



8TH E-NAVIGATION UNDERWAY INTERNATIONAL CONFERENCE
MS Pearl Seaways, at Sea, 24 to 26 January

Contribution to the IHO Work Programme 2018	
Task 2.1.6.1	E-navigation Underway International 2018

The 8th e-Navigation Underway International conference was held from 24th to 26th January 2018 on board the DFDS ferry M/S PEARL SEAWAYS, during which time she sailed from Copenhagen to Oslo and then returned to Copenhagen. The theme for the conference was the realisation of the Maritime Service Portfolios.

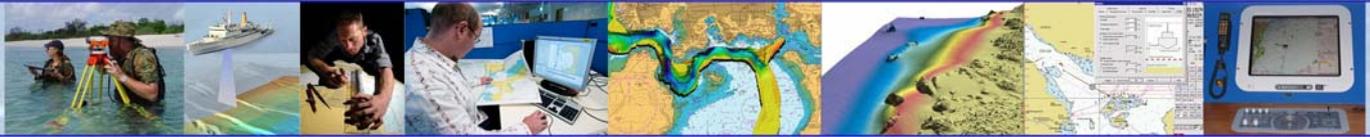
The conference was attended by 144 delegates, representing 29 countries and 7 international organisations. The associated exhibition attracted 3 exhibitors, displaying the latest developments in e-navigation.

Following welcoming remarks from Bjørn Borbye Pedersen of the Danish Maritime Authority, Conference Chair, and opening addresses from Francis Zachariae, Secretary-General of IALA, Andreas Nordseth, Director General of the Danish Maritime Authority, the key note speech was given by Mr Niels Smedegaard, President and CEO of DFDS (Det Forenede Dampskibs-Selskab).

A series of 28 presentations were given under the broad headings of general perspectives, e-navigation projects and testbeds, autonomous solutions in the maritime domain, specific e-navigation solutions, and building blocks for e-navigation. Director Abri Kampfer, representing the IHO, presented the progress in developing S-100 that has been recognised as the baseline standard for e-navigation.



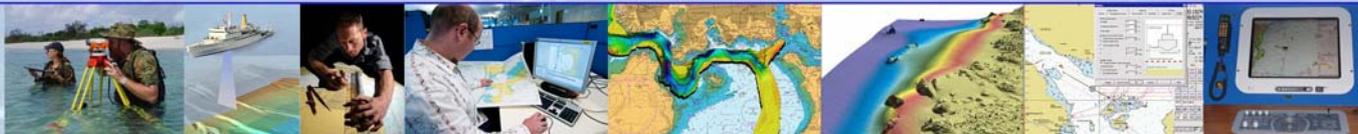
Participants to the 8th e-Navigation Underway Conference



Abri Kampfer addressing the Conference

As a result of the 28 presentations and related discussions that took place over the three days of the Conference, six highlights were identified:

- Ship-owners have clearly realised the potential and business cases in e-navigation both in the areas of safety, efficiency and cost reduction.
- Increasing attention is being paid to harmonised standards for services and products which are necessary for e-navigation.
- Disruption of the maritime industry driven by exponential technological change demands faster stakeholder and regulatory response to achieve the benefits of new technology for human needs.
- There is increasing collaboration between test bed operators, leading to an acceleration in the realisation of new digital maritime services and connectivity infrastructure.
- Several major projects and global test beds have tested VDES (WHF Digital Data Exchange System) with good results using both terrestrial and satellite platforms. VDES prototypes are now on the way for use on ships and ashore.
- Autonomous systems, driven by the business case, are becoming operational and authorities and organisations must prepare.



The presentations from the sessions are provided on the IALA web site at <http://www.iala-aism.org/products-projects/e-navigation/e-nav-underway/e-nav-underway-international-2018/>.

An invitation was issued to the 2018 e-Navigation Underway (North America) Conference to be held in California in the autumn of 2018 and to the second e-Navigation Underway – Asia-Pacific 2018 conference to be held in Seoul, Republic of Korea, from 3rd to 5th June 2018. An invitation was also issued to the 9th e-Navigation Underway International conference to be held on board ship in early 2019.



13TH MEETING OF THE DATA QUALITY WORKING GROUP (DQWG)

IHO Secretariat, Monaco, 15–19 January

Contribution to the IHO Work Programme 2018	
Task 2.1.2.6	HSSC WGs meetings / DQWG
Task 2.4.9	S-57 Framework / S-67 – <i>Mariners' Guide to Accuracy of ENC</i> s

The 13th meeting of the IHO Data Quality Working Group (DQWG) took place at the IHO Secretariat, Monaco, from 15 to 19 January.

The meeting was chaired by Mr Rogier Broekman (Netherlands) supported by Mr Sean Legeer (US), as Vice-Chair, and Mr Jyrki Mononen (Finland), as rapporteur. Ten delegates from nine Member States (Denmark, Finland, France, Italy, Japan, Netherlands, Norway, United Kingdom and United States of America) attended the meeting as well as a representative from RENC PRIMAR. Director Abri Kampfer, Technical Standards Support Officer Jeff Wootton and Assistant Director Yves Guillam represented the IHO Secretariat.



Participants in the DQWG-13 meeting, IHO Secretariat, Monaco



According to its new terms of reference adopted at the 9th meeting of the Hydrographic Services and Standards Committee (HSSC-9), one of the main objectives of the DQWG is to ensure that the data quality aspects are addressed in an appropriate and harmonized way for all S-100 based product specifications.

The first two days of the meeting were dedicated to a workshop addressing data quality aspects of the S-101 – *ENC Product Specification - Data Classification and Encoding Guide (DCEG)*, and the best practices on the way CATZOC values are populated for S-57 ENCs by Hydrographic Offices. This workshop highlighted useful rules implemented by some countries (generalization, impact of the passage of time, assessment of so-called unsurveyed areas, conversion tables from S-44 survey metadata to CATZOC values, etc.).

The workshop and the meeting also aimed at capturing the generic data quality components to be considered in the development of a data quality checklist for S-100 based products. After an introduction of ISO quality aspects and the INSPIRE¹ technical guidelines for quality elements depicted in the Data Specification on Elevation, a systematic review and comparison was made between existing S-100 based draft product specifications. Special focus was aimed at S-102 – *Bathymetric Surface*, thanks to the participation of the representative from PRIMAR.

Data quality elements

1. Completeness
2. Logical consistency
3. Positional accuracy
4. Temporal quality
5. Thematic accuracy
6. Aggregation measures
7. Usability

The final result is conformity: fully conformant, not conformant or not evaluated.



International Hydrographic Organization
Organisation Hydrographique Internationale

DQWG-13, 15-19 January 2018

The meeting also considered the comments made by the members of the Nautical Information Provision and Nautical Cartography Working Groups on the draft publication S-67 – *Mariners' Guide to Accuracy of ENCs*. It was concluded that a fair amount of work is still needed before this publication is re-submitted to HSSC for endorsement. As it remains a top priority to address mariners' requirements with regard to the quality of bathymetric data, the working group considered different methodologies to help in the decision making process (combination of safety depths and contours with data quality) while the portrayal aspects will need to be addressed by the Nautical Cartography Working Group.

The next meeting is planned at the IHO Secretariat, Monaco, from 5 to 8 February 2019. Further information concerning the meeting is available on the IHO web site at www.iho.int > Committees & WG > DQWG > DQWG-13 > Documents.

¹ *Infrastructure for Spatial Information in Europe.*