

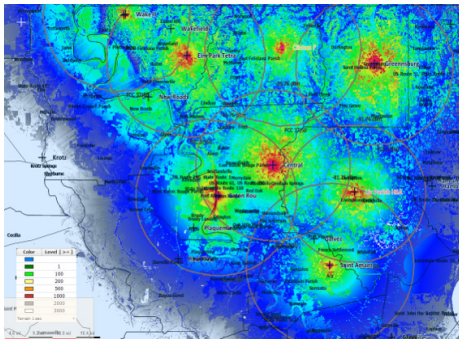
CASE STUDY: DEMCO, Louisiana, USA

DEMCO migrates to DAMM TETRA digital voice and data network solution

BACKGROUND:
DEMCO (Dixie Electric Membership Cooperation), the largest electric cooperative in Louisiana, was formed in 1938. DEMCO currently serves 102,000 members in seven Southeast Parishes of Louisiana and is one of the fastest growing cooperatives in the nation.

CHALLENGE:
Improve efficiency and secure workers safety during adverse conditions
DEMCO had been using an analog network for radio communication, though due to operational issues, they needed to migrate to a safe, reliable radio infrastructure. DEMCO realized they were missing out on business opportunities, as well as the opportunity to better serve their customers while increasing safety and security for their workers.

DEMCO wanted to be able to respond 24/7 and gain situational awareness by utilizing TETRA features such as logging, individual calls, priority calls, groups and DGNA. They wanted to keep track of a fleet of 65 portable radios and 160 vehicles in real time, along with SCADA data from 60 water supply stations in Southeast Louisiana.



SOLUTION:
Secure radio communication 24/7
TETRA was the chosen technology, with DAMM as the network solution, providing the most flexible, scalable and future-proof system. The intelligent decentralized architecture consists of 9 sites and provides full coverage for an area of 15,000 square miles. Microtel Source LLC, DAMM's US Partner, provided a complete solution for the design, commission, operation and maintenance of a DAMM communication system, which currently includes:

- 9 sites (DAMM BS418 High Power)
- DAMM Network Management
- DAMM Dispatcher
- DAMM Voice and Data Log System
- 160 Vehicle mounted DMO gateway repeaters
- 65 Sepura TETRA radio terminals

Lower OPEX and future-proof scalability
With a commitment to providing safe, reliable and affordable electricity to more than 100,000 members, a reliable, safe communication system was of the utmost importance as the key to their success was to gain 100% situational awareness 24/7, and thereby be able to serve their members and their trusted staff. With the network solution from DAMM they now have the safety of knowing where all units are located, and they have improved coverage 100-fold."



CHALLENGE
DEMCO sought migration to a safe, reliable infrastructure that would secure situational awareness 24/7 with real time monitoring, secure worker safety, and improve efficiency during adverse conditions, while servicing more than 100,000 people.

SOLUTION
The TETRA DAMM Network Solution exceeded their needs for a reliable digital voice and data system. The future-proof solution was based on decentralized architecture that enables AVL monitoring and SCADA monitoring.

RESULTS
An easy and smooth migration to a robust, future-proof system with lower operating expenses, and greater flexibility through scalability. With full control 24/7, the safety and efficiency of the workers has improved.

DAMM solutions and support are available worldwide through our Authorized Regional Partners

DAMM
Critical communication made easy

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New Solution, New Horizons
With the transition, DEMCO has gained a reliable, robust radio communication network, and thereby eliminated the problems with their previous analog system. Issues such as call-dropping have been resolved, plus the hardware from DAMM is much simpler to design, install and maintain. With the new network system, anyone can be linked at any given time.

One of the key benefits is the ability to use a computer to dispatch from anywhere. DEMCO is currently installing a number of remote dispatchers on the network to increase support and make sure that customers are taking full advantage of what the system can do.

In the past, everybody heard everything all the time, and it all came through in disjointed bits and pieces due to the poor quality of the old system. Today, people working in the field don't hear anything on the radio unless it is for him or his group. The new quiet radio environment is also reducing distraction for drivers, which has undoubtedly improved worker safety and accountability.

Crisis management during a 1000-year flood
Louisiana experienced a 1000-year flood in 2016. Some reports show that over 180,000 homes were affected. In storms and weather related events, redundancy is key because public networks often go down. For DEMCO, having their own secure network system meant they had full control and were able to respond accordingly.

Despite severe damage to the local area, all sites stayed online and the DAMM system was 100% operational throughout.

Simplified Dispatching
The Dispatcher is a 24/7 operation and every point is constantly monitored. The goal is to simplify the Dispatcher's situation, which can be especially hectic under extreme weather conditions.

Additionally, daily operations need to run smoothly and reliably. Reliability means that when you are pressing that button down, you know you are reaching people, and that they are hearing you. The dispatcher provides the ability to track and record calls, and with the logging system, calls can also be reviewed when it's necessary to replay communications that took place during an emergency situation. During daily operations, the system can be used to send a sequence of tasks to individuals or groups, which will improve safety and make workflow more efficient.

Utilize SCADA for better service
DEMCO have deployed an outage management system that handles a multitude of inputs. This system combined with a SCADA system monitoring all substations means that situation awareness is always there. The Dispatcher is a 24/7 operation and every point is constantly monitored and DEMCO utilizes telemetry to provide better customer service.

AVL enables dispatchers to identify proximity of vehicles and personnel, supplemented with telemetry data sent from the fleet of bucket trucks. This enables efficient workflow automation making it possible for the dispatcher to see if the truck is deployed on-site and when the task has been completed.

Easy, Lean installation
The implementation of the new system happened in parallel with the use of the legacy system. Once the TETRA system was operational, DEMCO simply replaced the radios as vehicles came in. The DEMCO truck drivers kept working—same talk groups, same everything; just different radios.

The Dispatch staff of DEMCO had both systems running simultaneously during the migration period, and then the legacy system was simply turned off. This migration process did not affect any of the DEMCO staff negatively in any way. The smooth migration took place over a couple of months.

Business Case: Sharing your Utility Network
DEMCO make a business out of sharing their utility network with other local companies needing critical communication. Currently the Baton Rouge Water Company has 65 units operational on the system. DEMCO is also working with other electric utility companies with similar operational requirements, sharing data and share support if required, when moving vehicles into each other's areas. The idea is to have a unified system that could benefit all.

DAMM Network Solutions:

DAMM MultiTech Platform
The world's first outdoor base station featuring 4 technologies in one box: TETRA, DMR Tier III, TEDS and Analog. Cover your needs today and tomorrow with a technology independent solution featuring Multi-Technology, Multi-Frequency, Multi-Carrier and Simulcast in one box.

TETRA System - Indoor
High capacity indoor TETRA base station transceiver and distributed controller with up to 16 carriers.

TETRA System - Outdoor
Mast mountable and compact IP65 encapsulated TETRA system. A small base station transceiver and distributed controller ideal for direct mounting on antenna masts, buildings and towers, reducing feeder loss and installation costs considerably.



The DAMM Network Solution comes complete with outdoor or indoor base stations. DAMM offers comprehensive features as well as built-in applications such as:

- Network Management
- Dispatcher
- Voice & Data Log System
- Group Bridge

With the DAMM PTT App you can use your tablet or smartphone to benefit from coverage extension over WiFi or LTE, as well as data capacity for videos and pictures. The range includes Android, iOS and Windows soft terminals.

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