

## Versioning in S-101

<b>Submitted by:</b>	S-101PT Chair
<b>Executive Summary:</b>	This paper presents suggestions on how we can more clearly convey the status of different components of S-101 and how we can ensure versioning is done consistently.
<b>Related Documents:</b>	S-101 Edition 1.1.0 <a href="#">M-3 2/2007</a>
<b>Related Projects:</b>	S-101, S-100

**Introduction / Background**

1. S-101 is currently in the test and development phase set out within IHO resolution 2/2007 therefore changes are occurring to individual components of the Product Specification and at times to the overall standard. Although para 4.2 of resolution 2/2007 sets out a numbering system, during a test and development phase additional sub versioning is required. Also, consistent versioning of components such as Feature Catalogues (FC) and Portrayal Catalogues (PC) requires clear guidance.

**Analysis/Discussion**

2. As part of the work of the S-101PT a number of issues around versioning have arisen these can be summarized as follows;

- During this period of active development, a number of versions of the different S-101 components have emerged. The community may also work on multiple versions at the same time.
- There is a need to clarify how feature and portrayal catalogue versions correspond to an S-101 version.

3. To provide clarity for all the S-101PT web page could include a table which lists the various versions and links to them within the GI Registry (where available). It also seems useful to link to the relevant development areas. For further clarity a named identifier using the phonetic alphabet could be used, although this may not be necessary. "Interim versions" which are created to allow those involved in test and development to explore changes but which are not published as a complete version of S-101 could also be shown in this table. Clear guidance would be needed that such versions should not be taken as normative.

Status	Identifier (phonetic alphabet)	DPS Version	DCEG Version(s)	FC Version (s)	PC Versions (s)	S-100 Version
<i>Lead</i>		<i>IHO Sec</i>	<i>IHO Sec</i>	<i>KHOA</i>	<i>NIWC</i>	<i>IHO Sec</i>
Published	Alfa	1.0.0	1.0.0	1.0.0	X.X.X	4.0.0
Development draft	Bravo	1.0.0	1.0.1	1.0.1	1.0.0	4.0.0
Planned Version	Charlie	1.1.0	1.1.0	1.1.0	1.1.0	5.0.0
Development Area	N/A				<a href="#">LINK</a>	

**Table 1** – Proposed summary table of S-101 versions

4. The S-101 product specification may be revised and result in updated FCs and PCs. However, it is also possible that the DCEG, FC, PC and validation checks may have intermediate versions. A range of scenarios can be envisaged (see annex A) and these are not exhaustive. This approach assumes that numbers are not limited to single digits, it also introduces a 4th date component for some elements. When the Product Specification changes the Feature Catalogue and Portrayal versions increase in line even if they have not themselves changed.

### Conclusions

5. During this test and development phase more clarity is needed on versioning for S-101 and likely for other S-10x product specifications as well. This paper proposes improvements which will add clarity for the various stakeholders engaged in this work.

### Recommendations

- A. Create a summary table on the S-101PT page clearly listing the versions of S-101 that are published and in different states of development.
- B. Formally agree the concept of interim versions.
- C. Consider adopting the scenarios in Annex A for S-101PT use, and if this is agreed;
- D. Raise the versioning scenarios listed in Annex A to the S-100WG for review and potentially for inclusion in S-97 and/or S-100.

## Annex A – S-101 Versioning Scenarios

Ref	Type of change	Example	DPS	DCEG	FC	PC	Validation
1	Major change includes an S-100 version change	New concept in S-100 used by S-101	X.0.0	X.0.0	X.0.0-YYYYMMDD	X.0.0-YYYYMMDD	X.0.0-YYYYMMDD
2	New content no portrayal impact	Attribute value added <sup>1</sup>	X.X.X	X.X.X	X.X.X-YYYYMMDD	X.X.X-YYYYMMDD	Possibly If yes: X.X.X-YYYYMMDD
3	New content with portrayal impact	New attribute value and corresponding symbol	X.X.X	X.X.X	X.X.X-YYYYMMDD	X.X.X-YYYYMMDD	Possibly. If yes: X.X.X-YYYYMMDD
4	Symbol change only data not affected	New symbol for existing content	N/A	N/A	N/A	X.X.X-YYYYMMDD	N/A
5	Validation change only	Additional check	N/A	N/A	N/A	N/A	X.X.X-YYYYMMDD
6	Encoding change	Change of guidance to cover new real world concept consistently	N/A	X.X.X	N/A	N/A	Possibly. If yes: X.X.X-YYYYMMDD
7	Feature catalogue correction, no content or portrayal impact	Add listed value to FC that is described in the DCEG but missing from FC.	N/A	N/A	X.X.X-YYYYMMDD	N/A	N/A
8	Portrayal catalogue correction, no content or FC impact	Correct portrayal catalogue rule	N/A	N/A	N/A	X.X.X-YYYYMMDD	N/A

1. Although technically this changes the application schema this is not included within the S-101 DPS. This is a good reason not to as the flexibility afforded by Feature Catalogues would immediately be degraded to some extent.