

Paper for Consideration by DCEG Sub Working Group

Re-Visiting Information Types

<b>Submitted by:</b>	TSMAD Vice Chair
<b>Executive Summary:</b>	While information types provide a mechanism to give extra information regarding a feature, the current implementation of information types in the DCEG could use some additional thought.
<b>Related Documents:</b>	S-101 DCEG
<b>Related Projects:</b>	N/A

**Introduction / Background**

Information types were developed for S-100 to enable a more precise use of meta information about features to eradicate the need and overuse of caution areas. S-100 defines Information types as follows:

Clause 3-5.1.2 Information types

An information type is a class of object which is defined in feature catalogue. An instance of an information type is an identifiable unit of information in a data set. Information types have only thematic attribute properties. An instance of an information type may be associated with one or more feature instances or other instances of information type.

Furthermore S-100 defines the class S100\_GF\_InformationType as follows:

Clause 3-5.2.11 S100\_GF\_InformationType

S100\_GF\_InformationType is the class for information types within S-100. An information type is an identifiable object that can be associated with features in order to carry information particular to the associated features. An example of an information type might be a Chart Note. Information types can also be associated with each other. This could be done where there is further supplementary information that is relevant to the information type or where there is a need to translate the information. For example a primary information object carrying a Chart Note may contain text in English and an associated supplementary information object may carry the same text in German. The characteristics of information types shall be carried by thematic attribute types only. Therefore, S100\_GF\_InformationType is associated with only S100\_GF\_ThematicAttributeType rather than the more generic class S100\_GF\_PropertyType.

**Analysis/Discussion**

While the baseline edition of the DCEG includes many needed new features and attributes to better model the real world, it still needs some further work on information types and their use and nomenclature. Currently the DCEG has the following features/attributes/information types defined:

DCEG 16.11

GEO Feature: Information Area – An area for which general information regarding navigation, but not directly related to safety of navigation, is available.

DCEG 22.1

Information Feature: Information – Information about a feature or a number of features.

This has an association on it called additional information. (I think that this is an information type)

DCEG 25.1

Feature Association: Additional Information – the binding between a geo feature and an information type feature.

DCEG 29.9

Complex Attributes: Information – This is a combination language and text.

This complex attribute is on every geo-feature and replaces the old INFORM in S-57.

As shown above, there are four different types of way to convey “information” all using the same name “information”. This can potentially cause confusion for encoders as to what type of information goes where. Therefore it is proposed that the DCEG sub-working group evaluate the need for multiple ways to convey “information” to the mariner.

For example, the currently defined information type “information” can be eliminated in favour of the complex attribute “Information” or vice versa. It depends on how TSMAD chooses to model the need to convey short snippets of informative text in multiple languages.

In addition, it would be a good exercise to review the DCEG for other attributes that would be better as an information type. For example, the new COLREGs feature also has an attribute called “regulation citation”. The intent of this attribute is to convey the appropriate regulation number that has created the COLREG and therefore has no need for spatial information and could be easily modelled as an information type. Additionally, the attribute regulation citation should also be added to the following features:

Anchorage Area  
Dumping Ground  
Military Practice Area  
Caution Area  
Fishery Zone  
Fishing Ground  
Restricted Area  
Pilotage District.

### **Recommendations**

It is recommended that the TSMAD DCEG have an in-depth discussion regarding the use of Information types and the overuse of the word “information” in defining various features/attributes/information types. It is also recommended that the TSMAD DCEG also revisit the use of regulation citation as an information type and include it on the additional features as proposed in this paper.

### **Action Required of TSMAD DCEG**

The TSMAD DCEG is invited to:

- a. discuss the use of “information” in S-101 and propose a way forward
- b. discuss the modelling of “regulation citation” as an information type and its inclusion on additional features.