Survey & Robotics

Location: Europe & Africa (North Sea)

Case study: Mesh networks for survey and inspection data sharing

Overview
Ashtead Technology was contracted by a major North Sea operator to provide a solution to share survey and inspection data across multiple vessels.

With increasing digital innovation fast becoming the norm across offshore assets, Ashtead Technology's Asset Integrity specialists deliver tangible value with bespoke data-sharing packages. These packages allow high volumes of data to be exchanged between vessels, platforms and other assets to ensure that operational safety and productivity remain high.

Solution
Using intelligent networking technologies designed specifically for vessel operations, and having ATEX approval for hazardous areas, Ashtead Technology provided a new capability in monitoring inspection operations aboard an FPSO which was openly shared across vessels in the field.

This capability included a custom-made diver-deployed video solution incorporating two magnetically-clamped subsea cameras, LED lights and umbilicals. This was attached inside the FPSO turret at key locations, allowing a clear view of the work being carried out.

The Mesh telemetry system allowed video and inspection data to be shared between the dive shack, FPSO turret winch operator station and the ROV support vessel positioned alongside the FPSO.

Benefits and value
This technology allowed the contractor and their client to access key inspection information in real-time, via video streams from the two diver-mounted cameras and ROV camera. This integrated system allowed key project personnel to carry out informed decision making, reducing project risk and reducing project costs.

With a significant reduction in the amount of equipment previously required to share data, the introduction of mesh data networks has since changed how this operator undertakes its operations. It has also been rolled out between platform and vessel as well as vessel-to-vessel communications for construction and IRM operations.

"The data management requirements of offshore operations are continually changing, with the reliable and rapid transmission of data often meaning the difference between success and failure.

"We were delighted to have been brought onboard with this project, with our mesh networks for inspection data sharing having a tangible impact on improved operational processes throughout the project."

Ross Macleod, Technical Director