

## Innovatively Engineered Solutions

Systems









### **KEY FACTS**

# Locations: Worldwide

### **Production Solution:**

An integrated remote assistance system comprising of live "eyesight" video streaming from personnel offshore or onsite with remote control communications to a centralised multi asset operation and maintenance team based onshore.

#### **Product Brief:**

Reduce asset operation costs by centralising highly skilled personal to allow them to maintain multiple assets

### Hardware:

- Wireless Access Points
- Helmet mounted Cameras
- Remote Control Multifunction Panels

### **Hazardous Areas:**

Safe Areas, Zone 1 and Zone 2. ATEX and IECEx



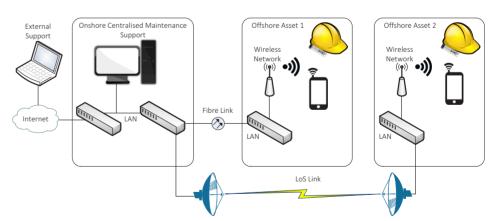
### **Live Remote Assistance**

Proeon are pleased to be offering to On and Offshore asset operators a strategic method of reducing operation costs.

Through the integration of a wireless, streaming, helmet mounted camera system, or a wearable "smart phone" style personal device aligned with a remote control multifunction access panel, the implementation of this system will allow for a reduced head count offshore. By locating highly skilled engineers in a central onshore location, and providing maintenance support to multiple assets rather than just the one, it will allow for a reduction of offshore or site time for skilled engineers. This allows them to cover more assets, efficiently.

The system can use an existing wireless network or a new wireless network can be installed. Proeon can offer wireless access point equipment suitable for installation within Zone 1 or Zone 2 Hazardous Areas, with the cameras being suitable for operation within a Zone 1 hazardous area. The camera system streams live "eyesight" video within a point to point or point to multipoint video conference style call. This provides real time support for; Ad hoc Inspection, Routine Inspection, Corrective Maintenance, Routine Maintenance, Personnel Emergency, Machinery Emergency and Video Recording.

Basic system topology is as shown here.



The individual's camera can be used to document, communicate and film during any work task being carried out with live assistance from base. The high definition Session Initiation Protocol (SIP) video conferencing call may be set up with dedicated Video Conferencing Workstations, Video Conferencing Enabled Workstations, Laptops and Video Conferencing Rooms. Video calls may be set up as point to point between the onsite user and the base support engineer but may also be expanded to a multipoint call bringing in other expertise or viewers. The system can be configured to allow access via the internet to interface with video conferencing enabled vendors or other specialist resource potentially reducing the needs for mobilisation of ad hoc external support. And because it's one to one, it's more secure than dial-in to the actual control systems, giving you safe and secure maintenance support.



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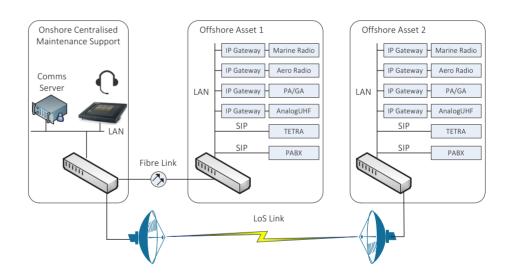
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### **Remote Multifunction Interface**

In supplement to the live video stream and live remote assistance Proeon can also offer integration of Telecoms Multifunction Access Panels (TMAP). The TMAP's provide remote access to the on asset systems. The system can be configured to allow full or partial access to PAGA, VHF/UHF Radio and Telephone system via the company LAN. This allows the centralised maintenance location to perform radio calls, telephone calls and make PA/GA announcements on the chosen asset from the centralised maintenance office from a single touch screen panel.

Interfacing to asset based equipment is provided by the installation of a local gateway or via LAN interface protocols such as SIP for telephony and TETRA systems. This ensures the onshore maintenance personnel have multiple methods of communication to the offshore personnel. A single TMAP may be configured to interface to multiple offshore assets. The TMAP features a capacitive touch screen interface which may be fully customised with regard to layout and provides different levels of user access via log in credentials.

The following diagram shows basic typical topology.



With the combined functionality of the streaming cameras and TMAPs the system provides a very real opportunity to reduce operation costs by reducing head count offshore and centralising highly skilled personnel providing support to multiple assets from an onshore location. The scalable architecture provides flexibility to roll out this service in a controlled and managed manner ensuring transition from high POB count to remote assistance, is carried out as smoothly as possible. The "smart phone" style camera with its android based operating system also offers interface to other network based support tools such as documentation, drawings and permits. The LAN based technology requires minimal disruption to existing installation with only the requirement for power and network connections to be made available.