

Title: WLA-compatibility – Extension to Discovery Metadata**S-100 Maintenance - Change Proposal Form**

Organisation	Portolan Sciences LLC, for TWCWG chair team & S-104 PT	Date	19-October-2023
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Change Proposal Type (*Select only one option*)

1.Clarification	2.Correction	3.Extension
		X

Location (*Identify all change proposal locations*)

No.	S-100 Version No.	Part No.	Section No.	Proposal Summary
1	5.1.0	17	4.5	Add a new <i>complianceCategory</i> code in exchange catalogue dataset discovery metadata to indicate datasets compatible with water level adjustment as described in S-98.

Change Proposal

The proposed new or revised text is in red below.

- 1) Add a new code to the S100_ComplianceCategory enumeration in Part 17 and explain it in Part 4a where the compliance categories are described.

Part 17 Table S100_ComplianceCategory – Add the following row:

Value	category5	IHO-S-100 and IMO harmonized display compliant and designed for S-98 water level adjustment algorithms.	5	See S-98 Annex C for water level adjustment algorithms. Product Specifications must describe appropriate requirements for encoding exchange catalogue discovery metadata.
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- 2) Part 4a Clause 4a-5.5 – Add new clause 4a-5.5.5:

4a-5.5.5 Category 5 – ECDIS water level adjustment compliant

As for category 4 and containing only features that meet the requirements for water level adjustment functionality on ECDIS.

The compliance category is encoded in attribute *complianceCategory* of the class/type *S100_ProductSpecification* in the exchange catalogue model and schema. Noting that dataset discovery metadata for each dataset contains an attribute *productSpecification: type*

S-100 Change Proposal Form (Updated April 2016)

S100_ProductSpecification, it is possible in the 5.0.0/5.1.0 exchange catalogue model and schema to encode the compliancy category on a per-dataset basis.

Change Proposal Justification

The justification is the same as for the companion “clarification” proposal: While it is possible for ECDIS applications to detect WLA-compatible datasets by opening the HDF5 datasets and examining their embedded metadata (vertical and horizontal datum, geographic extent, type of grid (*dataCodingFormat*), and type of data (forecast, prediction, observation, etc.), it is simpler and independent of the S-104 product specification to allow ECDIS applications to detect this by examining discovery metadata.

This proposal would entail a revision of the S-100 Edition 5.1.0 model or schemas and would therefore be an “extension” for S-100. A companion proposal describes an alternative which does not entail changes to the S-100 Edition 5.1.0 model and schemas.

It is recommended that the S-100 WG implement the “clarification” proposal as an interim solution now, since that proposal will not involve changes to the model or schemas, and consider the present proposal as a more robust solution to be implemented in S-100 Edition 5.2 or 6.0.

For future attention:

The author of this proposal (RM) believes the exchange catalogue storage size and efficiency for exchange sets containing many datasets would be improved by:

- moving the attribute *complianceCategory* out of *S100_ProductSpecification* into the containing *S100_DatasetDiscoveryMetadata* block, and
- moving the product specification XML block to the references section of the exchange catalogue, and
- changing the type of the *productSpecification* attribute of dataset discovery metadata to a reference to the product specification block in the references section

but this is a larger change than adding a code to the compliance category enumeration and should be considered for S-100 Edition 5.2 or 6.0.

What parts of the S-100 Infrastructure will this proposal affect?

- S-100 Feature Concept Dictionary Interface or Database
- S-100 Portrayal Register
- S-100 Feature Catalogue Builder
- S-100 Portrayal Catalogue Builder
- S-100 UML Models
- S-100 GitHub Schemas

Please send completed forms and supporting documentation to the secretary S-100WG.