

7th Meeting of the Standardization of Nautical Publications Working Group (SNPWG)
12-16 February 2007, BSH, Rostock, Germany

Items 10 and 11 for Discussion

SNPWG7 Item 10.1 Use of RGDATA

- a) We would like to understand how mariners would use what we say about **rgdata**. Different fields would be needed for different parts of a ship's passage through a VTS or during ship entry. Typically there would be the "Sailing Plan (SP)", then there would be several "Position reports" (PR), at reporting points or on crossing reporting lines, possibly Deviation Reports (DR) and finally there would be a "Final report" (FR), when the ship gets to destination or departs the area. There are three other IMO report types to report dangerous goods (DG), harmful substances (HS) and Marine pollutants (MR). All these reports contain different selections from the standard 24 (or 26) fields.
- b) How do we cover these various requirements? This could be a series of **rgdata** objects/attributes attached to the service object, which would need some way of indicating which serves each purpose. We are leaving aside for the moment the various dialects of reporting forms where authorities have taken the basic structure, extended it, and sometimes given slightly (or entirely different) meanings to letter fields. We also note that AIS is supposed to do a lot of this.

SNPWG7 Item 11.1 Use of string attributes

- a) In several of our proposals neither WEG nor NEG can find a way to encode everything. We find that we have to revert to text, with all the apparent disadvantages for searching as S-57 or S-100 Objects and Attributes.
- b) This is the reason for the "Headed text" information object. It will allow text to be stored in a database. Meta data can be added to the text to indicate what the text is about and whether it is a heading or the text itself, or whether it is a subsidiary paragraph to one above, whether it can be free standing or makes no sense without its "chapeau" paragraph above it. It can then be extracted and formatted by style sheets. In this way the same data can be used in several different products. For instance the data can be extracted for web delivery, it could be extracted for CD or DVD distribution or it could be used to print a book. In addition the data can be used for products of different extents. It can also be used in association with a chart or it could be free standing.
- c) Although searching is not easy inside an ECDIS, it is not impossible because searches can be made of the metadata or "tags", as well as for the data itself. In this way all information on say, limiting depths or pilotage, in an area or along a route could be extracted in a single search. Even when metadata is not held, searching an entire book, or 20mbs in pdf, is very quick and the Adobe search tool is extremely powerful. What we are looking for in NP3 products is to combine information, advice and regulation held in NPs, with the chart. This is not just a one way call. During the voyage execution it might mean calling up tidal information, port entry regulation or some radio detail like the channel or call sign for a VTS; but during voyage planning this may be to call up charts, when looking at port information or tidal windows. This means using the most appropriate tool and not limiting our thinking to the functions found in the current generation of ECDIS.
- d) The attributes **npsubject**, **rcmdts**, **reglts**, **resdes** and are just some of the attributes which will have to store text. What we will need to do with all of these types of attributes is to design metadata which effectively labels the data. Therefore a recommendation about ideal state of tide for entry or regulations about the number of tugs, in attendance or secured, depending on vessel size or wind, (which is typically highly complex and have lots of dependencies and may be best published in a table) needs to have relevant tags or signposting. These tags are different from paragraph titles or column or row heads and they may never be displayed.

SNPWG7 Item 11.2 List attributes versus repeating attributes

- a) We have a repeating pattern, where an Object has several Attributes but they are of different types. We see that there is ambiguity when one is a List and another is a single valued type (e.g. Enumeration, string or integer). In the List attribute the encoder can select two or three types of e.g. Category of Berthing Assistance but in the simple attribute the encoder can only provide one e.g. Notice, so it is unclear to which item the notice applies. Jens is right that by demoting Notice from an information object to an Attribute we have lost a lot of flexibility.
- b) One approach would be to make the List type attribute an Enumeration; but this would result in a whole stack of Objects in the same place to describe each of the items (e.g. types of berthing assistance); in a big port there would be hundreds of Objects with the same geometry.
- c) Is it better to have many geographic feature objects sharing the same spatial object (as is done now with S-57/ENC), or to have one geographic object (the one which is more closely related to position) and the others as associated information objects. For example: have one geometry for the Port, or piece of water, and all the services that applied to that area would be linked to that geographic object. This just highlights the limitations of S-57 in dealing with information which is not purely geographic.

SNPWG7 Item 11.3 Use of information objects

Information objects have been proposed by TSMAD to help solve two problems:

- a) The crude nature of S-57. This only allows two levels the Geographic object classes and Feature object attributes. This makes for long lists of dissimilar attributes for instance, CATBRG, category of bridge, which encodes variously how the bridge is constructed, what it is for, if it is fixed and if not how it opens.
- b) Some bits of information are not geographic or, if they are the geographic element is not well expressed in S-57. This includes information in the time domain (service hours and notice) and contact details.
- c) Phone numbers, e-mail addresses and websites are fairly clearly not geographic but street addresses obviously are. In this case though how do we capture these in S-57 or S-100? How does the encoder know where the address is? In the case of say, a company or Port Authority, which may be a long way from the port of interest is this relevant? Do addresses of say a diving company need to be viewed on an ECDIS?

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