

## Paper for Consideration by S100TSM9

### Management of external resources extended description

<b>Submitted by:</b>	PRIMAR
<b>Executive Summary:</b>	Extended descriptions related to management and intended updating of external resources (support files) in end user systems are needed in S-100 17-4.3
<b>Related Documents:</b>	S100WG7-4.3_2022_EN_Management of external resources extended descriptions. S-100 5.0.0 Part 17 S-101 1.1.0
<b>Related Projects:</b>	

#### Introduction / Background

This paper was discussed at the S-100WG7 meeting in 2022. The proposed addition to S-100 was accepted, with the caveat that the illustrated examples should be made more product generic (Not S-101 specific as was the original purpose) and presented at TSM7.

PRIMAR is preparing for the S-100 future. As part of this, the new support file management regime introduced with S-100 has raised some concerns, and a clarification on the use of a support file referenced by features in multiple datasets is needed.

#### Analysis/Discussion

1. In S-100 one single support file can be referenced by feature attributes in multiple datasets. This creates some complexity in a scenario where the support file content is updated, and the changes do not apply to all the datasets referencing the support file.
2. The solution to the above scenario is described in S-101 Product Specification, where guidance is given for how a producer should handle such a situation to ensure that the new support file information is only applicable to the intended datasets (New generic example added as Annex A to this document).
3. It is proposed to add the information in Annex A to S-100 to ensure a common approach on support file management for the situation described across all S-100 derived products. As requested by S-100WG7 the illustrated examples have been redrawn to capture a more product generic approach.
4. It is also proposed to add some guidance in S-100 (New chapter 17-4.3.1 is proposed) on this topic:

#### 17-4.3.1 Supported Resources Multiple References Guidance

One single support file can be referenced by feature attributes in multiple datasets. This creates some complexity in a scenario where the support file content is updated, and the changes do not apply to all the datasets currently referencing the support file.

In the situation where one support file is referenced by multiple datasets, and the support file content changes and initiates a new edition of the support file, all the datasets referencing the support file will adhere to the new edition. If the support file change is not applicable to all datasets referencing it, a new support file must be created for the new changes, and the datasets references to the old support file must be deleted and references to the new support file added. For the datasets not applicable to the change, the old support file and reference will still be valid.

(For further detailed explanation refer to S-98)

**Conclusions**

- The proposed description in Annex A should be added to S-100 17-4.3.
- The proposed guidance should be added as S-100 17-4.3.1.

**Action Required of S-100WG5**

The S-100WG is invited to:

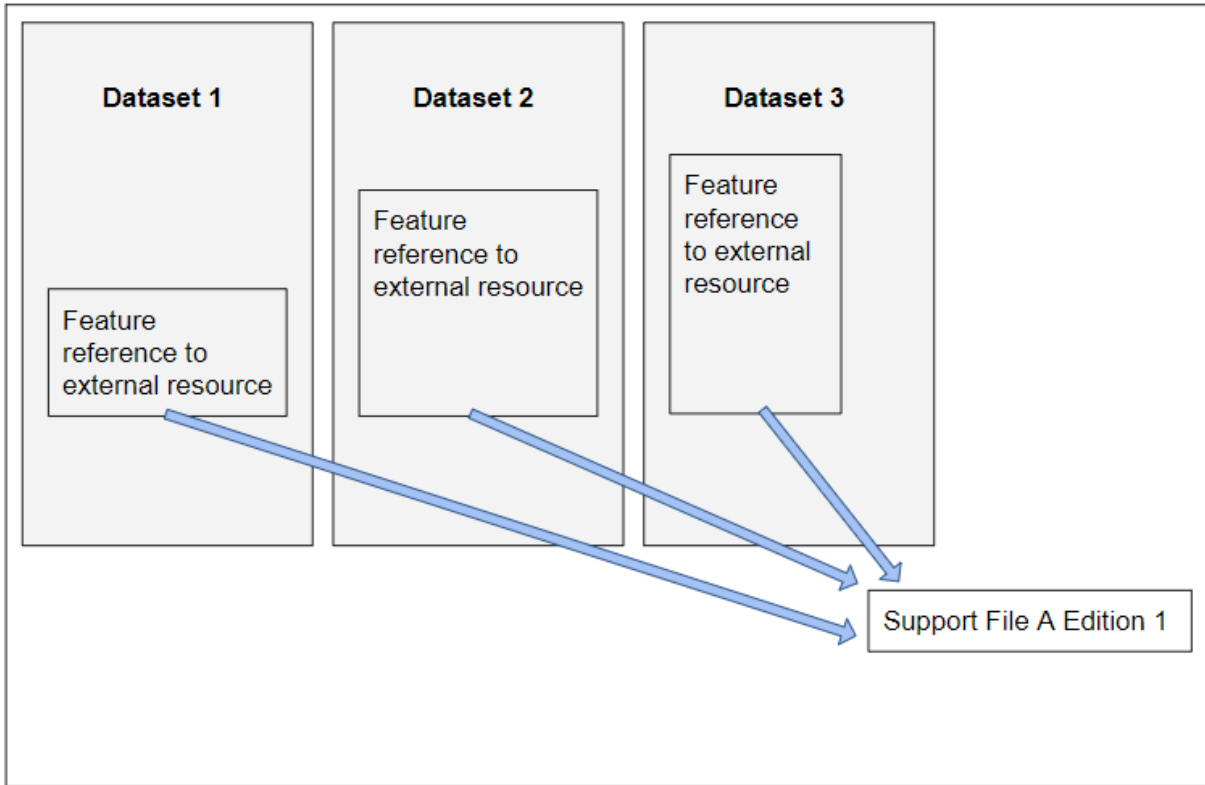
Note the paper and discuss proposed changes

**Annex A – Proposed addition to S-100 17-4.3**

If a New Edition of a support file contains changes not applicable to all previous associated features, a completely new support file must be created instead. This is to maintain the support file information in relevant associated features not affected by the last changes. For the datasets that require the changed support file associations to the old file must then be removed and new associations created for the new support file. Features where changes were not applicable will continue to use the old support file.

The following scenario demonstrates the rules related to versioning of existing support files, and issuing of new support files:

Three datasets are referencing the same support file A Edition 1:

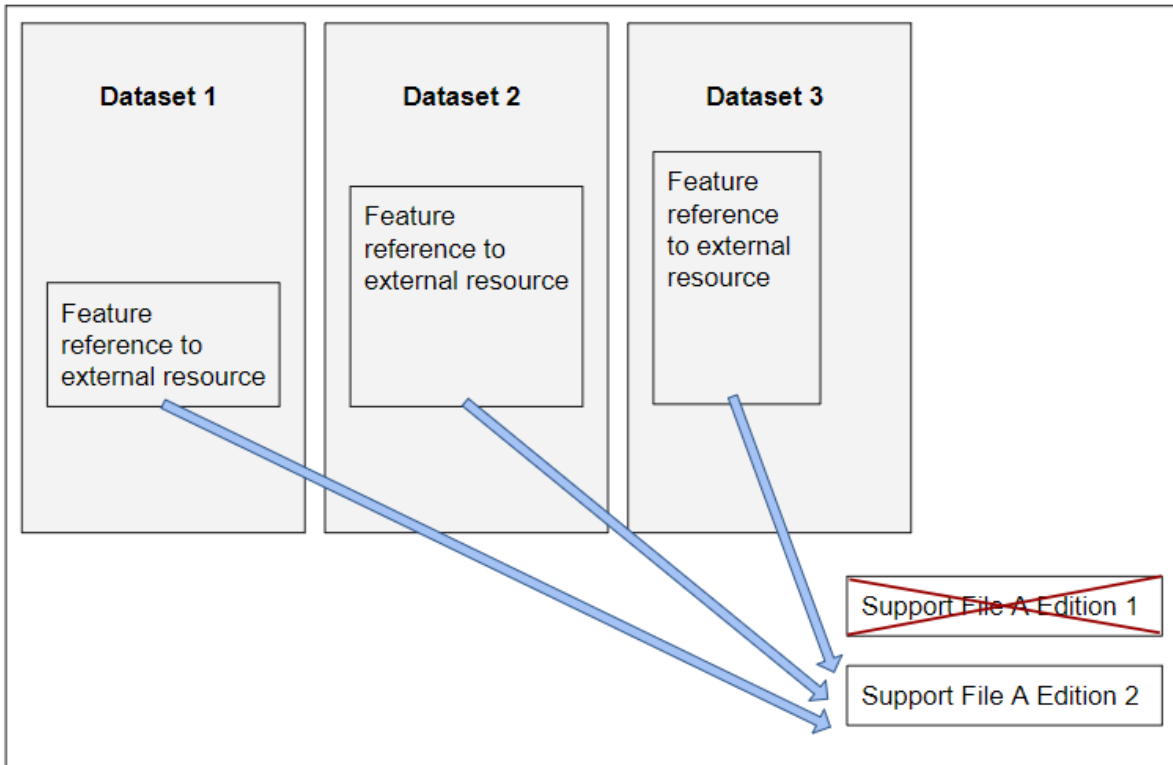


**Figure XX – Reference to a new support file**

- a) Changes occur making it necessary to issue a New Edition of support file A Edition 1.

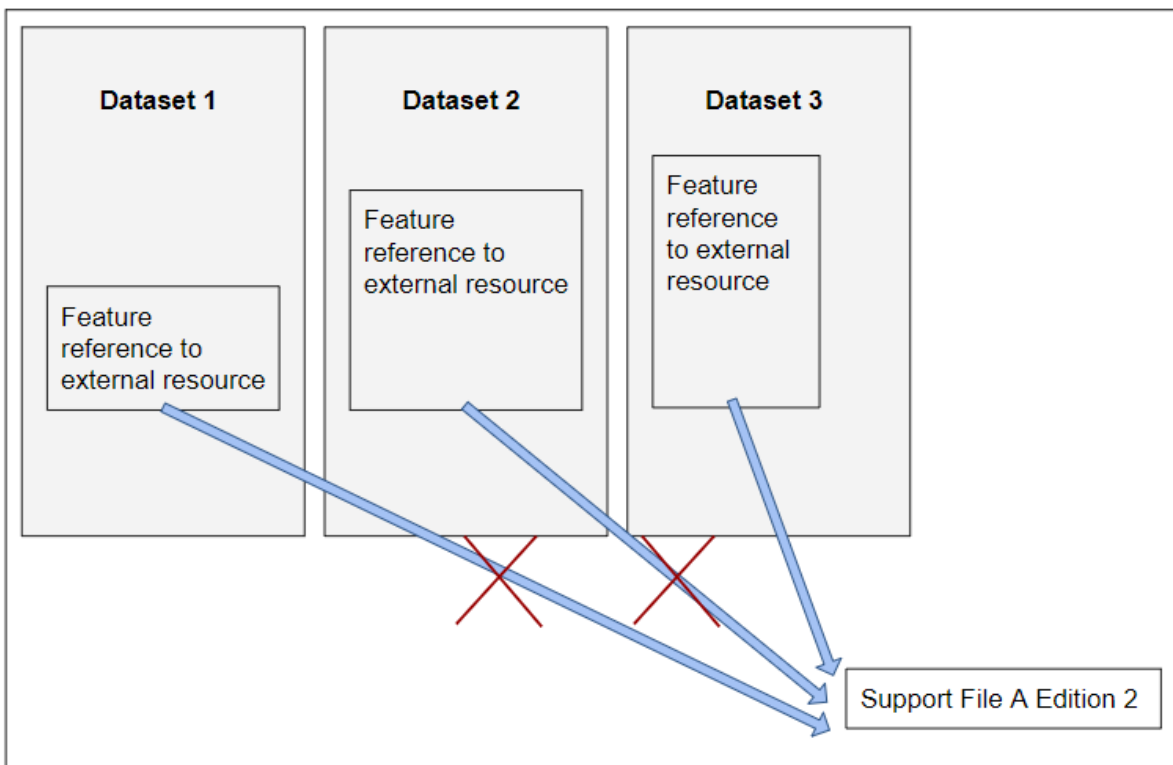
Support file A Edition 1 is no longer valid, and all 3 datasets refer to the New Edition of the support file A Edition 2. Edition 1 of the support file A should be deleted from the system if it is no longer referencing any feature that exists in the system.

This update technically should be possible to achieve with providing only the New Edition 2 of support file A in the Exchange Set, with the relevant new edition number information through the CATALOG.XML metadata:



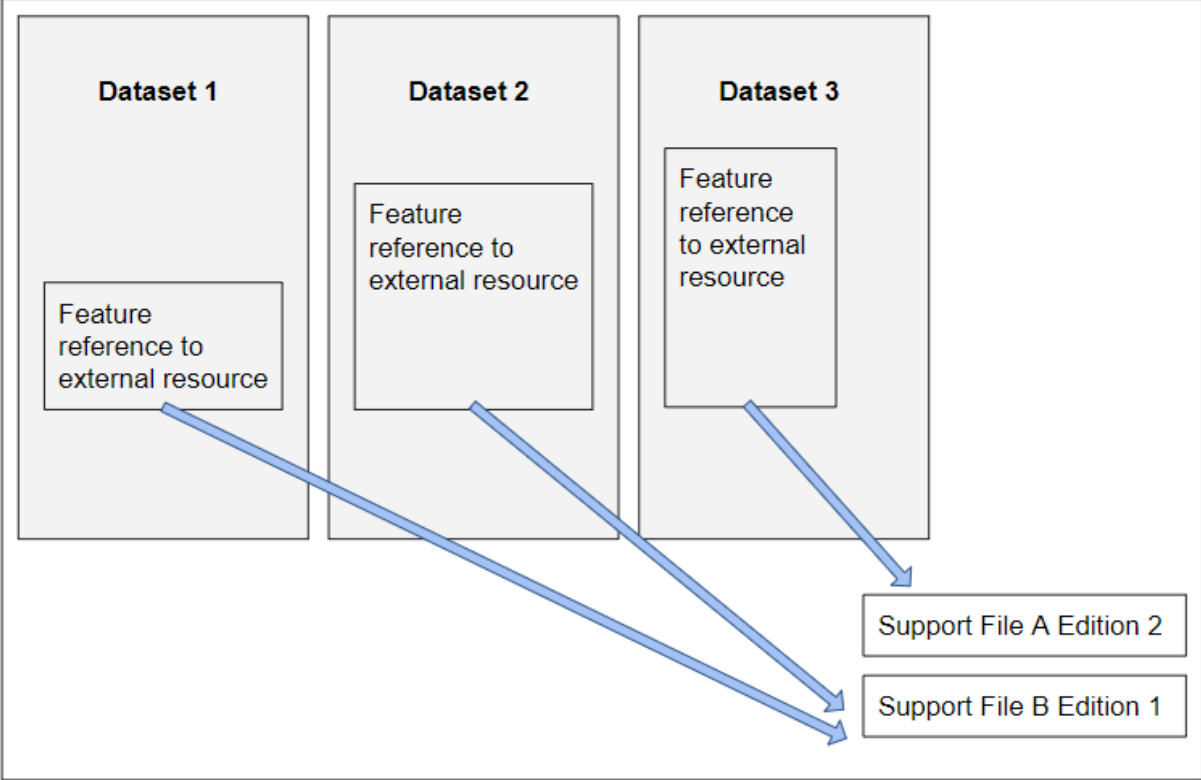
**Figure XX – Reference to New Edition of a support file**

- b) Further changes occur that are only applicable to Dataset 1 and Dataset 2. Consequently, these datasets can no longer refer to support file A Edition 2:



**Figure XX – Changes to support file that does not affect all existing referenced features**

In this case a new support file B must be created and referenced by Dataset 1 and Dataset 2:



**Figure XX – New situation with new and existing support files referencing the relevant features in relevant datasets**