



Cancellation Task Group

VTC01 Meeting 202512XX

Background

S-100 17-4.5 S100_DatasetDiscoveryMetadata – attribute editionNumber

Align data type of attribute “editionNumber” with existing schema implementation.

The datatype is proposed changed from “integer” to “positiveInteger.”

Attribute	editionNumber	The Edition number of the dataset	0..1	positiveInteger	When a data set is initially created, the Edition number 1 is assigned to it. The Edition number is increased by 1 at each new Edition. Edition number remains the same for a re-issue
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It will then align with the schema:

```
<xss:element name="editionNumber" type="xs:positiveInteger" minOccurs="0" maxOccurs="1">
  <xss:annotation>
    <xs:documentation>The edition number of the dataset. When a data set is initially created, the edition number 1 is assigned to it. The edition number is increased by 1 at each new edition. Edition number remains the same for a re-issue.
    </xs:documentation>
  </xss:annotation>
</xss:element>
```

S-100 v.5.2.0, Part17, Section 17-4.4.1

Having removed the ability to encode editionNumber = 0 above, the textual description is proposed changed accordingly:

In addition to fileless dataset cancellation using fields in the Catalogue metadata file (S100_Purpose = cancelled) a dataset may be cancelled by the Data Producer by the issuing of a cancellation update. In order to cancel a dataset, an update dataset file is created for which the Edition number in the S100_DatasetDiscoveryMetadata must be set to **0 the edition number of the product being cancelled**. This method is only used to cancel a Base dataset file. Where a dataset is cancelled and its name is reused at a later date, the issue date must be greater than the issue date of the cancelled dataset. When the dataset is cancelled it must be removed from the system. Fileless cancellation may be achieved by using a dataset metadata entry with the filename and original digital signature specifying the resource to be cancelled, and with all other mandatory metadata fields also set to the same values as the original, with the exception of the issueDate, which must be set to the issue date of the fileless cancellation itself.

An Exchange Set may contain Base dataset files and update dataset files for the same datasets. Under these circumstances the update dataset files must follow on in the correct sequential order from the last update applied to the Base dataset file.

4.25	Part17 Cancellation metadata	<p>[Decision 10/30] WG10 approved the revised proposal wording describing a universal dataset cancellation approach for any S-100 Product Specification.</p> <p>[Action 10/13] Task Group, with volunteers from PRIMAR (lead), IIC, IC-ENC, OSI, and WR Systems, to investigate the cancellation process for both fileless and file-based approaches in S-100, and to report the outcome to the S-100WG via letter for consideration.</p>	<i>Ed.5.2.1 Clarification</i> TSM12
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Issues detected

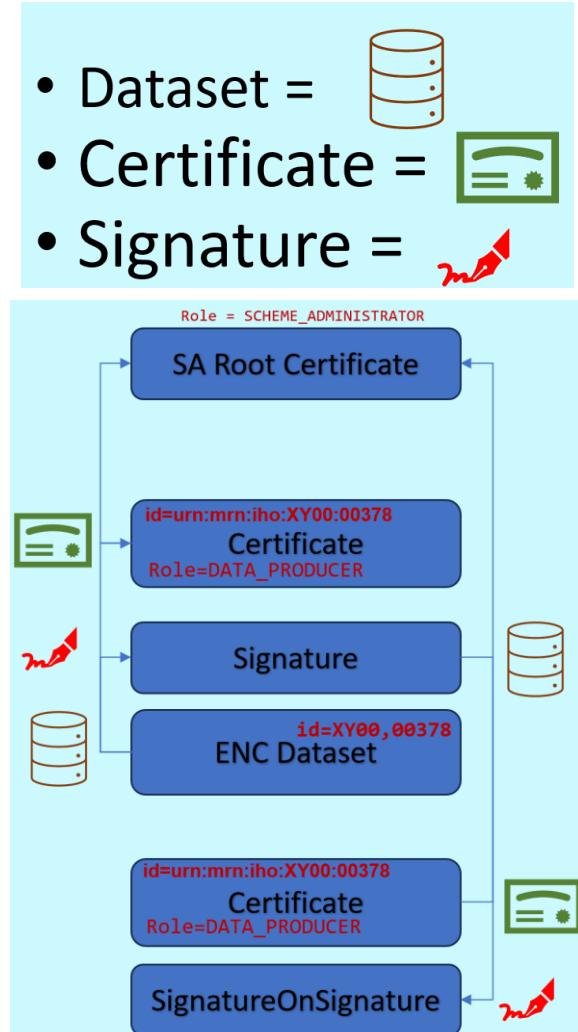
- A. Fileless cancellations Signature - improve process to avoid falsification.
- B. Fileless cancellations - more attributes must be encoded in S100_DatasetDiscoveryMetadata.
- C. Structure the cancellation information.
- D. S100_Purpose = 5 clarification.
- E. Better distinguish between the 2 methods fileless and file based.
- F. Describe the intended instruction from metadata to end user systems.



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A. Fileless cancellations Signature - improve process to avoid falsification.

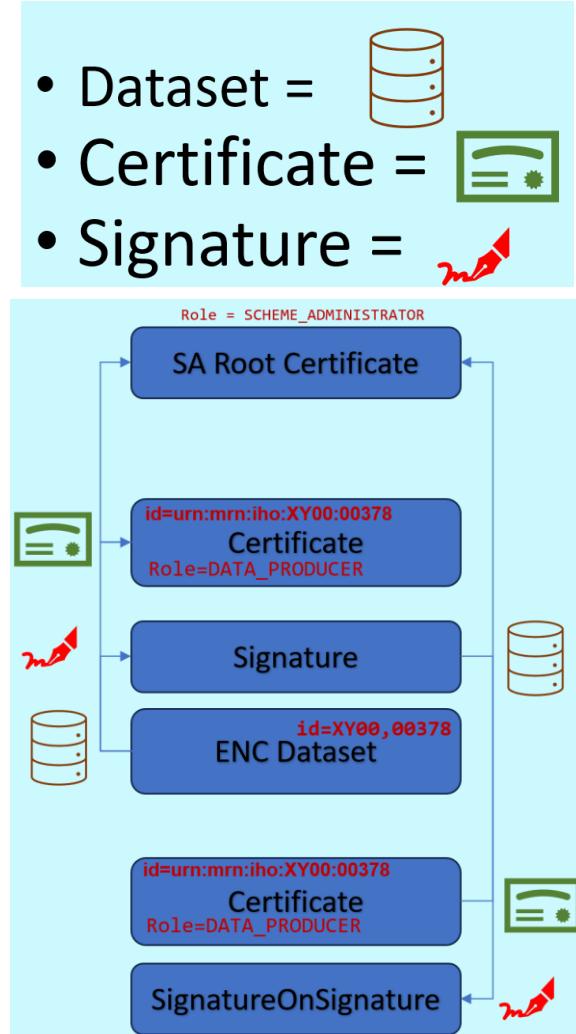
- Current situation (S-100 17-4.4.1):
 - “Fileless cancellation may be achieved by using a dataset metadata entry with the filename and original digital signature specifying the resource to be cancelled, and with all other mandatory metadata fields also set to the same values as the original, with the exception of the issueDate, which must be set to the issue date of the fileless cancellation itself.”
- Consequence:
 - Easily falsified - information available in original CATALOG.XML.
- Solution:
 - Cancellation duplicates digitalSignature of resource to be cancelled.
 - The producer also provides a signatureOnSignature of that data producer signature.
 - Not easily falsified - since the duplicated digitalSignature and the signatureOnSignature is made with the same authenticating certificate (also having the data producer code).



FREEDOM TO CHOOSE

A. Fileless cancellations Signature - improve process to avoid falsification.

- Clarifications needed:
 - Clarify that the data producer MUST reuse the signature for file-less cancellation purposes. Implication: Producer MUST retain original signature for file-less cancellation purpose.(Requirement for production system?)
 - S-100 ECDIS: Same requirement, MUST be retained for file-less cancellation purposes.
 - Requirement for S-98



B. Fileless cancellations - more attributes must be encoded in S100_DatasetDiscoveryMetadata.

- Currently, the following statement is given for fileless cancellations:
 - *“Fileless cancellation may be achieved by using a dataset metadata entry with the filename and original digital signature specifying the resource to be cancelled, and with all other mandatory metadata fields also set to the same values as the original, with the exception of the issueDate, which must be set to the issue date of the fileless cancellation itself.”*
- In addition to issueDate, the S100_DatasetDiscoveryMetadata attributes S100_Purpose, replaceData, dataReplacement (conditionally mandatory) and updateNumber (conditionally mandatory) must also be encoded.

File-based cancellation

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Issues Cancellation instruction

CATALOG.XML (S100_DDMD)	
fileName	= fileName of resource to be cancelled. (M)
digitalSignature Value	= signature of cancellation. (M)
issueDate	= Issue date of the cancellation itself. (M)
purpose	S100_Purpose = 5 (cancellation). (M)
replacedData	= either True or False. (M)
data Replacement	If replacedData = True. (CM)
editionNumber	= editionNumber of product to be cancelled. (M)
updateNumber	Increase by 1 from last published update. (M)
All other mandatory S100_Dataset Discovery Metadata fields = Values in the original	(M)

File-less cancellation

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Issues Cancellation instruction

CATALOG.XML (S100_DDMD)	
fileName	= fileName of resource to be cancelled. (M)
digitalSignature Value	= signature of resource to be cancelled. (M)
issueDate	= Issue date of the cancellation itself. (M)
purpose	S100_Purpose = 5 (cancellation). (M)
replacedData	= either True or False. (M)
data Replacement	If replacedData = True. (CM)
All other mandatory S100_Dataset Discovery Metadata fields = Values in the original	(M)

(M) = Mandatory

(CM) = Conditional Mandatory

B. Fileless cancellations - more attributes must be encoded in S100_DatasetDiscoveryMetadata.

To solve this, the following should be added in the descriptive text for fileless cancellations:

- **Fileless cancellation may be achieved by using a S100_DatasetDiscoveryMetadata entry with the filename and original digital signature specifying the resource to be cancelled, and with all other mandatory metadata fields also set to the same values as the original, with the exception of:**
 - **issueDate, which must be set to the issue date of the cancellation itself;**
 - **S100_Purpose =5 (cancellation);**
 - **replacedData set as either True or False;**
 - **dataReplacement (if the replacedData is set as True) must be populated with at least one replacement dataset name.**

And the following should be added in the descriptive text for file based cancellations:

- **File based cancellation may be achieved by the issuing of a cancellation dataset. In this case, a cancellation dataset file is created for which the edition number in S100_DatasetDiscoveryMetadata must be set to the edition number of the product to be cancelled. The above bullet list also applies, in addition to:**
 - **updateNumber (if a Product Specification supports updating of the Base datasets, increasing it by 1 from the last published update for the Base dataset.)**

C. Structure the cancellation information.

Structure the cancellation information in accordance with Edition number, Update number and Issue date. This means: highlight the cancellation descriptive text with bold “cancellation” text and align the text to the right accordingly:

Edition number	When a dataset is initially created (Base dataset), the Edition number 1 is assigned to it. The Edition number is increased by 1 at each New Edition.
Update number	Update number 0 is assigned to a new dataset and a New Edition. The first update dataset file associated with this new dataset must have update number 1. The update number must be increased by one for each subsequent update, until a New Edition is released. A re-issue of a dataset must have the update number of the last update applied to the dataset, and use the same Edition number.
Issue date	Date up to which the Data Producer has incorporated all applicable changes. The issue date must be greater than the previous issue date of the dataset.
Cancellation	The cancellation information should be structured here to align with the above information on Edition number, Update number and Issue date.

D. S100_Purpose = 5 clarification.

- Clarify that metadata attribute S100_Purpose must be populated = 5 (cancellation) for both fileless and file based cancellations.
- The existing text indicates that S100_Purpose = 5 is for file-less cancellation only:
 - *“In addition to fileless dataset cancellation using fields in the Catalogue metadata file (S100_Purpose = cancellation) a dataset may be cancelled by the Data Producer by the issuing of a cancellation.”*
- **S100_Purpose = 5 (cancellation) must be encoded for both fileless and file based cancellations.**

E. Better distinguish between the 2 methods fileless and file-based.

- The existing text is not distinguishing very well between the 2 methods. To solve this, the following statement should be added in the beginning of the descriptive text:
- **S-100 supports two methods for cancellations, fileless cancellation and file based cancellation.**



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F. Describe the intended instruction from metadata to end user systems.

- For better understanding when reading the section, clarify how the S100_DatasetDiscoveryMetadata provided for a cancellation provides “instructions” to the end user system. To solve this, the following statement should be added early in the descriptive text:
- **The S100_DatasetDiscoveryMetadata provided for a cancellation (fileless or file-based) is an instruction to the end user system to remove a particular dataset from the system.**