

Paper for Consideration by SNPWG17

Extended model for Light Information

Submitted by:	BSH
Executive Summary:	Discussion of extension of List of Lights information
Related Documents:	http://www.iho.int/iho_pubs/standard/S12_ENG.pdf
Related Projects:	SNPWG data model; S-100;

Introduction / Background

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 ENC's 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, ENC's 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.

SNPWG is proposing a data model which supports the usage of various numbers for each List of Lights entry.

Analysis/Discussion

The current lights model, either S-57 or S-101 based, does not provide all required information to describe lights information entirely and thus, the production of a printed or digital List of Lights publication is not possible using the current lights model. A comparison between the models and the List of Lights entries shows that the following information should be added.

1	Light Number	complex	S-12, item 4.1
2	Additional object name information	string	S-12, item 4.2
3	Relative description of the position	string	S-12, item 4.3
4	Additional building description	string	S-12, item 4.7
5	Additional Light information	string	S-12, item 4.8

Annex A provides draft versions of data sheets.

Annex B provides an example of the use of the additional attributes.

Conclusions

The results of the SNPWG questionnaire, show that mariners request information on navigational marks in addition to that currently provided by electronic charts. The additional attributes are able to provide such information.

The attributes are also the precondition to extend the navigational marks information in a way that IALA could easily extend the data model if considered necessary.

A further benefit can be seen at the List of Lights producing HO's side. The attributes will enable such HO's to produce a List of Lights publication based on one database for both charts and publications.

Recommendations

SNPWG17 should consider the proposal and extend the proposed set of attributes if necessary. SNPWG should discuss and decide whether it would be worthwhile contacting IALA in that regard.

Justification and Impacts

The idea of having one data base for all HO's' products would be supported. The present necessary duplication of data would be reduced significantly.

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

Action Required of SNPWG17

The SNPWG17 is invited to:

- a. note this paper,
- b. support the proposal and extend if considered necessary,
- c. support IALA if they intend to extend the model for their purposes.

addobn

FEATURE OBJECT ATTRIBUTES

Additional name (string) under new complex attribute feature name; see wiki

Attribute: Additional object name description

Acronym: addobn

Code:

CamelCase: additionalObjectNameDescription

Attribute type: Simple

Data type: String

Definitions:

An addition to the object name which is either a part of the name or which can't be encoded sufficiently using other S-57 attributes.

Remarks:

The additional object name description content will not become part of the name index. Thus, the consideration should be done extremely carefully to identify if such description is part of the name or not.

Distinction:

CATLIT, OBJNAM, NOBJNM

Justification:

New attribute

Comment:

No comments.

relpsn

FEATURE OBJECT ATTRIBUTES

Attribute: Relative position description

Acronym: relpsn

Code:

CamelCase: relativePositionDescription

Attribute type: Simple

Data type: String

Definitions:

This describes the position of a light in relation to or connection with or necessary dependence on another structure.

Remarks:

NIL

Distinction:

NIL

Justification:

New attribute

Comment:

No comments.

addbld

FEATURE OBJECT ATTRIBUTES

Attribute: Additional building or landmark description

Acronym: addbld

Code:

CamelCase: additionalBuildingOrLandmarkDescription

Attribute type: Simple

Data type: String

Definitions:

Information used to describe particular features of buildings or landmarks where a light is being fixed.

Remarks:

NIL

Distinction:

NIL

Justification:

New attribute

Comment:

No comments.

addlit

FEATURE OBJECT ATTRIBUTES

Attribute: Additional light information

Acronym: addlit

Code:

CamelCase: additionalLightInformation

Attribute type: Simple

Data type: String

Definitions: Information used to describe particular features of a light.

Remarks:

Encoding lights with sectors, the information has to be provided for the light starting with the lowest value (count starts with 000°).

Distinction: NIL

Justification: New attribute

Comment: No comments.

The example shows the employment of the additional attributes for an automatically generated List of Lights entry using the Hydrographic Production Database (HPD) Source data.

Nr.	Name. Feuerträger (Höhe über Erdboden)	Position	Kennung/ Wiederkehr	Höhe	Tragweite, Bemerkungen
nlitnm 305800 <i>B 1746</i> litnum	OBJNAM, addobn List West Licht-Tm. Turm, weiß, horizontal gestreift (11 m), mit roter Laterne CATLMK, COLOUR, COLPAT, VERLEN addbid	LAT/LON 55°03,18' N 008°24,09' E	LITCHR, COLOUR, SIGPER Oc.WRG 6s (01.5)+04.5 SIGSEQ	19 m HEIGHT	COLOUR, RANGE W 14 040.0° - 069.0° R 11 069.0° - 133.0° W 14 133.0° - 227.0° R 11 227.0° - 266.4° W 14 266.4° - 268.0° addit <i>Leitsektor Richtung Rome Dyb</i> G 10 268.0° - 285.0° W 14 285.0° - 310.0° W 14 310.0° - 040.0° SECTR1, SECTR2