



Part of the LNG Fleet



Customer Success Story

Converteam Rugby, UK



HMI Day View

About Converteam

Converteam is a leading supplier of power conversion engineering. Providing customized solutions to convert electrical energy through physical equipment such as motors, generators, and drives, Converteam also manufactures automation and process controls. Serving the Marine, Oil & Gas, Energy, and Manufacturing industries, Converteam's services are applied internationally.

Converteam's solution for the marine and offshore industry includes the C-Series Vessel Control System (VCS) which combines ship wide supervisory control and monitoring together in a single system, enabling operators a complete overview of all ship systems.

Converteam recently selected ICONICS for automation, SCADA and HMI in a fleet of LNG tankers, ships designed to transport liquefied natural gas.

"In selecting ICONICS' GENESIS32 for our offshore applications, Converteam focused upon OPC connectivity to ensure that this standard would allow on-going flexibility in the choice and development of controllers in the future. Equally important was the capability to develop well tested modular solutions that could be re-deployed according to the project's particular requirements."

Gerry Palmer

Converteam Software Section Leader
PC Products & Tools

ICONICS Software Deployed

ICONICS' GENESIS32 is the standard HMI for Converteam's C-Series Vessel Control System. This decision was made by comparison of several other HMI systems that failed in key areas of extensibility, modularity, flexibility and connectivity.

Key Features

In marine and offshore applications (both commercial and naval), HMI faces unique issues. HMI displays located on the bridge must comply with standards and regulation concerning night vision and other safety measures. Aboard ships where Converteam's C-Series VCS is implemented, ICONICS' GENESIS32 screens have three modes to enable the bridge crew better external observation: one for daylight, one for dusk and dawn, and one for night. GENESIS32 screens further ensure safety

and convenience with touch-screen drivers and oversized symbols for “finger-sized” use.

Project Summary

Converteam has special and proven systems for all aspects of data acquisition and control in the offshore environment. Systems are integrated with control rooms and the ship’s bridge according to their functionality. All HMI communication is executed through OPC links to an OPC Server. ICONICS’ GENESIS32 receives all information through this server and commands are issued in a similar manner.

The integrity of ship control is very high, thus all commands issued through the screens are acknowledged

and regulations surrounding the use of software control on vessels include a requirement that displays must appear on request, within two seconds. ICONICS and Converteam easily comply with this requirement.

Benefits of the System

The recently completed LNG fleet for a major UK energy company used a large control and monitoring system with over 750K HMI tags, 220K of alarms & events and 5,600 system I/Os. The modularity within GENESIS32 allows for proven control objects to be deployed to reduce engineering time and greatly improve project development quality, with fewer errors, delivering



Dusk View



Night View

and fed back to the display for operator confirmation to ensure that a command has been executed properly.

Alarms and trending, important to ship operation, are available at any time to be displayed and zoomed in on to provide detail for problem diagnosis and fault avoidance. Additionally, alarms and other data are stored historically in separate databases providing complete audit-trails of actions. Data historian workstations, where a PC provides black box logging, can record Vessel Control System, Dynamic Positioning signal parameters and Alarms/Events for long periods of time.

ICONICS-powered workstation displays are found in many areas of the ship’s systems, especially on the bridge where Dynamic Positioning is used. The standards

benefits in testing and commissioning. After only three days of training, an experienced control engineer became sufficiently conversant with GENESIS32. The availability of complete information behind each screen symbol allows instant access to all information at any point in the development and integration process.

Conclusion

ICONICS’ GENESIS32 is the long-term solution for the LNG fleet with a 25-year projected working life. This includes provisions for backwards compatibility, upgrades, portability and other whole-life cost issues. ICONICS is on board with meeting the specialized needs of Converteam’s marine and offshore clients.

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