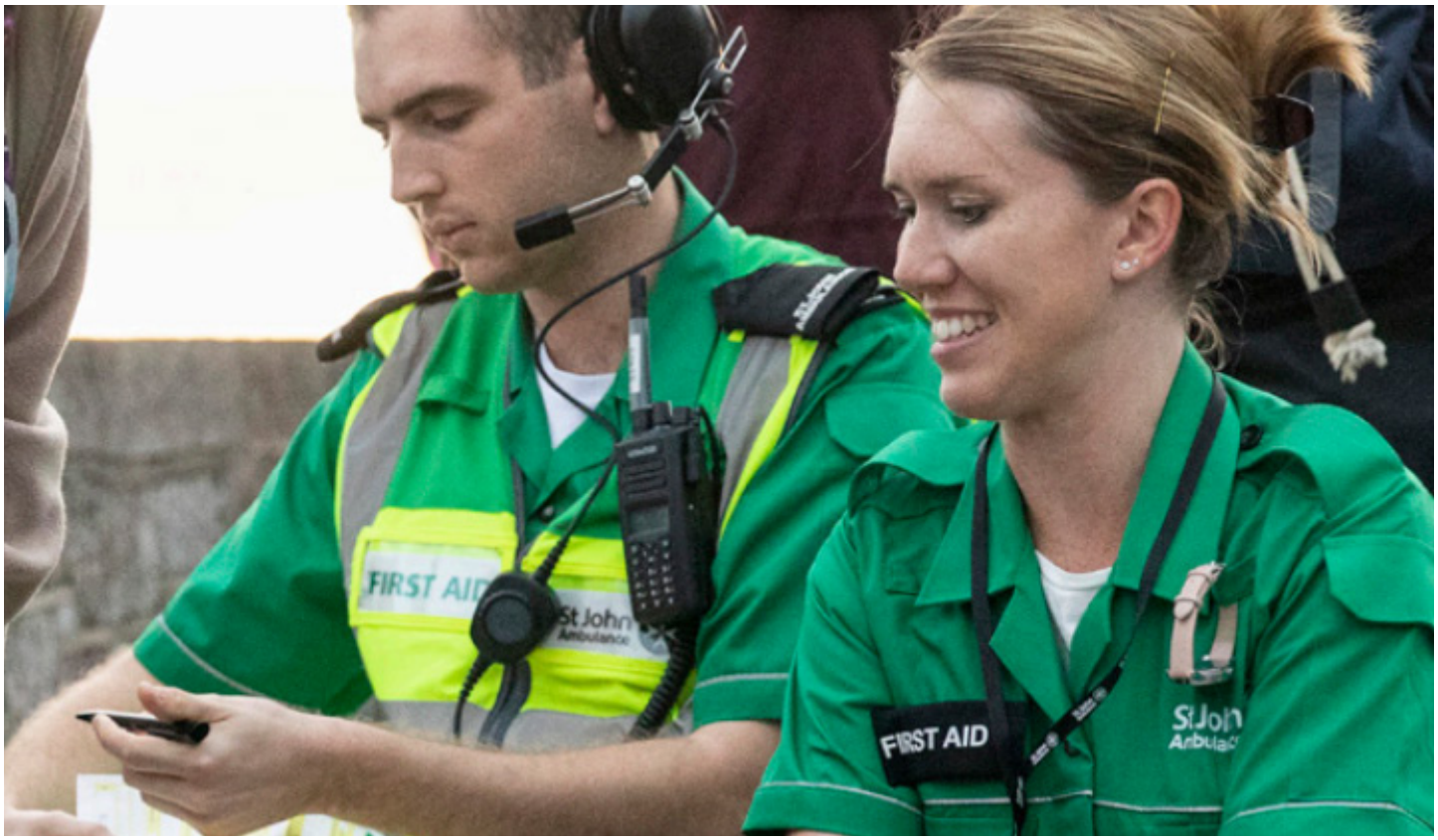
NEXEDGE NXDN digital forms the new backbone to St. John Ambulance communications systems

Saving lives and supporting communities

For almost 150 years, St John Ambulance has been saving lives and supporting communities.



With roots stretching back over 900 years, when the Knights of St John set up the Knights Hospitaller and the first Hospital of St John in Jerusalem, St John Ambulance is a dynamic, volunteer-led charity supporting communities and the NHS with first aid and first responder cover.

Today, the organisation can count on 25,000 trained volunteers to provide first aid treatment, ambulance services, training and equipment to communities throughout England and are a familiar sight at events from country fairs and football stadiums to music festivals and most recently, in supporting the NHS during the Coronavirus pandemic.

St John Ambulance operates from four Regions, each with District, Area and Unit based operations to bring support directly to the heart of local communities. In addition to the volunteers, the organisation runs a fleet of over 500 vehicles ranging from cycle response units to fully equipped ambulances, patient transport vehicles, off-road vehicles, mobile treatment centres and Command & Control units.

Throughtout the Coronavirus pandemic, St John volunteers have given hundreds of thousands of hours in support of the NHS, patient advocates, and vaccinators.

Developing a radiocommunication system fit for the future.

To ensure that volunteers can continue to provide the best possible service to communities across England, the Operations Communications team at St John Ambulance initiated a full review of its radiocommunication capability to develop a strategy that would deliver a more effective, user-friendly and resilient service to teams of volunteers operating in vehicles and on the ground. Dr Louis Clift, a St John volunteer and qualified engineer led the team on a journey to uncover the real needs of the organisation today and into the future and left no stones unturned in exploring the pros and cons of all available technologies.

The existing radiocommunication system has evolved over 25 years as funding has permitted without the benefit of a defined strategy or architecture. This has resulted in a patchwork of technologies and equipment being employed with resultant coverage and interoperability issues forcing the organisation to work around the limitations of the system rather that the system supporting vital operations.

“It’s all about enabling our teams to get the care to people that need it, quickly and efficiently, supported by the right clinical resources and equipment.”

Dr Louis Clift, National Operational Programme Lead, Operational Communications

Louis explains: “St John Ambulance is a respected and unique organisation serving communities throughout England. It is entirely funded by a combination of donations and revenue from providing services to the NHS, medical support at events, first aid training and equipment.

Every penny invested in equipment needs to be carefully considered and put to work in sustaining and improving our service delivery, so we had to be thorough and get it right in the selection of a radiocommunications system that would flex around our operations for the next 10 years at least.”

We live in a digital age where most people have ready access to powerful communication devices, so why use radio rather than mobile phones with messaging apps?

Louis continues: “We knew that we needed a digital solution to give us the capabilities we required and when we initially reviewed our options, we looked at every possibility, even mobile phones with specialist apps, but this was quickly rejected as a prime requirement is for rugged, professional devices suitable for group communications and capable of instant connection without the vagaries of service outages and network congestion. Our volunteers often find themselves working side by side with many other service providers all of which will operate their own radio systems, so we considered what they were using, but that too varied greatly by different agencies, organisers and enterprises. The technology widely found in use at many of the venues we operate in was DMR and on paper at least, it was a strong contender. However, while DMR offers the advantage of two channels from one repeater, it also posed significant obstacles for us.

“NEXEDGE NXDN brings proven performance in critical radio communications systems with functions and features matched to our strategy and requirements.”

To switch to DMR as the basis for our new system, would require the scrapping of our entire radio fleet at once, and we have a large fleet – over 500 mobile units in ambulances and support vehicles and 5,000 hand-portables, all spread across the country. Conversely, the NEXEDGE NXDN solution from KENWOOD aligned most closely with our list of requirements today and operational communications strategy to migrate in a phased way to a trunked digital system in the future, most notably:

- True 6.25kHz narrowband giving us as much as 50% increased coverage over analogue which will reduce our trunking infrastructure costs in the future,
- Site Roaming and improved fringe coverage allows our people to move between zones without needing to adjust their radios and gives communications officers the ability to tailor the system to a given situation,
- Audit Log function in NEXEDGE NXDN Type-C trunking will give us the data to design new sites or upgrade fixed infrastructure,
- Simple to use devices with user-friendly features like the selectable colour lightbar on handportables that lets the user know at-a -glance which talk group is in use,
- Over-The-Air Programming (OTAP) which will save effort and downtime with batch programming and also provide an audit trace of software and firmware history for each device in the fleet,
- Combination of Multiple Site Roaming and Linkable Talk Groups allows us to create a near instantaneous ‘pseudo-trunk’ system using a multicast system architecture and an advanced routing system to prepare our volunteers for what’s to come”.

Stephen Edwards, JVCKENWOOD UK, Communications Technical Support Manager reports: “We’re honoured to be working with the team at St John Ambulance, an organisation we hold in the highest regard. The Operational Communications team led by Louis have been relentless in finding a new radiocommunication solution that will give St John Ambulance teams the system they need to operate efficiently. Their creative and innovative use of NEXEDGE NXDN to enhance operational flexibility is testament to their understanding of radiocommunication technologies and applications. We’re looking forward to giving Louis and his team the support they need to fully implement their digital trunking strategy”.

“At the end of the day, our aim is to deliver a radio system that make no additional demands on our volunteers who put their clinical skills to use in serving our communities; they simply push to talk and let go to listen while the radio does the technical bit for them”

Dr Louis Clift, National Operational Programme Lead, Operational Communications

St John Ambulance

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