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THE VOICE OF FIREFIGHTING AND FIRE PREVENTION SINCE 1908

May 2015

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Primetech's Mission Possible

Primetech's Henry Walker

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Focusing on UK trade and industry overseas, European standards, global resilience, and the work of CTIF in developing European firefighting knowledge and harmonisation

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Primetech delivers comprehensive support for fire services

Henry Walker has made delivering powerful, flexible, interoperable fire service communications and enhancing firefighter safety top priorities for his fast growing company

Primetech's Henry Walker has a clear strategy for developing and delivering world leading communications and firefighting technologies in support of his clients throughout the UK Fire Service (and the other emergency services and responders). Listen to client requirements; be flexible developing advanced solutions in support of client needs.

It is a strategy that is clearly working, as new acquisitions by fire and other emergency services and a highly innovative programme of new product releases, demonstrations, collaborations and exercises are showing. From the introduction of the unique new Cobra Intervention Vehicle for Cumbria Fire and Rescue Service, featuring the Cold Cut Cobra firefighting system, to the recent launch of the company's MultiNet Comms family of lightweight, portable incident ground communications systems, Primetech is clearly going through a highly active and expansive phase.

Other recent news includes the company's inclusion as a pre-qualified framework supplier for the national HART ambulance Incident Management Technology programme with its MultiNet Comms solution, which will help deliver improved single and multi-agency working. Fire services are also expressing strong interest in this system.

Fire services have faced, and continue to face, huge challenges. These have ranged from budgetary constraints and struggles to maintain retained firefighter numbers and coverage in rural areas, to extreme weather events, such as wildfires in Wales and elsewhere, and floods such as those in 2014, as well as terrorist attacks and international SAR responses.

Linking all these challenges has been the need to deploy high capacity, resilient multi-agency communications, to ensure that all human and other resources deployed across incidents are used at maximum efficiency. There is also an essential requirement to ensure that emergency worker safety is protected, not always easy given how often firefighters are required to work in extremely hazardous conditions.

Primetech MultiNet Comms Network



The MultiNet Comms family of modular, integrated voice, video and internet incident ground communications solutions delivers powerful, wide-area incident ground communications for emergency services. Units are housed in ruggedised, portable, battery-powered cases, combining Ka-band mobile satellite broadband and video, voice and internet access over 2.4 and 5.8 GHz WiFi via a mesh network and 3G/4G. The system can also deliver UAV live imagery feeds, life signs monitoring and a private cellular network. Units are powered by light, powerful batteries which can be swapped easily for long duration operations.

Leading the technological response in support of fire services responding to these challenges is UK high tech communications and firefighting technology company Primetech, under its director Henry Walker. Since the early 2000's Primetech has built a strong market position by assessing new communications technologies, such as Ka-band mobile satellite broadband, and then adapting them to the specific requirements of UK emergency services.

At times, such as with the development of the MultiNet Comms family of incident ground communications, the Resilient Communications Trailer and the Primetech Rapid Intervention Vehicle, this has meant the company undertaking its own design and development work, pioneering whole new categories of integrated communications and firefighting solutions.



Henry Walker with Primetech Rapid Intervention Vehicle and MultiNet Comms nodes. The MultiNet Comms system provides fire and rescue services with flexible, affordable and portable integrated communications, including Ka satellite broadband, mesh networks, 3G/4G mobile voice, and UAV and other live-streamed imagery. Search and Rescue groups see the potential usefulness of the MultiNet Comms system for supporting UK and ISAR operations, such as Nepal, where local communications have been destroyed but powerful, resilient, self-sufficient command communications are essential for supporting effective operations and a Common Operational Picture.

“We work very closely with our emergency service clients throughout the UK and in countries such as Norway and Belgium,” says Henry Walker, “and the more we do so the more learn from them. Our role is to understand the single and multi-agency command communications challenges emergency services have to cope with on a daily basis, across a wide variety of scenarios, from wildfire and flooding to terror attacks and road and rail accidents.

“Once we have done this our highly experienced design and development team can then get to work. They did this with the Resilient Communications Trailer, for example, which can deliver the full power of a mobile incident command vehicle in a small, highly portable format that can be towed by any type of vehicle.

“The team have done it again with the new MultiNet Comms family. With the MultiNet Comms range we have gone one step further towards joining up incident ground communications, adding in Unmanned Aerial Vehicle live video imagery to the usual mix of live video feeds from tripod, body-worn and other sources.

“Primetech is now a pre-qualified framework supplier for the national HART ambulance Incident Management Technology programme with its MultiNet Comms solution. Fire services are also expressing strong interest in this system”

“The MultiNet Comms units are housed in a series of ruggedised cases, delivering live video imagery, voice communications and internet access over 2.4 and 5.8 GHz WiFi via a mesh network and 3G/4G, plus private cellular networks. The units are powered by light, powerful and swappable batteries. The range has been developed in response to requests from emergency services for communications solutions that are not dependent on being housed in incident command units, of whatever size.

“During the Somerset flooding in 2014, for example, there were areas in which emergency services needed to operate – village ‘islands’ cut off by flooding, for example – that could not be reached by ICU vehicles. Primetech had already created a first prototype of a portable communications unit for Gloucester Fire and Rescue Service that worked very well. The new Primetech MultiNet Comms range builds on this achievement.

“There are a number of different units within the MultiNet Comms family, but all units have certain features in common; they are all highly portable and self-supporting, featuring lithium polymer batteries that are light, powerful,

FIRE International: What's New at Interschutz

and capable of easy recharging; and they are all capable of linking together to form high bandwidth networks across incident grounds, joining up different sectors and supporting multi-agency communications between command teams and other emergency services.

"This helps support the commonly agreed objectives of the Joint Emergency Services Interoperability Programme."

The units within the Primetech MultiNet Comms product range include:

- **Incident Ground Extender Nodes** – these feature 2.4 and 5.8 GHz WiFi communications linked by a COFDM mesh network and can be located throughout an incident ground. They are capable of receiving and transmitting imagery, data, internet access and voice communications from the wide range of devices that are now deployed across an incident ground, including smart phones and ruggedised laptops featuring command and control systems.

- **Command Master/Primary Nodes** – these are used for receiving feeds from the various Incident Ground Extender Nodes located around an incident ground. The onboard, powerful multi network router automatically connects to any available data network. Military spec encryption allows incident ground data to be securely transferred to the HQ. Within the node is a ruggedised computer acting as the site server. Additional briefing screens can be added depending on requirements.

- Email, photographs and audio, live video feeds from body-worn, tripod, UAV and other cameras are transmitted back to the Command Master/Primary Nodes, facilitating multi-agency command HQs at incident ground level. This video, voice and incident information can then be passed on through the multi-agency communications hierarchies. The nodes can also be used to receive data from life-signs monitoring equipment worn by emergency personnel, such as HART ambulance staff, operating in hazardous environments.

- Command teams can add as many Incident Ground Extender Nodes as they need to cover incident ground areas. Battery charge lasts for about 24 hours, and can be supplemented with additional, swappable charged battery packs.

- **Unmanned Aerial Vehicles** – Primetech has added this exciting new element into the command communications mix, and it is anticipated that fire services will be very interested in introducing this highly effective (and cost-saving) new weapon into their firefighting arsenal.

- **Private Cellular Network nodes** – these are used for creating resilient mobile communications networks around incident grounds.

- **Ka-band mobile satellite broadband unit** – this is a waterproof ruggedised peli case-housed system linked to a C-Com Fly-75 satellite dish. It is battery powered and fully portable, linking the Command Master/Primary Node by high speed Ka mobile satellite broadband on to

"With the MultiNet Comms range we have gone one step further towards joining up incident ground communications, adding in Unmanned Aerial Vehicle live video imagery to the usual mix"

Henry Walker

other command levels in the network.

International Search and Rescue groups see the potential usefulness of the MultiNet Comms system for supporting ISAR operations, in places such as Nepal, where local communications have been destroyed but powerful, resilient, self sufficient command communications are essential for supporting effective operations and a Common Operational Picture.

"The Primetech MultiNet Comms range will continue to evolve as new technologies are introduced and to support improved public safety and the protection of emergency service personnel, especially those who work in hazardous environments," says Henry Walker.

Another significant new product for the company, currently being prepared by the design and development team, is the improved version of the Resilient Communications Trailer.

"The new version of the Resilient Communications Trailer is being developed in line with a specification from Norway, says Henry. "It follows on lessons learned from the tragic events during the Anders Breivik shootings, when communications limitations in a remote rural location hindered emergency service response. This will be a very powerful unit, the most powerful emergency communications trailer in the world, we believe, but still towable by any vehicle. UK emergency services are also expressing interest in the unit, because, sadly, they need to prepare for similar contingencies."

2015 looks to be a particularly busy year for Henry Walker and the Primetech team. As new emergency service communications challenges and requirements emerge the company will continue developing and releasing world leading high tech solutions.

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Cumbria FRS has recently introduced its new Cobra Intervention Vehicle supplied by Primetech

MultiNet Comms system selected for HART UK Ambulance framework

Primetech reports on its pioneering MultiNet Comms system which satisfies the requirement for delivering powerful, portable, multi-agency incident ground voice, data and video communications for UK ambulance services

After a thorough evaluation process, leading UK communications developer and integrator Primetech (UK) Ltd has been selected as an approved supplier for the national HART Ambulance Incident Management Technology framework agreement.

The inclusion of Primetech (UK) Ltd in the framework agreement was announced recently by the West Midlands Ambulance Service NHS Foundation Trust. The trust managed the framework supplier assessment process on behalf of all UK ambulance services.

Primetech's inclusion within the framework agreement means that the company's unique MultiNet Comms range of advanced, portable, interoperable incident ground communications, imagery and mobile satellite broadband solutions can now be procured by all UK HART ambulance fleets, the first time this has been possible. Fire services and ISAR groups are also expressing strong interest.

The MultiNet Comms system satisfies the HART framework requirement for powerful, flexible and portable incident ground communications using the most up-to-date technologies. The system is designed to be fully interoperable between HART teams from different ambulance services, as well as between HART teams and other emergency services.

MultiNet Comms units are housed in a series of rugged waterproof 'cases', delivering terrestrial, body-worn and UAV video, plus voice and internet access over 2.4 and 5.8 GHz WiFi via a mesh network and 3G/4G. The system also supports private cellular networks and body monitoring devices and is powered by light, powerful, swappable internal batteries.

The units within the Primetech MultiNet Comms product range include:

- Incident Ground Extender nodes
- Command Master/Primary nodes
- Private Cellular Network nodes
- Unmanned Aerial Vehicles capable of transmitting live imagery
- High speed Ka-band mobile satellite broadband system using a waterproof ruggedised controller linked to a C-Com Fly-75 satellite dish.



Primetech (UK) Ltd's MultiNet Comms system has been selected as an approved solution for the HART Ambulance Incident Management Technology framework. Fire services and ISAR groups are also expressing strong interest.

Henry Walker, director of Primetech said: "Primetech (UK) Ltd is delighted to have been selected as a HART framework agreement supplier for this important national contract. The company has pioneered the development and introduction of proven communications technologies across a wide range of emergency services throughout the UK, and we now look forward to supporting HART teams as they perform their important life-saving work.

"Our integrated MultiNet Comms solution has been specifically created to deliver full interoperability between different HART teams as well as multi-agency interoperability between HART teams and fire, police and other parties involved in emergency response. It has also been created with affordability in mind, helping to provide higher levels of high bandwidth communications at significantly lower cost."
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