CASE STUDY
UNITED OILFIELD SERVICES

SYNCHRONISING OILFIELD TEAMS WITH MOTOTRBO™

INCREASED FIELD WORKER PRODUCTIVITY AND SAFETY FOR SHALE GAS EXPLORATION

Photo: Marek Czarnecki, United Oilfield Services Sp. z o.o.

United Oilfield Services (UOS) is a Polish oilfield service company focusing on providing seismic data acquisition, modern drilling and critical hydraulic fracturing services to the European oil and gas industry. On a typical day, the company has 14 teams out in the field, involved in identifying and mapping shale gas reservoirs and extracting the natural gas.

To co-ordinate operations and ensure the safety of personnel across this demanding operation, UOS required a robust, feature-rich two-way radio system for intra-team communications. The need for a reliable, all-weather solution, capable of operating across different types of terrain – from cities to villages, fields or forests – and in high-noise environments, resulted in their choice of a MOTOTRBO digital radio system.

Installed by Motorola Solutions partner Elnex, the system enables instant, simultaneous communication between supervisors and employees and delivers clear audio so that conversations can be easily heard whether they're travelling in vehicles or working out in the field.

CUSTOMER PROFILE

Industry Name
Oil and gas industry

Customer Name
United Oilfield Services

Motorola Solutions Partner
Elnex

Key Benefits
- Reliable, long-range communications
- Enhanced audio quality
- Quick caller identification
- Cost-effective, scalable solution

Product Name
- MOTOTRBO DM 3601 mobile radios (70)
- MOTOTRBO DP 3601 portable radios (55)
- MOTOTRBO DR 3000 repeater (1)

MOTOTRBO is a solid communications system that gives us a modern platform on which we can build to add increased functionality as required. The extended range and excellent audio quality ensure that our staff don't miss important messages and the ruggedness of the radios enables them to withstand tough work environments.

Zbigniew Nehring, Chief Operating Officer

Photo: Marek Czarnecki,
United Oilfield Services Sp. z o.o.

THE CHALLENGE

UOS is committed to providing its customers with the best technology available and when it comes to the company's internal communications, this is no exception. They wanted a solution that could be depended on to improve productivity, increase safety and help field teams get the job done on time. In addition, the system needed to be able to cater for future expansion and provide additional functionality as required.

UOS's exploration teams have to work in variable - often harsh - weather conditions and in diverse locations. These factors can cause interference to wireless transmissions, resulting in missed calls or communication black-spots. To co-ordinate tasks efficiently and safely, the teams need to remain in contact with each other throughout their shift, which can last up to 12 hours. They also need to stay in touch with supervisors who are responsible for managing the teams out in the field.

Furthermore, the minimum range for coverage is 20 kilometres and across a given area there are multiple talk groups communicating at the same time, so personnel need to be able to identify who's sending them a message.

THE SOLUTION

Two-way radio would deliver the simplest and fastest communications for UOS and digital radio technology would enable them to overcome the challenges of interference and long range.

Elnex supplied a MOTOTRBO DR 3000 repeater, which uses TDMA digital technology to support two simultaneous voice or data paths and provide twice the calling capacity. This is achieved for the price of a single frequency licence, reducing communication and equipment costs.

Portable DP 3601 radios with display keep teams in contact in the field, while mobile DM 3601 radios have been installed in vehicles so that drivers can communicate with their co-workers to synchronise operations. Built to military specifications, the radios are robust enough to withstand harsh environments and the DP 3601 radios have IP57 certification for resistance to damage caused by dust or submersion in water.

The MOTOTRBO system has a built-in error-correction capability that reconstitutes the voice with virtually no loss over a far greater area than traditional two-way radio, ensuring communications are crystal clear, despite signal degradation or interference. In addition, the system requires less power, extending battery life so that workers can remain in contact during long shifts.

THE BENEFIT

The reliability of the MOTOTRBO system gives UOS the reassurance that its personnel can keep in touch at all times when they're out in the field, enhancing safety and promoting greater productivity through improved co-ordination between different work groups.

MOTOTRBO's intuitive, user-friendly interface enabled UOS's staff to operate the radios, despite not having had prior experience of two-way radios and without requiring extensive training. The radios can also be programmed using a USB connection, so Elnex was able to customise communications quickly and easily to meet the needs of UOS's different talk groups. Caller ID allows for quick identification of the sender, facilitating communication between multiple users.

The MOTOTRBO system's efficient use of the frequency spectrum and increased capacity make it a cost-effective solution that can scale to meet changing needs as UOS expands its operations.

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