understand the characteristics that it must meet if the ICCS performance is not to be compromised. And while the ICCS itself may be robust and resilient, delivery of other applications needs to follow similar principles such as ensuring diverse routing of incoming telephony; data network architecture including firewalls and routing components; and ensuring the environment (including power) in which the equipment is to be housed is appropriate.

Duncan Swan, Partner, Analysis Mason, has been with the company for almost 15 years. He has worked as project advisor for the multi-million pound government contract for digital mobile communications infrastructure for the emergency services and is currently the technical lead for one of the key shares, the ambulance service, as it migrates to this infrastructure.

VoIP's onward march

When the BAPCO Journal last covered VoIP (Voice over Internet Protocol) technology we went to a conference at the London Fire Brigade museum which discussed both the positives and the problems this technology offers. One year on, and the technology is becoming an important part of emergency service command and control and telephony systems.

"We've seen the reluctance to switch to VoIP recede over the months as people become more aware of its benefits, particularly its efficiency."

David Spiby, Director of EMEA Sales and Channel Enablement, Verint.

The acceleration in VoIP take up has been strong over the last year as Alan Hall, Sales Director of Fortek, who supplies a range of VoIP-based solutions into the emergency services, notes. "We have seen a rise in the number of emergency services using VoIP for their systems – Cornwall, Dorset, Hertfordshire, Tayside, Grampian and Merseyside Fire and Rescue Services are now all using VoIP, for example – and it provides several benefits, including both cost and simplicity."

Hall also notes that the deployment of the Signalling Initiation Protocol (SIP) by BT will further focus business and government and public safety organisations on the need to embrace and exploit this technology. Simplicity in VoIP systems is an essential consideration for the emergency services, Hall explains. "The continued development of robust and resilient computer telephony integration technologies built on industry-standard platforms enables emergency services to also benefit from these commercially available solutions." He continues: "The cost savings and flexibility of IP allows emergency services to move away from the implementation of static radio and telephony control equipment to a model that gives them the ability to combine and deploy communications and control room operations on a single workstation anywhere on the authority's network."

Recently Fortek has extended the use of VoIP to encompass integration to TETRA, working with Airwave Solutions Limited for the Firelink project in Scotland. Through the deployment of radio gateway servers to connect to the common Airwave equipment, analogue audio is converted into VoIP enabling radio and telephony audio control to be delivered across the service network to a common headset. This enables emergency services to have enterprise-wide access to command, control and communications functions. Providing full command, control and communications functionality that can be extended to major incident rooms, planning centres and to remote stations or divisional commands underlines the efficiencies a VoIP system can provide.

This is something that David Spiby Director of EMEA Sales and Channel Enablement at Verint, a recording software company, believes is a key driver too. "We've seen the reluctance to switch to VoIP recede over the months as people become more aware of its benefits, particularly its efficiency. For example, it's much easier to search through calls and find the bits you want for management and training purposes or post-incident analysis that are stored as data. Additionally, the data collected on the call is far more detailed and can be displayed quickly and succinctly on screen for the operator. All this makes a massive

2009 BAPCO

Promoting Integrated ICT for Civil Contingency Responders

Business Design Centre, Islington, London
Exhibition: 22 - 23 April 2009 **Conference:** 21 - 23 April 2009

The annual International Conference and Exhibition for all professionals involved in the provision and use of communications and information management technologies for civil contingency, public safety and incident management.

Sharing Information for the Future

Exhibition

- Over 100 specialist suppliers showcasing the latest equipment, technology and information & data management systems
- Gain expert advice on the use, implementation and management of communication equipment
- Compare and source new products, systems and services direct with the supplier
- See new product launches and brand new technologies – preview the future technologies that will shape operations

Conference

- New for 2009 – dual conference streams offer delegates a wider variety of key topics on integrated ICT and information sharing
- International keynote speakers present real-life case studies on increasing requirements for resilient systems and established protocols vital to public safety/civil contingency service delivery
- Focus on the needs of the user - explore how technology, both current and emerging, can be mapped against ever changing user requirements

BRINTEX EVENTS

For exhibition and conference enquiries, contact Lucy McPhail: +44 (0)20 7973 6635 / l.mcphail@hgluk.com or Jude Coverdale: +44 (0)20 7973 6671 / j.coverdale@hgluk.com

www.bapco.co.uk

"The cost savings and flexibility of IP allows emergency services to move away from the implementation of static radio and telephony control equipment."

Alan Hall, Sales Director, Fortek.

difference and means the dispatcher has far more information for each call, improving their decision making."

Spiby also believes that as the IT environment in the emergency services moves forward the uptake of this technology will continue. "Companies in the financial sector moved over to VoIP several years ago, for their back office calls, after they were assured of the benefits and the resilience of the technology. The public safety sector is slower to come to these technologies because of the costs implications of changing a system and the need to ensure the software has the necessary resilience. However, as with other technologies, eventually the evolution of these systems brings them to market and so it's important to take advantage of the benefits on offer."

One company supplying VoIP technology to end-users is Cardiff-based Excelerate Technology Ltd whose satellite broadband services include the option of VoIP applications and are being used by many blue light services including several NHS trusts to deliver not just data, but voice and video too. David Savage, CEO of Excelerate, explains. "VoIP is one of the core applications we provide. Doing so means that when ambulance or other emergency services vehicles attend an incident they have guaranteed communications wherever they are. Not only this but our VoIP services can work as a normal telephone extension but with the added benefit of being able to be patched to other devices such as cellular, VHF or UHF handsets."

Savage has also seen the rise in the uptake of VoIP as people have started to realise the benefits of the technology. "We have been providing these services for almost five years but it's only recently that they have become fully appreciated as part of an integrated approach with an eye on resilience, particularly in areas where there are no terrestrial alternatives or where they may have been compromised."

The benefits Excelerate offer with their system is underlined in the work they have done on the NHS HART (hazardous area response teams) project. This project has seen Excelerate commissioned to build the HART mobile incident response vehicles (MIRV's) for the ambulance service – in conjunction with coach builder WH Bence. Within this system they are providing the means for the vehicles to be able to access the necessary bandwidth while in the field so they can run a variety of data, voice and video applications, without the risk of losing the communication network. This project also adds the ability for each vehicle to carry its own private GSM network, the first time this has been done with any of the blue light services in Europe. This means that if there is a major incident such as a terrorist attack the emergency services using the Excelerate system will be guaranteed communications regardless of the impact to the public mobile networks, by using VoIP and other associated technology.

This use of VoIP services is a huge driver of growth and one technology that looks set to push this further is video and real time remote video conferencing, as Savage notes. "With video feeds a surgeon in a hospital could be shown live footage of an injury at an incident and give the paramedic at the scene instructions that could help save lives. We've seen the reluctance to switch to VoIP recede over the months as people become more aware of its benefits, particularly its efficiency. As satellite bandwidth is not considered to be cheap compared to terrestrial alternatives it is essential that applications that are bandwidth efficient are employed to keep costs down. As with all technology, as it evolves we will be able to deliver more for less as time goes on."

However, while the potential of VoIP continues to drive it forward, there are still certain issues that need to be taken into consideration. Paul Collins from CyberTech, a voice recording company, underlines one important consideration. "With VoIP there still exists no way to know where a call is coming from unless the person on the other end tells you. In many instances this isn't possible or the person calling may be reluctant to tell you. Landline calls or GSM network calls do not have this problem and so it is an issue for VoIP that needs to be addressed. However, it is not a problem that is going to stop the uptake in VoIP that we have seen, especially as cost saving becomes an ever more important part of decision making."

While Collins highlights this area of concern for VoIP he also notes that calls made between VoIP phones, such as between officers, give far more information than traditional calls do. "Calls between officers or between the Command and Control Centre and officers actually provide us with a lot more information than traditional calls. The more information the police have the better they can do their job so this is a massive improvement and underlines the importance of voice recording too." Indeed by being able to see the time, date, length and location of calls, post-incident analysis becomes more detailed and so provides a better break down that can help improve the emergency services work.

Changing systems, often from a legacy analogue system to a VoIP system is, of course, a cost issue and also requires extensive work to not only implement the system but also to ensure it is safe, secure and resilient. However, as Collins points out, as the technology moves forward it will become an integral part of emergency service IT software systems and its benefits will improve the service they can offer.

So one year on it seems that not only is VoIP now becoming the positive, useful technology it promised to be, as the transmission of data over internet protocol grows to incorporate video as well as voice, its scope for benefits will grow too.

TETRA World Congress 2009

Evolving solutions for mission critical users

International Congress Centre (ICM), Munich, Germany
26th – 29th May 2009

The meeting place for the international TETRA community

Make the most of this unique 4 day opportunity to meet with over 2500 leading TETRA users, manufacturers, network operators, application developers and system integrators from around the world, to discuss the hottest issues impacting mission critical communications users

Attending the congress will enable you to:

- Explore the latest TETRA equipment and applications with displays from over 100 leading companies
- Visit over 100 stands at the world's largest exhibition of TETRA equipment
- Gain a full understanding of the latest developments in the TETRA market and how it will develop over the next 10 years and beyond
- Choose from over 20 different presentation streams, interactive seminars and masterclasses to build the agenda that you want to see

Researched & Produced By:

IIR Telecoms & Technology
www.iir-telecoms.com

In Association With:

TETRA Association TETRA

Exhibition opportunities available
Contact **Stephan Groves** on **+44 0(20) 7017 7098**
or **sgroves@iir-conferences.com**

Full information visit **www.tetraworldcongress.com/bcjj**
or call **+44 (0)20 7017 7878**


Helping you serve the community.
Airwave Mobile Data Solutions deliver greater efficiency.
▪ Improve frontline policing
▪ Enhance decision making
▪ Reduce paperwork
Contact us on:
08000 11 33 99
airwavesales@airwavesolutions.co.uk
www.airwavesolutions.co.uk
AIRWAVE
POLICE
POLICE