

From: IALA

To: IHO S-100WG

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LIAISON NOTE

Challenges regarding the development of S-200 product specifications for the VTS domain

1 INTRODUCTION

The development of S-200 product specifications within the IALA VTS Committee is facing challenges regarding the specific functionalities needed for the interaction between the VTS and the ship. These challenges comprise the following topics:

- How to handle the S-100 readiness levels defined in S-97 ed. 1.1.0
- Versioning S-200 product specifications
- 2-way (time sensitive) communication between VTS and the ship

2 HOW TO HANDLE THE S-100 READINESS LEVELS DEFINED IN S-97 ED.1.1.0

The definitions used for the readiness levels in S-97 limit the maximum available level for the product specifications that are developed within the IALA VTS Committee.

S-97 ed.1.1.0 states the following on the readiness levels:

- Level 1: Contains the minimum amount of components needed to commence the development of test datasets and system prototypes. This should be considered the final stage of development before demonstration begins, and would typically be Edition 1.0.0 of a Product Specification.
- Level 2: Includes additional items such as data quality checks and test data sets so that the Product Specification can be demonstrated in prototype environments. This would typically map to Edition 1.n.n - 2.0.0 of a Product Specification. Depending on the end-user requirements of the Product Specification, Level 2 can be implemented in an operational context. Subsequent S-100 Readiness Levels are then dependent on operational requirements of the product within navigation systems.
- Level 3: Builds on Level 2 and includes a fully featured and documented exchange catalogue and (optionally) an encryption layer for the data and implementing system. At this level, prototype systems, products or processes should be demonstrated in a real-world environment.
- Level 4: Intended only for use in vessel navigation systems such as ECS and ECDIS. At this level, the developer of the Product Specification needs to ensure that documented considerations have been given to interoperability via S-98 and alerts and indications functionality. At this level, there should be a baselined and compliant system, process or product that is shown to operate or function as expected.

- Level 5: System, process or product is deployed and used routinely. At this stage, data and compliant systems are readily available for operational use. This stage includes functionality for a machine-based check of up-to-datedness (that is, automatic warnings and Update Status Reports). The functionality required for up-to-datedness could be provided within individual Product Specifications or through the S-128 Catalogue of Nautical Products.

Level 4 and above cannot be achieved by the product specifications that are under development. For S-212 the specific presentation and handling of the interaction between VTS and the ship on the ship side are outside the scope of the IALA VTS Committee. S-210 is not intended to be used on ECDIS systems, as the scope for this product specification is targeted for interaction between VTS centers or other shore based organizations.

The IALA VTS Committee would like to define readiness levels for these S-200 developments that would better fit the specific needs for the targeted product specifications.

3 VERSIONING OF S-212

Another challenge for S-212 is in the versioning of the product specification. The scope for S-212 is intended to contain the digital interaction between VTS and the ship. Because this scope can potentially support several technical services with different data elements, it is necessary to develop this product specification in stages. The first functionality where the data model is being included in S-212 is traffic clearance. Over time more functionalities might be defined and possibly more information elements might be included in the data model. The current version of S-97 does not describe how to handle the versions nor readiness level when S-212 needs to support new functionalities and changes are made to the data model.

4 2-WAY (TIME SENSITIVE) COMMUNICATION BETWEEN VTS AND SHIP

The current S-100 framework has not fully addressed how 2-way (time sensitive) communication between VTS and the ship can be supported.

5 ACTION REQUESTED

IHO S-100 WG is requested to take a note of the information above and provide feedback to the VTS Committee.