IHO MASS PT S100 Gap Analysis

Member State/Organization FINLAND Traficom

S100 Standard Reviewed S-102

Maturity of Standard

S100 Standard Chair

Issue/Requirement (take from Spreadsheet)	**Issue addressed?**	**More cnontent?**	**Gap in standard?**	**Potential Solution/s**	**Ease to implement?**
ALL: MASS will require more frequent or real-time updates of the data contained in the S100 products, which should be pushed from official sources that the vessels can 'listen' out for and update their navigational database and products automatically irrespective of where they are in the world. Event driven data updates and near real time updates will be required for MASS as MASS will always need to be up to date.	✓	☐	☐	This is not a problem from the S-102 perspective. The associated products are delivered only via network download.	Easy
ALL: The communication infrastructure necessary to sustain data exchange is not reliable and affordable today. Thought needs to be given to data packets sizes for data and updates for MASS.	✓	☐	☐	The S-102 can be applied for this purpose. It includes informative file-size limit of 10 MB.	Easy

S-102: MASS will require full bathymetric coverage datasets/DTM, gaps in data will pose a problem for MASS.	✓	☐	☐	This is not a direct problem of the S-102. That is, the coastal states should ensure the availability of data within its administrative sea area. Depth data is also available in S-101 format and can be used to produce redundancy as needed. Additionally, it could be necessary to add the associated metadata into S-102 products.	Easy
S-102: To avoid large volumes of bathymetric data (i.e. S102 gridded data), there is a need for conspicuous seabed features to be highlighted (such as sea mounts, obstacle or trenches) for use with Inertial Navigation Systems in GNSS denied environments. Similar to land based visually conspicuous objects captured in ENCs today.	✓	☐	☐	The current S-102 can already be used for this purpose. For underwater navigation, the utilization of S-103 could be considered.	Easy
S-102: MASS will require certainty of seabed and associtated features. High resolution data is great, but if it changes regularly, then that needs to be made clear and articulated in some way (example Humber estuary). Understanding when highly mobile seabed was last surveyed will also be important.	✓	☐	☐	The current S-102 already includes a cancellation mechanism, and the producer of data is responsible on its reliability. The application of the associated metadata could also applied to provide additional information. Rapidly changing data, such as migrating mud-banks, might require additional work or new products.	Easy

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ALL: MASS will require more geographical polygons to describe areas (such as speed restriction and constraints), with suitable attribution for MASS to interrogate and act appropriately. This information is often captured in text boxes, Sailing Directions or Pick Reports in natural language with very little geographic descriptors, making it impossible for MASS to interrogate, read and act upon. These could be created as instructional layers which are geographically location based containing attribution such as name of feature, type of feature, unique number, reason for speed restriction or constraint etc in a machine readable format.	✓	☐	☐	This is not a problem for the S-102 perspective, as it is not a vector based product.	Easy
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