

Paper for Consideration by TSMAD27

S-101 Feature Catalogue and Portrayal Catalogue Versioning

Submitted by:	TSMAD Vice Chair
Executive Summary:	This paper will outline a framework to manage versioning within S-101.
Related Documents:	S-101, S-100
Related Projects:	S-101, S-100

Introduction / Background

One of the basic principles that TSMAD agreed to was that if there were any changes to any part of the product specification that it would trigger a new version of the entire product specification. That means that if a change was made to the DCEG it would trigger a new minor version of S-101, this change may or may not have also triggered a change in the feature and portrayal catalogues. However, it was noted at the S-100 test strategy meeting that there maybe an issue with this scenario. One of the actions noted the following:

Need to think about the catalogs versus product specification maintenance and how it is numbered.
Need to look at the S-100 to see how the catalogue is inherited and how to wire it back so that systems know what versions of the catalog it can be traced back to. Look at the S_100 catalogue fields.

This paper seeks to clarify how the version control of S-101 should be handled and seeks TSMAD endorsement of this clarification.

Analysis/Discussion

S-101 states the following for Product Specification maintenance:

1.5.1 IHO Product Specification Maintenance**1.5.1.1 Introduction**

Changes to S-101 will be released by the IHO as a new edition, revision, or clarification.

1.5.1.2 New Edition

New Editions of S-101 introduce significant changes. New Editions enable new concepts, such as the ability to support new functions or applications, or the introduction of new constructs or data types. New Editions are likely to have a significant impact on either existing users or future users of S-101.

1.5.1.3 Revisions

Revisions are defined as substantive semantic changes to S-101. Typically, revisions will change S-101 to correct factual errors; introduce necessary changes that have become evident as a result of practical experience or changing circumstances. A revision must not be classified as a clarification. Revisions could have an impact on either existing users or future users of S-101. All cumulative clarifications must be included with the release of approved corrections revisions.

Changes in a revision are minor and ensure backward compatibility with the previous versions within the same Edition. Newer revisions, for example, introduce new features and attributes. Within the same Edition, a dataset of one version could always be processed with a later version of the feature and portrayal catalogues.

In most cases a new feature catalogue or portrayal catalogue will result in a revision of S-101.

1.5.1.4 Clarification

Clarifications are defined as non-substantive changes to S-101. Typically, clarifications: remove ambiguity; correct grammatical and spelling errors; amend or update cross references; and insert improved graphics. A clarification must not cause any substantive semantic change to S-101.

Changes in a clarification are minor and ensure backward compatibility with the previous versions within the same Edition. Within the same Edition, a dataset of one clarification version could always be processed with a later

version of the feature and portrayal catalogues, and a portrayal catalogue can always rely on earlier versions of the feature catalogues.

Changes in a clarification are minor and ensure backward compatibility with the previous versions

1.5.1.5 Version Numbers

The associated version control numbering to identify changes (n) to S-101 must be as follows:

New Editions denoted as **n.0.0**

Revisions denoted as n.**n.0**

Clarifications denoted as n.n.**n**

The following table shows a sample scenario for S-101 versioning:

S-101 version	Type of version	Parts Affected	Comment
1.0.0	Initial Version		
1.0.1	Clarification	DCEG	Corrected spelling in the DCEG
1.1.0	Revision	Portrayal Catalogue	Portrayal Rule Corrected
1.2.0	Revision	S-58 Check	Correction made to S-58 check
2.0.0	New Edition	Feature Catalogue Portrayal Catalogue DCEG S-58 Check	New Feature Added
2.0.1	Clarification	Main Product Specification	Spelling mistakes corrected
2.1.0	Revision	Main Product Specification	Dataset size extended
2.2.0	Revision	Feature Catalogue Portrayal Catalogue DCEG	New attribute added

From the above example, it should be noted that there are many things that may trigger a new version of S-101. Some of these items may trigger the need for a new portrayal and feature catalogue, but there are other scenarios that would trigger a new revision without the need for a new feature/portrayal catalogue.

The key issue is that TSMAD needs to manage the versioning of S-101 so that OEMs know when they would need to send out a new feature and portrayal catalogue – meaning there is new content to be implemented on the ECDIS.

So while it is conceivable to have a product specification revision without needed to change the underlying Feature Catalogue and Portrayal Catalogue, that type of situation would likely be rare. The contrast would be that most clarifications would likely never change the underlying feature and portrayal catalogues. With the above as the framework TSMAD could prescribe the following rule for version management:

1. Prescribe that changes to the feature and portrayal catalogue are only part of revisions and new editions. Thus the uptick at the clarification stage would not contain any FC/PC changes.
2. Create a sub-version for FC/PC and limit them to the n.n designation.

If TSMAD agrees to this rule for FC/PC changes then the following will have to occur:

1. A clause will have to be added to S-101 Maintenance Section stating this new rule.
2. S-100 metadata for the exchange set will have to be examined to provide enough information for systems to ensure that they have proper FC/PC available before loading each dataset. Meaning that there will need to be a correlation established between product specification version and FC/PC versions and populating that in the S-101 exchange set metadata.

Recommendations

TSMAD should discuss the above scenario and recommend a way forward for both S-101 and S-100.

Action Required of TSMAD

The TSMAD is invited to:

- a. note the paper
- b. discuss the prescribed approach for S-101 versioning
- c. recommend a way forward