The smart way to learn

Virtual, cloud-based, digitalised training methods are here to stay, says IEC Telecom.

Digital technologies are transforming the way we learn. Satellite communications specialist IEC Telecom reports it has seen a significant rise in the willingness of the maritime industry to embrace innovative technologies when finding new ways of operating as a result of the COVID-19 pandemic.

Nabil Ben Soussia, CEO Asia, Middle East & CIS at IEC Telecom Group, reported: "The maritime industry has often been slow to adopt new technologies but the pandemic has fast-tracked the implementation of digital solutions enabling a wide range of new services onboard, e-learning being one of them."

He explained that the vast majority of e-learning – 90 per cent – relates to very specific areas of knowledge, such as the need to change a spare-part, upgrade on-board software or receive new operational instructions. In the past, crews had to wait for GSM network availability in order to access their corporate video library or video-call an expert via Skype or WhatsApp when the vessel got closer to the shore. Otherwise, training was conducted in-person by a subject-matter specialist sent to the vessel from HQ. None of these options offered a continuous learning process and crew upskilling would be consistently disrupted and remain subject to the effect of external factors.

Smart glasses are transforming onboard tutoring

Digitalisation has opened doors to new solutions, enabling these challenges to be overcome.

"Videoconferencing is the primary channel for upskilling the workforce," explained Mr Ben Soussia. "Most of the learning happens over one-on-one tutoring/consultations dealing with a real case. The role of this tool cannot be overestimated, particularly with regards to the adoption of new on-board technologies. Modern digital communications systems are designed to support remote upgrades which means that, in order to operate efficiently, crews need to be trained on a regular basis."

Though commonplace in today's workplace, for a long time videoconferencing was simply unavailable onboard because popular apps, such as Zoom or Teams, are designed to operate with a delay factor of 400ms or less while most satellite systems have a delay of 700ms plus. Today, these constraints can be bypassed with a help of specialised communication apps, optimised for maritime use.

Specifically designed for satellite networks, these applications minimise the picture quality while optimising bandwidth usage to ensure dependable and cost-effective connection. As demand for videoconferencing is booming, the service range continuously evolves, with live streaming via 'smart glasses' being the latest trend. By using a headset device of this kind, the seafarer can follow the guidance of remote experts in real-time, which accelerates learning and improves the operational efficiency of the crew.

"File exchange in real time is the second most important component of e-learning on board. Operating ashore, we are so used to sharing big files in real time but that is not so simple onboard a vessel," outlines Mr Ben Soussia. "Traditionally satcom providers resolve this by applying data compression and TCP acceleration technology, enabling the file transfer process to adapt to the capacity offered by a low-bandwidth environment. Nowadays, we can offer much more advanced solutions. IEC Telecom is currently working at new file-transfer application and, without unveiling too many details, I can tell that our new solution will operate like Drobox or Google Drive, enabling the synchronisation of the file registry between ship and shore in real time."

With millennials joining the workforce, the number of computer-literate seafarers increases day by day. A number of recent crew surveys have revealed that almost threequarters of crew members bring smartphones onboard and more than half bring their laptops. With this shift we may expect the trend for e-learning to persist and evolve, shaping the future of the maritime industry.

Mr Ben Soussia concludes: "Learning is no longer limited to educational institutions or certified programs. Surrounded by technologies, we develop new skills or 'know-hows' every day. While live communication is the key driver of e-learning, connectivity is the backbone of the progress". DS