**GUIDE FOR REGISTRY USERS**

* Refer to email to Julia 20/10/16.
* Wherever possible, proposals should be as “generic” as possible to allow the widest possible use.
* Syntax for all fields (capitalized words (particularly for names and definitions) etc.).
* Authoritative “English” – an IHO accepted version of English must be adopted for the Registry. Given that the official IHO “English” is the Oxford English Dictionary, consider that this is the version that should be adopted. (For instance “metre” instead of “meter”.)
* Having stated the above, however, the definition for the concept must be taken into account. If the definition is more specific, then the name should also be suitably specific. The more generic should first be considered as to suitability and the more specific name/definition only proposed if not.
* Need a convention for “codes”, e.g. just “class 1A” is not good enough – should be “dangerous goods class 1A”. NOTE: S-100WG2 (April 2017) recommended that where an enumeration can be used it should be used rather than using the Codelist type.
* Concept name must be submitted as stand-alone, i.e. there must be no assumption of an associated alignment to another concept in the Registry.
* Proposed definitions must by syntactically correct. E.g.: Start with a capital, end with a full stop.
* All proposed definitions must have an authoritative reference. If a reference cannot be selected from the available reference list, then it should be included in the “Definition Source” field and the Registry Manager will include this in the list of References if the proposal is assessed as satisfactory.
* Simple attributes first, then enumerates, complex attributes, features.
* Need to establish rules (and examples) for the categorization of Proposal Type (example – proposals from Joe Phillips for Supersession that only require Clarification).
* When a proposal is rejected at any stage in the process, the rejecter must state a reason for the rejection.
* Criteria for creation of a new Domain.
* Codelists: Need criteria for when an item is modelled as an enumeration or a Codelist (note discussion and recommendation from S-100WG2). For instance, should anything that has a general application (or convention) beyond the field of hydrography be a Codelist? E.g. days of the week; units of measure (Briana proposal); country code; country name; IUCN Code; (various) WMO scales/lists.
* For all clarifications, the Justification (mandatory) field must be populated with the justification for the clarification, otherwise there is no criterion for assessment.
* For Register Manager: Rejected proposals (at both RM and DCB stages) only require correspondence back to the proposer, while proposals marked as “Negotiation” by the DCB require correspondence between the proposer and the DCB member(s).
* Enumerates: Does there need to be a conventional order of enumerates, e.g. good (positive) to bad (negative). Refer to simple attribute Category of Surface Visibility as an example.

**NICE TO HAVE**

* A function for proposers to propose new definition references (if this cannot be done, some on-line guidance for proposers to email if a reference does not exist in the Register).
* Email to submitting organization stating that a proposal has been assessed and has been accepted, and forwarded to the DCB (the “push” information rather than having people “pull” (have to find it)). In progress – refer email from Yong 17/10/16 and JW reply 18/10/16.
* Email to submitting organization stating that a proposal has been rejected, incorporating the Register Manager comments as added in the interface when they have completed their assessment and chosen to reject the proposal. In progress – refer email from Yong 17/10/16 and JW reply 18/10/16. NOTE: As an extension to this, a similar email should be generated at any stage during the proposal evaluation process when a proposal is rejected.
* A “signed in as ….” indication somewhere in the display when logged in.
* In the “List”, it would be nice if the oldest proposals were at the top – optionally a “user preference” option so that the user has the option to set the order to best suit their purpose.
* GI Register searches: Need an “All” option to search all “Item Type” (consider similar for other criteria). This should at least be implemented for the Registry/Register Manager(s).
* A list of “standard syntax” responses when rejecting proposals (message back to Proposer) or if there is a consideration for the DCB (when accepted for forwarding). *Develop own Word doc?*
* In “My Work”, when looking at “All History”, it would be nice to have a “Rejected” annotation in the “Assigned DCB” column against items that have been rejected by the Register Manager. It is difficult to quickly work out the proposals yet to be processed against proposals that have been rejected.
* When doing a search of the Registry, it would be good (for the Register Manager, but perhaps also for others) to see a list of features that have been proposed (“pending”?). At the moment I have to keep a separate document to search for items already proposed (or similar to items already proposed). This could possibly be done using a separate tab?
* References: When listing the references, it would be nice to be able to order them alphabetically. For example, there are a large number of WMO references that have been registered at different periods, meaning they have widely spaced reference numbers so are at various places throughout the complete list. While the index is good it is reliant on knowing which particular search words to use, which may not always be reliable.
* A date column that lists when the Register Manager forwarded the proposal to the DCB.
* Proposals: When adding S-4 references, the last entered reference is on top. If entering multiple references in the order they appear in S-4, then the last reference is quoted first in the list. Would like to see this reversed. (NOTE: Probably the same for INT1 references?)
* When searching Reference Sources, the “Alternative Title” is not included in the search when using search words. Good example is MARPOL 73/78 which is named the “International Convention for the Prevention of Pollution from Ships, as Modified by the Protocol of 1978”.
* When the interface is “off-line” for maintenance/development, some notification on the Home page (or a completely different page?) to let users know that there work cannot be processed. It is frustrating to spent 10 minutes doing work in the interface and then get an error message (in Korean) to say that there has been an error.
* An option to search by Disposition Status. To find attributes that are “For Negotiation” you have to go to “All History” and scroll through. As the list of proposals increases, this will become increasingly difficult to find proposals with this disposition status.
* When processing a Supersession, it would be nice to be able to easily look at the item that is being superseded (not easy to do, particularly when the name of the item has been changed).
* Registry Manager: Email notification to the Register Manager when a new application is submitted for Register roles (Submitting Organization, DCB, ….). Similarly, when an application is accepted or rejected by the Registry Manager an automated response should be forwarded to the applicant (refer email from Gilles 05/03/17).
* Email to submitting organization stating that a proposal has been received and will be assessed by the Register Manager at the first available opportunity (the “push” information rather than having people “pull” (have to find it)).
* Curser turn to “hourglass” when the computer is “thinking”.
* A “Stop” icon to cease a process (for instance if you realize you have made an error).
* A notification (about 5 minutes?) before the interface is going to be taken out of service to notify anyone using it to finish their work and sign off.
* A “pop up” dialogue box to indicate that you have been auto logged out due to inactivity. Currently you do not know until you get the Korean “Error” screen when you try to submit.

**TO DO**

* For registered items, the field “Distinguishing Features” should be “Distinctions”.
* Discussion with Tony 02/11/16: Need to see whether the concept of a repository of Codelists can be set up in the Registry (refer to structure of INSPIRE Registry. A good example of this is the IUCN Environmental Codes that have been registered by the NIPWG guys (Briana).
* IHO Hydro Register: There are entries for “West Cardinal” and “West Cardinal Mark” (enumerates). Needs to be reconciled – consider should be just “West Cardinal”. Check all other cardinals.
* IHO Hydro Register: There are entries for “Custom” and “Customs Office” (enumerates). Needs to be reconciled. Note also rejected proposal (Briana) for “Customs”.
* IHO Hydro Register: There is an entry for “Border” (enumerates). Proposal for “Border Control” (Briana) accepted and forwarded to DCB 20/10/16. Consider that “Border” should be superseded.
* IHO Hydro Register: The entry for “Port Control” (enumerate) is specific to traffic signal station. Suggest that this be re-named to be more specific, e.g. “Port Control Signal”.
* IHO Hydro Register: The entry for “Military Practice” (enumerate) is specific to traffic signal station. Suggest that this be re-named to be more specific, e.g. “Military Practice Signal”.
* IHO Hydro Register: The entry for “Remotely Sensed” (enumerate) is specific to remotely sensed survey data (bathymetry). Suggest that this be re-named to be more specific, e.g. “Remotely Sensed Survey” (?).
* Metres (metres, Metres) exists 4 times in the Registry with 4 different definitions – most of which are fairly specific. Need to rationalize into a single instance with a generic definition (suggest using the definition for “Metres” bound to the attribute **distance of unit measurement**). Note for DCEG.
* Feet (feet) exists 3 times in the Registry with 3 different definitions – most of which are fairly specific. Need to rationalize into a single instance with a generic definition. Note for DCEG.
* Stone (stone) exists twice in the Registry with 2 different definitions. Need to rationalize into a single instance with a generic definition – recommend use definition of instance bound to **nature of surface**. Note for DCEG.
* NIPWG (Briana) has submitted proposals for “gross tonnage” and “net tonnage” but also for “gross ton” and “net ton”. Need to determine whether these respectively mean the same thing and withdraw as appropriate.
* NIPWG (Briana) has submitted a proposal for “source indication” as a complex attribute. Have noted that this already exists in the Register as a simple attribute, however have accepted her proposal as this attribute is not being used as a simple attribute in any other PS (as far as I am aware). Will need to reconcile.
* Discussion with Tony 02/11/16: Attribute **nationality** should be renamed **country code** (will need to do some research on this to determine that this is the correct terminology to be using (UN?).
* “Centre of Low” exists in the WMO Weather Domain as a Feature with no valid descriptive characteristics. Needs to be retired or re-proposed as clarification to fix (contact Joe about this).
* WMO Weather have registered concepts containing the terms “water-spout” and “waterspout”. Need to be rationalised.
* In the WMO Weather Domain (FCD Register), there are repeated registered items (from April 2016).
* The enumerate “time” (Category of Signal Station, Warning) needs to be amended to something similar to “time signal”. Current name is far too generic.
* Simple attribute Waterway Distance is currently registered twice (IHO Hydro and Inland ENC) with different definitions. The IHO Hydro definition looks to be more generic – need to rationalize and discuss with IENC people.
* When querying the definition source list, the list is not alphabetized. Need to amend so that the list is displayed in alphabetical order (refer to email from Briana 11/10/16).
* List of definition sources needs to be reviewed – there may be many “duplicated” (i.e. slightly different wording but same source) entries (refer to email from Briana 11/10/16).
* Need to know the process (how to) add members to a Domain Control Body (e.g. the WMO Weather Domain has no members of its DCB at the moment. NOTE: This is stopping the processing of proposals to that Domain!! 31/10/16: **NOTE**: The way the interface works is incorrect according to S-99. Refer to TSSO email to Yong 31/10/16.

**FOR DISCUSSION**

* When submitting a proposal for a clarification, the “Proposed change” and “Justification” fields are “greyed out” and cannot be populated. Consider that the ability to populate these fields is required so as to allow for informed assessment of the proposal by the RM and DCB.
* For FCD: Will need a field for “assigned enumerate code/value” (unique identifier??) so that a unique code can be assigned for use of the concept as an enumeration in a PS (however see later suggestion for a “sub-register”). Perhaps this is something that can only be viewed by the Register Manager when a proposal is made and assigned by them before forwarding the proposal to the DCB?
  + How would this work if the concept is bound to more than one attribute?
  + Should there be a separate Register (for instance at an “interim” level between the Concept Register and the Data Dictionary Registers) containing the binding of enumerate values to enumerated attributes and their values? Same could be said for Codelist values? This would certainly help for consistency and interoperability.
* Within the IHO Hydro Domain, there are a number of registered concepts that have a very “generic” name but a specific contextual definition (refer to many of the comments in the “To Do” list in the previous Section). The reverse may also be the case in some cases. This will need to be addressed as part of the general clean-up of the Registry and the “conventions” and guidance that need to be developed.
* Conventions:
  + Name and definition must be aligned in regard to specificity. A generic name cannot have a definition specific to a particular context or application, and vice versa.
  + Should abbreviations be allowed (e.g. “HO”)? Need to take into account the use of the “best understood” term (e.g. SMS); and whether the fact that the abbreviation is expanded in the definition is a factor (note also “UTC”).
  + Every effort must be made to provide an appropriate unique, authorized (referenced) definition.
  + Syntax for feature/attribute/enumerate names – e,g, capitalized first letter(s), etc.
  + Suggest the higher the intended “level” in modelling, the more specific the name/definition can be, i.e. enumerates should in the first instance be very generic, attributes a little more specific and features relatively specific? This follows the line that the “context” of the application of a concept can be gained from the modelling (an “inherited” specificity).
* What is the difference between the “Reference” and “Definition Source” fields in the Proposal form?
* I have rejected proposals for enumerates “metre” and “foot” based on their already being instances of “metres” (4 times) and “feet” (3 times) already registered. When dealing with such proposals, should we be using a convention for the terminology in the name (singular or plural)?
* When considering the merit of some proposals, it is difficult to assess them when there is not some indication as to how these are intended to be used in a Product Specification (some sort of context). This is particularly true of feature and attribute proposals. Would like at least one of a “Justification” or “Proposer Comments” free text field in the Proposal form so that the Proposer can supply additional information about the reason for their proposal (if they would like to). This will be particularly important for the proposer to be able to supply some justification if there is a similar concept already registered but they do not think it is suited to their requirement.
* How specific to Hydrography does a concept need to be to be registered (where such considerations are required)? For instance, the item **distance** (simple attribute) has been forwarded to the DCB. However there are different methods for determining the “distance” between two points on the earth – Rhumb line distance and geodesic spring immediately to mind.
* Can the Register Manager make a recommendation to the DCB (beyond just forwarding the proposal for evaluation)?
* In the “Administration: members/All” tab, there is a list of individuals, their organization etc. but no indication as to their “role” in the Registry (SO, DCB, Register Manager ….). Can this be included in the list? I know that you can get this information by clicking on an entry, but it is a bit of a pain.
* Need to have the access to the Registry in a more prominent place on the IHO web site. In particular, do not think it should still be under the “Future Developments” sub-heading.
* Looking at the INSPIRE Registry, I think we need to take a page out of their book and have a “type” list for Codelists. The best example to start with would be the IUCN Environmental Classification codes. The Codelist name should exist in the FCD, but not the values of the Codelist – these should be managed in the Codelist (by clarification etc.).
* “Closed” (or “fixed”) Codelist? Not sure whether things such as the days of the week, months of the year etc. can be modelled. Needs further investigation and discussion (see above).
* Codelists: In the Proposal Form, there is a separate process for proposing the Codelist type attribute and the Codelist values. This should be combined into a single proposal form, whereby the proposer defines the attribute and the values (including definitions of values) all in one process. Will need to be discussed also in terms of possible clarification (adding to the values). It is important to note with this that the Codelist values will generally be outside the discipline of hydrography and therefore should not need discussion and approval of the DCB – only the attribute itself.
* Welcome Page of Registry: The link to the Registry Manager prompts the user to sign in. I don’t think this is the intention of this link(??). Suggest that this should bring up an email window with the address populated as the Registry Manager’s email address.
* There is a fundamental problem with the proposal process in that there is a field for Data Type that, when enumeration is selected, a “Show” list comes up. If the process is to propose simple attributes before enumerations, how is this list to be created? According to the current process, enumerates cannot be proposed first as they have to be linked to an attribute. A possible way to do this would be to have the list “generated” by the assignment of proposed enumerates to the proposed attribute value.
* There is apparently a “notes” option for proposers to comment when an item is rejected by the Register Manager – it has been reported that this is the case (Joe – 07/11/16) but it appears that it did not work (also not enough available characters to fully comment). Need to check and discuss with Yong and Tony.
* Finalizing complex attributes is very difficult. There is no indication in the sub-attributes list as to whether they are valid (I think this is needed), so you do not know that the attribute cannot be finalized until you hit the “Complete” button and get the message – time consuming. Again another indication of the importance of having a true FCD to register concepts in.
* Proposals with a disposition of “Negotiation” (as identified by the DCB) do not appear in the RMs queue unless “All History” is selected. Is this intentional? Is it up the DCB to get in touch with the proposer and initiate the negotiation (or vice versa)? Given that the “Not Accepted” are still in the queue, I would think that “Negotiation” would still be there too.
* While the “See All History” option is very useful, it will become more cumbersome as the amount of proposals increases. Perhaps need a method of limiting the selection as required (perhaps by date (year))?
* It does not make sense to me that a proposal for an enumerate, a feature or a complex attribute can be accepted by all but cannot be finalized because a linked simple attribute has been rejected. Again this speaks to the general functionality of a true FCD, and needs to be resolved.
* Refer email from Joe Phillips 21/11/16 and Yong’s reply 22/11/16. There is an issue with Proposing Organizations wishing to propose new enumerate values for attributes that are registered in Domains other than their proposer Domain. Current method could potentially be very confusing, and further could create problems when building Feature Catalogues.
* Suggest that even if a proposer from another Domain is proposing a change (clarification/supersession) to a concept, the Domain for that concept remain as originally registered.
* Refer to email from Eivind 23/11/16. Missing data types URI, URL, URN and S-100\_TruncatedDate.
* “Structured Text” exists as a valid attribute type in the Registry. However, I thought it had been removed from S-100. Needs to be further investigated and possible discussed.
* Refer email from Joe Phillips 28/11/16 and my reply 29/11/16. Cannot define new binding of existing enumerates to a new enumerated attribute in the Register. This is potentially a major issue as the only solution at this stage is to re-register the enumerates again so as to bind them to the new enumerated attribute.
* In the proposal form, the mandatory “Justification” field has a character limit restriction. This restriction needs to be removed or the number of allowable characters increased.
* Proposal form for Information Types does not include a field for feature distinctions (“distinguishing features”).
* How are associations and roles handled in the Registry (if at all – may just be a function of the Feature Catalogue?). Note discussion at S-100WG2 – decision was to build the associations and define roles using the FCB. However also note detailed response from Eivind and Raphael on this decision (email from Eivind 16 May 2017 and associated paper for NIPWG4 meeting).
* Need some guidance (as the Registry Manager) as to the process for assessing applications for Registry roles (Submitting Organization, DCB, etc.). I am assuming that the Registry Manager needs to consult with “Domain Owners” (Chairs of WGs?), but at this stage there is no guidance on this. Note decisions at S-100WG2 meeting – action on TSSO.
* Have noted that when a Submitting Organization submits a proposal for Supersession or Clarification for an item that is in a different Domain to the one they represent, the Domain for that item is changed to the proposer’s Domain when the proposal has been processed. Not sure if this is a major issue but is probably not the intent of the interface.
* Refer email to Yong 21/04/17 in response to a question from Joe (21/04/17) – proposal for retirement of a simple attribute not completed however all TSSO records and proposal not in RM queue indicate that the proposal had in fact been completed. Possible bug.
* There has been feedback from Registry users that the “Management Details” in the displayed information for registered concepts is confusing. Even though the “Status” field that the user selects (Valid, Superseded, …) is the key indicator, users are confused when they see the “Proposal Type in the “Management Details” section. Suggest that this could be clarified by amending this to “Previous Proposal Type”?
* Complex attributes do not have a “Distinctions” (Distinguishing Features) field.
* For S-101: Inland ENC has modelled a notice mark as a feature. Suggest this would be a good option for S-101.
* Note that items registered as simple attributes (FCD Register) do not have the option of defining distinctions (“distinguishing features”).
* Item name: Should “special characters (e.g. “/”) be allowed?
* Supertypes: Suggest an “intermediate” Register containing internationally agreed “hydrographically relevant” Supertypes. This Register will inherit from the Concept Register, and will be the basis from which derivatives of the Supertypes can be made for PSs. This will then also allow the Supertypes themselves to be used as Feature Types in PSs?
* As an extension of the above point, can this concept of an “intermediate” Register also be used for Associations/Roles, etc?
* Is the Alpha Code supposed to be unique? If so, there should be a duplicate check included in the Register interface. Taking this a step further, if this is the case can this be used as the unique ID? If so then it needs to be mandatory in the Concept Register.
* Could we have a “register” for allowable (agreed) text strings that can be populated for the “other: [something]” Codelist value (open enumeration and open dictionary Codelists)?
* Taking this a step further, should there be an “intermediate” register, derived from the Concept Register, that includes all the enumerated attributes and all possible values (and codes) for the enumerates? This would promote interoperability I think – for instance it would not be good if one community used value 1 for “Day of the Week” as “Sunday” and another group used value 1 for “Monday”.
* “Closed” (or “fixed”) Codelist? Not sure whether things such as the days of the week, months of the year etc. can be modelled. Needs further investigation and discussion.
* How do you create a new Domain?
* How are new Domains established in a Register (application and administration processes)?
* How does someone “apply” to be the DCB member for their Domain?

**EMAIL DISCUSSION 14-15 DECEMBER 2017:**

Hi All.  
  
Julia is correct - I have almost completed my review of the Registry (FCD Register) content, and in conjunction a draft document of Guidelines and Conventions for Registry proposals and content.  This draft at the moment contains more documented questions/issues than actual guidelines and conventions; one of the principle issues is along the lines of the argument in Briana's email.  I will be emailing all this stuff to the Sub-WGs established at S-100WG2 for evaluation and comment before the Christmas break.  I think this will be the start of a significant discussion that is required within the S-100WG.  
  
For now, in the interest of advancing S-100 based Product Specifications and acknowledging that there are significant issues with the current content of the FCD Register, I have been approving all submitted proposals unless it is an absolute duplicate (including bindings) of an already existing item in the Register.  The intention is to rationalize this content into the new "Concept Register" in accordance with the final agreed Conventions and Guidelines.  In the meantime, as Julia has suggested, I will be including the content of Briana's email (and Raphael's response) with all the other issues so far identified with the FCD Register.  
  
Best Regards,  
  
Jeff.

***Jeff Wootton***

***Technical Standards Support Officer***

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On 15/12/2017 00:25, Julia Powell - NOAA Federal wrote:

Hi All -

I agree with Briana in principle - but I also am wary of this potentially holding up a bunch of product specifications.  Jeff is doing a holistic review of the content, and this should be added to his list as a better way of modeling the real world.  the results of that exercise will have a knock on effect to the registry, its content and different product specifications.

Julia

On Thu, Dec 14, 2017 at 4:06 PM, Raphael Malyankar <[raphaelm@portolansciences.com](mailto:raphaelm@portolansciences.com)> wrote:

Hi,

I believe NIPWG did formulate a more generic definition, though it was different from the one in Briana's e-mail.

It is on the NIPWG Wiki:  "A numeric measure of the spatial separation between two locations." dating from 30 May this year. (The S-122/S-123 feature catalogues use an older definition 'A linear extent of space'  and should be updated.)

The matter of a generic distance attribute + a distanceType is more complex, and something that needs more consideration and discussion. For one, it adds another attribute (another two, if you define a complex attribute as a 'container' for distance and distanceType).

Regards,

Raphael

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On Thu, Dec 14, 2017 at 8:26 AM, briana sullivan <[briana@ccom.unh.edu](mailto:briana@ccom.unh.edu)> wrote:

Jens/Jeff,

*(NOTE: in the interest of time you can skim this email reading only the highlighted yellow text and probably get the jist of what I am proposing)*

The 'distance' definition that we submitted is:

* distance: ***distance from the user to the marker (real - IHO Hydro)***

Jeff's note in the register states:

Definition could possibly be more generic (and authorized). Accepted in the interim.(by. Jeff Wootton, 2016-10-25, Assign DCB )

And Julia noticed the measuredDistance attribute:

 I believe that there is already a measured distance attribute.(by. Julia Powell, 2016-11-02, Reject )   
 (by. Jeff Wootton, 2016-11-14, Finalize ) ->  what does "Finalize" mean in this situation?

I completely agree DISTANCE should be more generic...

There are already in the register the following items related to **"a numerical description of how far apart two objects are." *(distance)***

***(pay attention to their definitions in bold)***

1. measuredDistance: ***An accurately defined distance along a course at sea. (integer - IHO Hydro - S101DEC)***
2. waterwayDistance: ***The distance measured from an origin of a river or canal. The length of the space between two points along a waterway. (real - inland ENC)***
3. distanceOfImpactUpstream: ***Upstream distance of the impact of an area, which is signed by notice marks. The distance is normally given on an additional mark left and/or right of the notice mark (real - inland ENC)***
4. distanceOfImpactDownstream: ***Downstream distance of the impact of an area, which is signed by notice marks. The distance is normally given on an additional mark left and/or right of the notice mark (real - inland ENC)***
5. distanceFromNoticeMarkSecond: ***Maximum distance of the impact of an area, which is signed by notice marks. The distance is measured from the notice mark rectangular to the bank (real - inland ENC)***
6. distanceFromNoticeMarkFirst:***Minimum distance of the impact of an area, which is signed by notice marks. The distance is measured from the notice mark rectangular to the bank (real - inland ENC)***
7. soundingDistanceMinimum: ***The minimum spacing of the principal sounding lines of a survey. (integer - IHO Hydro)***
8. soundingDistanceMaximum:***The maximum spacing of the principal sounding lines of a survey. (integer - IHO Hydro)***
9. horizontalClearanceLength - ***The length of a feature, such as a lock or basin, which is available for safe navigation. This may, or may not, be the same as the total physical length of the feature. (real - IHO Hydro)***
10. sectorLineLength - ***A sector is the part of a circle between two straight lines drawn from the centre to the circumference. Sector line length specifies the displayed length of the line, in ground units, defining the limit of the sector. (integer - IHO Hydro)***
11. waveLengthValue - ***The distance between two successive peaks (or other points of identical phase) on an electromagnetic wave.(real, IHO Hydro)***
12. verticalLength - ***The total vertical length of an object. (real, IHO Hydro)***
13. horizontalLength - ***A measurement of the longer of two linear axis. (real, IHO Hydro)***
14. maximalPermittedLength - ***The maximal permitted length of a vessel or convoy according to the particular article/clause of the applicable law/regulation (real, inland ENC)***
15. lengthRangeValue1\* - ***The minimum value of the length range the particular article/clause of the applicable law/regulation is dealing with (real, inland ENC*** - \**i would rename this to be more descriptive: lengthRangeValueMin*)
16. lengthRangeValue2\* - ***The maximum value of the length range the particular article/clause of the applicable law/regulation is dealing with (real, inland ENC*** - \**i would rename this to be more descriptive: lengthRangeValueMax*)
17. height - ***The value of the vertical distance to the highest point of the object, measured from a specified vertical datum. (real, IHO Hydro)***
18. leadMinWidth***- IA\_DMW defines the mimimum width of the lead or fracture or crack in metres (integer, WMO ICE)***
19. leadMaxWidth***- IA\_DXW defines the maximum width of the lead or fracture or crack in metres (integer, WMO ICE)***
20. iceLeadWidth - ***ICELWD indicates the width of a lead or fracture or crack in metres (integer, WMO ICE)***
21. horizontalWidth -***A measurement of the shorter of two linear axis. (real, IHO Hydro)***
22. horizontalClearanceWidth***- The width of an object, such as a lock or basin, which is available for safe navigation. This may, or may not, be the same as the total physical width (HORWID) of the object (real, inland ENC)***

Because in essence, at the core, all of these are really just a measurement between two points.

So, why not **simplify the registry** and the list of simple attributes with only one generic attribute in the registry to encompass *all* types of distance?

registry entry => DISTAN distance -  "a numerical description of how far apart two objects are"

Then include a supporting attribute ***distanceType***that would then be ***an enumeration of possible definitions/uses for distance*.**

For example:

* measured                       - an accurately defined distance along a course at sea.
* waterway                        - the distance measured from an origin of a river or canal along a waterway.
* ofImpactUpstream          - Upstream distance of the impact of an area, which is signed by notice marks. The distance is normally given on an additional mark left and/or right of the notice mark
* ofImpactDownstream     - Downstream distance of the impact of an area, which is signed by notice marks. The distance is normally given on an additional mark left and/or right of the notice mark
* fromNoticeMarkFirst       - Minimum distance of the impact of an area, which is signed by notice marks. The distance is measured from the notice mark rectangular to the bank
* fromNoticeMarkSecond  - Maximum distance of the impact of an area, which is signed by notice marks. The distance is measured from the notice mark rectangular to the bank
* soundingMinimum          - The minimum spacing of the principal sounding lines of a survey.
* soundingMaximum         -The maximum spacing of the principal sounding lines of a survey.
* horizontalClearance       - The length of a feature, such as a lock or basin, which is available for safe navigation. This may, or may not, be the same as the total physical length of the feature.
* sectorLine                      - A sector is the part of a circle between two straight lines drawn from the centre to the circumference. Sector line length specifies the displayed length of the line, in ground units, defining the limit of the sector.
* waveLengthValue          - The distance between two successive peaks (or other points of identical phase) on an electromagnetic wave.
* vertical                           - The total vertical length of an object.
* horizontal                       - A measurement of the longer of two linear axis.
* maximalPermitted         - The maximal permitted length of a vessel or convoy according to the particular article/clause of the applicable law/regulation
* rangeValueMin              - The minimum value of the length range the particular article/clause of the applicable law/regulation is dealing with
* rangeValueMax             - The maximum value of the length range the particular article/clause of the applicable law/regulation is dealing with
* height                            - The value of the vertical distance to the highest point of the object, measured from a specified vertical datum.
* leadMin                         - IA\_DMW defines the mimimum width of the lead or fracture or crack in metres
* leadMax                        - IA\_DXW defines the maximum width of the lead or fracture or crack in metres
* iceLead                         - ICELWD indicates the width of a lead or fracture or crack in metres
* horizontal                      - A measurement of the shorter of two linear axis.
* horizontalClearance     - The width of an object, such as a lock or basin, which is available for safe navigation. This may, or may not, be the same as the total physical width (HORWID) of the object

The enumeration list could grow to cover all the specific uses of distance with their own definition of how that distance is measured. (Much cleaner than adding more attributes)

NOTE: Just doing the simple exercise of getting rid of the terms "distance, length, width, height" from the possible enumeration values it is evident that even this list could be reduced. (notice the "horizontal" items and their definitions)

* fromNoticeMarkFirst -                  Minimum distance of the impact of an area, which is signed by notice marks. The distance is measured from the notice mark rectangular to the bank
* fromNoticeMarkSecond -             Maximum distance of the impact of an area, which is signed by notice marks. The distance is measured from the notice mark rectangular to the bank
* height -                                         The value of the vertical distance to the highest point of the object, measured from a specified vertical datum.
* horizontal -                                   A measurement of the shorter of two linear axis.
* horizontal -                                   A measurement of the longer of two linear axis.
* horizontalClearance -                  The width of an object, such as a lock or basin, which is available for safe navigation. This may, or may not, be the same as the total physical width (HORWID) of the object
* horizontalClearance -                  The length of a feature, such as a lock or basin, which is available for safe navigation. This may, or may not, be the same as the total physical length of the feature.
* iceLead -                                      ICELWD indicates the width of a lead or fracture or crack in metres
* leadMax -                                     IA\_DXW defines the maximum width of the lead or fracture or crack in metres
* leadMin -                                      IA\_DMW defines the mimimum width of the lead or fracture or crack in metres
* maximalPermitted -                      The maximal permitted length of a vessel or convoy according to the particular article/clause of the applicable law/regulation
* measured -                                  An accurately defined distance along a course at sea.
* ofImpactUpstream -                     Upstream distance of the impact of an area, which is signed by notice marks. The distance is normally given on an additional mark left and/or right of the notice mark
* ofImpactDownstream -                Downstream distance of the impact of an area, which is signed by notice marks. The distance is normally given on an additional mark left and/or right of the notice mark
* rangeValueMin -                          The minimum value of the length range the particular article/clause of the applicable law/regulation is dealing with
* rangeValueMax -                         The maximum value of the length range the particular article/clause of the applicable law/regulation is dealing with
* sectorLine -                                 A sector is the part of a circle between two straight lines drawn from the centre to the circumference. Sector line length specifies the displayed length of the line, in ground units, defining the limit of the sector.
* soundingMinimum:The minimum spacing of the principal sounding lines of a survey.
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* waterway -                                  The distance measured from an origin of a river or canal along a waterway.
* waveLengthValue -                     The distance between two successive peaks (or other points of identical phase) on an electromagnetic wave.

And of course the distance attribute would also be associated with a generic attribute to give their units (the following could also be combined into one attribute....***distanceUnits***):

* heightLengthUnits - This attribute encodes the units of measurement for heights and lengths. (enumeration, IHO Hydro)
* distanceUnitOfMeasurement - A specified amount of a quantity, as of length, by comparison with which any other quantity of the same kind is measured or estimated (enumeration, IHO Hydro)

And if they can't all be of dataType = real, then to allow for some flexibility a ***distanceDataType*** enumeration could contain either real or integer.

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Ok, so could it be too generic? Or is your answer to that question fueled by the "red tape", work and headache in getting everyone involved in the above terms to agree? Minus all of those things....if it was as *easy* as pushing the red "easy button"...would you want to do it?

I say we go bold and do this thing *RIGHT* not fall back on what is convenient. Doing the work upfront now will mean a more streamlined, easier to use and understand registry for the future.

My thoughts....knowing there are many ways to skin a dead cat....and this is just one.

Balls in your court now,

cheers,

briana

On Wed, Dec 13, 2017 at 3:21 PM, Jens Schröder-Fürstenberg <[Jens.Schroeder-Fuerstenberg@bsh.de](mailto:Jens.Schroeder-Fuerstenberg@bsh.de)> wrote:

Hi Briana,

Sorry that my email was not precise enough.

As far as I understand Jeff’s email correctly, we have a chain of dependencies which has to be settled starting with the ground level.

The first is to resubmit the attribute “distance” . Jeff was mentioning that this must be in your inbox (I afraid months ago)-

Once this has been approved that other complex attributes can be approved.

“bearingInformation” belongs on “distance” and “graphic”  belongs on “bearingInformation”

Having approved “bearingInformation” and “graphic” ,  I shall ask Yong for the next database/FC comparison. Based on that comparison, we can check what remains and how we will proceed. The interesting aspect is that each comparison comes up with new results (okay, we have some items which are coming up every time).  In particular, the sub-attributes of complex attributes  have been  sometimes not detected.

Doesn’t matter, one day it will be history.

Cheers

Jens

**From:** briana sullivan [mailto:[briana@ccom.unh.edu](mailto:briana@ccom.unh.edu" \t "_blank)]   
**Sent:** Tuesday, December 12, 2017 2:12 PM  
**To:** Jens Schröder-Fürstenberg  
**Subject:** Re: Registry Items

So Jens, my buddy,

I am a bit confused on what is "on me"? I thought (from the email with Raphael) that the spreadsheet (and further entries into the registry) would be put on hold until Raphael got another updated dump from Yong.

And then, I thought after that we would canvas the entire group for volunteers to split the work so they could gain practical experience.

Am I totally off base with this?

prost,

briana

On Sun, Dec 10, 2017 at 3:21 PM, Jens Schröder-Fürstenberg <[Jens.Schroeder-Fuerstenberg@bsh.de](mailto:Jens.Schroeder-Fuerstenberg@bsh.de" \t "_blank)> wrote:

All,

Let me know how the progress is. Briana, it’s on you now.

Jens

**From:** TSSO [mailto:[tsso@iho.int](mailto:tsso@iho.int" \t "_blank)]   
**Sent:** Thursday, December 07, 2017 3:26 PM  
**To:** Jens Schröder-Fürstenberg; 'Julia Powell - NOAA Federal'; briana sullivan  
**Cc:** YONG BAEK  
**Subject:** Re: Registry Items

All:  
  
As you can see from the screenshot below, this proposal currently has a Disposition Status of "Not Accepted".  I assume that the proposal is therefore back in Briana's queue?  If so, could you please resubmit Briana, and I will finalize the proposal.  
  
Thanks and Best Regards,  
  
Jeff.

***Jeff Wootton***

***Technical Standards Support Officer***

***Organization hydrographique internationale / International Hydrographic Organization******4b Quai Antoine Ier - BP 445 - MC98011 Monaco Cedex - Principauté de Monaco***

***em:*** [***tsso@iho.int***](mailto:tsso@iho.int)

***ph:*** [***+377 93 10 81 09***](tel:+377%2093%2010%2081%2009)[***https://www.iho.int/***](https://www.iho.int/)

On 07/12/2017 14:55, Jens Schröder-Fürstenberg wrote:

Okay,

It’s now either on Briana to resubmit or on Jeff to agree. Whoever takes the action, pls do so.

Thanks

Jens

**From:** Julia Powell - NOAA Federal [<mailto:julia.powell@noaa.gov>]   
**Sent:** Thursday, December 07, 2017 2:52 PM  
**To:** briana sullivan  
**Cc:** Jens Schröder-Fürstenberg; TSSO; YONG BAEK  
**Subject:** Re: Registry Items

Seeing as I cannot see what my original issue with distance was - I think it is back in Briana's workspace to resubmit and get it approved.

Julia

On Thu, Dec 7, 2017 at 7:11 AM, briana sullivan <[briana@ccom.unh.edu](mailto:briana@ccom.unh.edu" \t "_blank)> wrote:

yes agreed, as the "dispute" was just an oversight in all the terms I entered....I'm following the lead of Jens!

cheers all,

briana

On Thu, Dec 7, 2017 at 4:53 AM, Jens Schröder-Fürstenberg <[Jens.Schroeder-Fuerstenberg@bsh.de](mailto:Jens.Schroeder-Fuerstenberg@bsh.de" \t "_blank)> wrote:

Hi Jeff,

Thanks for bringing that up again.

Seems the progress is  sticking  in a dependency chain.

Considering that further progress depends on that, I agree with you proposal to accept this as an interim solution and sort out the issues afterwards.

Cheers

Jens

**From:** TSSO [mailto:[tsso@iho.int](mailto:tsso@iho.int)]   
**Sent:** Thursday, December 07, 2017 10:35 AM  
**To:** Jens Schröder-Fürstenberg  
**Cc:** briana sullivan; Julia Powell; YONG BAEK  
**Subject:** Registry Items

Hi Jens.  
  
All done, except:  
  
The complex attribute Graphic cannot be finalized, as one of the identified sub-attributes is the complex attribute "bearing information", which has not been completed:  
  
  
  
The reason that I cannot finalize this proposal is that there is a sub-attribute "distance", which as you can see from the screenshot above has itself not been finalized.  Now, the problem I have with the simple attribute "distance" is that it has been "in dispute" between Briana and Julia for almost 12 months - I cannot do anything from my end to resolve this.  
  
I have cc'd both Briana and Julia on this email, however I suggest that you get in touch with Briana yourself in order to try to expedite a solution.  My previous suggestion was that we just accept the "distance" proposal for now and sort it out when there are robust conventions and guidelines for Register content.  
  
Best Regards,  
  
Jeff.

--

***Jeff Wootton***

***Technical Standards Support Officer***

***Organization hydrographique internationale / International Hydrographic Organization******4b Quai Antoine Ier - BP 445 - MC98011 Monaco Cedex - Principauté de Monaco***

***em:*** [***tsso@iho.int***](mailto:tsso@iho.int)

***ph:*** [***+377 93 10 81 09***](tel:+377%2093%2010%2081%2009)[***https://www.iho.int/***](https://www.iho.int/)

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Deputy Chief

Coast Survey Development Lab

Office of Coast Survey

NOAA

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--

Deputy Chief

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