

Paper for Consideration by SNPWG17

Harmonised model for Light Number Information

Submitted by:	BSH
Executive Summary:	Discussion of new numbers of List of Lights entries
Related Documents:	SNPWG 03-12; DCEG.20_Light List Number Complex_Round 2.doc; http://www.iho.int/iho_pubs/standard/S12_ENG.pdf http://www.iho.int/mtg_docs/com_wg/TSMAD/TSMAD25/TSMAD25-4.2.1A_HarmModelforLightInfo.pdf http://www.iho.int/mtg_docs/com_wg/SNPWG/SNPWG16/SNPWG16-14.1_List_o_Lights_Rev1.pdf http://www.fuerstenberg-dhg.de/mediawiki/index.php/LITNUM
Related Projects:	SNPWG data model; S100; S-101

Introduction / Background

A List of Lights, either in digital or printed format, is under the carriage requirement regime of all coastal states. This carriage requirement is based on SOLAS V and it is assumed that this will not be withdrawn in the foreseen future.

SNPWG is working on a data model which will enable data providers to structure their nautical publication information in an ECDIS compatible format. TSMAD is working on an S-101 Product Specification for ENCs that contains light information. IALA is also working on creating an S-100 model for light information.

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 is kept current. This implies the use of a common data model and a single data source for light information.

As IALA is the International Association representing those bodies that are responsible for maintaining navigational lights, it is proposed that IALA should work together with TSMAD and SNPWG to ensure that the models used for light information are compatible. TSMAD 25 has decided not to include List of Light numbers in the S-101 Product Specification.

Analysis/Discussion

The IHO published the S-12 standard which standardises the presentation of light information in the List of Lights. Although the responsibility for List of Lights information differs from country to country, the national Hydrographic Offices usually publish the List of Lights information. National List of Lights information is occasionally published in List of Lights of a neighbouring country as well.

A responsible national office assigns a List of Lights number to a particular light. The national light number is only valid in products of the responsible national HO.

Usually, international light numbers are being used to exchange light information between offices of different coastal states. Although not being said explicitly elsewhere, S-12 has assigned the determination of an international light number to the UKHO.

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 SNPWG developed a simplified structure to model a particular List of Lights number. However, this structure doesn't support multiple numbers as used for national and informational purposes. Thus, an improved data model should be pursued.

The proposal suggests a complex attribute for light numbers consisting of a publication ID code, a number and the responsible nation.

Note: FOR REASONS OF ECONOMY, DELEGATES ARE KINDLY REQUESTED TO BRING THEIR OWN COPIES OF THE DOCUMENTS TO THE MEETING

Complex Attribute	Acronym	Allowable Encoding Value	Type	Multi
Light Number	LITNUM		C	0,*
Number of Light Identifier	LITNID		S	0,1
Number of Light value	LITNMV	XXXXXXXX.XXXXX	F	1,1
Nation	NATION		A	0,1

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Bearing in mind that TSMAD has agreed on the introduction of a Persistent Unique Identifier for all features, the light feature should carry this identifier as well.

The introduction of the Persistent Unique Identifier into the new S-100 Edition 2.0.0 will support the establishment of an e-Nav suggested data stream from the source (IALA) to the end user (ECDIS or List of Lights) without any or with limited interaction of the ENC and List of Lights issuing HOs. The Persistent Unique Identifier will additionally support the proposed data model and the production of a List of Lights publication.

Conclusions

The proposal offers the benefit that a database could contain various numbers and that would support the data exchange between List of Lights issuing organisations. That might reduce the workload for both the List of Lights issuing organisation and the UKHO as the responsible office for international light numbers.

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

Recommendations

The SNPWG should revise the current LITNUM attribute and its sub-attributes.

Justification and Impacts

The work will have very little impact on the current workload.

The idea of establishing a data stream for light information from source to user underlines the IMO e-Nav idea. Once established, the workload for HOs will be reduced significantly.

Action required of SNPWG17

The SNPWG17 is invited to:

- a. note this paper
- b. agree on the proposal.