

LONDON--([BUSINESS WIRE](#))--Avanti Communications, BAPCO and Quortus today announced Project HYDRA, an innovative programme to provide 4G mobile networks to the UK's emergency services via satellite backhaul, has successfully demonstrated Transmission Control Protocol (TCP) optimisation. Project HYDRA allows emergency services to deploy secure 4G mobile networks anywhere, allowing them access to the communication tools they need to deal with emergency situations.

Project HYDRA - co-funded by the Technology Strategy Board and industry partners Avanti Communications, BAPCO and Quortus - enables 4G devices used in the field by operational teams to access the full capability of 4G, wherever the HYDRA solution is deployed. It provides a completely private network over a radius of 2km that can securely transmit data, make calls without interference and even locate disaster victims using the signal from their mobile phones.

The technology delivers a secure private 4G overlay network for emergency staff, ensuring total traffic separation from the general public telecommunications network. It can be deployed as a transportable platform, providing immediate backhaul for 2G, 3G and 4G communications. Additionally, the solution can be installed as a permanent feature in areas where additional capacity is frequently required.

As a world-first for 4G, HYDRA has addressed the following objectives:

- Tested TCP optimisation operating on end user data
- Full compliance with required legal intercept and billing architectures
- Integrates high bandwidth satellite services to become part of the Mobile Network Operator (MNO) network infrastructure, enhancing end user experience

Andy Odgers, CEO of Quortus, commented: "With 4G earmarked as the network of

choice for emergency services in the UK it is important that they have connectivity everywhere. Our joint solution with Avanti utilises both our core network and satellite optimisation technology to meet the unique needs of emergency services, providing virtually ubiquitous access to 4G. HYDRA enables 4G networks to be deployed where they are needed; giving first responders the tools they need to deal with emergencies.”

Paul Feenan, Director of Avanti Government Services, commented: “Our world-first is further evidence of the quality of Ka-band satellite technology to power secure data, voice and backhaul solutions. Using Avanti’s high-speed satellite link, the technology delivers up to 60Mbps download and 20Mbps upload speeds to end users. Crucially, we have tailored this for both mobile deployed scenarios as well as fixed cellular backhaul solutions, across the emergency services sector.”

Paul Hirst, Project Manager with British APCO commented: “We are delighted to be working with our colleagues from Avanti and Quortus. This partnership has delivered a clear demonstration of the real operational benefits for the emergency services and for those who are victims of disasters. With support from the UK Technology Strategy Board, the project is looking to the future of public safety communications by employing 4G and other leading-edge technologies.”

HYDRA is tailored for both mobile deployed scenarios and fixed cellular data backhaul solutions. Fixed solutions cover network extension, deployment to not-spots and meeting government SLA for MNOs. Deployed scenarios provide resilience where terrestrial networks are overloaded or non-existent. The testing was completed at Satellite Applications Catapult headquarters in Harwell, Oxford in March 2014.

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About Avanti Communications

Avanti Communications is a carriers’ carrier, selling wholesale data telecoms to service providers which use them to create networks for enterprise, carrier, government and consumer users. Avanti Communications’ network consists of:- two high throughput satellites in orbit, called HYLAS 1 and HYLAS 2; a multiband satellite called Artemis

plus a fourth satellite in construction called HYLAS 3 and an international fibre network connecting data centres in several countries. Avanti Communications has GEO satellite network spectrum filings in the ITU Master Register for Ka band at 33.5° West and 31.0° East and for Ka, Ku, S and L-band at 21.5° East. Avanti Communications serves customers in Europe, Middle East and Africa. Avanti Communications is a full member of European Telecommunications Standards Institute www.etsi.org. Visit: www.avantiplc.com

About BAPCO

British Association of Public-Safety Communications Officials (British APCO) is a growing community with extensive communications knowledge gained as a result of delivering real life public safety. British APCO fosters knowledge exchange in communications to support and improve the delivery of public safety. The HYDRA technology was demonstrated at the British APCO 2014 event in April. Visit www.bapco.org.uk/content

About Quortus

Quortus is changing the nature of mobile networks by enabling operators to embed full core network functionality into cost-effective software applications. Quortus software can be deployed in small footprint tactical solutions, enterprises, metro hotspots and rural areas where it can act as a complete mobile network thereby drastically easing the load on traditional infrastructure and transforming the user experience. For the first time advanced network features can be handled at the edge including smart voice and data offload; session creation, switching & handoff; traffic compression & aggregation; and edge caching & presence information for mobile apps. The company is headquartered in the UK. Visit: www.quortus.com

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