Input paper: [[1]](#footnote-2) ENAV28-X.X.X

Input paper for the following Committee(s): check as appropriate Purpose of paper:

**X** ARM **□** ENG **□** PAP **x** Input

**X** ENAV **□** VTS **□** Information

Agenda item [[2]](#footnote-3)

Technical Domain / Task Number 2 …………………………………

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Change Proposal for IALA G1128: THE SPECIFICATION OF e-NAVIGATION

TECHNICAL SERVICES

# Summary

IALA G1128 is a guideline that provides information on how to develop specifications of e-Navigation Technical Services. In the past years, efforts have been made to use the guideline and its templates to successfully develop service specifications for maritime services, especially in the context of the Maritime Connectivity Platform. However, while applying the principles and templates as well as the supplied xsd-Schemas some smaller problems, or open points in the guideline could be identified.

## Purpose of the document

This document provides input to a revision of G1128 and proposes corrections to the supplied xsd-Schemas.

# Discussion

The following points relate to the contents of the guideline:

* The guideline includes explicit references to the Maritime Connectivity Platform’s service registry. These should be rephrased, as the guideline should be service registry implementation agnostic.
* The orchestration within a service not described in the guideline.
* The data model for the Service Specification should be aligned with S-100 Base data types.
* Service accepted payloads not explicitly expressed in formal representation for respective documentation level. Hint, this could be included in Service Design ServicePhysicalDataModel and possibly described in the Service instance as well.
* The service instance document should include more details as it is intended as the main document for service consumers. It is proposed to include more details on service coverage, required input, output, functionality, dynamic behaviour and allowed operations from the user-perspective.
* It is not discussed how to deal with the composition of services in the guideline. It could be beneficial to mention service composition at least on an informative level.
* Operational Service Instance descriptions and technical documentation for the service instance, should support more than one document each for a service instance in such a way, that an operator could benefit from a shorter version of the specification.
* Extend the support for searching of services based on same technical design, STM have extended the Service Registry, but enumerations is not added in XML Schema. This requires today separate governance and monitoring of these fields. (ServiceType, Keywords)
  + Navelink has adopted the STM guidelines and included these in the monitoring tools for Service Registry. But there still need to be an agreement of the maintenance procedures for e.g. ServiceType enumeration, and other guidelines for keywords, naming of ships and shore centers, service coverage, descriptions etc.
* Guideline for service registration implicates further specifying of how elements in specification, design and instances should be filled out i.e. UnLocode - 5 characters, no space, capital letters or empty (blank). See attached Navelink guidelines.

The following points relate to issues/errors in the XSD Schemas provided in Annex of the guideline:

**ServiceSpecificationSchema.xsd**

* The “ValueTypeDataModelMapping” type of the specification contains a parameter element with type “S100Base:S100\_Parameter” referencing the S100 standard. This is a problem however, since the “S100\_Parameter” is not actually part of the “S100Base” XML schema definition.
* The “ServiceDataModel” type of the specification contains an element with name “FeatureCatalogue” and type “S100Base:S100\_FC\_Catalogue”, referencing the “S100FC” XML schema definition. “S100\_FC\_Catalogue” however, is actually an element in that XSD file, not a type, hence the type reference is invalid.

**ServiceInstanceSchema.xsd**

* The defined “ServiceInstance” type contains an element with name “coversAreas” which is defined with the attributes “minOccurs=1” and “maxOccurs=unbounded”. This is not valid however inside an “<all></all>” statement, where “maxOccurs” can only have values up to one (1). To resolve that, we could change the referenced “ServiceInstanceSchema:CoverageInfo” type to have an unbounded number of cover area elements.

# Action requested of the Committee

The ENAV and ARM committees are asked to consider and adopt the presented proposals.

1. Input document number, to be assigned by the Committee Secretary [↑](#footnote-ref-2)
2. Leave open if uncertain [↑](#footnote-ref-3)