**Architecture of the Digital Delivery of VTS Information**



Figure 1 - VTS Digital Services System Architecture

**Explanation**

1. Purpose/scope
   1. The purpose of the drawing is to explain the high level architecture on how the technical services and the product specifications relate to facilitate a digital data exchange for VTS information
   2. It ‘s also meant to clarify to process regarding the tasks on Maritime Services, Technical Services and a Product Specification for the Digital Delivery of VTS Information including the operational aspects of these elements
   3. The data exchange to ships meet the requirements of both manned and unmanned ships
2. Definitions
   1. VTS System

* See definition in G.1111
  1. Technical Services Specification
* Describes how to implement the digital data exchange using specific technologies (see G.1128)
* The technical service specifications are referenced in the MS description in the context of eNavigation for VTS as “associated technical services” (MSC.1/circ.1610)
* VTS Navigational ECDIS/MASS Services specifications
  + - * This is the subset of the technical service specifications from the VTS system that is targeting ECDIS and/or regulated on board MASS systems
      * The communication between the VTS system and the ECDIS should follow set regulations, in particular IEC (IEC 63173-2:2022) and IALA (G.1157)
      * The IEC 63173-2:2022 requires a service and identity registry which can be provided by the Maritime Connectivity Platform (MCP)
* VTS Navigational Service specifications for MASS
  + - * This is the subset of the technical service specifications from the VTS system that is targeting regulated on board MASS systems
      * The communication between the VTS system and the MASS on board systems should follow set regulations, in particular IEC (IEC 63173-2:2022) and IALA (G.1157)
      * The IEC 63173-2:2022 requires a service and identity registry which can be provided by the Maritime Connectivity Platform (MCP)
* VTS Other Services specifications
  + - * This is the subset of the technical service specifications from the VTS system that is targeting other (non ECDIS) systems
  1. Technical Service
* This is the implementation of a technical service specification
  1. Public Facing VTS Services
* The exchange of data through other means than harmonized technical services (e.g. email, website, …)
  1. S-100 Product Specifications
* S-XXX data
  + - * S-100 datasets exchanged with the VTS that have been mandated to be used and portrayed on the ECDIS and/or regulated on board MASS systems
* S-ZZZ data
  + - * S-100 datasets exchanged with the VTS that have been mandated to be used on regulated systems for MASS
* S-YYY data
  + - * S-100 datasets exchanged with the VTS to targeted systems other than ECDIS and/or regulated on board MASS systems
      * Some of these Product specifications may include portrayal and others might not
  1. Other VTS data
* Datasets exchanged with the VTS other than S-100, these can possibly been harmonized by other standards (e.g. IMO compendium, …)

1. External Stakeholders
   1. Entities other than ships that need to exchange data with the VTS

* Coastal State Authorities
* Port Authorities
* Allied Services
* Other VTS Centers
* Hydrographic/Meteorological offices
* ENC providers
* Shore Control Centers
* …
  1. Data exchange with external stakeholders and other relevant entities include but is not limited to S-100 harmonized datasets

1. Tasks
   1. Product Specification (task 2.3.1)

* Has 2 parts:
  + - * VTS exclusive datamodel based on elements in the IHO feature catalogue, i.e. not covered by Product Specifications by other domains
      * When needed definition of the portrayal
  1. Technical Services Specifications (task 2.5.1)
* Making the Technical Service Specifications derived from the use cases defined by task 1.2.4