

Portable Private LTE Solutions

Reducing operational costs through enabling remote inspections and verification surveys

Increased demand for costly offshore inspections and verification

The inevitable ageing of installations, together with new regulations such as the offshore safety directive are increasing the demand for offshore inspections and verification.

Currently, the most common approach to performing offshore inspections and verifications is to send a surveyor offshore, introducing significant operational costs associated with (helicopter) travel and time.

This underlines the necessity for cost-effective mobile solutions.





Rolloos has developed a lightweight portable private LTE network together with Total E*P NL.

Remote inspections and verification surveys

Driven by the need for cost reduction, organizations like DNV GL are investigating and providing alternative ways to perform offshore inspections and verification surveys. A tested solution is the introduction of remote inspections and verification surveys for which no time and money intensive offshore travel is needed. To perform a remote inspection or verification survey, onsite technicians are equipped with the latest ecom ATEX certified 4G/LTE Smart-Ex[®] smartphones and Tab-Ex[®] 02 industrial tablets. Integrated cameras and video conferencing software enables a DNV GL surveyor to give remote and real-time support and guidance to execute the independent verification survey. As the surveyor remains at land significant cost and time savings are being realized.

Connectivity challenge

The biggest challenge for remote inspections still is the lack of stable connectivity at offshore platforms. Many offshore platforms do not allow the execution of cost saving remote inspections as the lack of platform-wide connectivity does not allow real-time mobile video conferencing. Although communication to land is often available through e.g. TOUGH, VSAT and in the future TAMPNET there is no or limited wireless connectivity near the equipment. Even those large-scale offshore networks are not able to guarantee the required connectivity deep within the offshore structures. The main cause of this is the steel structure of the offshore platform which also limits the effectiveness of WiFi solutions. However, local and portable networks do have the capability to overcome this challenge.

Portable Private LTE solutions

Private Long Term Evolution (LTE) technology enables high capacity, high speed 4G mobile communication even within steel structures. A Private LTE network offers mobility without the need for portable radios and allows the implementation of Internet of Things (IoT) applications.



Offshore technicians perform maintenance work at multiple unmanned platforms. They carry this network-in-a-box (NIB) on board and deploy it within five minutes to create full coverage.

Rolloos has developed a lightweight portable Private LTE network together with Total E*P NL. Offshore technicians perform maintenance work at multiple unmanned platforms. They carry-on this network in a box (NIB) and deploy it within 5 minutes to create full coverage. It allows them to use their tablets and smartphones to access remote information and support, make data available online in real time and thus collaborate more flexibly from any location. The NIB enables remote verification surveys in situations with limited permanently installed connectivity.

Benefits

Enabling remote inspections and verification surveys reduces operational cost. Each offshore platform requires multiple verification surveys per year. Each remote survey will save up to EUR 10.000,-. This does not even take into account the environmental savings resulting from a reduced need for additional helicopter flights. Also, establishing full connectivity provides the opportunity to implement additional use cases. Operators can use the explosion-proof Smart-Ex[®] and Tab-Ex[®] mobile devices for remote support during maintenance operations and technicians can access operational data when they are right in front of the equipment of interest.

At a glance:

- Enabling remote inspections and verification surveys reduces operational costs.
- A Private LTE network offers mobility without the need for portable radios and allows the implementation of Internet of Things (IoT) applications.
- With the ATEX certified 4G/LTE Smart-Ex[®] Android smartphones and Tab-Ex[®] industrial tablets staff members can easily access remote information and support, make data available online in real time and thus collaborate more flexibly from any location.

More information at www.ecom-ex.com