NIPWG Letter 3/20179 February 2017

REVISION of DATA MODEL COMPONENTS

**References:**

A. NIPWG Wiki

B. IHO Registry, HYDRO Register

Dear colleagues,

Most of the NIPWG data model components relevant to the S-122 (MPA) Product Specification have been incorporated into the IHO Registry / HYRO register. What is different from the past and from the time the most NIPWG wiki items were developed, the new registry regime requires definition, also for enumerations.

The contractors who are working on the development of the S-122 (MPA) and S-123 (Radio Services) product specifications took the initiative and proposed definitions for all data model components relevant to these two product specifications.

It is now on us to review the proposals and to provide support to the items where they have questions. As opposed to the wiki and inviting you to comment on the wiki, I decided that it would be more convenient to provide you with a comprehensive list in this letter and to ask you to comment on the entries (please use track changes). The list is attached at Annex A.

The structure of each table is uniform:

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| **Titel** |
| URL | The Wiki link for convenience |
| Definition | The proposed definition or a proposal for an amended definition |
| Remarks | Proposed text for the remark section  |
| Other | Information for consideration and additional comments |

Your feedback is appreciated **by the** **17 March 2017** at the latest. Please note that this is **a tacit approval letter if you agree on the proposed definition.**



Jens Schröder-Fürstenberg,

Chair, NIPWG

**Template**

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| URL |  |
| Definition |  |
| Remarks |  |
| Other |  |

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| **Time intervals by day of the week** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/TmIntervalsByDoW> |
| Definition | Time intervals by days of the week. |
| Remarks | The sub-attribute dayOfWeekIsRange indicates whether an instance of this complex attribute encodes a range of days or discrete days. The days or day-range(s) are encoded in sub-attribute dayOfWeek. An indeterminate range may be indicated with a null value at the appropriate position. Multiple ranges or multiple days are allowed in one instance of this complex attribute, but mixing range with discrete days(s) is not allowed (encode another instance of this attribute instead). Product specifications may need to allow repetition of this complex attribute in order to allow encoding of schedules which vary for different days of the week. Ranges may 'wrap'; for example, the range 7-2 (meaning Sunday through Tuesday, inclusive) is permitted. To encode multiple intervals during the day, repeat TIMSTW and TIMENW as necessary. |
| Other | Constraints: Duplicates or overlaps are not permitted. Examples: To encode “Monday through Friday” use the sequence: dayOfWeek=1, dayOfWeek=5 and set dayOfWeekIsRange=TRUE. To encode the days Monday, Wednesday, Friday, use the sequence dayOfWeek=1, dayOfWeek=3, dayOfWeek=5 and set dayOfWeekIsRange=FALSE. The sequence dayOfWeek=1, dayOfWeek=3, dayOfWeek=5 to indicate Mon-Wed and Thursday is not allowed. Encode the Mon-Wed and Thursday schedules in different instances of this complex attribute. To encode times that are the same through the US/European work week (Monday through Friday) but different on weekends (Saturday/Sunday), encode two instances of the complex attribute tmIntervalsByDoW bound to the same object. Office hours from 0800-1200 and 1300-1700 from Monday through Friday are encoded using one instance of tmIntervalsByDoW with TIMSTW=0800, TIMENW = 1200, and TIMSTW=1300, TIMENW=1700 (and dayOfWeek and DayOfWeekIsRange as in example 1 above). *Aside: This model could probably be simplified if we were allowed to use representations like ISO 8601 (which are like 'structured text'), or S100\_TruncatedDate. S-100 Date/Time/DateTime/S100\_TruncatedDate aren't enough for modeling time schedules.* |

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| **Category of Schedule** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/CategoryOfSchedule> |
| Definition | Describes the type of schedule, e.g., opening, closure, etc. |
| Remarks |  |
| Other |  |

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| **Telecommunications** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/Telecomunications> |
| Definition |  |
| Remarks |  |
| Other | Missing 'm' - spelling should be 'telecommunication' or 'telecommunications' |

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| **Telecommunication Service** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/TelcomService>  |
| Definition |  |
| Remarks |  |
| Other | Suggest making definition more consistent with other categoryOf... attributes and attribute [telecommunications](http://wp12183585.server-he.de/npubwiki/wiki/index.php?title=Telecommunications&action=edit&redlink=1)/[telecomunications](http://wp12183585.server-he.de/npubwiki/wiki/index.php/Telecomunications%22%20%5Co%20%22Telecomunications). Proposed updated definition: Classification of methods of communication over a distance by electrical or electromagnetic means. Compare to current registry definition "Methods to communicate between involved parties over a distance." |

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| **Catdinal Directions** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/CARDIR>  |
| Definition |  |
| Remarks |  |
| Other | GML has the enumeration compassPoint, which uses abbreviations instead. Should we change CARDIR to be like that? <simpleType name="CompassPointEnumeration"><restriction base="string"><enumeration value="N"/><enumeration value="NNE"/><enumeration value="NE"/><enumeration value="ENE"/><enumeration value="E"/><enumeration value="ESE"/><enumeration value="SE"/><enumeration value="SSE"/><enumeration value="S"/><enumeration value="SSW"/><enumeration value="SW"/><enumeration value="WSW"/><enumeration value="W"/><enumeration value="WNW"/><enumeration value="NW"/><enumeration value="NNW"/></restriction></simpleType> |

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| **Category of Cargo** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/CATCGO> |
| Definition | Minor update to current GI registry [definition](http://registry.iho.int/feature/view.do?recordID=2004025&page=1&type=3&status=2) for consistency with other categoryOf... attributes: Classification of the different types of cargo that a ship may be carrying. |
| Remarks |  |
| Other |  |

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| **Category of frequency pairs** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/CATFRP> |
| Definition | Classification of frequencies for communication based on preference. |
| Remarks |  |
| Other |  |

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| **Comparison Operator** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/COMPOP> |
| Definition | The definition should probably be just: "Numerical comparison".What the GI registry currently has for the definition ("The definition of COMPOP provides the relation between the value given in the model and the real ship's value.") should be moved to the Remarks section. |
| Remarks |  |
| Other |  |

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| **Membership** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/MBRSHP> |
| Definition | Registry currently has the definition 'indicates whether a vessel is included or excluded from the regulation/restriction/recommendation/nautical information' which seems OK. |
| Remarks |  |
| Other |  |

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| **Operation** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/OPERAT> |
| Definition | Suggested definition: Indicates whether the minimum or maximum value should be used to describe a condition or in application processing. The registry currently has this as the definition: "OPERAT is intended to be used in conjunction with other attributes (or sub-attributes of a complex attribute) to indicate how their values must be combined in order to describe a condition." but that seems more of a remark and I think it should be moved to the Remarks section, which would consist of two bullet points: Attribute **operation** is intended to be used in conjunction with other attributes (or sub-attributes of a complex attribute) to indicate how their values must be combined in order to describe a condition. Null attributes are ignored. Example use: Complex attribute underkeelAllowance with UKCFIX=2.5, UKCVAR=10.00, operation=1 inicates that the under-keel allowance required is the greater of 2.5 metres or 10% of the ship's draught.  |
| Remarks |  |
| Other |  |

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| **Category of Text** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/CATTXT>  |
| Definition | Classification of textual information in relation to the source material from which it is derived. |
| Remarks |  |
| Other |  |

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| **Category of vessel** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/CATVSL> |
| Definition | Classification of vessels by function or use. |
| Remarks |  |
| Other |  |

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| **Graphics** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/GRAPHC> |
| Definition | Pictorial information such as a photograph, sketch, or other graphic, optionally accompanied by descriptive information about the graphic and the location relative to its subject from which it was made. Q: 'descriptive information' or 'metadata'? metadata fits but there is very little of it and it is quite informal - far from what ISO or S-100 would regard as metadata. |
| Remarks |  |
| Other |  |

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| **Schedule by day of the week** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/ScheduleByDoW>  |
| Definition | Proposed definition: Describes the nature and timings of a daily schedule by days of the week. Alternative: 'Describes the nature and timings of a daily schedule'? |
| Remarks |  |
| Other |  |

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| **Source Type** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/SORTYP> |
| Definition | The type of source (see [GI Registry](http://registry.iho.int/feature/view.do?recordID=2004055&page=1&type=3&status=2)).  |
| Remarks |  |
| Other | Wondering whether 1-6 can be simplified into just two: 1: law or regulation: treaty, convention, or international agreement; law or regulation issued by a national or other authority 2: official publication: publication not having the force of law, issued by an international organisation or a national or local administration  |

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| **Time reference** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/TIMREF> |
| Definition |  |
| Remarks | Should add a Remark: Local time is the local civil time after daylight savings time (if any) has been applied. For example 0800 local time in New York is the same instant as 1300 UTC on December 1, when DST is **not** in effect in New York, and 1200 UTC on June 1, when DST **is** in effect in New York. |
| Other |  |

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| **Vessel’s characteristics** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/VSLCAR> |
| Definition | Characteristics of vessels |
| Remarks | This is an enumeration of different properties of vessels which are often used in specifying whether they are subject to rules or restrictions. The properties covered by this attribute are those of the vessel itself, such as dimensional and tonnage properties. The type of vessel and the cargo carried by a vessel are characterized by different attributes (see categoryOfVessel, categoryOfCargo, categoryOfDangerousOrHazardousCargo). |
| Other |  |

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| **Vessel’s characteristics units** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/VSLUNT> |
| Definition | the unit used for vessel characteristics attribute ([Registry link](http://registry.iho.int/feature/view.do?recordID=2004011&page=1&type=3&status=2))  |
| Remarks |  |
| Other | Allowing different units for the same characteristic means developers must be extra careful to convert units when processing. On the other hand, standardizing on a single unit for a characteristic means encoders must be extra careful when creating the original data. Dilemma.If the GI registry defines a unified set of units of measure and a generic *unitOfMeasure* attribute we should consider replacing [VSLUNT](http://wp12183585.server-he.de/npubwiki/wiki/index.php/VSLUNT) with that.  |

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| **Category of Broadcast** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/CATBRC> |
| Definition | Classification of broadcaster or communications based on public availability and commercial/non-commercial nature. |
| Remarks |  |
| Other |  |

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| **Category of maritime broadcast** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/CATMAB> |
| Definition | Classification of maritime broadcast based on the nature of information conveyed. |
| Remarks |  |
| Other |  |

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| **Category of radio methods** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/CATRMT> |
| Definition | :Classification of (methods of?) radiocommunications based on frequency band and radio traffic method. |
| Remarks |  |
| Other |  |

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| **Ballast** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/BALAST> |
| Definition | Whether the vessel is in ballast |
| Remarks |  |
| Other |  |

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| **Category of Authority** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/CATAUT>  |
| Definition | The type of person, government agency or organisation, corporation, or private or publicly owned company entrusted or invested with powers of managing or controlling access or activity in an area. Can we shorten this?: "The type of person, government agency or organisation granted powers of managing or controlling access and/or activity in an area."  |
| Remarks |  |
| Other |  |

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| **Category of weather and ice forecast and warning area** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/CATFCA> |
| Definition | Classification of weather forecast and warning areas based on source of warnings and forecasts. |
| Remarks |  |
| Other |  |

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| **Category of flag** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/CATFLG> |
| Definition | Classification of flag/ensign flown by a vessel to signify its nationality or role |
| Remarks |  |
| Other |  |

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| **Category of GMDSS area** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/CATGMD> |
| Definition | Classification of GMDSS areas based on availability of GMDSS services and GMDSS equipment requirements. |
| Remarks |  |
| Other |  |

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| **Category of DGPS operational status** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/CATGPS> |
| Definition | Classification of DGPS operational statuses. |
| Remarks |  |
| Other | Should add 'suspended' and compare to S-240.  |

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| **Category of messages of DGPS station (GLONASS)** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/CATRCO> |
| Definition | Classification of DGPS messages relevant to the GLONASS system |
| Remarks |  |
| Other |  |

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| **Category of time domain** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/CATTIM> |
| Definition | Classification of the time frames of forecasts and reports. |
| Remarks |  |
| Other | Eivind suggests the definition and use should be reviewed, the attribute is about the consistency and type of the reported information that is used for the climatic information, and that isn't clear from reading the definition. At present this attribute appears to be used only in natural conditions so this could be part of that discussion if that holds. Not clear it will be needed in S-123. |

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| **Category of messages of DGPS station (GPS)** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/CATUCO> |
| Definition | Classification of DGPS messages relevant to the GPS system |
| Remarks |  |
| Other |  |

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| **IMO format for Reporting** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/IMOREP> |
| Definition | Whether a report must be in an IMO standard format. |
| Remarks |  |
| Other |  |

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| **Index of co-operation** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/INDCOP> |
| Definition | Proposed revised definition: A factor governing the image resolution of radiofax transmissions. |
| Remarks | The Index of Cooperation must be known to decode the transmission. The Index of Co-operation is generally 576, although 288 with alternate line scanning is sometimes used. |
| Other |  |

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| **Integrity monitoring** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/INTMON> |
| Definition | The ability to provide timely warnings to users when a station should not be used for navigation and also to verify the validity of the DGPS broadcast. |
| Remarks |  |
| Other | The definition derived from the current listed value labels, given that I suggest revising the labels: 1: DGPS integrity monitoring is provided. 2: DGPS integrity monitoring is not provided. |

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| **Transmission regularity** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/TRMREG> |
| Definition | Alternate definitions: Describes when transmissions are made. Classification of regularity or conditions for transmission. Transmission pattern or conditions. |
| Remarks |  |
| Other |  |

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| **Transmission of traffic list** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/TRMTFC> |
| Definition | Describes whether a station transmits traffic lists. |
| Remarks |  |
| Other |  |

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| **Category of vessels** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/CATVSL_2> |
| Definition | Classification of vessels by function or use. |
| Remarks |  |
| Other | New proposed listed values. 13: light recreational a pleasure boat or watercraft, or an excursion vessel used for short cruises such as whale watching 14: heavy lift a vessel designed to move very large loads that cannot be handled by normal ships (Wikipedia).[jens](http://wp12183585.server-he.de/npubwiki/wiki/index.php/User%3AJens) ([talk](http://wp12183585.server-he.de/npubwiki/wiki/index.php?title=User_talk:Jens&action=edit&redlink=1)) 07:20, 23 January 2017 (CET) I agree with recreational but have use case problems with heavy lift. So. recreational added to the list [raphael](http://wp12183585.server-he.de/npubwiki/wiki/index.php/User%3ARmm) ([talk](http://wp12183585.server-he.de/npubwiki/wiki/index.php?title=User_talk:Rmm&action=edit&redlink=1)) 18:31, 23 January 2017 (CET): OK. Awaiting input on a use case for 'heavy lift' from other NIPWG members. [raphael](http://wp12183585.server-he.de/npubwiki/wiki/index.php/User%3ARmm) ([talk](http://wp12183585.server-he.de/npubwiki/wiki/index.php?title=User_talk:Rmm&action=edit&redlink=1)) 20:06, 1 February 2017 (CET): This was changed from enumeration to an open enumeration codelist in 2014 (see the S-122 figure 'Defining Vessel Categories...' on the [UML diagrams](http://wp12183585.server-he.de/npubwiki/wiki/index.php/SNPWG2) page. The main page still says 'enumeration', it should be updated. Since it is an open enumeration codelist, other vessel types can be indicated using the 'other: xyz' formulation. Use of the 'other: xyz' formulation is supposed to be **by agreement**. It is not carte blanche for individual encoders or data producers to add anything they want. While a suitable process has not yet been defined, my own view is any such 'extra' value must be brought before the S-122 project team and/or NIPWG (though not necessarily approved by them), and have the support of at least three stakeholders (producers or OEMs) before it can be used. If a particular 'other: xyz' type becomes widely used, consideration should be given to making it a listed value via the process for revising the product specification. I also suggest adding 'sport fishing' to the definition of 'light recreational' on the theory that this is one subcategory to which protected area rules are important. (Eivind says sport fishing might require its own category, likely there will be significantly different regulations applying to sport fishing over a pleasure boat. Tentatively not broken out separately, pending further comments from others.) Proposed revised definition of 'light recreational': a pleasure boat or watercraft, sport fishing boat, or an excursion vessel used for short cruises such as whale watching [raphael](http://wp12183585.server-he.de/npubwiki/wiki/index.php/User%3ARmm) ([talk](http://wp12183585.server-he.de/npubwiki/wiki/index.php?title=User_talk:Rmm&action=edit&redlink=1)) 23:55, 3 February 2017 (CET): Proposed definition for the attribute: [raphael](http://wp12183585.server-he.de/npubwiki/wiki/index.php/User%3ARmm) ([talk](http://wp12183585.server-he.de/npubwiki/wiki/index.php?title=User_talk:Rmm&action=edit&redlink=1)) 01:25, 7 February 2017 (CET): I notice that we added two new listed values to [CATVSL\_2](http://wp12183585.server-he.de/npubwiki/wiki/index.php/CATVSL_2) for *semi-submersible offshore installation* and *jackup exploration or project installation*. *light recreational* should be added to this list. |

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| **Category of IUCN** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/CATIUC>  |
| Definition |  |
| Remarks |  |
| Other | NIPWG members were saying that the list might not be suitable for their national marine areas.So, alternatives (with definitions) should be provided.  |

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| **Action or activity** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/ACTION>  |
| Definition |  |
| Remarks |  |
| Other | NIPWG members were saying that the list should be extended or that this attribute should become a code list.So, additions (with definitions) should be provided. |

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| **Category of regulation / restriction / recommendation / nautical information** |
| URL | <http://wp12183585.server-he.de/npubwiki/wiki/index.php/CATRXN>  |
| Definition |  |
| Remarks |  |
| Other | NIPWG members were saying that this attribute should become a code list. |

**Template**

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| URL |  |
| Definition |  |
| Remarks |  |
| Other |  |