

Paper for Consideration by S-101PT10

S100_DatasetDiscoveryMetadata attributes replacedData and dataReplacement

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Executive Summary:	The intended use of the metadata attributes replacedData and dataReplacement is clarified at S-100 level. There is a need for finetuning the implementation of the attributes description and multiplicity in S-101 Product Specification.
Related Documents:	S-100 5.0.0 Part 17, S-101 v.1.1.0 PS
Related Projects:	

Introduction / Background

Because the ENC provision to the end users (for official ECDIS) by the Producers is designed by default as a service within a certain time period, and is never provided as a one time purchase, it is very important to have unambiguous mechanism in the S-100 ENC Product Specification for the ENC service provision continuity. The lack of this mechanism today causes the need for unnecessary and time consuming manual operations at the RENC level.

It is also the responsibility of the producing authority to define and plan the service provision and continuity of the ENCs for the end user. The lack of standardized mechanism to provide this information in a structured manner to the first distribution instance - in most cases the RENCs, creates unnecessary workload at both parties - the RENC and the Producer.

Now with the new S-100 standards S100_DatasetDiscoveryMetadata it is possible to clearly define this information creation already at the Producers level in the ENC metadata.

Existing wording in S-101 v.1.1.0:

replacedData	If a data file is cancelled is it replaced by another data file	0..1	Boolean	True indicates the cancelled dataset is to be replaced False indicates the cancelled dataset is not to be replaced
dataReplacement	Cell name	0..*	CharacterString	A dataset may be replaced by 1 or more datasets

Approved change in S-100 Part 17:

Attribute	replacedData	If a data file is cancelled is it replaced by another data file If a data file is cancelled is it replaced by another data file. Indicates if a cancelled dataset is replaced by other data file(s)	0..1	Boolean	True indicates the cancelled dataset is to be replaced False indicates the cancelled dataset is not to be replaced **See note
Attribute	dataReplacement	Cell name Cell-Dataset_name	0..*	CharacterString	A dataset may be replaced by 1 or more datasets **See note

NOTE: replacedData and dataReplacement. The intended use of the attributes replacedData and dataReplacement could for example be to provide a mechanism for service providers to build automation when providing replacement data sets to customers within existing subscription periods.

Analysis/Discussion

The intention of the New Cells, New Editions and Cancellation updates is by default known when the Producer starts the production or updating of the ENCs in question, hence there shouldn't be any issues to populate these metadata attributes, as needed, during any stage of the ENC production. As mentioned earlier, the data Producer is responsible for the ENCs - including if the new or remodeled ENCs are to be purchased or obtained for free as replacements for the existing customers of the canceled ENCs. When this information is encoded by the Producer

before ENC issue, this will also improve the Producers and RENCs communication efficiency, as no further additional procedural steps need to be taken.

To make it efficient and consistent across all Producers, RENCs, Distributors and ECDIS implementations, capturing of those attributes for the specific use cases need to be mandated. We propose to implement the mandate of those attributes based on certain conditions, as there are use cases where encoding of these attributes would not be logical.

Here we propose:

1. when the datasets *S100_DatasetDiscoveryMetadata* attribute *purpose (S100_Purpose)* is encoded as *5 (cancellation)*, then the attribute *replacedData* is mandatory;
2. when the *S100_DatasetDiscoveryMetadata* attribute *replacedData* is populated as *True*, then the attribute *dataReplacement* is mandatory, and must include at least one, real Dataset name entry - issued by authorized ENC Producer and already existing in the service dataset with).
3. with the earlier populated *replaceData = True*, it is believed without the necessity to provide any further proof, that when the populated Dataset name in the attribute *dataReplacement* includes Producer code different than the Producer code of the cancellation dataset, the Producer of the cancellation dataset has all legal agreements in place with the mentioned ENC Producers to be able to mandate their free use for the ECDIS service end users til the end of their existing (at the moment of issuing the cancellation dataset) subscription periods of the now canceled ENCs.

It is known that there are many use cases when the cancelation and replacement ENCs impact more than one ENC Producer. We trust that by mandating the metadata attributes coding as proposed above would significantly improve and make consistent the process of issuing and distribution of cancellation datasets.

From the dataset validation perspective, in the use case of different producer codes mentioned in the attributes, we assume it is then enough, if there exists a Warning that the Producer codes do not match between the mentioned Dataset names and the Producer code of the cancellation dataset.

Conclusions

- The *S100_DatasetDiscoveryMetadata* attributes *replacedData* and *dataReplacement* in the S-101 product Specification must be made mandatory, as a minimum under a certain condition - for the ENC cancellation datasets.
- Encoding the *replaceData = True* the Producer of the cancellation dataset assumes all responsibility for the named replacement provision for free to the end users as mentioned above.
- The proposed changes should be implemented in the Product Specification.

Action Required of S-101PT10

The S-101PT10 is invited to:

Note the report and discuss proposed changes.