PART II

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MARINERS' NAVIGATIONAL OBJECTS

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Most of content of the previous edition of the Presentation Library, Part II has been deleted in Edition 4.0.0. In 2004 the IMO published the MSC.191(79) Performance Standards for the presentation of navigation-related information on shipborne navigational displays. In response to the new IMO Performance Standards the IEC published the first edition of the corresponding test standard, IEC 62288, in 2008. The IEC standard describes most of the original mariner objects that were specified in Part II, making their inclusion in S-52 redundant. Three of the original mariner objects have been retained in the S-52 Presentation Library, Part II as they are not available in either the IMO or IEC standards.

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1 MARINERS' OBJECT CLASSES

1.1 Form

Each navigational object class is specified according to a standardized form, which is the form for the class definition:

- Object Class: written name of the navigational object class

- Acronym: six-character acronym of class name; always lower case letters

- Code: integer code to be used for non-standard objects, according to S-57.

- Reference : reference to the IEC 61174 Annex E "Navigational Symbols" symbol number or other reason for the object

- For each navigational object class an individual set of relevant attributes is defined. This set is divided into three subsets:

* subset "Attribute_A": applies to the individual characteristic of a certain object; e.g. whether planned route or alternate route.

* subset "Attribute_B": applies to the future use of the data e.g. for presentation or for an information system; e.g. smallest display scale at which a certain symbol should be shown.

* subset "Attribute_C": applies to data administration; e.g. date of establishing a certain planned route.

Each subset shows the list of Attribute - codes. For the description of each Attribute see section 2.

- Geometric Primitive: indicates the allowable geometric forms. Point, line or area.

- Definition: Where possible each object class is defined using an existing definition, and the source is quoted.

- Remarks: Under 'Remarks' further comments and notes are given. Related but separate object classes are listed under the heading 'Distinction'.

1.2   Mariner's Object Classes: Overview

In the following list the codes of the object classes are in alphabetical order.

Mariners' Object Class	Code	IEC	Page
Danger highlight	dnghlt	9	II-3
Mariners' feature	marfea		II-4
Mariners' Note	marnot		II-5

1.3   Mariners' Object Classes: Catalogue

Mariners' Object Class: **Danger highlight**

Acronym**:**   **dnghlt**   Code: 8195

Reference: IEC 61174 Annex E Section 12

Set Attribute_A:

Set Attribute_B: SCAMIN;

Set Attribute_C: inptid;

Geometric Primitive: Point, Area;

Definition:

A 'danger highlight' is used by the mariner to draw attention to a hazard he believes to be dangerous to his ship.

Remarks:

Distinction: 'events', 'marfea', 'mnufea', 'refpnt'

Symbolization:

The symbol is a transparent red square or freely drawn polygon positioned by the mariner. It may be flashing, at the mariner's discretion. All underlying chart data

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Mariners' Object Class: **Mariners' feature**

Acronym: **marfea** Code: 8199

Reference: To meet the requirement of IMO PS 1.6, and of IHO S-52 section 2.3.1

Set Attribute_A: OBJNAM;

Set Attribute_B: SCAMIN;usrmrk;

Set Attribute_C: inptid; RECDAT; loctim;

Geometric Primitive: Area; Line; Point;

Definition:

A 'mariners' feature' is a feature added to the SENC by the mariner. Examples are a mariners' caution or information symbol referring to a real object, or additional chart information from his own observation, or from a pilot or other reliable source..

Remarks:

Distinction: 'dnghlt', 'marnot', 'mnufea', 'positn'

A "danger highlight" shall solely be used to define an existing chart feature believed to be dangerous. The mariners' feature is used by the mariner also for observation report purposes. Whilst a "mariners' note" consists of text written on the display, the "mariners' feature" may consist of symbols, lines or areas drawn interactively by the mariner, as he does on the paper chart.

Symbolization:

The colour allocated to mariners' features is NINFO.

point feature: an exclamation mark in a circle or a small letter "I" in a box or any chart symbol in orange.
line feature: solid or dashed line, NINFO, 1 or 2 pixels wide.

area feature: if a filled area is required, use area fill, 75% transparency, ADINF {AC(ADINF,3)}.

Chart features drawn by the mariner should be distinguished as described in section 7.1.4 of the Presentation Library, Part I.

Mariners' Object Class:	**Mariners' Note**

Acronym: **marnot** Code: 8200

Reference: To meet the requirements of IMO PS 1.6

Set Attribute_A: catnot;

Set Attribute_B: SCAMIN; usrmrk;

Set Attribute_C: inptid; RECDAT;

Geometric Primitive: Point;

Definition:

A "mariners' note" is textual information defined by the mariner which is related to a certain geographic position.

Remarks:

Distinction: 'events', 'marfea', 'mnufea'

The attribute "category of mariners' note" ('catnot') classifies the stored textual information according to the importance, that is whether it is a "caution" or "information" note.

Symbolization:

An exclamation mark in a circle or a small letter "I" in a rectangle, SY(CHINFO08) or SY(CONF.), colour NINFO.

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2 NAVIGATIONAL ATTRIBUTES

2.1 Form

Each "Navigational Attribute" is specified using a standardized form. The usage of the form format will depend upon the attributes' description requirements. (The form and definitions are taken as far as possible from S-57):

- Attribute: descriptor of the attribute class

- Acronym: six-character coding of attribute class name in lower case letters

- Code: integer code to be used for non-standard objects, according to S-57.

- Reference: reference to the IEC symbol number or other authority

- Input Type: one-character code of attribute class (see [S-57, A-3.1]):

* discrete value type: 'E' (for 'enumeration')
* float data type: 'F' (for 'float number')
* integer data type: 'I' (for 'integer number')
* coded string type: 'A' (for 'ASCII')
* free text format type: 'S' (for 'string')

- Expected Input: depending on the input type, two different forms appear:

* for 'E'-type attributes a list of ID-numbers with associated, defined meanings is given.
* for 'A', 'F', 'I' and 'S'-type attributes the expected input is indicated.

- Remarks: under 'Remarks' further comments and notes are given. The description of the expected input or the definitions which are associated with that attribute are also given. For some attributes, official definitions are given.

2.2   Navigational Attributes: Overview

In the following list the codes of the attributes are in alphabetical order.

Navigational Attribute	Code	Page
Category of mariners' note	catnot	II-9
Input identifier	inptid	II-10
Local time	loctim	II-11
User's remark	usrmrk	II-12

2.3   Navigational Attributes: Catalogue

Attribute: **Category of mariners' note**

Acronym: **catnot**   Code: 8196

Reference: Requirements of IMO PS 1.6

Input type: E

Expected Input:

ID	Meaning
0	undefined
1	information
2	caution

Remarks:

The attribute "category of mariners' note" depends on the importance of the information:

-       A caution contains information about a danger, or instructions or advice.
-       Information is any note containing other information.

Attribute:	**Input identifier**

Acronym: **inptid** Code: 8201

Reference: Requirements of IMO PS 1.6

Input type: S

Expected Input:

Specific value of input identifier (name or initials).

Remarks:

Distinction: 'OBJNAM'

The attribute "input identifier" is used for identification of the originator of a certain mariners' object, e.g. to identify the mariner who marked a danger highlight or who planned a route.

Attribute:	**Local time**

Acronym: **loctim**   Code: 8202

Reference: IEC 61174 Annex E Section 2, 7, 8, 9, 11, 17

Input type: A

Expected Input:

Specific value for time indication in format HHMM or MM.

Remarks:

Distinction: 'plndat'

The attribute "local time" represents the local time of making an observation or of predicted arrival at a point, etc.

Attribute: **Users' remark**

Acronym: **usrmrk**   Code: 8214

Reference: Requirements of IMO PS 1.6

Input type: S

Expected Input:

    Text string for users' remark.

Remarks:

    The attribute "users' remark" contains information, or annotation made by the mariner.

2.4   Text

Text should be written in black using letter prefixes or suffixes to prevent any confusion with soundings, as explained in section 9.1 of the Presentation Library, Part I

3.   REFERENCES

[IMO NAV]   Guidelines for presentation of navigation-related symbols, terms and abbreviations Safety of Navigation Circular SN/Circ. 243, London, July 2004

[IEC 60872]   "Marine automatic radar plotting aids (ARPA)". International Electro-technical Commission (IEC) Publication 60872. Latest edition.

see also Part I of the Presentation Library under "3. References"

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