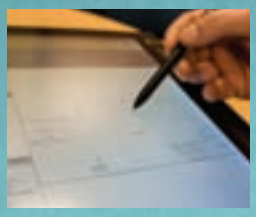


How mobile solutions are making a real difference to Hampshire FRS.

Data analytics can deliver tangible benefits to the community.

Information management for civil contingency responders

BAPCO Journal

Volume 15 Issue No 5 • September 2009 • £3.50

Resources multiplied

Technology tackles the challenges of the Policing Pledge

SUNGARD PUBLIC SECTOR

The Efficiency Experts

The Efficiency Experts

SunGard is **the** supplier of technology driven effectiveness and efficiency to the Public Sector.

In the UK more than 50m citizens are served by agencies that rely on SunGard public safety systems.

Our mission is to provide solutions that maximise the intelligent use of assets and resources to optimise operational efficiency.

Its why we are driven to continuously improve our solutions and help our customers increase public confidence.

Last year, our efforts were officially recognised when we received the Queen's Award for Enterprise in the Innovation category - for the continuous development of public safety communication systems.

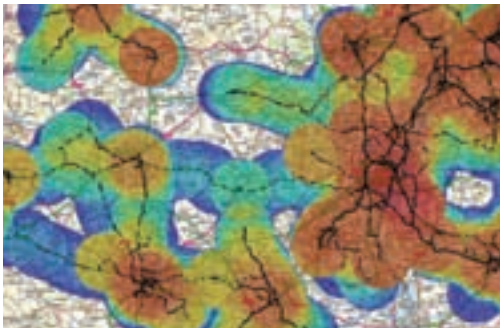
SunGard Public Sector – efficiency is achieved, when all of the pieces come together . . .

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

THE QUEEN'S AWARDS FOR ENTERPRISE: INNOVATION 2008

TETRA

Contents



Cover image: www.blackcoffee project.com

NEWS

FEATURES

REGULARS

Information management for civil contingency responders

BAPCO Journal

Volume 15 Issue No 5 • September 2009 • £3.50

Editor Jose Maria Sanchez de Muniain
Tel: 01935 374011 **Email:** jm.sanchez@hgluk.com
Staff Writer & Web Editor 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 Tim Malone
Tel: 01935 374014 **Email:** t.malone@hisdorset.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

Printed in the UK by Latimer Trend & Co, Plymouth, Devon.

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

President's address

I sit down to write this column, having just returned from the APCO conference and exhibition held in Las Vegas. The event was staged on an American scale and was well supported by delegates and exhibitors alike.

This year's conference celebrated the 75th anniversary of the formation of APCO. During the conference I took the opportunity to learn more about the history of APCO; for those like me who were unaware, APCO have partnered with an academic institution to establish an historic archive of its long history, some of this material being made available on the web (www.apcohistory.org).

This started me thinking that as many of our founder members of BABCO move inexorably towards retirement, what have we done to capture and secure our own much more modest history? Perhaps the Executive committee need to consider how best to achieve this before it our history is lost.

Following the success of the Communication Centre Managers' Seminar held in June there has been much discussion about the need to establish these seminars as regular events, and perhaps formalising a Comms Centre Managers' special interest group within BAPCO as there doesn't seem to be another established forum for this group to meet on a multiagency basis. Whether or not you managed to attend the June Seminar in Kegworth, I would be interested in gauging the level of support for this proposal from BAPCO members and non-members alike. All credit to Kevin Robson for this initiative, I think he may have started something here.

Olaf Baars, President.

We are now rapidly approaching our series of Autumn Roadshows with the theme of "sharing information". These seminars are open to BAPCO Members and non-members. This year's Roadshows will be held on 7th October in Newcastle, 21st October in London and 4th November in Coventry. Delegate numbers are limited so secure your place now, send an email to admin.manager@bapco.org.uk to make your booking or to find out more information.

Although I will be unable to make Newcastle, I hope to see you at the other events this autumn.

BAPCO 2010 Call for papers

The 12th annual BAPCO Conference & Exhibition will open its doors between the 20-22 April 2010 at The Business Design Centre, Islington, London.

BAPCO 2010 is the only major event of its kind to take place in Europe, bringing together professionals from across the spectrum of users and suppliers in the public safety sector including civil contingency response, emergency planning, disaster relief and ICT & data management. The theme for next year's conference is "Towards a new dawn".

This will focus primarily on the future of ICT & communications and implications for public safety, disaster relief and resilience in light of increasing demand and constant change in the economical & political climate.

In order to feature in the conference seminar programme BAPCO invites you to submit papers or proposals for consideration no later than Friday 23rd October 2009.

Papers can be submitted via the official BAPCO website at www.bapco.org.uk.

Command Support teams

To explore issues related to Command Support doctrine and operational practice, Vector-Command, in partnership with various fire and rescue services, is organising a series of workshops and master classes throughout the UK at various dates between September and November.

At the half-day workshops, officers will learn more about technological support for their Command Support teams, lessons learned from some of the early installations of the Command Support and will also have the opportunity to participate in hands-on demonstrations of the Command Support System and related technologies.

To register interest email rob.munro@vectorcommand.com.

FireLink – "major milestone"

Delivery of Firelink, a new national communications system which will enhance the effectiveness of Great Britain's fire and rescue services, has reached a major milestone with 6,500 fire and rescue service vehicles now installed with new radio equipment, amounting to around nearly two thirds of the 8,440 vehicles used by FRS's around the country. Airwave will be the new communications service for the FRSs of England, Scotland and Wales.

John Lewis, head of Airwave's fire and civil resilience division, said: "We're currently installing Airwave in four vehicles in 16 FRSs every single day, a rate soon to be increased to four vehicles in 18 FRSs. For such rapid delivery, co-ordinating Airwave people, suppliers and customers is no mean feat, especially as it's important to minimise the impact on fire service operations." Ashley Truluck, national project manager for FireLink, said: "This is a major landmark in the history of the project and the fact that we have managed to maintain vehicle rollout to schedule bears ample witness to the spirit of co-operation and partnership that exists between both the FireLink and Airwave teams, particularly at the local operational level."

RUGGED TECHNOLOGY FOR EXTREME ENVIRONMENTS

IP54 - IP68 CERTIFIED
WATER, SAND/DUST PROTECTION

COMPLIANT TO MIL-STD-810F
RUGGED ENVIRONMENTS

COMPLIANT TO MIL-STD-461E
EMC TESTING

ndura RUGGED

when tough isn't enough...

The ndura RUGGED® range from Blazepoint limited, which includes laptops, tablet PC's and PDA's, is designed to withstand such hostile conditions as dust and water, extreme temperatures, humidity and drops from height. The performance levels mean that the equipment is ideally suited to areas such as the emergency services, military, marine, utilities, telecommunications, oil and gas exploration and construction.

Blazepoint is a leader in rugged technology and engineering, designing and manufacturing bespoke IT solutions for unforgiving environments and purpose designed equipment mounting systems. The company also supports security initiatives as a major supplier of leading brand plastic ID card printers and consumables to the UK market.

blazepoint

CALL FOR FURTHER DETAILS ON
01865 892 050

The Emergency Services Show 2009
Stoneleigh Park, Coventry
24-25 November
Planning, response and recovery
VISIT BLAZEPOINT ON STAND NUMBER 314

FAX: 01865 892 031 EMAIL: sales@blazepoint.co.uk WEB: www.blazepoint.co.uk
Blazepoint Limited, 2 Tower Estate, Chalgrove, Oxford OX44 7XZ

Translation on the move

Mobile and portable public address (PA) systems specialist STG has added a new product to its arsenal – a mobile translation system.

The Phraselator P2 is a handheld speech-to-speech translator with automatic speech recognition technology that allows instantaneous translation without voice training.

The latest version is capable of translating over 100,000 preloaded phrases in over 40 languages – and it is also possible to program it so the phrases can be accessed through voice activation.

The LAPD uses the Phraselator and it has created its own crowd control module to include phrases such as, "We're going to be leading the march today," in four languages.

EC's eCall ultimatum

The European Commission has made a last call to all EU countries to speed up voluntary implementation of the new in-car communication technology eCall that could save 2,500 lives a year.

The eCall system automatically dials 112, Europe's single emergency number, when a car has a serious accident and sends its location to the nearest emergency service.

The deployment of eCall is voluntary and so far the system is not operational in any EU country. The EC warns in a policy document that if no progress is made in rolling out the system by the end of 2009 it could propose regulatory measures to make this life-saving technology available all over Europe.

CCTV scheme to catch distracted drivers

Microbus M-PC2 vehicle-based computers are at the heart of a new CCTV car initiative being piloted by Greater Manchester Police.

Smart cars, which have a 12ft (3.6m) mast with a camera attached, are to be parked at junctions to monitor traffic and catch drivers using their mobile phones or being otherwise distracted at the wheel. Anyone seen driving while distracted is filmed and later a letter is sent to the owner of the car, in many cases along with a fine. The scheme is part of Greater Manchester's Casualty Reduction Partnership.

The cars, developed by Traffic Enforcement Systems (TES) Ltd, are currently being piloted in Greater Manchester, and are among the first of their kind in the UK and the operational performance of the solution relies on the Microbus M-PC2 vehicle-based computer connected to a roof-mounted low-light zoom camera which is fitted with a polarising filter to help cut through windscreen glare.

Camera control and recording is controlled through the computer's OptiVue touchscreen mounted neatly into the dashboard.

The M-PC2's Integrated Digital Video Recorder (iDVR) records primary evidential footage with timestamps that can be saved onto USB drives. Secondary backup footage for the entire shift is downloaded onto DVD.

Clive Paul, Managing Director of TES said: "In developing the solution, we had tried various Digital Video Recorders that are on the market as well as other best of breed products but chose the Microbus M-PC2. With the Microbus M-PC2 we found that elusive product. It not only satisfied our immediate needs but it's also a product that can grow with our ambitions, and dare we say it, be future proof."

ACPO visitors go up by 14%

ACPO-APA International Policing Exhibition, the UK's largest and most influential policing event, took place 8-9 July at Manchester Central. The event saw just under 1,400 professionals from the policing and security sectors travel to Manchester to see the latest technology and services from over 160 leading suppliers and organisations.

According to the organisers the event proved to be a success with a 14% increase in visitor attendance, which included 22%of Chief Police Officers and Police Authority members as well as police staff and representatives from the Home Office, the Border and Immigration Agency, and British Transport Police.

Running alongside the exhibition was the Annual Summer Conference for the Association of Chief Police Officers and Association of Police Authorities, which newly-elected ACPO president Sir Hugh Orde called a triumph for tri-partite working:

Next year's exhibition will take place at Manchester Central from 12-13 May with the ACPO-APA Summer Conference from 11-13 May.

Website is Prepared Together

The Red Cross and the EU have launched a joint website to encourage and improve Europe-wide community preparation for emergencies such as flooding, flu pandemics, fires and terrorism.

The multi-lingual Informed Prepared Together website, www.informedprepared.eu, pulls together information from across the EU on how communities, individuals, organisations, businesses and government at all levels can prepare themselves. "Emergencies and disasters are about people," said Moya Wood-Heath, the Informed Prepared Together Project Leader and Civil Protection Adviser to the British Red Cross and Red Cross / EU Office. "Rebuilding homes, businesses and cities is a difficult challenge, but rebuilding the lives of survivors, the bereaved and the wider community is no less important. Being informed, being prepared and working together not only reduces the threat and impact of emergencies, but can also speed recovery." The site also hosts a library of downloadable and printable resources, including leaflets, calendars and a card game, to help spread the preparedness message.

Easing the pain of Fixed Penalties

A new national system to help frontline police officers deal with offenders more quickly is being developed by the National Policing Improvement Agency (NPIA). PentiP (Penalty Notice Processing) will improve the recording and processing of two types of one-off financial penalties (Fixed Penalty Notices, issued for driving offences such as speeding and failure to wear a seatbelt and Penalty Notices for Disorder) to help reduce red tape and enabling police officers to spend more time patrolling the streets.

Both notices are currently issued on paper and processed by two separate computer systems. PentiP will computerise the issuing of the ticket and bring the two computer systems together into one. Moving to a central electronic processing system will deliver over £120 million in cashable benefits over 10 years to the police and courts services and improve the accuracy of information on driving offences held by the Driver and Vehicle Licensing Agency (DVLA).

Frontline officers will also benefit by being able to quickly check whether a penalty notice is the most appropriate method of dealing with an offender or if there is a previously issued unpaid penalty.

Chief Constable Peter Neyroud, Chief Executive of the NPIA said: "Quick access to information is essential to help frontline officers deal with offenders appropriately. PentiP will speed up the administration of penalty notices, cut bureaucracy and give officers more time to spend on the frontline and contribute to a more joined-up criminal justice system."

The contract to design, build, deliver and manage the service has been awarded to Northgate Public Services.

ACPOS' centralised gazetteer

A partnership of IT service companies, led by Buying Solutions Prime Contractor Infotech Enterprises and consortium partners GGP Systems and Infoshare, have successfully bid for a competitive Tender issued by the Association of Chief Police Officers in Scotland (ACPOS), to provide a centralised address gazetteer for police services across Scotland.

Lothian & Borders Police, who are representing the eight Scottish Police Forces and the Scottish Police Services Authority, are overseeing the contract, which will see the creation, implementation and use of a definitive national location gazetteer together with Gazetteer Management Software and Web Services throughout police services in Scotland

This project will see the creation of a national gazetteer detailing every property in addition to the location of police "incidents" in Scotland. It will involve data from each of the eight police forces together with additional detail.

Deputy Chief Constable, Tom Halpin, ACPOS National Command and Control Project Executive, said: "The new system will help us to identify precise locations and allocate the best equipped and nearest police patrol."

Hampshire feeling social

Hampshire Fire and Rescue Service is to engage with target audiences through the use of three social media channels.

A Youtube channel has been launched at www.youtube.com/hampshirefireservice where people can watch videos about the recruitment process and corporate planning process, as well as see footage of incidents and the many other activities that go on throughout the Service.

Facebook users can keep in touch with the Service by becoming a fan of the official Hampshire Fire and Rescue Service page. Finally, a Twitter channel has been set up at @hants_fire to get up to the minute information.

Last month Hampshire FRS Chief Officer, John Bonney, also President of the CFOA, was tweeting from a national fire chiefs conference he attended in Canada. Deputy Chief Officer Dave Curry said: "Although the fire service does not have a product to promote, it does want to connect with its target audiences in order to engage with them and educate them about safety at home, work and on the road. Using social media channels to do this makes perfect sense."

NICE & new

NICE Systems' latest version of NICE Inform includes Inform Media Player and Inform Verify.

NICE Inform 3.0 captures, and manages audio, video, text and data, enabling captured emergency and other voice communications to be seamlessly synchronised with surveillance video and other incident information.

The Inform Media Player makes it possible for comprehensive incident reconstructions. These and other incident-related information can be compiled and disseminated on CDs, DVDs, or by e-mail, and reviewed or replayed, for a 360° view of incidents.

GIS used for Risk System

Digital mapping developer Cadcorp has announced that Northumberland FRS has selected Cadcorp SIS Map Modeller and Cadcorp SIS Map Reader software to replace the service's existing mapping system and to improve the information provided to the front-line.

Northumberland FRS has plans to connect the SIS-based GIS to the Community Fire Risk Management Information System (CFRMIS) in order to display details of community safety activities, such as home fire safety checks. It will also connect to an Oracle-based database in order to display incident data such as fires, false alarms, RTCs and other incidents, all in a map.

In addition, plans are in place for information such as risk areas from the Fire Service Emergency Cover (FSEC) Toolkit provided by central government, as well as selected demographic information from Experian's Mosaic system, to be displayed through the new GIS for easier interpretation.

Avon first in GIS fire safety

Avon Fire & Rescue Service has become the first UK service to deploy Geographic Information System (GIS) technology to improve the safety of its firefighters and the public at major fires.

ESRI (UK)'s GIS-driven data capture solution, known as DragonMap, will enable the Fire and Rescue Service to accurately conduct risk assessment surveys of larger buildings and facilities. The system will enable them to quickly capture key data, such as construction materials employed or entry/exit points, adding the information to digital maps held on ruggedised laptops. On return to base, this information will then be electronically transferred into ESRI's ArcView GIS, enabling the sharing of information across the organisation. The same information will be viewable on screens within the cabs of the fire appliances.

Emergency Services Show

Now in its fourth year, The Emergency Services Show (24-25 November 2009) will be encouraging multi-agency co-operation by bringing together all relevant organisations and equipment suppliers, to provide an invaluable insight into the workings of the emergency services and associated agencies to promote effective collaboration.

Over 350 trade exhibitors will take part in providing visitors with access to cutting edge technology. A dedicated Networking Zone is aimed at personnel with a role in operations, training, recruitment and emergency planning. The Networking Zone consists of two areas. The Blue Light Zone is an area for police, ambulance and fire and rescue services. The Emergency Response Zone provides a unique opportunity to find out more about specific emergency responders, professional, government and voluntary organisations encouraging inter agency co-operation.

The integral two-day conference "Planning, Response and Recovery" will provide visitors with the opportunity to join decision makers from other agencies. It will feature expert speakers exploring current strategic thinking as well as past, present and future challenges in emergency response. This year's speakers include Russell Price, Chairman, Continuity Forum, talking about the need to align thinking, planning and response.

For more information visit www.theemergencyservices show2009.com.

Why 111 is vital

Ofcom has announced that a new, non-urgent NHS number could be introduced across England. The 111 number would provide an alternative to 999 for non-emergency cases and could supply information on out-of-hours GP services and walk-in centres.

Recent research from ntl:Telewest Business found that confusion was rife on when to call 999. The research revealed that:

- 67 per cent of Britons would welcome a non-urgent NHS number and would use it rather than calling a GP, 999 or NHS Direct.
- People would need educating on the number itself – 85 per cent of those surveyed had no knowledge of the 101 emergency number.
- Almost two thirds of adults admitted to calling 999 in non-emergency situations.

However, in order to ensure the 111 number is successful, public education and flexible network infrastructure is vital, said ntl:Telewest. That will ensure calls are handled effectively and are routed onto the best resource as quickly as possible.

David Astley, Head of Health and Emergency Services, ntl:Telewest Business, said: "There is a serious issue with confused callers jamming 999 switchboards as they simply don't know who else to call."

Having a Voiceblast

PageOne has announced a service that can quickly and simultaneously send a personalised voice message to the landline or mobile number of thousands of people within an organisation.

With secure pin access their own dedicated "blast" number, Voiceblast enhances an existing incident management messaging infrastructure. Its features include the ability for the recipient to accept or reject a "blast" message, and real-time graphical reporting of the number of calls accepted, rejected and busy.

It allows up to 10 groups per account, each group containing up to 9,999 members. Furthermore, the system offers the option of prerecording up to 99 voice messages of up to 40 seconds in length that can be saved and sent out when required

Derbyshire awards PIPS

Derbyshire Constabulary has awarded PIPS Technology a four-year framework agreement for the supply of ANPR equipment to several police forces and local authorities,

The authorities that will receive the technology are Derbyshire, Leicestershire, Lincolnshire, Nottinghamshire and Northamptonshire and the contract award follows an extensive period of evaluation and testing by Derbyshire Constabulary of fixed site ANPR equipment.

Matthew Rudder, ANPR procurement lead for Derbyshire Constabulary said: "The field tests used during the evaluation process revealed that the proposed equipment successfully captured 96% of all number plates accurately."

CONTACT INTELLIGENCE CUSTOMER SERVICE INCIDENT MANAGEMENT

Fortek VISION PX

Police command and control systems

SUPPORTING LAW ENFORCEMENT TO DELIVER THE POLICING PLEDGE

To deliver a holistic response to the Policing Pledge it is vital to have systems integration and interoperability. **Fortek's VISION Communications and Control system** combine advanced call handling capability, hi-tech officer location systems and spatial analysis to provide a seamless solution that can meet the challenges of the Policing Pledge.

INTELLIGENT APPROACH TO CALL HANDLING

• Consistent approach to contact with public • Key information is automatically populated • Caller history

OPTIMISED RESPONSE THROUGH TECHNOLOGY

• More accurate response times through integrated routing algorithms and APL and AVL integration

MAXIMISING FRONTLINE POLICING

• Improved policing visibility through intelligence • Enhanced policing presence through mapping technologies
• Underpinning officer safety through resource location software

Fortek

In Pursuit of Public Safety

FORTEK COMPUTERS LIMITED
1 Spring Garden Lane, Gosport, Hampshire, PO12 1HY, England
t: +44 (0)23 9251 0088 f: +44 (0)23 9251 0626 e: fortek@fortek.co.uk www.fortek.co.uk

BAPCO

THE BRITISH ASSOCIATION OF PUBLIC SAFETY COMMUNICATION OFFICERS

BAPCO 2010: call for papers

The 12th annual BAPCO Conference & Exhibition will open its doors between 20-22 April 2010 at The Business Design Centre, Islington, London. BAPCO 2010 is the only major event of its kind to take place in Europe, bringing together professionals from across the spectrum of users and suppliers in the public safety sector including civil contingency response, emergency planning, disaster relief and ICT & data management.

The theme for next years' conference is "towards a new dawn". This will focus primarily on the future of ICT and communications and implications for public safety, disaster relief and resilience in light of increasing demand and constant change in the economical and political climate.

In order to feature in the conference seminar programme, BAPCO invites you to submit papers or proposals for consideration no later than Friday 23rd October 2009. For key focus points and further application details please visit www.bapco.co.uk.

This is your chance to shape the content of next years' conference with your experience and your take on the future for this sector. Please check the link for details. We look forward to receiving your applications and to seeing you at BAPCO 2010.

Warm regards,
The BAPCO organising team
on behalf of Ray Trotter
Chief Executive Officer BAPCO.

BAPCO Roadshows 2009

The remaining dates and venues for the 2009 events are:

- 7th October at Newcastle Racecourse Conference Centre
- 21st October at Hendon Hall Hotel, Hendon, London
- 4th November at The Royal Court Hotel, Coventry

For more information please visit www.bapco.org.uk

BAPCO Central Contacts

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

President Elect
Hayden Newton
president.elect@bapco.org.uk
☎01234 408999

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

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

Chief Executive
Ray Trotter
trotterr@bapco.org.uk
☎ 07767 342601

Life President
Ken Mott
mottk@bapco.org.uk
☎ 01522 575542

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

European Projects Officer
Shaun O'Neill
☎ 07785 925450

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

CAG Secretary
Colin Evans
☎ 07790 901578

BAPCO WEBSITE: www.bapco.org.uk

BAPCO Regional Contacts

South East Region
Chair: David Taylor
chair.se@bapco.org.uk
☎07973 338388
Secretary: Andy Fleet
info.se@bapco.org.uk
☎01621 892623
Executive Member: Tony Morris
exec.rep.se@bapco.org.uk
☎01243 777316

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: Gary Black
info.scotland@bapco.org.uk
☎01463 703172
Executive Member: Brian Carlin
exec.rep.scotland@bapco.org.uk
☎07905 656403

Fully exploiting mobile data

In this second installment following the journey of the Airwave Mobile Data Car from inception to practical on-the-road demonstrations – both nationally and internationally – we take a closer look at the kit that's on board.

The Airwave Mobile Data Car (AMDC) was developed in association with Volvo, Ford SVP, Microbus and other technology suppliers. It is now embarking on a series of road shows in the UK to increase awareness of mobile data functionality, as well as a series of major events (including the Sepura Talk TETRA Conference in Marbella, Spain in October).

Richard Page, head of strategic marketing at Airwave, said that the vehicle is generating extensive interest in how mobile data applications can be exploited in novel ways to improve interoperability and frontline productivity.

A software hub has been developed that integrates the mobile data applications, navigation software, TETRA radio control and streaming video feeds with the control of the blue lights and siren. All this functionality on the Tablet PC fitted on the central console allows for improved data sharing and recording into mobile data applications.

The mobile data car is based on the Volvo D5 estate police which is designed for emergency services requirements and able to handle specialist equipment such as the Tablet PC, PDAs, TETRA radio in addition to blue lights and siren. This makes the car suitable for use by both the fire and rescue services and the ambulance service. By installing a fire mobilisation application onto the Tablet PC Airwave is able to transform the car into a mobile command centre for a Fire Manager or Fire Officer.

Improvements have already been made to fine tune the positioning of equipment in the front for better ease of use. In addition, the software on the Microbus Tablet PC has been enhanced to improve the integration of the blue lights, siren and the RSG LED matrix sign with the operational software applications.

Constant tracking of the car is carried out by the RSG Jupiter Data Tracker. This records the location of the car as well as a selection of data parameters including the engine speed, use of blue lights and siren, when the doors are locked or unlocked, sidelight activation and others. This information could be integrated into mobile data applications to record the date and time and other supporting evidence in the case of an accident.

Sarah Tottle, special vehicles manager at Volvo, stated: "Working with Airwave to put together this innovative mobile data car allows us to showcase the advanced capabilities of mobile technology and TETRA data communications today and how it can be incorporated into a Volvo D5 to deliver the productivity, effectiveness and ease of use that fleet managers are actively seeking for their operational staff."

For more information contact Richard Page at Airwave or Sarah Tottle at Volvo.

The AMDC will be on display at the National Association of Police Fleet Managers Exhibition, the Police Superintendents Conference and Exhibition, and the Fire and Rescue Service Special Interest Group meeting.

A new way of doing business

Earlier in the year the NPIA announced the award of a contract to improve national information sharing in the police service. With the national roll out of the project due to begin January 2010, Jose Maria Sanchez de Muniain talks to Project Manager Graham Dunn at the NPIA about an implementation that lies at the heart of a genuine joined-up approach to policing.

"If there is a specific data source that a force wants to share with a colleague in another force, for instance during a joint operation, then IAM CS will allow access by guest officers."

The contract – placed with Siemens Enterprise Communications Group – is to create a national infrastructure called Identity and Access Management Central Services (IAM CS – pronounced "I am CS").

The new architecture is an essential building block for the new Police National Database that is currently also being built. In simplistic terms, the PND will become a central repository of information for all England and Wales' forces, to avoid a repeat of the Soham murders situation, where a crucial piece of intelligence may be held at local force level only. IAM CS is an integral part of this because it sets out a national standard set of access control policies, standards and guidance that each force will implement at local level. In essence, it verifies the identity of each individual accessing shared information.

Graham Dunn goes on to explain that there are two levels of implementation, local and enterprise.

At local level IAM CS can be used to allow a select number of users to access the new PND. Going to the other side of the spectrum, the solution can be implemented enterprise-wide within a force so all officers have access, in this case not only to the appropriate databases but also police buildings and resources.

"The idea of IAM CS is that it will enable us to give access to the right people at the right time to the information they need. We are going to share the information securely, and it will not be a case of giving officers carte blanche."

Access to information will be set according to each officer's roles and appropriate to their duties. For example an officer in a road policing environment will typically only be able to access information related to road policing, explains Dunn. If another sort of information is required, then it would be provided on a case-by-case basis.

Crucially, Dunn highlights that IAM CS is not about providing access to systems that were not accessible before. He emphasises that local forces' systems will instead be feeding into the Police National Database, and it is the access to national applications such as the PND that IAM CS will be regulating. But it is a flexible system. "If there is a specific data source that a force wants to share with a colleague in another force, for instance during a joint operation, then IAM CS will allow access by guest officers." There will be three levels of use for officers; home force accessibility; secondment and home force accessibility; and joint operations.

As regards how this information will be accessed, Dunn is quick to point towards the ACPO mission statement, which states: "The police service security architecture is to enable employees (and systems) to access the services, when needed, that they require under their basis of employment, whether access is via fixed, mobile or remote device, from either their 'home force', 'other force' systems or elsewhere, within security constraints."

Dunn explains that if an employee required access to day-to-day data sources, then a simple security approach like name and password could be used. If there were a need for regular access to sensitive data, then a stronger approach would be used in the form of a smart card.

A central audit office will record all information access requests, and at force level various management applications will be able to display who is doing what and when.

Challenges and roll out

By all accounts IAM CS will be operational during the first quarter of 2010, and forces will be required to be

operational on the system by second quarter 2010 in order to access the PND. Dunn explains there is a rolling programme of PND so forces will have to implement IAM CS locally at least, in order to log onto national applications. "And every national application will be migrated to the IAM CS family so we have one common way of securing data."

The biggest challenge now facing forces is the funding for implementation of IAM CS. Forces are under pressure in their annual budgets and in effect, says Dunn, additional funding is required to be put into place. "But I like to say that this is 'spend to save'. It might not save anything in terms of hardware or real estate, but it will save time for officers checking on individuals, and it will mean we get officers on the front line as opposed to filling in bits of paper in the station. And the biggest benefit is it will stop cases like the Soham murders because a snippet of information from one force will be available to all."

Forces will need to decide whether to implement IAM CS just for accessing national applications, local systems or whether they want the enterprise-wide option which would also cover buildings access. "They may start with PND and then over the years migrate to a final enterprise solution. Several forces such as West Midlands and the Metropolitan Police are doing it enterprise-wide, others are using a combination of IAM CS for PND in addition to their own building access system. But what they may do as building access systems come for a refresh is move towards using smart cards for everything. Scotland are also interested in using the NPIA's IAM CS type of approach, so it may become the UK way of doing business."

"It might not save anything in terms of hardware or real estate, but it will save time for officers checking on individuals, and it will mean we get officers on the front line as opposed to filling in bits of paper in the station."

Evidencing the Pledge

Intelligent call handling, response optimisation and evidencing of front line policing activity are just some of the features that Fortek has enhanced in response to the demands of the Policing Pledge. BAPCO Journal speaks with Fortek Sales Director Alan Hall.

The buzz terms may at times read like a management-speak bingo card: accountability, community focus, evidencing, national policing offer, low level crimes, but the nucleus of the challenge for police forces is simple. Increase public confidence and prove that you are doing so.

Fortek's expertise is in working closely with all emergency services bringing forward functionality to meet specific local, national and government led initiatives. Its focus in the police has been to introduce a series of enhancements through its Command and Control systems aimed at helping forces to improve customer satisfaction. The recent challenge has been to focus on specific requirements of the Policing Pledge and to exploit its VISION PX product to enable forces to deliver against that Pledge.

The challenge now, believes Hall, lies not so much in harnessing the technology itself but in streamlining the business processes to make it work.

Heat Maps, taken after the pro-active policing patrols have taken place, can be printed and distributed to senior officers and management, thus evidencing force-wide improvements against the Pledge.

Improving contact management

It is no secret that traditionally in the context of non-urgent call taking, each incident report by the public has been handled as a unique event. It doesn't make a difference if a caller is reporting that his garage has been broken into for the third time, or the first. Each time the call handler takes down all the same details, starting with name, address etc. The impression that that makes to the caller, points out Hall, is that the police are unaware of the previously reported crime, and by implication, that it has done nothing about it. To tackle this impression, Fortek has introduced what it calls Enhanced Contact Management;

Working with Nottinghamshire Police, Fortek has extended its Command and Control system by seamlessly integrating contact management functionality into the call handling process. At the time of the call the operator is presented with relevant information pertaining to the caller. Previous contact history, including call history, location based information and personal information is offered to the operator; by making this data instantly available the operator can have a more informed conversation with the caller. It allows the call handler to maintain a consistent approach when handling the call and importantly helps the public feel confident with the process and police contact.

Hall believes that by using this functionality an individual force can not only easily improve its relationship with the public as well as provide a useful communication tool for its call handlers, but that such functionality by itself serves as evidence that the force is proactively striving to improve upon its performance.

Tony Eggleton, CAD project Manager, Nottinghamshire Police comments: "Our Command Officers and the new Chief stated that levels of customer service are paramount when dealing with incident calls. Therefore, the new software is used as part of our customer service desk. The difference between VISION PX and other Command and Control systems is the way in which it stores and processes

information. The system provides control room operators with a detailed display, enabling them to access pertinent information associated with all aspects of the call or incident scenario."

Optimising response – non-emergency and emergency scenarios

Another key point that Fortek has identified in relation to improving confidence in the police also relates to non-urgent police response. The Police need to offer a flexible response to public request for non urgent crime visits, the policing pledge states:

"If you are calling about an issue that we have agreed with your community will be a neighbourhood priority and attendance is required, we will aim to be with you within 60 minutes. Alternatively, if appropriate, we will make an appointment to see you at a time that fits in with your life and within 48 hours."

Up to now call handlers have not had the technology to schedule appointments directly into officers' diaries.

Nottinghamshire Police are one of the first forces in the UK to have embraced Fortek's enhanced Command and Control functionality. A key benefit of the system is that it is fully integrated to the Microsoft Office suite of products, by using this standard technology such as (Microsoft Exchange), call handlers in Nottingham will be able to schedule appointments for officers in one of their three Managed Incident Cars, which are dedicated to following up on non-urgent crime reports. Importantly, the scheduling takes place at the point of contact. The fact that the call handler can say that Sergeant Jones has an appointment free tomorrow at 2pm gives the caller much more confidence than previously available.

This is a major plus point for us because Fortek now exploits commercially available technology in the control room environment providing real tangible benefits. The next step, adds Hall, is adding another feature which verifies an appointment via text message to a mobile phone or via email, and sends a reminder prior to the scheduled time. Similar scheduling is already in widespread use in medical, commercial and other industries.

Emergency call response is further improved with Fortek's latest despatching and response management software.

By utilising vehicle and personal tracking technology to quickly allocate the nearest resources (with the correct skill set) to an incident means that the despatcher can now provide emergency callers with an estimated time of arrival. Once the nearest available unit has been assigned to attend, our system uses routing technology from mapping software to create an ETA that is presented to the despatcher immediately.

Evidencing and maximising front line policing

A key driver of the Pledge is improving police visibility, and the Government stipulates that forces must be visable 80% of the time in their neighbourhood addressing their priorities. "The question is, how can individual forces evidence that? Working with West Mercia Police authority we have added functionality that uses mapping to capture APL (Automatic Person Location) and AVL (Automatic Vehicle Location) data and hold it historically. The captured data can then be presented onto a mapping system like a heat map, showing Police activity levels within specific geographic areas."

Such a dynamic and visual analysis can lead to what Fortek calls "priority pathing". This feature has been developed through work with New South Wales Police in Australia where Policing Initiatives have been driven around improving Police visibility in high crime or target areas. Priority pathing prompts the supervisor in the control room to allocate travel route plans for units through target areas.

Priority pathing ensures that officers travel in and out of areas that have seen criminal activity, and visably increase their presence.

VISION PX system records that and allows the senior officers to evidence that crime areas are being targeted. Heat Maps can be taken after the pro-active policing patrols have taken place which can be printed and distributed to senior officers and management, thus evidencing force wide improvements against the pledge.

The despatcher can now provide the emergency caller with an estimated time of arrival at the first point of contact.

Policing Pledge excerpts – we will:

- Always treat you fairly with dignity and respect ensuring you have fair access to our services at a time that is reasonable and suitable for you.
- Aim to answer 999 calls within 10 seconds, deploying to emergencies immediately giving an estimated time of arrival, getting to you safely, and as quickly as possible. In urban areas, we will aim to get to you within 15 minutes and in rural areas within 20 minutes.
- Answer all non-emergency calls promptly. If attendance is needed, send a patrol giving you an estimated time of arrival, and:
  - If you are vulnerable or upset aim to be with you within 60 minutes.
  - If you are calling about an issue that we have agreed with your community will be a neighbourhood priority and attendance is required, we will aim to be with you within 60 minutes.
  - Alternatively, if appropriate, we will make an appointment to see you at a time that fits in with your life and within 48 hours.
  - If agreed that attendance is not necessary we will give you advice, answer your questions and/or put you in touch with someone who can help.
- Provide monthly updates on progress, and on local crime and policing issues. This will include the provision of activity maps, information on specific crimes and what happened to those brought to justice, details of what action we and our partners are taking to make your neighbourhood safer and information on how your force is performing.

Up to now call handlers have not had the technology to schedule appointments directly into officers' diaries.

Improving your interactions

Since the introduction of the Policing Pledge police forces have been faced with the challenge of optimising the usage of existing IT to assist them in meeting the new focus on community policing. One such challenge is ensuring that the interaction between the public and call takers is polite and courteous – but how can forces measure such a subjective area and – more importantly – manage and improve on it? BAPCO Journal speaks with Paul Collins, Director Business Development Public Safety, of call recording specialist CyberTech International.

"We do have some police forces in the UK using this system for evaluating 'soft calls', but most forces while they are using the management tools for emergency calls, they aren't for helpdesk calls."

Applications such as Evaluation are standard in commercial contact centres, but most police forces are still only using them for emergency calls.

Policing Pledge delivery is at the top of the agenda of all forces in the country and Pledge monitoring reports are being compiled up and down the country attempting to show in statistical terms how forces are meeting these new requirements.

Indicator categories may include:

- % people saying the officer was polite and courteous.
- % people saying they were satisfied with the five user satisfaction areas (making contact; action taken; keeping informed; treatment by staff; overall).
- % agreeing that the police would treat you with respect if you had contact with them.

Such performance indicators provide a useful account of how the public views its interaction with the police, but the question remains, is there an existing IT tool that can pro-actively improve these interactions, and by extension, the performance indicators?

Paul Collins of CyberTech believes that while most police forces record all their emergency calls, and in many cases their non-emergency/helpdesk calls from the public, they rarely use additional application that allow them to evaluate and improve upon the quality of the call handling.

One such application is CyberTech's Evaluation Application, a value-added quality and efficiency monitoring solution. In a nutshell, explains Collins, Evaluation can offer a complete picture of every call to identify where and how performance can be improved. "Typically what they would do is use the application to listen to a random sample of calls and assess them, and for emergency calls they would then process them to ensure that they are meeting national standards." Collins adds that call handler managers could add a category for courteousness and friendliness to the measuring standards in order to evaluate the quality of the calls. "We do have some police forces in the UK using this system for evaluating 'soft calls', but most forces while they are using the management tools for emergency calls, they aren't for helpdesk calls."

Once calls are recorded they can be fed into training, suggests Collins. "This is standard in call centres, which are very profit and loss oriented. They would take a couple of good examples and a couple of bad examples – something that the police have been late to do."

Evaluation Application

- One application for voice recording, screen recording and evaluation.
- Evaluation forms with configurable sections.
- Set up schedule to select recorded calls and screen recordings for evaluation (eg a defined number of calls to be retrieved by day, week or month).
- Design custom forms.
- Creating evaluation projects by assigning calls to be assessed, along with forms to supervisors.
- Generate graphical reports on evaluations and call statistics.

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

Automating Quality Assurance

Jamie Wilson, Public Safety Marketing Manager EMEA at NICE Systems, outlines how an automated approach to quality assurance (QA) A enhances human monitoring, enabling team leaders to better focus their activities and efforts. It is about creating the right combination of people, processes and technology. QA has the potential to improve internal efficiency and performance, but also the quality of service perceived by the citizen.

Police forces need to look carefully at how they currently manage and maintain quality, whilst scrutinising the associated costs. Whilst every police force will have a formula for managing quality there is a real risk of spending excessively and not achieving a clear picture of how individual call takers and the command and control centre as a whole is performing.

For several years there has been major advances made in quality monitoring by commercial contact centres. They have streamlined processes, supported by the latest technologies to identify and share examples of best practice, recognise and react to common trends and potential issues, as well as the ability to pinpoint agents that are above and below the necessary standard. Crucially, they are doing this against a backdrop of operational cost cutting. The endeavours of these contact centres present an ideal opportunity for police forces to learn best practice in the implementation of an affordable QA initiative.

Some police forces are more forward thinking than others and at one end of the spectrum you have those that are assigned QA when they have spare time (so you can imagine how often this occurs in a busy force) and at the opposite end I recently met with a Quality Assurance Officer (the first person with such a title I have had the pleasure of speaking to at a UK police force) who had been recruited from a commercial organisation by the Chief Inspector to instigate a QA management process.

"Using this approach it is realistically possible to assess calls 50% quicker and for some forces this will equate to over £100,000 in savings per year."

How is QA being managed in forces today?

Upon return from a site visit one of my colleagues recounted his experience of a QA programme within one of the larger command and control centres in the UK.

He explained that four team leaders were tasked with assessing 40 calls each week from a combination of 999 calls and general enquiries. Each call assessment would take approximately 25 minutes to complete and at the end of the process the call taker would be awarded a score. This lengthy process will often be completed in accordance with the National Call Handling Standards looking at the level of professionalism, empathy that is demonstrated, establishing caller needs as well as hold and wait times. This process equates to 20 hours a week and an annual cost in man-hours of £45,000 per year. Meanwhile the crime-recording bureau of this particular force spends a further £150,000 per year assessing calls.

The downside of this approach is that only 160 calls are being evaluated per week and this represents a very small percentage of the thousands of calls that are taking place. Given that the aim of QA should be to identify the calls that are failing to meet pre-defined quality standards and in turn get to the root cause of why, it is vitally important to evaluate a representative sample of interactions.

Obviously, the smaller the sample the less information is available on which to base decisions accurately, yet the cost and manpower to scale up to a significantly higher volume of call assessments is prohibitive using this type of process.

This is the same issue that faces commercial contact centres and they have overcome the challenge by further leveraging their investments in digital call recording technology which has enabled them to capture and store every call or interaction that takes place between their agents and customers. This is the very same technology that the vast majority of UK police forces have installed whilst moving from expensive and resource draining tape-based systems.

With every call/interaction being captured and stored digitally, the right foundations are in place to use what are known as quality monitoring tools and techniques. Such software makes it possible to accurately and automatically score 100% of the interactions, based on pre-defined parameters, giving an accurate and total view of call taker, team and overall performance levels.

Once you have this level of insight you can use it make informed decisions to effect an improvement. For example, implement or refine call taker training and coaching initiatives for individuals and groups in order to bridge skills gaps; correct broken internal processes that have been identified (e.g. timely dissemination of information out to call takers, systems crashes or slowdowns affecting call duration); improve workforce scheduling (are there trends in call volumes, or call types that need to be addressed) ensuring the right people with the right skill sets are available at the right times.

Using this approach it is realistically possible to assess calls 50% quicker and for some forces this will equate to over £100,000 in savings per year.

"Deploying BlackBerry smartphones enable our front-line officers to police smarter, not harder."

Keith Gough, Mobile Information Project Manager, Thames Valley Police.

GPS will improve safety

In July it was announced that the Metropolitan Police was carrying out trials of Automated Personal Location System (APLS) technology to monitor, track and record the locations and routes walked by officers on the beat. Yet, reports Dan Worth, this technology still has a way to go until it is fully adopted and rolled out by police forces.

Top: previously, when Thames Valley officers and PCSOs spotted graffiti while on patrol they had to travel back to the station to collect a camera (if they didn't have it), return to the location to take the photograph, and then go back to the station to download the images and return the digital camera. Right: using GIS to the full could involve providing accurate data from the field, including where cordons have been established or estimates of casualties.

These trials represent yet another use in the growing array of GPS-based technologies used by the emergency services. As the capabilities of PDAs are enhanced to run the latest high-end GPS applications the technology is becoming more widespread and, crucially, more functional.

Simon Cottingham from ESRI believes that the new wave of GPS-enabled devices being issued to police officers will open up a range of applications which will increase officer safety as well as improve their ability to respond to the public." He outlines how there are three ways the usage of GPS in PDAs will manifest itself: "Firstly, officer locations can be reported back into police control rooms allowing control room supervisors to make sure they have adequate resources on the ground. More importantly this technology also allows any officer who is in trouble to press an emergency activation button and for this to be flagged to control room staff who can in turn identify and notify other officers in the vicinity providing the quickest possible assistance to officers in need of urgent backup.

"Secondly, this technology can be used to support location based services so that a user with a GPS enabled mobile device could be provided information based on their current location.

The police could use this technology to push information about risks or recent activity around a location. For example, as a police officer walks down the street alerts may be sent to their PDA with details of ASBOs in the local area and associated photos, or as an officer is dispatched to domestic disturbance at a property the device may automatically provide details of firearms licenses registered at that property or information on previous incidents at the same location.

"Finally, the technology can be used in a more active manner, using the full capabilities of mobile GIS to actually update information from the field. For example in the case of a first responder at a major emergency, they may be able to provide accurate location details and casualty estimates with a few clicks on a map, or send details back of where cordons have been established around a scene.

Continued on page 24.

→ Surrey Police, Achieving Excellence of Service and Efficiency Savings

Surrey Police has received multiple awards for their quality of service and innovative use of technology.

Intergraph's I/CAD command and control system is helping Surrey integrate key information across operational functions. The integration of call handling and crime recording has enabled Surrey to remove 'silos' and improve efficiency with measurable effects:

- Priority call attendance up 8%
- 20% reduction in the number of calls per crime reported
- Substantial efficiency savings
- Smooth introduction of the Policing Pledge

In June, Surrey Police received Intergraph's prestigious Icon Award, which recognises visionary companies and organisations around the world that have made innovative use of Intergraph software to bring significant benefits to their organisation or industry.

INTERGRAPH®

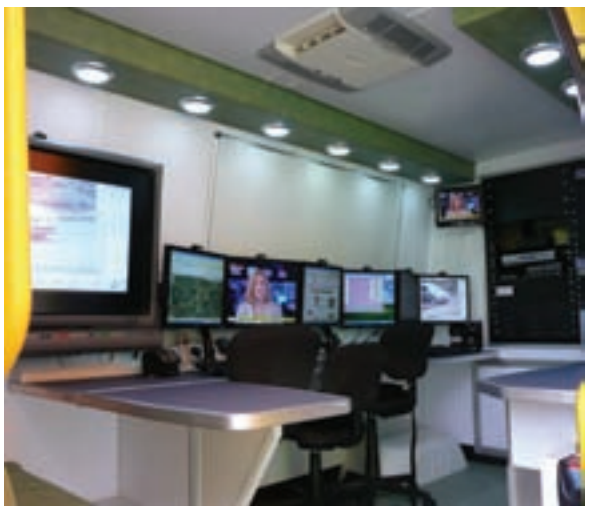
Create a Safer World®

To learn more visit:
www.intergraph.co.uk/publicsafety

Integration Expertise Delivers Enhanced Communications

Satellite Broadband continues to play a pivotal role in enabling the emergency services and public sector to effectively communicate from any location, particularly where traditional GSM networks are unavailable. Access to high speed broadband is the key to delivering a wide range of voice, data and video applications that allow major incidents to be managed more efficiently and operational outcomes to be enhanced.

Excelerate Technology pioneered the initial concept of providing access to high-speed broadband using automatically deployable satellite platforms fitted to new and existing mobile ICUs as well as standalone transportable solutions that deliver reliable and resilient communications across the incident ground. Satellite broadband enables uninterrupted voice and data communications to be maintained, even in environments where GSM networks are unavailable, with other responders, headquarters and other locations. It also enables the emergency services to achieve interoperability and share information to meet their responsibilities under the Civil Contingencies Act.



Integration Expertise

However, there are significant integration issues that must be overcome if these disparate applications are to deliver the required results. Solution providers must have extensive experience of the latest voice, data and video technologies as well as understanding the operational requirements of the emergency services. Excelerate Technology has been able to make a major impact on the UK market by investing in research and development, and providing a one-stop-shop approach to managing the integration, real-time network operation and support. The company has been responsible for equipping some of the UK's largest and most advanced mobile command and control vehicles. Customers include Royal Berkshire Fire and Rescue Service, Strathclyde Fire and Rescue Service, South Central Ambulance Service NHS Trust (SCAS) and Fife Fire and

Rescue Service, the latest vehicle to be completed.

Excelerate Technology is also technology supplier nationally for the Department of Health's HART (Hazardous Area Response Teams) programme which is delivering a new generation of civil contingency vehicles equipped to provide high levels of real-time information and resilient communications, integrating voice, video and data technologies to enhance patient and victim care at major incidents.

As prime technology partner for these vehicles, Excelerate Technology played a key role in the development process providing advice and guidance on what could and could not be achieved. The company also actively recommended new and innovative approaches that would provide a comprehensive, joined up picture of all activities associated with major incidents and enable command decisions to be clearly and effectively communicated.

Satellite Broadband

Satellite broadband is now routinely fitted to mobile command and control vehicles enabling a wide range of specialised command and support applications to run including STEPS (Strategic Emergency Planning Software), advanced GIS mapping, asset management database information and risk information – all of which can be combined to create a common operating picture. Data and imagery can be displayed on touch screen displays, desktops and wireless-linked mobile data terminals that also provide access to email, instant messaging, video-conferencing, live CCTV footage from incident and traffic cameras or television news. The secure satellite links also enable live video to be streamed to a video server for online access in

virtual real-time by authorised personnel.

It also enables the use of private GSM, satellite and GSM-based VoIP (Voice over IP) that gives PBX switching functionality and enables different voice devices including UHF and VHF radios, mobile and VoIP phones to be patched into each other with all voice communication channels being recorded in real-time.

Many smaller rapid response vehicles are also being equipped with the same technologies as these larger command and control vehicles. Increasingly, they are being fitted with additional mobile BGAN solutions that deliver broadband access whilst the vehicles are on the move. Recent contracts include West Midlands Ambulance and Gwent, Derbyshire and Nottinghamshire Police.

Business Continuity

These vehicles also have a wider role to play as part of business continuity strategies that enable organisations to meet their statutory duty to continue operations, including multi-agency working and communication, regardless of physical circumstances such as the loss of Headquarters facilities. According to Mark Kerr, Chief Executive of Powys County Council, which operates a fleet of Youth Information Service vehicles equipped by Excelerate Technology: "The built-in satellite communications capability enables us to deploy the vehicles anywhere in the county at short notice to provide communications support in the event of a local disaster. They also provide us with an essential fall back should our central facilities be compromised."

Stand-alone Solutions

In addition to these high profile projects, Excelerate Technology supplies many organisations with innovative stand-alone solutions that can be rapidly deployed in any environment. These include a body worn camera system that delivers high quality, interference-free images regardless of line-of-sight using COFDM Video and UHF Telemetry. This system also enables high quality images to be received from personnel operating inside buildings or in tunnels where traditional transmission technologies will not work. Also making use of COFDM transmission is a powerful dual thermal CCTV solution that combines a high resolution optical zoom camera with a sensitive thermal imaging camera in the same remote head for day and night operation. Live video streams from both these systems can be viewed on built-in displays in Peli cases or any of the large or small screen monitors used by Silver Command staff in command and control centres operating at the scene of an incident.

Excelerate Technology also provides a comprehensive range of compact portable satellite solutions that are quick and easy for a single person to operate with motorised set-up and antenna positioning. There is no requirement for special training in order to operate these systems which integrate with all standard local area network infrastructures.

Excelerate Technology is ISO9001 accredited and is committed to working closely with users to turn ideas into reality in the most cost effective way. The company's R&D and project engineering centre is a centre of excellence where new products and solutions, particularly those delivering interoperability between the blue light services, continue to be rapidly developed. This facility also provides the capacity to efficiently handle an increasing number of projects, whether supplying standalone solutions, retrofitting existing vehicles or building bespoke mobile command and control units.

excelerate

DATA VIDEO VOICE INTERNET VIA SATELLITE & WIRELESS

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

Simon Cottingham from ESRI believes that the new wave of GPS-enabled devices being issued to police officers will open up a range of applications which will increase officer safety.

They can also query the maps on the mobile device for risks and assets in the area, such as schools that need to be evacuated or where the nearest medical facilities are."

Peter Molyneux from Getac, a manufacturer of rugged PDAs with enhanced GPS technology, observes that with health and safety and corporate manslaughter becoming major elements of employment, devices that can offer this functionality provide a vital level of safety, and give those in the field peace of mind when working on their own.

Enhanced GPS positioning

Getac has recently increased its PDA offering with a new rugged device, the PS535F that offers enhanced GPS positioning as well as wireless and Bluetooth connectivity and has an IP 54 rating. "Importantly, though, while it is strong enough to offer protection to IP54 it is also light enough and small enough to mean it can be used in the field and carried for long periods of time. The battery life is long enough to cover an entire shift and it has all the functions of a regular PDA, including highly accurate GPS functionality," says Molyneux.

The accuracy of GPS is a key consideration now, especially as the quality continues to improve to within a few metres, and this is something Getac were keen to offer on the new device. "A few metres can be a big difference, and if the information is displayed on a handheld screen it needs to be clear to the user where they are being directed to.

Getac's PS535F was put through a series of rigorous tests to ensure it could withstand the toughest environments, covering risk from water, sand, and dust.

Therefore the PS535F has a highly accurate GPS functionality and one that is very quick to load too, taking just a few seconds to locate its position."

The use of smartphones' built-in GPS capability is a feature Graham Baker of Research In Motion (RIM) believes has even more potential for the future. "Quite rightly, police forces are cautious about introducing new technologies to ensure that they don't cause any upheavals to their working practices.

"However, this means, that as of yet, we have not seen the GPS feature on mobile devices used to its full potential. The ability to push information – such as crime hot spots and known criminals' whereabouts – to officers on their BlackBerry smartphone as they 'walk the beat' is likely to become the norm in the next six to 18 months. We have also had a number of forces ask us about the possibility of using GPS information to automatically fill in forms for Stop and Search or incident reports, to improve efficiencies and ensure that recorded data is accurate."

Geo-tagging applications

Another technology becoming increasingly popular, notes Graham Baker, is the use of geo-tagging. "We recently supplied over 1,000 BlackBerry smartphones to Thames Valley Police as it wanted to increase operational efficiencies and improve productivity.

The force is using geo-tagging on BlackBerry smartphones to counter anti-social behavior. Previously when officers and PCSOs spotted graffiti while on patrol they would have to travel back to the station to collect a camera if they didn't have it, then return to the location to take the photograph and then back to the station to download the images and return the digital camera. With BlackBerry smartphones and a geo-tagging application, officers are able to capture the images while out on the beat and then upload them remotely to the necessary system, eliminating travel time and making the officer's job a lot easier.

The photos are also automatically tagged so the exact location can be recorded." Keith Gough, Mobile Information Project Manager at Thames Valley Police, adds, "Deploying BlackBerry smartphones enable our front-line officers to police smarter, not harder as being able to access systems via BlackBerry smartphones means less time spent travelling between stations as officers no longer need to go back to the station every time they need to access information from a computer."

Keeping track of officers when out on the beat, as the Metropolitan Police is doing in its current trials, is not something that RIM is involved in or has been asked about.

However, Baker does explain that 'geo-fencing' of police headquarters and stations is another use of GPS technology that is becoming increasingly popular in the police sector to help measure the amount of time officers are spending out on the beat. "Police visibility is a major issue for forces and so by using geo-fencing they can see when devices, and as such officers, are out of the station and how much time they are spending out on the street. This gives forces the ability to calculate if enough officers are out on the street."

How safe is your mobile data?

Last month the Assistant Information Commissioner Mick Gorrill urged organisations to make sure they encrypted all mobile devices such as laptops and PDAs, to protect against the risk of data loss or theft. With the use of mobile data growing all the time, from in-vehicle solutions to smart phones, and the amount of data captured increasing too, the necessity to address the issue of data security is not going away, writes Dan Worth.

The Mobile ID Unit is proving very popular with Border and Port Authority Police, as well as the National Football Unit. It is set up to only hold a minimal amount of information before it is cleared.

Chris Paddock from Microbus, a supplier of both encrypted and unencrypted mobile data solutions, re-enforces the point that many vehicles used by the emergency services require access to confidential information, which is why it's vital this information can only be accessed by those who have the necessary permission to do so. What if the device storing this information (or the vehicle itself) was stolen?

Protecting data is done in three ways, outlines Paddock. "You can use software to encrypt the data on the storage medium, making it impossible to read unless you have code that unscrambles it. Secondly, the storage medium can be protected by additional hardware so only those with the necessary passwords and 'tokens' – such as a USB dongle – can access the information. And thirdly, the data can be sent and stored on remote hard-drives so no data is stored in the terminal that sends it, thus removing the risk of it being stolen."

Sending information to be stored remotely means technology can work independently of personnel in vehicles, increasing the scope of work the technology can offer. Technology like Automatic Number Plate Recognition (ANPR) can be programmed to record and send information back to a central, secure location without the need for officers to operate the technology. "This means if a vehicle is captured on ANPR that's of interest to the emergency services for reasons above the security clearance level of the officers in the car, then the time, data, and location of where the data was recorded can be captured, and sent to a secure location, without the officers in the vehicle knowing it has happened and without retaining the data in the vehicle."

Microbus supplies a large number of police forces with mobile data units for installation in vehicles, and the Metropolitan Police use 1,700 of its units to allow officers access to the PNC. While Microbus supplies the units to the emergency services, the encryption technology itself is provided by Stonewood Group, whose products are used by central government, local governments and emergency service users.

Stonewood's Andy Donaghue observes that the need for encryption has risen for a number of reasons. Firstly, software that previously protected unencrypted data is now easily infiltrated by basic attack tools. Secondly, as the use of mobile data has risen so more emergency services personnel are working remotely from the main site – either in-vehicle, in shared offices with local authorities, or even from home. "This means information they access remotely must be encrypted." Finally, there are now far greater implications for lost data, as seen by the Cabinet Office's Directive to encrypt mobile data and devices, and supported by the Information Commissioner's Office. "The Information Commissioner has to be informed about any losses and this is invariably reported in the media. However,

if data is lost, or stolen from a vehicle, and it's encrypted, then the loss is negated because the data will not be accessible."

Stonewood supply a wide range of end users, and its encrypted hard drives are the preferred choice of NATO for use in regions such as Iraq and Afghanistan. "Since then we've expanded the use into areas such as emergency services. On the back of this we have recently launched a brand new range of encrypted hard-drives called Eclypt that offer additional benefits – such as multi-user access, 256-bit encryption and a two-level drop in the data's protective marking – and conform to all necessary encryption standards such as the American Federal Information Processing Standards (FIPS) and the British government's Communications-Electronics Security Group." Furthermore, Donaghue emphasises that this encryption is seamless when used with the Flagstone and Eclypt hard drives, as they operate independent of systems.

In the field – borders and ports

APD, a leading supplier of communication and control applications, recently introduced a new Mobile ID Unit that is proving very popular in particularly with Border and Port Authority police and the National Football Unit.

John Gwynne of APD explains that using the unit, officers can check a person's name, date of birth, gender, nationality and document information in just a few seconds. This information is then formatted into a Police National Computer (PNC) query and the results displayed on the device's screen and the information stored on the terminal. To avoid the potential data risk of too much information being stored on one piece of equipment, the device is set up to only hold a minimal amount of information before it is cleared; thus also removing the risk of too much information being lost.

Gwynne notes the importance of ensuring all elements of the data chain are protected: "These days, you have to assume that those you are encrypting against are also using high-level technology and that they could be trying to hack into your systems at any stage in the connections. It's therefore crucial to encrypt the end-user device as well as the back-end system it's connecting too. It may be the case that a hacker will try to trick, or 'spoof', a terminal into believing a connection is the correct one and so will transmit data direct to the hacker."

FireLink

The fire and rescue service is currently going through a massive overhaul of its mobile data systems as part of the FireLink programme under which all vehicles are being upgraded with new in-vehicle terminals to offer a range of benefits, one of which is greater system resilience and security. The upgrade will bring all fire vehicles interoperability on Airwave to allow communication with the police and ambulance while also ensuring all fire vehicles are on a common equipment platform. The new mobile data terminals, being installed by telent and supplied by Motorola via Airwave, will offer increased levels of encryption. David King from telent comments that many fire vehicles require access to information that needs to be encrypted, such as layouts of government buildings, or where chemicals are stored, "so it's important information like this can't be stolen or intercepted. By providing high levels of encryption on the new terminals this risk will be removed and also with the encryption on radios the firefighters and command personnel can talk freely over the networks without fear of conversations being overheard."

Communities and Local Government adds that FireLink radios encrypt all their traffic, both voice and data, and the encryption of data storage devices is being considered (within the context of the sensitivity of the information to be handled), as part of a package of security measures to protect confidentiality, integrity and availability.

Additional BlackBerry security

As mobile data devices become smaller more information can be pushed to individual users (eg officers on the beat). Smartphones are increasingly being used by police forces to access the information when out on the beat. Graham Baker from Research in Motion (RIM), which provides BlackBerry smartphones to one in six UK police officers, highlights that all BlackBerry smartphones and the BlackBerry platform have been accredited up to 'restricted' level data by the Communications Electronics Security Group (CESG). "Therefore users can be assured that sensitive information can be accessed securely and if lost or stolen, devices can be instantly wiped and disabled over the air by an appointed administrator."

To offer further levels of protection, RIM has recently introduced a new smaller BlackBerry Smart Card Reader that offers proximity controlled access to a BlackBerry smartphone using AES-256 encryption. This means that a BlackBerry smartphone, or any other Bluetooth supported device, will automatically lock itself if it is moved a certain distance from the Smart Card Reader or if the card is removed from the reader itself, providing an extra level of security beyond those outlined above.

"These days you have to assume that those you are encrypting against are also using high-level technology and that they could be trying to hack into your systems at any stage in the connections."

John Gwynne, Product Manager, APD.

Stonewood's new Eclypt range of encrypted hard-drives offer multi-user access, 256-bit encryption and they conform to CESG standards.

Promoting digital radio solutions

Several of the world's leading device and network suppliers in digital radio services have announced the launch of the new DMR Association. BAPCO Journal Editor Jose Maria Sanchez de Muniain interviewed DMR Chair Mario Micheli of SELEX Communications (Italy).

Mario Micheli explains manufacturers are coming together to ensure that all DMR performances are compatible prior to certification by the new association.

Created by founding members of the DMR MOU Association which focused on helping establish the standard, this new organisation is designed to take DMR to the next level: encouraging interoperability and new product/service development to establish DMR as a preferred choice for professional users of conventional and trunked digital radio. "Analogue is still a huge part of the market. In other sectors of telephony the movement form analogue to digital happened in the 90s. In PMR and public safety this happened with TETRA. But today the world is still full of analogue equipment which is obsolete," commented Micheli, who added that the migration form analogue, in a nutshell, has been taking too long.

The DMR Association will concentrate on removing barriers to interoperability by establishing best practices for testing and validation of the DMR standard. The organisation will also focus heavily on creating and promoting a common industry view on DMR as well as a variety of services to grow the market for all companies in the value chain. This includes developing educational

programs and tools like the DMR Association certification program to dentify equipment meeting the DMR standard.

In addition, the group will seek to work with other standards bodies to ensure wider recognition of DMR standard and encourage broader interoperability of new products and services. "Our goal is to make DMR the most widely supported 21st century digital radio standard for business, and certified interoperability is the key to creating that demand," said Micheli. "The DMR Association is designed to promote growth by enabling open multi-vendor markets and healthy competition. This leads to lower long-term cost of ownership, a wide selection of products, as well as continuous product innovation – the most important features for current and future buyers."

The DMR Association has already begun to establish its testing and validation benchmarks. Association members Motorola and SELEX Communications recently supplied fully interoperable DMR communications equipment for the security operations at the recent G8 Summit in Italy.

DMR testing will range from laboratory work to real-life field trials and deployments to ensure pre-certified equipment is put through its paces. The field trials will form the basis for a guarantee to end users that if they buy certified DMR equipment, there will be no interoperability problems with terminals from different (also certified) terminals. "This has been a huge success already with TETRA such as in the UK public safety sector and many other Public Safety operators outside the UK," said Micheli.

In addition to equipment and system compliance, the Association has a marketing committee dedicated to demonstrating why DMR is the leading international value digital radio standard available today in professional markets. "With digital radio emerging in the business world, there have been cases of mis-information," added Margaret Grant (of Tait Radio Communications, New Zealand), DMR Association Marketing Chair. "The DMR Association is aiming to provide clear, up-to-date information, designed for international markets, allowing interested parties, including potential members to make an informed choice."

The Association will become a first point of call for organisations looking to migrate to DMR, because it will clear up misinformation relating to – for instance – implementation and operational disruption. A key message is that DMR is not competing with TETRA – we are talking about an alternative standard and not a competing standard," said Micheli, who added that the standard has already been established by ETSI. "We as manufacturers are coming together to ensure that all performances are compatible prior to certification issue."

The Association plans to make further statements on certification in autumn and will formalise existing interoperability after that. As more member products come onto the market the aim is to quickly certify interoperability.

For more information visit www.dmr association.org.

A Joint Agency Information and Analysis Cell is where the information and assessments from all relevant agencies can be shared in real time to Strategic Coordinating Group meetings.

Joining up the digital dots

VectorCommand's Command Support System is a unique new technology suite which builds and shares a common operational picture across incident grounds and throughout command networks. It supports a more integrated and dynamically updated form of multi-agency emergency command, addressing situational awareness issues frequently highlighted in post-incident reviews, writes VectorCommand's Stephen Prendergast.

"Information is the lifeblood of effective operational command. Yet time and again we look at post–incident reviews of major incidents to find that decisions were flawed by an inaccurate or incomplete information picture. Many will say this is simply a symptom of post–event inquiries done with the benefit of hindsight – but the fact remains that decisions taken by senior command without a common information picture will usually be less effective than those taken with a more accurate and relevant understanding of the situation."

That is the view of Ian Dickinson, former Assistant Chief Constable for Lothian and Borders and an officer with extensive senior operational command experience, having been the Gold commander for Scotland's capital during the 2008 G8 summit (where a joint agency information system was established).

Imagery from UAVs (such as this Hampshire FRS helicopter) can be shared across all levels of command using the Command Support System.

"At strategic (Gold) level can we afford to allocate the time in a Gold Group meeting to the exchange of information between commanders just to try and obtain an up–to–date situation assessment or evaluation of options? Clearly this is not effective – yet that is exactly what often happens.

"There is an alternative – establishing a joint agency information cell where the information and assessments from all relevant agencies are shared and circulated at tactical and strategic level – both before meetings and in real time to the command meetings. Specialist staff with good quality support technology can add considerable value to the separate agency information, and present commanders with assessments that enable much better tactical and strategic decision making.

"Putting it another way – can commanders defend a position to a post–incident review in which decisions were taken without the benefit of a joint agency information sharing mechanism? A Joint Information and Analysis Cell, supported by quality technology is, without doubt, the best way to support high risk decisions, and it will become increasingly difficult to justify multi–agency incident management without one."

Technological support for a more joined up way of

working is at the heart of the thinking behind the design of the Command Support System, developed by VectorCommand in close cooperation with organisations such as the London Fire Brigade/London Fire and Emergency Planning Authority, Royal Berkshire Fire and Rescue Service, the Civil Protection Mechanism of the European Union and South Yorkshire Fire and Rescue Service and Local Resilience Forum. Interoperability and accurate information creation, management and sharing are at the heart of the system's "DNA".

The Command Support System works in conformity with industry–standard decision making models and combines a number of key GIS mapping, communications, database, Standard Operating Procedure, asset management, display, record keeping/review, planning, and imagery capture and distribution technologies.

These different types of functionality have been integrated into an iPhone–like interface which can be used on ruggedised wireless devices, such as the Panasonic Toughbook family, as well as on incident command unit desktops, within Joint Information and Analysis Cell desktops and electronic whiteboards, and headquarters command room display screens. The system has been designed and engineered to be intuitive and easy to understand and use.

The Command Support System's delivery of a Common Operational Picture involves a new approach to using a suite of technologies for improving accuracy and dynamic situation reporting, from sector level within an incident area on up to incident level, and then further on up to command centre level. That is why the Command Support System is described as a distributed C4I system (Command, Control, Communications, Computing and Information).

The Command Support System approach also recognises that the new technology enhances the role of the Command Support Officer; for example his initial role upon arrival at an incident could be to act as an intelligence gatherer, compiling key incident information (using UAV and still pictures, CCTV footage, casualty assessments, threats, requirements etc), annotating this information into maps, reports and electronic whiteboard drawings within the Command Support System, and then sharing these reports – instantly – with all other relevant parties, including the Joint Information and Intelligence Analysis Cell supporting Strategic Coordinating Groups within Local Resilience Forums.

Command Support System supports and maximizes the impact of the new generation of incident command vehicles.

As an incident develops (or multiple incidents develop), and different agencies become involved over prolonged periods of time, adding to event complexity, the system is updated dynamically from throughout different sectors, providing all participating agencies and Gold Command with one clear joined–up view of all activities. In this way, modern multi–agency emergency organisations would be seen to be exploiting to the full the command support possibilities of the latest information technologies.

"It is perhaps an exaggeration to suggest this," says Ian Dickinson, "but can emergency command and management continue to rely on Professor Lindblom's science of 'muddling through'? He wrote his now famous thesis in 1959 – we do now have a more modern alternative."

Command Support Officers viewing reports from throughout an incident ground.

Mobility-driven efficiency

In a drive to improve productivity, Hampshire Fire and Rescue Service (HFRS) has implemented Innogistic's CFRMIS Mobile solution. John Richardson from Innogistic talks to Dave Norgate, Group Manager from HFRS, about how this new solution has made a big difference.

In line with their statutory requirements HFRS conduct fire safety activities through a team of Fire Safety Inspectors. These activities include business fire safety visits to enforce fire regulations in non-domestic premises as well as fire risk reduction and education in the community as a whole.

Delivering ongoing service improvements, whilst maintaining a tight control on expenditure, is a challenge which, like all public sector organisations at present, Hampshire Fire and Rescue Service constantly faces. Ever since the Hampton report of 2005 looked into the scope for improving regulatory inspections and enforcement, there has been a drive towards using new processes and technology to gain efficiencies.

At around the same time, changes in fire safety legislation occurred, as Dave Norgate explains. "Until recently, fire authorities were responsible for the inspections and for issuing the fire certification for commercial and workplace premises. However, the introduction of the Fire Safety Order (FSO) 2005 brought about a major change in fire safety legislation. Employers were made responsible for the fire safety of their buildings and were required to carry out their own risk assessment and compliance activities without the local fire service having to make an inspection visit. Should the fire service decide to visit the premises to conduct a fire safety audit, then the company's fire responsible person provides us with their risk assessment as the starting point of the audit process. The fire service will audit the fire safety risk assessment by checking the supporting processes as well as undertaking a physical check on key areas within the building. This audit process has now replaced the old certification process but HFRS, like all other Fire and Rescue Services, still maintains a recording, consultative and enforcement role to ensure that fire protection regulations are being adhered to."

In line with HFRS Senior Management Team's desire to support technology that gives efficiency gains and provides the most efficient service to the community, it decided to implement CFRMIS (Community Fire Risk Management Information System) developed by Bristol based software specialist, Innogistic, in order to collect and manage information relating to Technical Fire Risk throughout the county.

Norgate continues: "HFRS has records, held in CFRMIS, of all non-domestic premises in the county. Each premises has a risk rating which moves up or down dependant on the standards of fire safety found during the Fire Safety Audit conducted by the fire service. This information is used by us to ensure compliance at all business and commercial premises. It can also provide us with a profile of locations requiring monitoring and possible enforcement inspections. For example, there may be buildings that represent a particular fire risk due to the nature of processes occurring within them or the nature of goods stored within them. Alternatively it may be a business which has not previously heeded our non-conformance notification. An inspection may be needed in this instance so as to ensure compliance or gain information should we need to take stronger action."

The process of Fire Safety Inspections, although supported by CFRMIS as the main back office system, was primarily paper based and as such was both resource hungry and inefficient in terms of time and travelling. Innogistic realised that remote working using a mobile

solution could provide an answer to these problems. Significant advances in mobile technology and hardware provided the required infrastructure for mobile working and Innogistic developed CFRMIS Mobile to take advantage of these new developments.

The mobile solution

CFRMIS Mobile is a software solution that Fire Safety Officers can use to download details of fire safety inspection jobs to a tablet PC. At the inspection site, prescribed data gathering forms are used on the tablet laptop to record all the details of the premise and any particular risks associated with it. Norgate states that this point is of particular importance: "Using the audit forms electronically on site is of particular value for us as it helps ensure that the proper procedures and legalities of a fire safety inspection are correctly adhered to.

This has been a particular advantage of CFRMIS Mobile. If we need to consider the possibility of legal action, it is vital that we have done everything correctly in the run up to that action." Once the inspection is complete and the correct data collected, CFRMIS Mobile synchronises the new information back to the central CFRMIS database held at the fire and rescue service's headquarters.

HFRS was quick to see the potential of CFRMIS Mobile and was one of the first to sign up to Innogistic's Early Adopter programme, explains Norgate: "We had a vision of our Fire Safety Inspectors working remotely, being able to access information prior to the visit and undertake data capture at the point of inspection, all without having to first travel to their main work base to collect and plan their jobs for the day. All of this is now a reality using CFRMIS Mobile. Our inspectors can now remotely connect to our network, download any completed jobs as well as pick up their future inspections, all with one visit to any of our branch offices or stations throughout the county.

They can then plan their schedule of inspections much more efficiently and without the need to 'call in at the office' morning or evening. The difference this has made to travelling times and costs, and of course to our CO2 emissions, is very impressive. But importantly it has also greatly improved our productivity in terms of numbers of inspections."

There were initial concerns about capital investment costs in terms of new hardware as well as the cost of the software, says Norgate. "Naturally when you instigate a new system like this you are conscious of the initial investment costs. However, we have found that in terms of pure hardware costs, the new system has given us savings as we no longer need the traditional fixed desktop terminals that the inspectors used to use, which are paid for on a lease rental basis. This saving alone has more than covered the cost of the new tablet laptops.

"This system has also allowed us to look into new ideas where our hardware is concerned. We have been very pleased with the performance of the tablet laptops we procured, as they are lasting longer than we initially predicted. We are now looking into portable printers which, if they work as we hope, will eventually allow our inspectors to print out any correspondence, forms or non-compliance documents, and deliver it personally to the business concerned at the end of the inspection, saving us a great deal in admin time and postage."

Although all these advantages became apparent quite quickly, HFRS wanted to make sure that any improvements were correctly measured over a longer period of time, in this case over a full year of operation. "When you implement such fundamental changes in infrastructure and working practices, you need to ensure that they are delivering wholesale improvements in service delivery and cost.

To find this out properly we approached the initial implementation of CFRMIS Mobile as a one-year trial, making sure we rigorously measured any changes or improvements and reported objectively on the findings. The whole purpose of implementing mobile working was to provide the most efficient and cost effective way of delivering fire safety enforcement in Hampshire, so we had to measure the system's impact on the broad spectrum of our Fire Safety Inspectors' performance as well as our infrastructure."

The trial study initially involved eight fire safety officers throughout the county, although this has now been rolled out to all 30 inspectors.

"We were very pleased with the way this new system worked," concludes Norgate. "Right from the start we began to notice a difference but it was not until we produced the final report that we were able to see how much of an impact CFRMIS Mobile had made. The new solution, once installed, gave us very few headaches and has performed exactly as we wished it to.

The interface, utilising the workstation connection points at the regional offices and stations has proved robust and cost effective, especially when compared to other mobile solutions. The ability to upload and download jobs, with very few exceptions, has proven highly successful and our team enjoy the freedom and flexibility that mobile working has given them."

HFRS operates across an area that encompasses the M3, M27, the docks of Portsmouth and Southampton, the large commuter belt conurbations of Basingstoke, Farnborough and Aldershot, and beautiful yet vulnerable rural areas such as the New Forest and the Hampshire Downs.

Deny the road to the criminal

A new protocol for local authority ANPR systems has been extended to ensure that data can be shared with the police, writes traffic specialist and TEC Editor Carol Debell.

"Any local authority buying UTMC compatible cameras in future, should they be in partnership with the police, will be able to provide the data required by the National ANPR Data Centre."

Peter Billington, Senior Partner, Telematics Technology.

Automatic Number Plate Recognition (ANPR) provides a powerful tool in the drive to "deny criminals the use of the road". Vehicle intelligence can link criminals to vehicles and vehicles to crime scenes. And it enables the police to intervene when these vehicles are identified on the public highway.

The underlying proposition is very simple. There is a strong correlation between those people who are guilty of various types of vehicle crime and those people who engage in criminality. In short, criminals are more likely to drive untaxed and uninsured vehicles, actions which are easily detectable using ANPR.

As a result the odds on a criminal using a vehicle being the subject of positive action by the police rises from very slim to very high and even if not caught immediately, ANPR will continue to detect their presence and increase their vulnerability and risk each time they use the road.

To be effective, the national ANPR network has to be comprehensive and a lot of work has gone on over the last couple of years both to extend the primary network but also to work with partners using ANPR for other purposes. Since the launch of Project Columbus in 2006, a concerted effort has been made to extend the national ANPR network to cover private-sector sites including car parks, shopping centres and petrol stations.

The aim is to expand the system to 100 million 'reads' per day, all of which will be stored by the National ANPR Data Centre in Hendon. These reads will provide the time, data and place of each vehicle sighting and will be stored for five years providing a valuable source of intelligence for the future.

An additional source of ANPR data has become available over the last couple of years as local authorities all over the country invest in journey-time measurement systems. They are doing this because the Traffic Management Act 2004, which requires local authorities to tackle congestion and disruption on their road network, is now beginning to bite. The starting point is to measure congestion, a somewhat controversial concept in its own right. The method of choice in many areas is to use ANPR on strategic routes. Number plates are read as a vehicle enters a pre-defined zone, and then

read again as it leaves. Provided a reasonable number of "matches" is achieved, the authority is able to build up a picture of average journey times across the city. Not only does this provide the data for year-on-year comparisons of average speeds, hopefully showing improvements, it also enables traffic managers to identify incidents in real time, for instance as journey times suddenly spiral.

It is this new focus on journey-time measurement which has brought ANPR within the focus of the UTMC initiative. UTMC (Urban Traffic Management and Control) was a £6m project launched by the Department for Transport in 1997 with the aim of ensuring that the different applications used within modern traffic management systems are able to communicate and share information with each other.

The project has been through a number of phases – in 2001 full scale demonstration projects took place in Preston, Reading, Stratford-upon-Avon and York. These involved a wide variety of suppliers and demonstrated

both the advantages and the challenges of trying to integrate equipment from different manufacturers. It led to the setting up of the UTMC Development Group (UDG) which consists of stakeholders including local authorities and suppliers and the development of UTMC Technical Specifications which define UTMC standards.

Essentially, this initiative means that as more and more local authorities go down the UTMC route, instead of having to negotiate their way round design of new systems, they can build on the experience of the early adopters knowing that the equipment that they procure will all work together. Interoperability is the aim and although it is not quite a plug and play environment, because these are sophisticated systems and each one is different, it does ensure that integration of systems is relatively easily achieved.

In a fully functioning system the data being produced from a range of sources including traffic signal controllers, detectors, CCTV cameras etc feeds back into a common database. This database draws live data from the streets as well as historic archives enabling traffic controllers to manage traffic flows and incidents and in turn to inform the public via Variable Message Signs, SMS messaging, websites etc.

ANPR is becoming an increasingly important part of the mix which is why, in 2007, a UTMC ANPR Working Group was set up to develop an open protocol for use by ANPR cameras when connecting to UTMC systems.

Peter Billington is the current chair of the Working Group. Billington is a senior partner in engineering consultancy Telematics Technology. He has particular expertise in the design, development and deployment of ANPR systems and was the technical authority for the two largest ANPR-based journey time measurement systems in the world – the UK National Traffic Control Centre and Trafficmaster.

Billington says the fact that ANPR came relatively late to the UTMC standards environment has had its advantages. Traditionally, he says, there has been a lot of concern about going down the web services route because of the amount of bandwidth required. "There is less concern about this now because bandwidth is becoming cheaper. XML web services is the way the world is going." As a result, the new protocol is one of the first in the UTMC stable to move away from the use of SNMP (Simple Network Management Protocol) and embrace the new direction towards XML web services.

The ANPR protocol is also a first in that it has extended its focus beyond traffic management. Journey time measurement using ANPR simply requires a number plate read and a subsequent match. However, Billington points out that if these systems are to share data with the police, then images will be required.

"The feedback we received was that more and more local authorities are wanting to do the right thing and share cameras with the police so we wanted to be sure that the data being produced by the cameras would be capable of meeting police ANPR standards. Until now these systems typically have used text or binary protocols which made no provision for sending images." Additionally, he adds that built into the protocol is the provision to send the kind of data not currently being sent by these systems.

"We have included data such as the classification of the vehicle, the make, model, the colour etc. That data is not used for journey time measurement but it is potentially very interesting to the police." The other important addition is in the area of diagnostics. "We've done a lot of work on predictive maintenance. It means a lot more can be done remotely and reduces the need to send someone out onto the road."

The draft protocol is now with the UDG and all being well should be published in the next draft of the UTMC standard. And what does this mean in practice? Billington: "Any local authority buying UTMC compatible cameras in future, should they be in partnership with the police, will be able to provide the data required by the National ANPR Data Centre."

For more information visit www.utmc.uk.com. Peter Billington can be contacted on Peter.billington@telematech.co.uk

CCTV and ANPR team up in Northamptonshire

A crime prevention and safety scheme, using a CCTV and ANPR camera system supplied by Nova Integrated Systems, has been installed on the Brackmills industrial estate, thanks to a grant from the West Northamptonshire Development Corporation.

The estate had been hit by a spate of lorry jackings and thefts – cargoes stolen from lorries included clothes, TVs and other electrical equipment.

Mike Franklin, formerly crime prevention manager with Northamptonshire Police, said that good images were being received by radio transmission technology and covered all entrances/exits to the estate. "The system can store up to two years of data from the ANPR system which could be used as a post investigative tool for any incidents." He confirmed that since the cameras and ANPR became operational there had been a massive drop in crime with road freight crime and dangerous parking almost eradicated.

Charlotte Patrick, sector development manager with Northamptonshire Enterprise Ltd, concurred with these comments. She said that following the introduction of the cameras onto the estate there had been a significant drop in external crime and that the cameras were certainly working as a deterrent.

An important feature of the system designed by Nova was that it could produce high quality images using radio transmission technology which would deliver an ongoing cost saving to Northampton Council over the alternative fibre systems available.

Businesses on the state have made a commitment to pay for the on-going maintenance and monitoring of the system.

The PIPS P382 SpikeHD is a fully integrated number plate reading system, designed for use in high performance applications where multiple lane coverage is required.

Work smarter with mobile data and advanced video solutions from Microbus

Every day police officers rely on Microbus products for accurate and timely information as well as video processing on the frontline.

Our vehicle technology solutions cover a wide range of applications including mobile data, video surveillance, GPS based navigation, mapping, ANPR, AVLS, database access, computer aided despatch and DVR.

Cost-effective, reliable and robust, they deliver proven operational benefits that could help your organisation.

Benefits

- Reduce paperwork and administration
- Increase efficiency and effectiveness
- Reduce communication errors
- Improve operational visibility

TETRA

For more information call +44 (0)1628 537333
email sales@microbus.com
visit www.microbus.com

Microbus

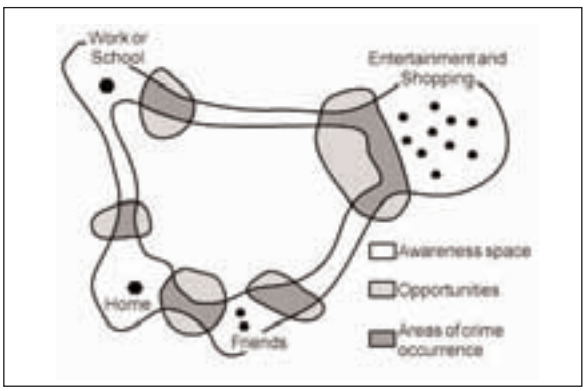
Community benefits

Keith Bentley, Chief Superintendent (retired) Greater Manchester Police highlighted at the recent ACPO conference how data analytics could deliver tangible benefits to the community. Keith Bentley speaks exclusively with Jose Maria Sanchez de Muniain.

Between 2005 and 2006 Greater Manchester Police (GMP) and West Midlands Police trialled data analytics software from US company SPSS. Headed by Chief Superintendent Keith Bentley (GMP) and Rick Adderley (WMP), the idea was to join up data from 3,000 cases of sexual predatory offending that were held in disparate systems and to analyse the data further with sophisticated software supplied by SPSS.

Bentley's experiment involved the usage of PASW Modeler (formerly "Clementine"), a data mining software that operates on sophisticated algorithms called Kohonen association rules (named after inventor Prof. Teuvo Kohonen). Two Kohonen networks were used to cluster similar physical descriptions and MO. The clusters were then compared to see whether groups of similar physical descriptions coincided with groups of similar MO.

Analytical teams then investigated the clusters, using statistical methods to verify the similarities' importance. If clusters indicated the same criminal could be at work, the departments re-opened and investigated the other crimes. If the criminal was unknown but a large cluster indicated the same offender, the leads from these cases were combined and the case re-prioritised. The behaviour of prolific repeat offenders was also investigated, with the goal of identifying crimes that seemed to fit their behavioural pattern. "We were looking for crime linkage association patterns, where relevant data was held by different authorities in different systems," remembers Bentley. "In our trial, data stream for the years 2002-2005 was sifted by an analyst. The result was that 19 particular offender streams were identified, leading to the arrests and convictions of six serial offenders who were responsible for the offender streams." The 19 "offender streams" refers to 19 distinct patterns relating to (for instance) offender strategies relating to so-called Internet grooming, or exit strategy mechanisms where an offender would repeatedly use a similar method of disassociating himself from a crime.



As far as Bentley is concerned, the experiment was proof of concept that data analytics and data mining as used commonly in commercial environments (eg by supermarkets to gather customer information) – if adopted by all police forces – could deliver real community benefits. Data mining could allow the police to use the information better and also to link it across different databases.

Nobody, says Bentley, wants a repeat of the Kirk Reid scenario that hit headlines in March this year. Reid first attacked in 2001 and was not arrested until 2008, even though he'd become known to Wandsworth's specialist rape and sexual assault specialist team (Saphire) in 2004. It was not until January 2008, when the Met Police's serious crime team took over, that he was caught in just three days.

Worryingly, Bentley believes that the problems associated with the Kirk Reid scenario have not gone away, "and they will not go away until sophisticated data mining approaches become part of day to day operations during an investigation." In his opinion data mining should be at the vanguard of government strategy for community policing and helping to make people's lives better. "When I gave my presentation to ACPO this year I talked about Emma, a rape victim, and how she was still scarred long after the perpetrator had been given the punishment. This is the type of solution that communities want, policing in an effective way that supports people."He adds that GMP is the only force to have invested further with data analysis.

The benefit of this technology is that it is transferrable, so while GMP and West Midlands were initially looking at the idea of pursuing sex offenders, the same methodology could be used for robbery and burglary offences. "It is basically looking at patterns that don't get picked up."

That such technology is unaffordable doesn't hold water for Bentley. He points out that every single one of England and Wales' 43 police forces already have the basic structure for data mining through existing SPSS software in basic analytics. "This product is basically an enhancement and it links into what forces already have, so each force already has the foundation to build upon analytics."

Psychiatrist Gene Abel, an internationally recognised expert in the area of sexual misconduct, carried out research in the 1980s which indicated 232 child molesters admitted 55,000 incidents of molestation against 17,000 victims. 561 general sex offenders admitted 291,000 offences against 195,000 victims. Left: routine activity theory, as presented by Keith Bentley during ACPO 2009.

CBRN Resilience in the UK

In early July, in the same week that President Obama and Russian President Dmitry Medvedev signed an agreement to reduce their countries' respective nuclear armories to 1,700 each, the BAPCO Journal attended a conference organised by Defence IQ entitled "CBRN Resilience". Dan Worth summarises the presentations given by leading emergency services professionals, concerning this niche but highly important area.

"Familiarising officers with this equipment is vital as it means if they have to use it during a large-scale incident they are not coming to it cold."

Superintendent John Buttress, Police National CBRN Centre.

Ensuring UK Resilience Through Effective Fire and Rescue Service and Local Government Resolve – Sir Ken Knight

The first speaker of the morning was the Chief Fire and Rescue Advisor to the Government, Sir Ken Knight. He spoke about the need to ensure the emergency services have the necessary skills and equipment to be fully prepared to deal with the ongoing threat of terrorism and the CBRN risks inherent in this.

Sir Ken started by noting that the emergency services have, since around 2000, had a lot of good experience at dealing with large scale, one-off events, such as the foot and mount crisis, the fuel strikes, major flooding events and Buncefield. All these varied and unique events have helped provide a basis from which planning and training for CBRN incidents have been set out. Part of this has been the improvement in communication and a more "joined up operational platform" in which the emergency services have got a lot better at working together efficiently, and sharing best practice and information after both real events and training scenarios.

Sir Ken also noted the investment being made by the government in this area, notably the New Dimension project which, since its formation after the terrorist attacks in New York on September 11, has received around £300m. This investment has helped to deliver new equipment, training and procedures to the fire and rescue service to enhance national capabilities at dealing with CBRN threats. This has also involved the training of firefighters, first in Texas, and now at a purpose built facility at the Fire Service College in Moreton on Marsh, Gloucestershire, in the preparation for CBRN and USAR (Urban Search and Rescue) scenarios. As Sir Ken noted, the need to train firefighters is paramount to ensuring they are able to respond effectively to incidents as they occur; any CBRN threat that is encountered is likely to be of a large scale and highly complex so it is imperative firefighters can cope with the situation and have had training that mirrors the risks they could face at such incidents.

A final point from Sir Ken, on this theme, was the necessity of emergency services using a common language that would cover events, symbols and terminology so there was no risk of miscommunication or confusion at key moments.

Go to blazes with NLPG

At the Underpinning Transformational Government conference and exhibition

Thursday 26th November 2009 | Victoria Park Plaza Hotel, London

Anyone that is interested in delivering services to a location, quickly and accurately will be interested in this conference. As well as demonstrating the importance of the NLPG and NSG to the fire and police services, this event will explore the role of these datasets in enabling partnership working between local authorities and fire and police, and we would particularly like to welcome delegates from those sectors.

Conference themes:

- using the NLPG to save lives
- the importance of location to service delivery
- use of the NLPG in national projects such as ePIMS (OGC's Electronic Property Information Mapping Service), the 2011 Census and FiReControl project
- approaches to and the importance of sharing data across different agencies and partnership working
- representation of local government interest through projects such as the Government Connect programme and the formation of the Local Government CIO Council
- using location information to generate business savings
- the effect of becoming a unitary authority on local government datasets
- benefits of a widely used web based system based around common data
- an insight into new technology and services that will enhance interaction between the public sector and its customers
- case studies from Exemplar authorities and fire services

Speakers include representatives from the FiReControl Project, Cambridgeshire Fire and Rescue Services and Kent Fire and Rescue Service. **For more information on the conference programme, see www.nlpg.org.uk or www.thensg.org.uk.**

The conference is free to all signatories of the Mapping Services Agreement, that is, all councils, police forces, fire, national parks, conservation boards, passenger transport services, parish councils and local government run Local Education Authority (LEA) schools.

Registration is now open on the NLPG and NSG websites.

For more information about the conference and exhibition opportunities, contact:

Gayle Gander
ggander@intelligent-addressing.co.uk

or **Laura Brown**
lbrown@intelligent-addressing.co.uk
on 020 7747 3500.

Visit www.nlpg.org.uk or www.thensg.org.uk

nlpg
The National Land & Property Gazetteer

Delivery of the Police National CBRN Operational Response Plan – Superintendent John Buttress

The second talk of the morning was delivered by Superintendent John Buttress from the Police National CBRN Centre, a unit dedicated to training and preparing for potential CBRN incidents that was set up in October 2001. Superintendent Buttress started his talk by noting that Britain has always had to deal with unique and high-level events, from IRA terrorism to plane crashes. Therefore, he reasoned, for the government to have invested an additionally £80m in a centre solely concerned with CBRN would suggest they are aware of the risk it poses, and suggests they are conscious an attack of this nature is a possibility in the future.

He continued by noting that the CBRN threat is somewhat of an unknown because of the risk of suicide bombers – something not encountered in Britain previously – and the randomness of the targets, ie the general public, means it is harder to predict where an attack could occur. Therefore it is vital police officers are trained to be able to cope with incidents as and when they could occur – as Superintendent Buttress says, "to increase CBRN resilience through a series of phased investments".

With the Multiple oxygen Delivery system carried on their vehicles they were able to treat 40 children at the scene and only five ambulances were needed to transport more severe casualties to hospital."

Steve Wheaton, Regional Head of Specialist Operations, West Midlands Ambulance Service.

Superintendent Buttress touched on two distinct areas. Firstly, the necessity of having the correct clothing was covered, after the recent signing of a contract worth £18m that was recently signed to provide 12,000 CBRN quick-don PPE suits to officers, after an extensive tender process.

Secondly, the importance of crowd control was another area that the Police National CBRN Centre has to consider and Superintendent Butress explained that to provide this it had recently purchased a series of large barriers, which have been used in real situations, such as at a Cardiff v Swansea football match. As well as this, an electronic messaging system to provide information to those held behind barriers, had been purchased too. This had also been used at Glastonbury to remind those arriving to be aware of the risk of crime. "Familiarising officers with this equipment is vital as it means if they have to use it during a large-scale incident they are not coming to it cold."

While CBRN might, in the main, be a niche area, the investment the governments has made in the Police National CBRN Centre underlines the importance it places in this area, and the possibility it could be called into action and to date over 7,000 officers have been trained at this dedicated centre.

Hazardous Area Response Teams (HART) Teams – Steve Wheaton

Steve Wheaton, Regional Head of Specialist Operations from the West Midlands Ambulance Service, gave the final talk of the morning sessions on Hazardous Area Response Teams (HART) and the role they play in providing emergency triage and treatment to patients in hazardous areas and warm zones. As Wheaton noted, previously at large-scale incidents paramedics would have to stand on the edge of the inner cordon, waiting for patients to be brought to them before they could begin treatment. Therefore the idea of setting up dedicated teams who would be trained to enter hazardous areas was put forward in 2004 after reports from incidents like 9/11 had been produced. The project was looked into by the Department of Health, to assess its viability and cost and they submitted a paper to government ministers recommending the teams in May 2005. Then, after the terrorist attacks in July, the project was fast-tracked and given approval in August.

As a result of this, the plan is to have 12 HART teams based across the UK by the end of 2012. London will have two teams, covering the East and West of the city, while the North West, covering Manchester and Liverpool, will also have two teams, due to the size of the area and the two populations in these cities.

The HART teams are to be phased into their areas over 18 months, a period in which the teams are trained and provided with the necessary equipment, to bring them up to the required standard.

A HART teams consists of six paramedics, including a team leader. They remain dedicated HART staff to ensure their skills and training remains current while maintaining 24/7 dedicated incident coverage.

HART teams utilise a range of specialist vehicles that include a forward command vehicle fitted with the necessary equipment and technology for use at the site. This includes satellite communications, a self-contained Wi-Fi network, VOIP and GSM encrypted phones. A back-up of each vehicle has also been purchased so if one is taken out of action for any reason there is a back up on available. All this has been achieved with additional funding provided by the government, with the promise of continued funding of around £2.4m a year.

To conclude, Wheaton gave an example of the real-life benefits of HART, when called into action in Birmingham in April. "The original call suggested approx 30 ambulances would need to be sent to a swimming pool after a chlorine leak affected around 50 children. Obviously 30 ambulances is a huge amount and one a controller would find it almost impossible to send. However, once the true extent of the call was ascertained by commanders on the scene, it was evident that large amount of resources were required to provide oxygen therapy equipment, they were able to send a HART team, with their specialist equipment, to the incident to provide rapid triage and medical treatment.

"With the Multiple oxygen Delivery system carried on their vehicles they were able to treat 40 children at the scene and only five ambulances were needed to transport more severe casualties to hospital."

This was just one example of where HART teams are making a clear difference in today's operational environment and improving the care given to patients.

CYBERTECH
INTERNATIONAL

LOOKING FOR A TETRA RECORDING SOLUTION?

CyberTech provides resilient and powerful recording solutions that are:

- **highly secure**
- **user friendly**
- **easily scalable**
- **IT friendly**

Our extensive experience of the emergency services' unique requirements ensures that we provide you with the most appropriate cutting edge recording technology.

For more information or to arrange a free demo get in touch.

Tel +44 (0)1732 784350 • info@cybertech-int.co.uk • www.cybertech-int.co.uk

Airwave FUSION Delivering Paperless Policing.

21st Century mobile information solutions for improved force performance:

- Automated information handling
- Empowered remote policing
- Synchronised frontline and back office processes

To find out more about Airwave call our experts on 08000 11 33 99 or visit www.airwavesolutions.co.uk.

AIRWAVE