KENWOOD

Kenwood NEXEDGE® the power behind the Nextalk PAMR Network in Cape Town

With a population of 3.75 million and a total area of some 2844 km2, Cape Town is the capital of the Western Cape province and home to the Nextalk Public Access Mobile Radio (PAMR) network.

The company behind the Nextalk network is RFG Communication, whose Managing Director, Wayne Martin joined the company in 1992 as Workshop Manager and went on to buy the company in 1995.

Since then the business has grown and broadened its customer base from serving the farming community to include a wider service industry profile from its state of the art facility in the Gants industrial area in Strand, Western Cape.

RFG Communication is the majority shareholder in Nextalk, a wide area, trunked digital radio network offering seamless roaming of connected equipment between its strategically located repeater sites.

The building of the network started in 2009 to meet demand from customers wanting wider coverage along with the features and flexibility of digital technology without having to apply for new licenses or invest in their own infrastructure.
At the time, it was a forerunner in harnessing digital radio communication in South Africa and the first system in the southern hemisphere to employ Kenwood Nexedge multi-site equipment and infrastructure.

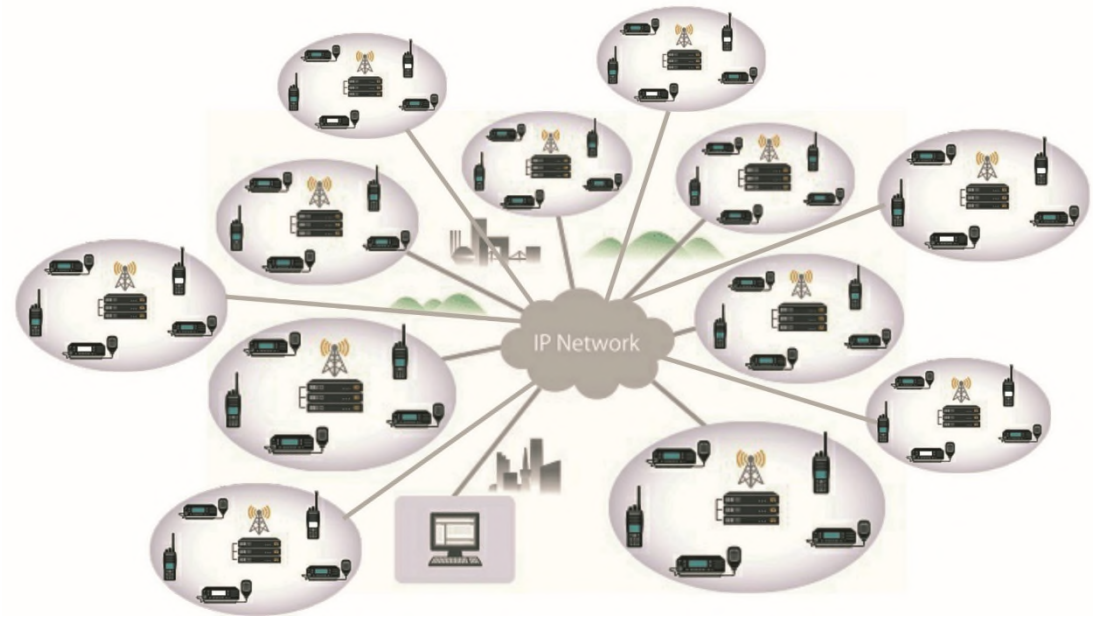
Today, Nextalk is a 12-site PAMR network with a licensed 8GHZ IP backbone and redundancy built into both the network infrastructure and its IP backbone to assure 99% system availability.

It is the most advanced radio network currently operating in the Western Cape, providing coverage from Cape Town to as far as Vredenberg, Robertson and Caledon; and one of the few networks able to serve Sea Point, Camps Bay and Hout Bay.

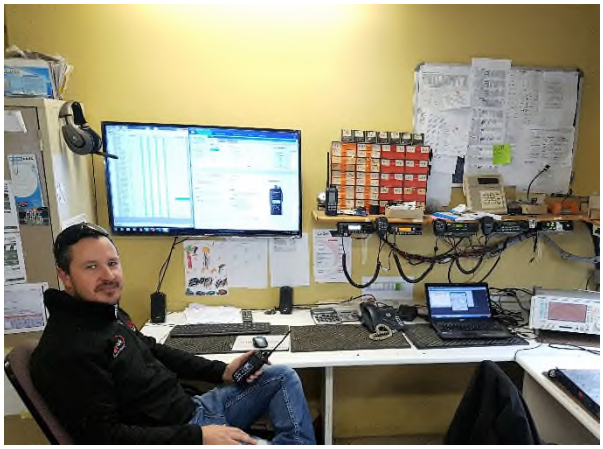
Kenwood NEXEDGE with its 6.25kHz FDMA narrowband protocol was chosen as the basis for the Nextalk system for a number of reasons, as Wayne Martin recalls:
"Building a new, wide area digital PAMR system from scratch requires investment and taking a long-term commercial view, so we reviewed our options carefully before deciding on Nexedge on the basis of its reputation, performance, infrastructure cost, flexibility, features, ease of implementation and the excellent technical support from both Global Communications and the team at JVCKENWOOD in the UK".

The Nextalk network has over 600 subscribers who use its Voice, GPS tracking and Status Message capabilities. The inherent security offered by the NXDN air access method is also important to a number of subscribers, particularly those involved in providing private security services. The other distinctive features of Nextalk appreciated by its subscribers include:

- fixed monthly airtime fee
- unlimited talk time
- seamless roaming between coverage areas
- automatic subscriber validation
- individual and group calls
- text messaging
- choice to rent or purchase equipment
- call queuing and automatic connection
- late entry joining to a group or individual call
- remote stun/kill/revive a radio that is lost or stolen
- PTT ID on calls
- AVL (Automatic vehicle location) option
- calls to landlines or cellular phones option
- emergency calls option



Designed for both redundancy and resilience, the Nextalk network is supported 24/7 by Technical Manager, Kevin Martin and his team, while each site additionally features battery backup and generator points with automatic transfer switches and IP network redundancy.



The fully digital NXDN Type C trunking system currently offers 30 channels on an L3 network with ring topology and employs OSPF (Open Shortest Path First) routing protocol.

Each of the 12, Microwave IP interconnected sites feature masts of between 6 and 30 meters in height with Webb HD 400 UHF folded dipole antennas. They are equipped with an average of 4 Nexedge NXR-800 repeaters and in terms of the equipment used by subscribers, the system supports 250 Nexedge NX-800 mobiles and 350 NX-320E2 hand-portables.

Wayne Martin concludes: **"The beauty of building a network from a clean sheet is that you can plan for the future. That's why we made sure that we used equipment and infrastructure that not only meets current requirements but can be easily upgraded. We are already planning to add 3 sites to extend coverage and upgrade the entire network to NEXEDGE Generation 2 and the KAS-20 GPS AVL / Dispatcher software suite which will significantly increase subscriber capacity and offer customers more data features".**

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