Updated 29 March 2012

The following changes are proposed for consideration by IHO, with a view to improving the usefulness of the IHO’s S-100 and S-99 standards and enhance their role in e-Navigation. These observations may form an annex to a Liaison Note for the IMO/IHO High-level Group on Data Modeling, once it is established. The body of the note would report progress made by IALA in developing procedures for participation in the IHO GI Registry and in developing Product Specifications within the S-100 framework for IALA applications.

1. Transform the notion of the ‘Main and Supplementary Register’ from the sub-division of the Registers to a tag at each of the entry item

Rationale:

* That distinction adds unnecessary complexity.
* The discriminator given at present is whether or not an item supports IMO mandatory carriage requirements. This is a relevant attribute. But by the very same token it could be represented as such in e.g. a tag.

1. Separate the ‘Product Specification Registry’ conceptually from the body of the GI Registry:

Rationale: The ‘Product Specification Registry’ is of a different kind; it is organisational in orientation as opposed to the other Registers, which are functional in orientation.

1. Evolve the “Product Specification Registry” into THE root list for any and all products in the maritime domain, by including also references and metadata to non-S-100-based products.

Rationale:

* The product specification root list would be referenced from the IMO intended generic MSP concept.
* There will be product specification which are essentially not electronic, but which need to be pointed at, such as operational service descriptions.
* There will be legacy non-S-100- products to be pointed at from one single product reference list.
* The position of IHO in the e-Navigation domain could be aggregated from a strategic point of view.

1. Transform the “Producer Code Registry” at S-100 GI Registry into metadata.

Rationale: The “Producer Code Registry was created due to a S-57 legacy consideration.

It is required to study how the data contained in the “Producer Code Registry” presently may be better stored in the other Registers of the GI Registry, e.g. using the Metadata Register.

1. Evolve the “Producer Codes Registry”, in consultation with other international manufacturer / producer organisations, into an international root table of producer codes.

Rationale:

* A producer code is needed, in particular due to the harmonization intended by e-Navigation.
* At present, there have developed producer codes for shipboard devices, which are even exchanged by the AIS VHF data link. The appropriate list of producer codes is maintained by NMEA.
* At present, the producer codes for ENC data are maintained by IHO.
* It is foreseen, that with the implementation of e-Navigation there will be an increased usage of software modules (“apps”), the producers of which would need to be identified.
* The different historical strands of producer codes therefore need to be harmonized internationally to cater for any kind of product.

1. Review the definitions involved with the S-100 GI Registry and collate them in a readily available place.

Rationale: Searching for definitions and terms in the documentation already involved with the S-100 GI Registry and included in the draft Guideline on Participation in the S-100 GI registry proved difficult and in some cases impossible.

1. There is a need to discuss the mechanism to model dynamic data exchanges.

Rationale: In preparing a data model for the IVEF product Specification it appeared that modelling dynamic data exchanges seems to be insufficiently supported by the current S-100 specification. It has been suggested that the way forward would be to provide an input paper for the next meeting of TSMAD, followed by a discussion on the way forward.

1. Create a new Register called “Harmonized User Requirements Register”

Rationale: The Registry does not contain user requirements, yet. A formalized user requirement management is essential to capture the existing user requirements and thus provide the traceability. A register concept can be applied to formalized user requirements, thereby creating a structured repository for formalized user requirements. Hence, a Harmonized User Requirement Register will be included in the Registry as the uppermost layer which would have a similar internal structure as the other Registers. The Harmonized User Requirement Register informs and directs all other Registers (including the Product Specification Register), as appropriate.

1. Create a new Register called “Maritime Data Exchange Format (MDEF) Register”

Rationale: The Registry does not contain data exchange format definitions, yet. While the Portrayal Register captures all entries relevant to the human interaction, the Maritime Data Exchange Format Register captures the data sentence syntax and semantics and the data interface encoding for machine to machine data exchange. The Maritime Data Exchange Format would also contain general rules for data sentence usage as well as general rules for data encoding, while a product specification may contain more specific rules for data sentence usage and encoding.

Note: The notion of identification applies for both equipment and data sources. The development of technologies requires the development of a seamless method to identify both with a harmonized/unique set of tools.