WG6 Report to e-NAV10

# Working Group 6 – e-Navigation Information Portrayal

## Prepare Recommendations and Guidelines on Maritime Information Systems (in co-ordination with the VTS Committee) (Task 25)

### a) “Maritime Information Systems (MIS) as a Component of e-Navigation” describes a variety of shore-based and shipborne equipment, systems, services and processes that fall under the scope of e-Navigation. In particular, a series of tables list: the tasks/functions, information needed, shipborne and shore-based sources of information, the communication means to provide this information, and VTS-related information to be shown onboard.

At eNAV9, this document was completed and sent as a Liaison Note (Output Paper #22) to the IMO e-Navigation Correspondence Group. An earlier version had been provided to the VTS Committee for review and comment. In turn, a Liaison Note was sent back from VTS Committee (VTS32/output/13, 11 March 2010). Comments had also been provided by the COMSAR 15 (SAR Working Group).

Action taken: Since further work on communications aspects may be needed, this document has been passed to WG4 (Communications). Unless additional portrayal issues are identified, no further work is planned by WG6.

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## Prepare Guidelines on the portrayal of information (Task 26\*)

a) Draft Guidelines for the Portrayal of e-Navigation Information (draft version 3) was prepared. In addition to making a distinction between data and information, it defines portrayal related terms and describes the four basic portrayal options (alpha-numeric, graph, symbol/icon, and geo-spatial). Key reference documents include:

IALA Rec. V-125 - *Use and Presentation of Symbology at VTS Centre*

IALA Guideline No. 1072 - *AtoN Information Exchange and Presentation*

IMO NAV56-11 – *New Symbols for AIS AtoN*

IMO Res. MSC.191(79) - *Performance Standards for the Presentation of Navigation-related Information on Shipborne Navigational Displays*

IMO SN/Circ.243 - *Guidelines for the Presentation of Navigation-related Symbols, Terms and Abbreviations*, 15 December 2004.

IEC 62288 – *Presentation of Navigation-related Information on Shipborne Navigational Displays – General Requirements, methods of testing, required test requirements*

Work will continue intercessionally.

b) Reviewed IALA Recommendation V-125

The working group reviewed the content of V-125 with respect to e-Navigation portrayal guidelines. Since VTS Committee is currently engaged in revision of V-128 which may include presentation requirements , a Liaison Note to the VTS Committee was prepared that provides the following observations and recommendations to the VTS Committee for consideration in the next editions of V-125 and V-128.

Action item: Send as Liaison Note [eNAV10 Output 25 ] to IALA VTS Committee

c) Compilation of *e-Navigation Portrayal Examples* (two documents)

1) **Summary Sheet** – A comprehensive reference document that summarizes portrayal examples continues to be compiled. It includes:

Papers submitted to:

IMO (NAV 54 - NAV 57)

IALA eNAV Committee (eNAV4 – eNAV10)

Papers/presentations given at meetings and conferences, including:

IALA 2010 Conference

e-Navigation Underway

Korean Regional e-Navigation Conference

Reports on Trials/Testbed Projects

AIS Baltic Project

*BLAST* Project

*EfficienSea* Project

etc.

Reports on existing and new system developments

Collision avoidance

VTS

R&D Projects

Work will continue intercessionally to more fully populate this document.

2) **Detail Sheet** – It includes four (4) basic categories for compiling information:

Brief Description (PP Pres or 1-2 page information paper)

Functional Capabilities (types of data 🡪 information content)

Intended Purpose (including benefits)

Portrayal examples (means or methods of portrayal)

a) good examples

b) lessons-learned

c) some concerns

Action Item: eNAV Committee members are encouraged to submit examples of e-Navigation Portrayal examples. In particular, more shore-based examples are needed.

c) Portrayal of AIS Application Specific Messages

As decided at eNAV9, the data parameters contained in relevant ITU and IMO standards was used as a basis to identify of what types information should be displayed and how. Using a matrix (spreadsheet) compiled by the Vice Chair of WG3, each data parameters can be portrayed in 1-4 ways: alpha-numeric text, graph, symbol/icon, or geo-spatial (point, line, or area). Further work may continue intercessionally by correspondence.

## Monitor developments in ECDIS, INS, and ENCs (Task 27\*)

a) WG6 will use the IHO S-100 Registry for establishing an e-Navigation Information Portrayal Register. WG6 Chair will coordinate with IHO, and attend the annual IHO Technical Committee Meeting (November 2011).

b) The CDV for IEC 61924-2 for the new INS Performance Standard - MSC 252(83) proposes new icon/symbols for alert status.

## Monitor and report progress on related systems (Task 28\*)

Briefly reviewed the “Current IMO SOLAS navigation and communication equipment list that may need to be modified for e-Navigation” that had been completed at eNAV9. Further work may be necessary on some references as they become out-of-date.

**12.5 Other Matters**

a) Gap Analysis – Reference: e-NAV10-7-7 Updated Gap Analysis and Practical e-navigation solution with HEAP\_25Jul2011.doc

Due to size and complexity of this document, there was not sufficient time to conduct a thorough review. However, our initial effort focused on two key aspects:

1) Content that is portrayal-related

2) Comments on key items

WG6 reviewed and discussed the referenced input paper from the IMO e-Navigation Correspondence Group and added 24 comments and questions regarding matters that may pertain to portrayal issues, interface and training. These additions are embedded in the Word document as Comments. Several questions were raised as to whether some "gaps" are actually not gaps but only describe user needs. In several cases, we found references to the standard 61162 that appear incorrect since 61162 is not intended to address transfer of large documents, for example Sailing Directions. Rather than address training issues piecemeal, a global perspective on the training issues seems needed.

b) AIS AtoN

Received an update on the work of the IMO Correspondence Group onAIS AtoN (Coordinator, Hideki Noguchi). Cdr. NOGUCHI explained about the current situation of the IMO Correspondence Group work. Although the symbol issues of AIS-AtoN will be discussed after the NAV58, one of the contents of the draft IMO policy on AIS-AtoN handled “portrayal” matter. At this moment, the CG is handling the definition of AIS-AtoN. There are some proposals of definition, one proposal is to mirror the definition of IALA Recommendation of A-126 that considers the AIS-AtoN as conventional AtoNs such as lighthouse, lighted buoy which usually provide positioning information. On the other hand, other proposals expand the concept of AtoN to include line, area and other object information. The CG is now waiting for comment from the members regarding the proposed definitions.

WG6 felt that Virtual AtoNs have a role in e-Navigation. However, some concerns were expressed in regard to some uses which may be inappropriate:

- Locating a virtual AtoN on a physical lighthouse

- Indicating lines and areas should be provided by AIS ASMs. Associating the term AtoN could conflict with other existing standards

c) Reviewed/discussed two potential approachesfor the display of chart-related depth information:

1)) “Bathymetric Blue” display of high-density bathymetry from recent hydro surveys

2) “Red-Yellow-Green” display for decision-support (e.g., under-keel clearance)

d) 3-D Display

Dr. Thomas Porathe gave a very interesting presentation about an ongoing research project (BLAST Project) on egocentric view 3-D conning displays. This type of display presents tactical information in an intuitive way (no mental rotations required) for close range decision support and is intended as a supplementary to the ECDIS and radar.

e) Intersessional Meetings

There is no plan to hold an intersessional WG6 meeting before eNAV11. Instead, work will be progressed via e-mail and telephone. However, some WG6 members may meet on the occasion of upcoming Conferences (*eNavigation 2011* and *eNavigation Underway 2012*).

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