



Simrad TD50 visualisation showing schooling Sand Eel in the North Sea

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Kongsberg Maritime (Simrad): Live 3D Data Streaming - New Simrad Visualisation Software Released inVigo

Kongsberg Maritime has unveiled an advanced new technology platform at the ICES Working Group on Fisheries Acoustics, Science and Technology (WGFAST) in Vigo today (19th April), which enables live streaming of 3D data generated by scientific multibeam systems. The unique, new Simrad TD50 data visualisation software is currently operational with the Simrad ME70 scientific multibeam echo sounder, with plans to enable 3D data streaming from a wider range of Simrad acoustic systems in the future.

The Simrad TD50 software reads the incredibly clean raw data from the ME70 in real time and delivers accurate live visualisation of the oceanspace beneath the vessel to the scientific lab on board and to the bridge. Previously the data had to be post-processed before the 3D potential of the system was realised, but with a live feed now available, researchers and vessel crews benefit from a new highly effective decision support tool that can enhance vessel efficiency and the effectiveness of scientific surveys in general.

Accurate 3D visualisation gives users a better understanding of the marine ecosystem by i.e. enabling precise measurement of schools of fish rather than estimating size and shapes based on models. Additionally, 3D view of bottom topography and the relating bottom habitats further enhances the understanding of the marine ecosystems. When accurate 3D visualisation is delivered in real-time, the benefits are significant. The Simrad TD50 system is especially relevant to projects using 'adaptive sampling, as the live 3D stream of the survey area enables researchers to see specific attributes as the vessel passes over them, allowing action for further inspection to be taken immediately.

The live 3D stream from the Simrad ME70 data can be delivered to multiple locations on board which allows for better interaction between scientists and the vessel operators, typically important in demanding operations where the vessel interacts with objects in the water column. Research vessels engaged in active sampling of biology such as trawling can also improve their capabilities, with the Simrad TD50 system effectively providing a 'long range camera' below the surface.

The ME70 is a calibrated system with extremely low noise data, making it possible to map very small targets, such as plankton layers, at the same time as strong targets, such as fish school or bottom. The ME70 has been adopted by several key research organisations worldwide including France's Ifremer on board 'L'Europe' and 'Thalassa', and Norway's Institute of Marine Research (IMR) on board the new 'Kronprins Haakon' Research Vessel. The latter is equipped with an extensive suite of KONGSBERG systems for research vessels, including the full range of scientific equipment for marine ecosystem assessment.

"The Simrad TD50 has been a fantastic story," said Tonny Algrøy, Global Sales Manager, Simrad Fishery Research, Kongsberg Maritime. "Real time 3D visualisation of massive data like this was said to be impossible only years

ago, but with help from Kongsberg Digital's 3D center of excellence we have now upped the ME70 capabilities to a new level. Research vessels can now react immediately to changes in the environment they study, which is a facility that has the potential to create a positive step-change in the way scientific surveys are conducted."

Video of the Simrad TD50 in action on board Kongsberg Maritime's test vessel Simrad Echo, in the shallow sand eel grounds in southern part of the North Sea: www.simrad.com/td50. As the ME70 has much greater depth capabilities than shown in this data set, the true power of the combined system will be even more evident in deeper waters.

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For further information, please contact:

Tonny Algrøy
Kongsberg Maritime (Simrad)
Tel: +47 33034100
Tonny.Algroy@simrad.com
www.simrad.com

About Kongsberg Maritime

Kongsberg Maritime is a global marine technology company providing innovative and reliable technology solutions for all marine industry sectors including merchant, offshore, subsea and naval. Headquartered in Kongsberg, Norway, the company has manufacturing, sales and service facilities in 20 countries and a total of 65 worldwide offices.

Kongsberg Maritime developed systems for vessels cover all aspects of automation, control, navigation, safety and dynamic positioning. Kongsberg Maritime also develops subsea solutions covering systems for Underwater Mapping (UMAP), Underwater Navigation (UNAV), Subsea Monitoring (SUMO) and Marine Robotics in addition underwater cameras.

Marine and offshore training simulators, LNG equipment, information management software, position reference systems, integrated aquaculture

technology and advanced products to support seismic and drilling operations are also part of the company's diverse portfolio.

In parallel with its extensive technology portfolio, Kongsberg Maritime provides services within EIT (Electro, Instrument & Telecom) engineering and system integration, on an EPC (Engineering, Procurement & Construction) basis.

Kongsberg Maritime delivers solutions that cover all aspects of technology underwater and on the water, aboard new build and retrofit vessels, and on offshore platforms and rigs, often under a single supplier strategy called The Full Picture.

Kongsberg Maritime is part of Kongsberg Gruppen (KONGSBERG), an international, knowledge-based group that celebrated 200 years in business during 2014. KONGSBERG supplies high-technology systems and solutions to customers in the oil and gas industry, the merchant marine, and the defence and aerospace industries.

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