UKHO announces S-102 Bathymetric Surface data set sea trial project in collaboration with Port of London Authority and SEAiq Pilot

The UK Hydrographic Office (UKHO) has today announced it is kickstarting an S-102 Bathymetric Surface sea trial project in collaboration with the Port of London Authority (PLA) and multi-platform piloting solution SEAiq Pilot.

The S-102 Bathymetric Surface data set is created using the International Hydrographic Office's (IHO) new S-100 data standard. The new S-102 product specification will enable Hydrographic Offices to create S-100 layers with a far greater granularity of bathymetric information than the traditional ENC, supporting safe navigation and unlocking economic value for ports.

The project is the first real-world S-102 sea trial in the UK and also marks the first time the UKHO has run a S-100 sea trial. Working in collaboration with the PLA and SEAiq Pilot, UKHO will test S-102 Bathymetric Surface product specifications in real-life scenarios with the PLA pilots to understand user requirements of the new data set and collect feedback that will help to influence the S-100 data standard development process, in turn improving product specifications, data coverage and user experience.

The sea trial will take place in spring 2022, when the UKHO, PLA and SEAiq Pilot will carry out a piloted passage on a commercial vessel. The PLA pilots will use SEAiq Pilot software and UKHO's S-102 Bathymetric Surface data sets in a real scenario at sea. The outcomes of the trial will be monitored from pilot boarding point to berth, using SEAiq Pilot's Portable Piloting Unit and the UKHO's S-102 data to monitor the passage. The results will then be assessed to understand the need for potential extensions to S-102 and to feedback into the IHO testbed development process.

The project will also set out to build the safety case for the S-102 data set and provide a real-life case study for how S-102 can improve situational awareness and navigational safety for pilots.

The live sea trial is the third phase of the S-102 Bathymetric Surface collaboration project between UKHO, PLA and SEAiq Pilot. During January and February 2022, the PLA provided the latest hydrographic survey information of the trial area for the UKHO to create and supply the necessary S-102 data sets required by pilots. In March 2022, and before the live sea trial commences, the project will observe a passage planning desk exercise running through different scenarios using the S-102 Bathymetric Surface data.

Commenting on the announcement, Tom Mellor, Project Lead & Head of OEM Technical Support and Digital Standards at the UKHO, said:

> We are extremely excited to kickstart this exciting sea trial with our partners at PLA and SEAiq Pilot. It marks the first time that S-102 will be tested in a real-life setting in UK waters and will provide crucial evidence for how we develop S-102 products in the future.
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> S-100 data standards will be transformative for anyone who uses marine navigational data. By conducting this trial we will continue to build the safety case for S-102 and help to support greater commercial, economic, environmental and safety of life at sea outcomes in the UK’s Exclusive Economic Zone.
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> We are keen to bring a user perspective to the future of nautical navigation with a small, diverse and highly experienced team of pilots and hydrographers joining this collaborative effort.

John Dillon-Leetch, PLA Port Hydrographer, added:

> We are keen to assist the UKHO and IHO with the development of S-102. Utilising up-to-date PLA Safety of Navigation survey data in S-102 format in real-world situations will gather important feedback through the whole data value chain, from survey capture to use. In particular, the live onboard testing of the product by experienced PLA pilots will provide valuable mariners’ insights that will help to inform the final product.

Dr Mark Hayden Founder of SEAiq Pilot, added:

> We are pleased to support this project with our SEAiq Pilot ECS software; the most advanced navigational software specifically designed for pilots. Our software supports S-102 data display and we look forward to receiving the user feedback from the pilots in this trial to continue to innovate our system.