



Using newly developed wireless devices, video can be shared with “virtual” experts to inspect work

# Mobile collaboration BRINGS HOME SAVINGS

**V**ideo conferencing is a standard form of business communication and is expected to become a \$10.8 billion industry by 2015. The typical form of video collaboration facilitates face-to-face meetings in video conferencing boardrooms.

For the marine industry, though, the heart of their business is often in a shipyard or onboard a ship—where traditional video conferencing doesn’t reach.

However, the development of new mobile technologies has presented the opportunity for video collaboration to expand into the shipyard, to a supplier location, or onto the water.

Mobile technologies generally include wireless video devices for use in the yard or onboard and collaboration software for the remote experts’ desktops. Yard workers use the mobile device to share video, voice, telestration (i.e., onscreen drawing) and images with the experts who interact live through the collaboration PC software in a totally secure manner.

For example, mobile collaboration was used by BP to share live video from inside a tanker in a Singapore shipyard with multiple remote experts across Europe. The purpose of this live video collaboration session was to monitor and assess the conversion of a Very Large Crude Carrier to a Floating Production Storage and Offloading (FPSO) vessel destined for ultra-deepwater exploration in offshore Angola. With a live mobile collaboration session, BP brought in virtual experts to immediately inspect critical areas and review progress.

The solution included a certified mobile device and rugged headset inside the tanker and collaboration software on the PCs of experts in offices in Aberdeen and Sunbury, Scotland, as well as the home of the Offshore Installation Manager (OIM). The mobile device streamed content to the remote experts using SingTel’s cellular service and a Huawei cellular to WiFi router. With this adhoc network, live collaboration was possi-

ble even from within the depths of the engine room.

Using mobile collaboration, the technician in the tanker was able to show very detailed visuals of critical areas including the engine, welds, and work permits. The remote participants were able to talk, draw onscreen and take high resolution snapshots to perform detailed assessments. The built-in illumination ring of the camera provided high quality visuals even when lighting was very poor in areas like the engine room. This FPSO conversion is just one example of the use of mobile collaboration within the marine industry.

“This initiative was a powerful illustration of the huge potential of remote video collaboration and has opened a wide spectrum of new possibilities for us,” says Ken Douglas, former CTO Technology Director and now in a CIO role in BP.

continued on p. 22

continued from p. 17

## REDUCED DOWNTIME

Mobile collaboration helps in various operational situations, including marine equipment maintenance and repair. If a piece of equipment is down and the right engineer is not available onsite to troubleshoot the problem, downtime rapidly escalates.

By using the mobile video device to show a remote expert the failed equipment, costly delays are removed from the repair process. Together, the marine engineer and remote specialist can now collaborate to identify immediate corrective action plans. In essence, mobile technology brings the problem to the expert, as opposed to the other way around.

## IMPROVED SUPPLIER INTERACTION

Supply chain interaction and OEM vendor communications are streamlined through mobile collaboration. Equipment reviews are an ongoing part of standard communication with suppliers.

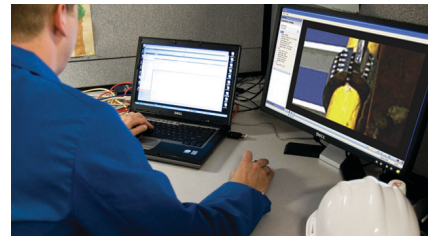
Normally, team members travel to the supplier locations for live interac-

tions, introducing delays into the process. Instead of travel, the mobile devices are kept or shipped to major suppliers to perform live visual communication when needed. In some cases, third-party cameras such as microscopes or borescopes can also be attached to the mobile device to provide enhanced detail. By interacting live with suppliers from the shipyard, the marine industry accelerates construction and maintenance timelines, reduces travel costs, and leverages scarce expert resources in their own company and that of their supply chain partners.

## NETWORK REQUIREMENTS

While many benefits and cost savings are related to using mobile video collaboration on the plant floor, it is important to consider the infrastructure requirements. The main requirement is that the mobile devices require either an Ethernet or wireless network connection to access the Internet.

Wireless connectivity (i.e., 802.11 b/g) can be achieved through a wireless network, 3G/4G cellular network with a MiFi or using a satellite terminal. Cellular is the most common method used in



shipyards. Onsite has been optimized for these various environments and can require as little as 60 kbps of bandwidth.

## MULTIPLE BENEFITS

With the advent of mobile technologies, securely extending the power of video collaboration across a marine enterprise is now a reality. Mobile video has proven to reduce downtime, drive quality improvements, accelerate delivery, leverage experts and eliminate unnecessary travel.

Video is now an essential component of interaction between marine facilities, suppliers, customers and OEM vendors. For many, engaging in a video collaboration session has become as simple as making a phone call. **ML**

**WHEN THERE IS A PROBLEM OUT THERE  
YOU NEED TO SOLVE IT  
FROM HERE**

**WITH VIRTUAL PRESENCE TECHNOLOGY GET YOUR EXPERTS  
RIGHT WHERE AND WHEN YOU NEED THEM.**

SEE LIBRESTREAM'S VIRTUAL PRESENCE TECHNOLOGY IN OIL AND GAS  
[WWW.LIBRESTREAM.COM/OILANDGAS/OVERVIEW](http://WWW.LIBRESTREAM.COM/OILANDGAS/OVERVIEW)

**Librestream**