Title: Correction for S100_ProductSpecification

S-100 Maintenance - Change Proposal Form

Organisation	NIWC	Date	3/1/2023
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Change Proposal Type (Select only one option)

1.Clarification	2.Correction	3.Extension
	X	

Location (Identify all change proposal locations)

S-100 Version No.	Part No.	Section No.	Proposal Summary	
5	10c 17 17	Table 10c-6 Row 1 Figure 17-7 4.5	Correct the S100_ProductSpecification reference Correct the UML model Correct the identifier used to resolve the FC	

Change Proposal

Support unrestricted a	and unambiguous	determination	of the f	feature	catalog	associated	with
each dataset and/or p	ortrayal catalog.						

See attached redlines.

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	See attached.
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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
\boxtimes	S-100 UML Models
\boxtimes	S-100 Schemas

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

Change Proposal Justification

Currently, data producers and distributors are restricted in how they can associate datasets and portrayal catalogues (PC) with the appropriate feature catalogue (FC) within an exchange set (XS).

Upon receiving an XS the ECDIS must associate each received dataset and PC with a corresponding FC prior to use. Currently, the *number* attribute of *S100_ProductSpecification* is the only value which can be used to discover this association. This poses the following issues:

- The FC must be associated with a registered version of a product specification. This precludes use of FC's intended for:
 - evaluation (during FC development)
 - support of specific testing (prototyping or proof-of-concept)
 - o support of application specific profiles within a product specification.
- Experience has shown that not all versions of a product specification will be registered, or the registrations may not occur until after the need to deliver catalogues and data has arisen. In these cases, an XS cannot accurately describe the FC associations.
 - o e.g., S-101 v1.0.2, etc.
- Populating the XS is complicated by the fact that the registry user interface doesn't expose the index of the registered product specifications.
- Experience has shown that the current implementation is confusing:
 - to ECDIS developers
 - o to data producers
 - o to data distributors

The redlines which follow provide a clear and unambiguous method to determine:

- the feature catalogue used to create a given dataset,
- the feature catalogue targeted by a given portrayal catalogue,
- the feature catalogues associated with a particular version of a product specification (assuming the *version* attribute is provided in the *S100_ProductSpecification* class).

The change identifies the feature catalogue using an S-100 cryptographic hash MRN (e.g., urn:mrn:iho:s100:hash:sha256:a948904f2f0f479b8f8197694b30184b0d2ed1c1cd 2a1ec0fb85d299a192a447). Consideration should also be given to embedding this MRN in both the PC and in the 10a/b/c encodings to assist in automated population of exchange sets, but that is out of scope for this proposal.

Redlines

1. Correct the S100_ProductSpecification reference in Table 10c-6 Row 1.

Table 10c-6 – Embedded metadata (carrier metadata) in root group

No	Name	Camel Case	Mult	Data Type	Remarks and/or Units
1	Product Specification number and version	productSpecification	1	String	For example ² , 'INT.IHO.S-NNN.X.X', with Xs representing the version number. "NNN" and "X" do not imply length restrictions Corresponds to combination of S100_ProductSpecification name and number_version_fields

Update S100_ProductSpecification in Figure 17-7.

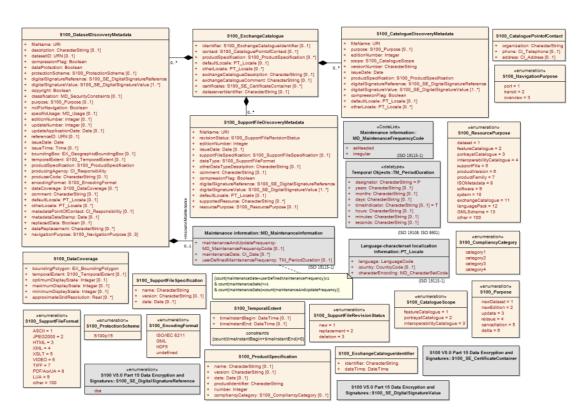


Figure 17-7 - S-100 Exchange Set Catalogue - class details

3. Update S100_ProductSpecification in Figure 17-7.

17-4.5 S100 ProductSpecification

Role Name	Name	Description	Mult Type		Remarks	
Class	S100_ProductSpecification	[]	-	-	-	
Attribute	name	[]	01	CharacterString	[]	
Attribute	version	[]	01	CharacterString	[]	
Attribute	date	[]	01	Date	[]	
Attribute	productIdentifier	[]	1	CharacterString	For example, "S-101"	
Attribute	number<u>f</u>cHash	S-100 cryptographic hash MRN of the feature catalogue.The		Integer<u>URI</u>	For IHO Product Specifications these should be taken from the IHO Product Specification Register in the IHO Geospatial Information (GI) Registry For example: "urn:mrn:iho:s100:hash:sha256:a948904f2f0f479b8f8197694b30184b0d2ed1c1cd2a1ec0fb85d299a192a447" Required unless PS doesn't use a feature catalogue (e.g., S-98)	
Attribute	compliancyCategory	[]	01	[]	[]	