



S-100 Versioning Discussion

S-101 PT Chair Thomas RICHARDSON

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OVERVIEW

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- At S-101PT8 a discussion took place about the versioning of S-101
[S-101PT8 2021 21 EN Versioning in S-101 V1.pdf \(iho.int\)](#)
- Firstly this challenge is broader than S101 as it applies to other Product Specifications and, subject to agreement, guidance should be included in S-97 and possibly S-100 in future; and may impact on Resolution 2/2007
- It was generally felt that dates should not form part of the versioning scheme
- IHO Resolution 2/2007 is relevant to this but does not provide specific guidance for S-100 Product Specifications which have various interdependent component elements; nor does it cater for the Edition 1.0.0 to 2.0.0 “Implementation and Testing” phase
- Action PT8-30 was taken by the chair to refine the tables and progress this work

[Chair]

[Docs: S-101PT8-21 – [S-101 Versioning](#)]

Notes:

- The Chair presented on S-101 **versioning**, including proposed tables for inclusion on the S-101PT web pages to list the latest published **versions** of S-101 documentation and Catalogues, both during the development phase and post-operational.
- The Paper generated significant discussion, in particular the appending of dates to the **version** numbers and the requirement to establish a relationship between a **version** of S-101 and its Catalogues.

Decisions:

S-101PT8-29: While considered to be a good starting point, it was agreed that the tables included in Paper S-101PT8-21 required further refinement.

Actions:

S-101PT8-30: The **versioning** tables included in paper S-101PT8-21 are to be refined, with discussion with relevant stakeholders as required (Chair).



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VERSIONING

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| 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 | | | | LINK | |

Table 1 – Proposed summary table of S-101 versions

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SCENARIOS

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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 ¹ | 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.



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TEST & DEVELOPMENT PERIOD

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- During the Test and Development phase S-101 and other specifications will iterate as follows;
1.0.0, 1.1.0 1.2.0.....
- A new edition must increment the version of all components this would include a new version of S-100 e.g.
- 1.1.0 applied to the DPS, DCEG, FC, PC incremented to 1.1.1
- Revisions may increment only the 2nd element 1.X.X changes may be introduced but must be backwards compatible e.g. add feature attribute or attribute value but not remove or change existing concepts
- Clarifications only increment the 3rd element 1.1.X and these may be applied to individual components e.g .DCEG 1.1.3 can be used with DPS 1.1.0 but changes must be non-substantive



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OPERATIONAL PERIOD

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- Once the operational phase is reached the impact on data produced and ECDIS systems increases and rules need to be in place to ensure the system works effectively
- S-98 C-21.1 sets a requirement for ECDIS to support multiple versions of FCs and PCs and importantly once operational any changes need to be carefully considered
- Clearly once operational producing new editions of S-101 due to catalogue changes is impractical, it seems more likely that over time older catalogues would be phased out
- This may require the version of catalogues to be used together to be exchanged in some way or enforced in the distribution chain

**IHO****PROPOSED TABLE**International
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| 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 | X.0.0 | X.0.0 |
| 2 | New content no portrayal impact | Attribute value added ¹ | X.X.X | X.X.X | X.X.X | X.X.X | Possibly If yes: X.X.X |
| 3 | New content with portrayal impact | New attribute value and corresponding symbol | X.X.X | X.X.X | X.X.X | X.X.X | Possibly. If yes: X.X.X |
| 4 | Symbol change only data not affected | New symbol for existing content | X.X.X | X.X.X | X.X.X | X.X.X | X.X.X |
| 5 | Validation change only | Additional check non critical | X.X.X | X.X.X | X.X.X | X.X.X | X.X.X |
| 6 | Encoding change | Change of guidance to cover new real world concept consistently | X.X.X | X.X.X | X.X.X | X.X.X | Possibly. If yes: X.X.X |
| 7 | Feature catalogue correction, no content or portrayal impact | Add listed value to FC that is described in the DCEG but missing from FC. | X.X.X | X.X.X | X.X.X | X.X.X | X.X.X |
| 8 | Portrayal catalogue correction, no content or FC impact | Correct portrayal catalogue rule | X.X.X | X.X.X | X.X.X | X.X.X | X.X.X |



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RECOMMENDATIONS

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The S-101 PT is invited to

- a) Review the proposed table of versioning provided
- b) Consider raising this with the S-100 WG for confirmation and inclusion in S-97 and possibly S-100 including consideration of how version combinations are dealt with; and possible impacts on Resolution 2/2007
- c) Include testing of this in testbeds and S-164 development



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QUESTIONS ?