



LEADING AFRICAN ENERGY COMPANY UPGRADES TO MOTOTRBO™ CAPACITY MAX

FOR IMPROVED SITE COVERAGE, ADDED FUNCTIONALITY AND CRYSTAL-CLEAR MISSION CRITICAL COMMUNICATIONS AT ITS GNL AND GPL UNITS AND HQ



SONATRACH

Headquartered in Algiers, Sonatrach is owned by the Algerian government and was formed to explore the country's hydrocarbon resources; it is involved in all aspects of hydrocarbon energy production from exploration, to extraction, transport and refining, as well as treatment, processing and marketing. Sonatrach is the largest company in Africa and the 11th largest oil consortium in the world, employing approximately 120,000 workers and producing 30% of Algeria's GNP. Sonatrach operates numerous oil fields, including the largest field in Algeria, Hassi Messaoud, and over 3,900 km of crude oil pipelines in the country. Sonatrach has also diversified into petrochemistry and the desalination of seawater.

Working in close collaboration with partners Airadio Net S.L. (a division of American International Radio (AIR), Inc.) and locally based ManCom SARL, Sonatrach has deployed a MOTOTRBO™ Capacity Max Trunked Radio System at its LPG (Liquefied Petroleum Gas) and LNG (Liquefied Natural Gas) liquefaction units in Arzew and its liquefaction and separation division HQ in Oran. Security and maintenance teams at Oran and site employees in the numerous units extending across the Arzew site use the network to communicate reliably, clearly, safely and independently.

CUSTOMER PROFILE

Organisation:
Sonatrach

Industry:
Energy

Location:
Algeria

Partners:

- Airadio Net S.L. (a division of American International Radio (AIR), Inc.)
- ManCom SARL



CHALLENGE

Sonatrach needed to update its analogue Motorola Solutions SmartZone system, which was installed over 10 years previously and was no longer delivering the necessary performance. It wanted a system with improved functionality and coverage, which could operate on the same frequencies but with higher capacity. Following a tender process, Motorola Solutions partners Airadio and ManCom (who have been working together since 2002) were commissioned to deploy a MOTOTRBO Capacity Max system to replace the SmartZone network. Airadio and ManCom's engineers worked in close collaboration together to design the architecture of the new system to meet Sonatrach's requirements, running FATs and SATs, as well as providing ongoing support before, during and post installation. Having a locally based partner in ManCom is key to the success of the project, with regard to local and import regulations and frequency licensing.

SOLUTION

Sonatrach has installed a new MOTOTRBO Capacity Max system with 8 SLR 8000 repeaters at its industrial site in Arzew, 3 SLR 8000 repeaters at its HQ in Oran and 2 further SLR 8000 repeaters at its GL3Z site. Users on the old SmartZone network are being migrated to the new system, with communications continuing throughout for a seamless transfer. The Arzew system includes full hardware redundancy to ensure no loss of service. Sonatrach network administrators benefited from comprehensive training at Motorola Solutions' Training Facility to familiarise themselves with the Capacity Max system. All hardware supplied is supported by Motorola Solutions' product warranty with ongoing 24/7 remote and on-site technical after-sales support provided by the partners.

Sonatrach has deployed TRBOnet PLUS for its control room solutions, including functionality such as voice dispatch, fleet administration, event logging, alarm and lone worker management, text messages and emails, job ticketing and voice recording. It also runs the Motorola Solutions Radio Manager (RM) and System Advisor (SA) software applications to manage and oversee the Capacity Max system.

There are currently over 1,500 workers using the Sonatrach Capacity Max network and call volumes are increasing significantly thanks to the added capacity. The majority of users are based at the multi-zone Arzew industrial site; mobile workers are equipped with MOTOTRBO DP4400e digital portable two-way radios with Hazloc certified batteries, which ensure the radios can be used in the potentially explosive environment. Vehicle operators, meanwhile, use the MOTOTRBO DM4400e digital mobile two-way radios and office-based personnel, such as operations, control room, HSE, security and equipment teams and administrators, use MOTOTRBO DM4400e digital mobile two-way radios.

Motorola Solutions Products:

- MOTOTRBO™ Capacity Max Trunked Radio System
- 13 x SLR 8000 Repeaters
- 835 x MOTOTRBO DP4400e Digital Portable Two-Way Radios
- 51 x MOTOTRBO DM4400e Digital Mobile Two-Way Radios with in-vehicle accessory pack
- 56 x MOTOTRBO DM4400e Digital Mobile Two-Way Radios
- IMPRES™ TIA4950 Hazloc certified batteries (PMNN4489)
- IMPRES Battery Fleet Management software
- Capacity Max Radio Manager (RM) application
- Capacity Max System Advisor (SA) application
- TRBOnet PLUS

Services:

- Factory Acceptance Tests (FAT)
- Site Acceptance Tests (SAT)
- Standard Motorola Solutions hardware warranty
- Training at Motorola Solutions facility
- 24x7 Remote Technical Support
- On-site Field Support

Usage:

- Group and individual calls
- Dispatch
- Voice recording
- 25 channels (plus one control channel)
- Alarm and Lone Worker

Benefits:

- Greatly improved coverage and consistent communications when moving between zones
- Full redundancy ensures continuous network availability
- DMR TDMA technology allows for double capacity using the same number of repeaters as the previous system, so reducing infrastructure costs, whilst supporting growth needs
- Class-leading Hazloc specifications ensure the radios and batteries are safe to use in Sonatrach's potentially explosive refinery environment and IMPRES specification ensures batteries always last long shifts
- Capacity Max ensures security for Sonatrach, with all communications being encrypted and all radios being securely authenticated

CASE STUDY
SONATRACH

“The Motorola Solutions MOTOTRBO Capacity Max System deployed by ManCom and Airadio is working optimally. Our workers have clear, reliable, safe, mission-critical communications at our site, our HQ and our GL3Z complex; moreover the Capacity Max System offers added functionality and scalability, ensuring we have invested in a long-term solution.”

Mokhtar Benatanach, Head of Telecoms Department, Sonatrach



BENEFITS

Sonatrach chose the Capacity Max system due to its latest future-proof and scalable design and its DMR TDMA technology, which allows double the capacity of calls on the same number of channels to meet Sonatrach’s growing need for radio communication; moreover, Sonatrach could re-use its existing frequencies. The new high-performance network provides clearer and reliable communications across a wider area, as well as significantly increased added functionality; and the ongoing support from Motorola Solutions, ManCom and Airadio Net ensures the network is always functioning optimally.

Moreover, in view of the potentially hazardous nature of its operations, security of communications is of paramount importance for Sonatrach. With Capacity Max, all voice, data and control traffic is highly secure, and all radios are authenticated; Sonatrach can also remotely disable and re-enable a device, if it is misplaced or stolen. Looking to the future, Sonatrach may use WAVE broadband PTT to link workers’ Android devices at the HQ to subscriber radios.

- Wide range of features and applications for enhanced future capability
- Fully scalable system which will support Sonatrach in the future; the Capacity Max system can cover up to 250 sites with up to 3,000 users per site
- Seamless upgrade migration from SmartZone to Capacity Max system with no loss of service
- Strong local service support to ensure continuity of service and network uptime