

Drill Rigs Use IOCOM



About

- Energy company wants to be able to connect geologists, drilling experts, managers and drilling crews from remote locations
 - IOCOM customer since 2003
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Goals

- Wanted solution that would allow them to share video, audio, and data over standard IP links
 - Looking for a way to monitor and assist pumping stations
 - System must be able to connect over satellite
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Overview

IOCOM has had great success in the energy industry for the exportation and production of oil and natural gas. IOCOM is able to provide high quality, videoconferencing service with full data sharing over low speed and satellite links to these isolated drilling rigs.

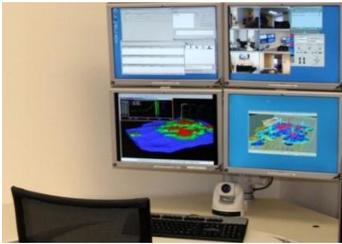
Challenge

An energy company wanted a solution that would allow them to share video, audio and data over standard IP links to multiple places at one time so that geologists, drilling experts, managers, and the drilling crews could collaborate on where the best points were to drill. They wanted a way to be able to monitor and assist the pumping stations as they extracted the deposits to ensure the work was done safely, efficiently, and any problems could be dealt with immediately. It was also important that the system they use would be able to connect to satellite because the drilling rigs are often very far from land.

Solution

The drilling rigs that IOCOM is used on are ocean going vessels that drill for deposits in open oceans. As these systems need to be mobile and are often very far from any land they face some unique challenges in communications. The system must rely on satellite links for all ship to shore conversations and most video conferencing system cannot handle the high delay inherent in satellite communications. These links are also very expensive and limited often running at 256Kbps for all traffic. IOCOM is able to support connections over satellite and can be set to use very low bandwidth for the connection to enable the links.

The drilling ship was fitted with a middle range IOCOM system in a conference room with 1 PTZ camera, a room microphone system and a connection to the CCTV system that ran throughout the drill ship. The system was set to send a low bandwidth video and audio by default. This kept the usage of the network at acceptable levels.



Approach

- IOCOM is able to support connections over satellite and can be set to use very low bandwidth for the connection to enable the links
 - The drilling ship was situated with video conferencing technology as well as an on-shore set-up for experienced engineers and geologist to be able to collaborate with the drilling crews via IOCOM
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On shore, a room was kitted out with two cameras, multiple microphones at a desk, a large high definition multi panel display and connection to the display output of a geological modeling tool. The on shore team would consist of geologists and experienced engineers who would work with the team on the drilling rig to determine the best place to drill. Through the connection to the modeling tool, the on shore team could share the modeling data and discuss this with the team on the rig. The rig could then share any point on the rig by switching to the appropriate CCTV feed, including the drill at the bottom of the ocean. Additional experts could be brought in over IOCOM from anywhere in the world to discuss issues and help solve problems. This greatly improved the ability to find deposits while reducing costs.

The Production Platforms is used to pull deposits from the ocean floor. A series of wells are connected to a pumping station that in turns passes the deposits on to a processing platform that collects and readies the resource for shipment. This can be passed through pipelines in a continuous flow or passed to tankers for transport to shore and a refinery. IOCOM is used on these systems as way for an operations center on shore to communicate with the platform to monitor and optimize the production and assist in the case of any problems or events. The operations team back on shore sit in and Advance Collaborative Environment (ACE) or Integrated Collaborative Environment (ICE) made up of a large display area showing all the feeds from the various monitored locations on the platform as well as individual stations for each engineer so that they can communicate directly with the engineers on the platform. Through cameras, microphones and desktop share, the operations team can see and quickly communicate to discuss optimizations of flow rates, identify trouble and suggest corrective action before an issue becomes a problem. This allows two sets of eyes to monitor the operation and keeps an experienced hand available at all times.



Results

- The drilling and operations teams were successfully able to employ the IOCOM software into their business
 - The systems in place have been very reliable and have not had an unscheduled outage due to the IOCOM systems
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Results

The drilling and operations teams were successfully able to employ the IOCOM software into their business. The systems in place have been very reliable and have not had an unscheduled outage due to the IOCOM systems. The IOCOM software was able to connect to satellite systems and has the ability to work over high latency connections. IOCOM has enabled the energy companies to be able to stay connected to their families and also share their experiences with younger and less experienced engineers on the rigs. This has helped the energy companies to improve capabilities everywhere while reducing the number of people at each facility

