

## Comments – Catalogue and dataset versioning

<b>Submitted by:</b>	Portolan Sciences LLC
<b>Executive Summary:</b>	Comments relating to catalogue and dataset versioning
<b>Related Documents:</b>	S100WG8-24 (TSM10-8.2)
<b>Related Projects:</b>	--

### Comments

- 1) An unambiguous link between a dataset and a version of a catalogue is definitely necessary.
- 2) Version numbers (in a broad sense) of Feature and Portrayal Catalogues (FC/PC) need not and should not change version numbers entirely independently of the main Product Specification number.
- 3) Allowing feature and portrayal catalogues' version numbers to:
  - a) use exactly the same N.N.N format as the main Product Specification, and
  - b) progress independently of version numbers of Product Specifications
 will result in proliferating version numbers which are difficult to distinguish and have no obvious relation to one another. This means an authoritative table mapping version numbers of main Product Specifications to FC/PC versions must be created and maintained.
- 4) Version numbers of validation checks can also be expected to evolve in the same way as feature and portrayal catalogues. We now have four streams of version numbers which can change independently on one another.
 

This will entail additional work processes in IHO technical groups to maintain mappings between versions, an authoritative distribution source. The resultant table will be prone to errors in interpretation as well as maintenance.
- 5) Many software applications utilize a “build” number which is distinct from and supplements the version number of the application. This concept can be applied to versioning all subsidiary components of Product Specifications such as FC, PC, and validation checks.
  - a) The format of such a “build number” should be easily distinguishable from the N.N.N format used for product specifications. (This facilitates both human and automated recognition of each component – version and build.) The full version number for FC, PC, and validation checks should include the N.N.N version number of the main Product Specification as well as the build number.
  - b) Version matching for application can use “regex grouping” functionality, available with most modern programming languages and associated libraries.
  - c) Since version numbers are strings in S-100 (N.N.N), a build number suffix can be added without modifying the UML model.
- 6) The proposed revisions should be evaluated in the context of updating portrayal in isolation (for example, to use a revised symbol). Since according to the proposal, the PC version is specified in the discovery metadata for a dataset, publishing an updated PC means discovery metadata for the dataset must be updated. This applies to every dataset that uses the old PC. S-100 currently provides no way to update only discovery metadata blocks; a fresh discovery metadata block must therefore be issued even when the dataset itself has not changed. It is not clear how this can be done within the context of S-100 5.2.0, without re-issuing the exchange set containing the now-corrected discovery block (which apparently entails re-issuing the dataset too).

### Conclusions

1. The implications of the proposed solution for linking datasets to FC/PC need to be examined in more depth.
2. Alternative solutions such as the “build number” described above should be explored before a decision is made.