e-NAV12 Input

Agenda item 7.2

Task Number 2

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e-Navigation Test-Beds

# Summary

The report of the Working Group on e-Navigation to IMO NAV 58 included the following statement: ‘…invited the Sub-Committee to agree with the further development of Guidelines for the harmonization of test beds.’ Some guidelines have already been developed, based on discussions initiated at e-Navigation Underway in 2011.

It is suggested that these draft guidelines might be a useful input to the IMO Correspondence Group.

## Purpose of the document

This paper is provided as the basis for an input to the IMO CG on e-Navigation.

## Related documents

IMO NAV 58/WP.6

# Discussion

## Background

Test-beds have been set up for e-navigation applications in the Baltic (EfficienSea) and will be set up in the North Sea (ACCSEAS). Other projects effectively providing test-beds are Mona Lisa and the Marine Electronic Highway in the Malacca Strait. It is important that the implementation and outcomes of these test-beds are harmonized, if the e-navigation solutions that emerge are to have general application. These draft guidelines have been prepared for discussion and further development.

**2.2 Need for test-beds**

Test-beds will provide early implementation and user experience while the e-Navigation system itself is still under development. They also allow early detection of areas of improvements or defects in intended system functionality [1].

## 2.3 Scope and benefits of Guidelines

Guidelines and harmonization in this area would increase the value of the test beds as input to the e-navigation process. These guidelines should stretch from planning of test-beds, through developing of test systems and conducting actual sea-tests, to the development of systematic reporting structures to increase comparability of test-bed results and allowing detection of the best candidates for implementation [1].

## 2.4 Planning of test-beds

When planning test-beds, e-navigation applications selected should be linked to the established user requirements and aimed at the agreed objectives of e-navigation. Where possible the applications should address identified gaps in the Gap Analysis.

## 2.5 Architecture

Test-bed applications should align with the IMO e-Navigation architecture and the concept of the Maritime Service Portfolio.

## 2.6 User involvement

Test-beds should involve users at every stage from planning, through implementation to assessment of results.

## 2.7 Data Structures

Applications should (potentially) fit into the baseline data model agreed for the development of e-navigation – the IHO S-100 Data Registry.

## 2.8 Information

Information on test-bed progress should be provided on websites that can be accessed by all interested parties.

## 2.9 Results

The results of test-beds should be made generally available, once quality assurance checks have been completed. Where the output is in the form of software tools, these should be open-source, with arrangements in place for user feedback and improvement.

# REFERENCES

[1] IMO CG Report to COMSAR (COMSAR 16/11).

[2] IMO NAV 58/WP6, Report of e-navigation Working Group.

# Action requested of the Committee

The Committee is invited to consider the discussion above as part of an IALA input to the IMO CG on e-Navigation.