

**6th HSSC Meeting
Viña del Mar, Chile, 11-14 November 2014**

Paper for Consideration by HSSC

List of Lights New Numbering System

Proposal by the Standardization of Nautical Publications WG (SNPWG)

Submitted by:	SNPWG
Executive Summary:	Improvement of the efficiency of the data exchange between List of Lights entries stakeholders by introducing a new numbering system
Related Documents:	http://www.iho.int/mtg_docs/com_wg/CPRNW/S100_NWG/IMO%20BAC%20KGROUND%20RELATED%20TO%20THE%20DEVELOPMENT%20OF%20E-NAVIGATION.htm
Related Projects:	S-12 S-100, S-125 (Navigational Services), IMO e-Navigation solution S3 in conjunction with Maritime Service Portfolios MSP 11 and MSP 12

Introduction / Background

Based on a gap analysis, the e-Navigation concept of the IMO identified potential e-Navigation solutions of which the solution S3 (improved reliability, resilience and integrity of bridge equipment and navigation information) is relevant for this paper. S3 is focussing inter alia on the seamless transfer of electronic information/data between ship and shore and vice versa and between ship to ship and shore to shore.

In addition, a preliminary list of Maritime Service Portfolios (MSPs) was acquired. These MSPs are based on the recognition of the need to harmonise, standardise and identify shore based functions and services under different situations and/or locations (e.g., ports, coastal and high seas). The Maritime Service Portfolios MSP11 and 12 (nautical chart service and nautical publications service) have to be considered in accordance with the proposal detailed in this paper.

The IHO published the S-12 standard which recommends a standardised presentation of light information in the List of Lights publications.

The IALA is the International Association representing those bodies that are responsible for maintaining aids to navigation. The IALA Committee – Aids to Navigation Requirements & Management (ARM) is working on creating an S-100 based data model for light information. It can be assumed that the IALA light information numbering data model is not 100% compatible with the data model developed by the responsible IHO WG.

Analysis / Discussion

Light information is required to be encoded and stored in paper charts, ENCs and List of Lights publications. There is a need to ensure that light information contained in these navigational products remains current. This implies the use of a common data model and a single data source for light information.

Although the responsibility for List of Lights information differs from country to country, the national Hydrographic Offices usually publish the List of Lights information. The national light number is only valid in products of the responsible national HO. National List of Lights information is occasionally published in List of Lights of a neighbouring country as well.

In addition and according to S-12, the UKHO is responsible for the designation of an international number for a light. This international light number is used to exchange light information between offices of

different coastal states. Both the national and the international light numbers are stored in the respective national List of Lights publications.

The international number can be replaced by another one if the UKHO considers that this is necessary and appropriate. If that happens, national agencies have to revise their List of Lights publication(s) to reflect the amended international list of lights number(s) in their publications.

An increasing number of offices produce their List of Lights information from a database. The re-order of both the national and/or the international numbers would cause significant problems for the producer.

The introduction of the Persistent Unique Identifier into the new S-100 Edition 2.0.0 will support the idea of having a single number/identifier for a light and the corresponding production of a List of Lights publication.

The SNPWG is proposing a new numeration system for each List of Lights entry and a closer liaison with the responsible IALA Committee in respect of the harmonisation of the data models and the light numbers in particular. It is intended to ensure that the IHO and the IALA models used for light information are compatible.

Justification and Impacts

The use of a common number of a light could result in the initiation of a data stream for light information from source to user. It supports particularly the IMO e-Navigation concept.

Once established, the workload for HOs will be reduced significantly. The work will have very little impact on the current workload.

Conclusions and Recommended Actions

Both IALA and the IHO could benefit from a harmonised approach of the lights numbering. The IMO e-Navigation solution S3 would be supported with the first data stream. The workload for HOs would be reduced. A harmonised numbering system will enable the HOs to produce a List of Lights publication based on one database for both charts, ENCs and publications.

More importantly, data modellers should not be forced to switch between different ways of modelling the same kind of information when modelling either chart content or nautical publication content.

The proposal also supports the well-established principle that coastal states are responsible for the hydrographic information of their respective coast. Potentially, issuing organisations transfer the WEND principle from the ENC to other hydrographic information and it is a logical and consequent extension of the IHO WEND principles.

A further benefit can be seen on the stakeholder's side. A harmonised data model is essential to earn as many as possible benefits from the new S-100 world.

The SNPWG should discuss a harmonised numbering system with the IALA and review the appropriate sections of S-12 to establish the legal basis for using only one unique number for a light.

Having been contacted before the HSSC meeting, the relevant IALA Committee – Aids to Navigation Requirements & Management (ARM) – indicated that the initial response is favourable. However, the proposal has to be considered by the next Committee meeting which is scheduled by the end of November 2014.

Action Required of HSSC

HSSC6 is invited to:

1. take note of the proposal,
2. consider the data stream idea,
3. endorse that the SNPWG contacts the relevant IALA Committee to harmonise the lights numbering system,

4. assign the review of the appropriate sections of S-12 to establish the legal basis for using only one unique number to the SNPWG.