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| --- | --- | --- | --- | --- | --- | --- | --- |
| Doc | DE | Clause 1 | Para 2 | ed | Typo at the end of the first sentence.  “[…]specified in each individual check..” | Remove the duplicated dot “.” at the end. | **Agreed** |
| Doc | DE | Clause 1.4.1 | Para 3 | ed | Typo “necesssarily” | Remove one “s” | **Agreed** |
| Doc | DE | Clause 2 | Table 2-1 | ed | Typo at the description of “Linked Table” | Remove the duplicated dot “.” at the end. | **Agreed** |
| doc | AU | 4 | Table 4-1 | te | Phases 2, 4, 5 seem to focus on non-conformances at the Dataset level and not across products. Shouldn’t Phase 6 be part of S-158:100?? | Review content or improve Descriptions so they focus on the cross-product outputs they aim at checking. | **TBD after deletion of product-specific checks (see other AU comment).**  **Might leave in table with a remark about there being no checks in the phase. S-98 is still under development and checks might turn up later.** |
| Doc/Excel | DE | Clause 4 | Table 4-1 | te | The dev check numbers in Excel does not match the format in the document.  Excel <> Document  S98\_Dev2001 <> S98Dev\_20xx | Align the format of the check numbers in Excel to the document. | **Will use S98\_DevXXXX for consistency with other S‑158 specifications.** |
| Doc | DE | Clause 5 | Para 1 | ed | Typo “descibed” | Correct to “described” | **Agreed** |
| Doc | DE | Clause 8 | Para 1 | te | The first sentence read as S-102 must be in edition 2.0.0 which is not the case. According to clause 1.1 “Scope” the S-102 is in edition 3.0.x. In general, the correction number of the edition should not be expressed as “0”. It should be “x”. | Correct to  “S-102 Edition 3.0.x, S-104 and S-111 Editions 2.0.x datasets […]” | **Agreed** |
| Doc | DE | Clause 8 | Para 3 | ed | Typo at “10-7 degrees” | Correct to “10-7 degrees” | **Agreed** |
| Doc | DE | Clause 8 | Para 3 | ed | Typo at default tolerance first point.  […] the the precision of […] | Remove the duplicated “the”. | **Agreed** |
| Doc | DE | Clause 9 | Para 1 | ge | Why is a build date needed? We got a correction number included in the name of the excel file. Isn’t this sufficient? | Remove the build date from the document and the excel file name. | **Not agreed, needed for maintenance & tracking.** |
| list | AU | Dev1001 to Dev6012 | NA | ed | The vast majority of the tests from S98\_Dev1001 to S98\_Dev6012 seem to be Product specific and not linked to the interoperability between datasets from. | Move tests to the Product specific S-158:1xx documents | **Agreed** |
| list | rmm | Dev1001 to Dev1004, Dev2001 to Dev2005, Dev2008, Dev2009, Dev4001 to Dev4005, Dev6001-Dev6010, |  | te | Generic checks unrelated to S-98. Remarks in Notes column indicate the corresponding S-100 generic checks. These checks are redundant in the S-98 list. | Delete checks from this list. | Agreed |
| list | rmm | Dev1005 |  | te | Description obsolete, attributes in description are not used in S-100 5.2.0 and specifications allow UTM/UPS EPSG codes as well as dynamic geographic 2D CRS based on different members (horizontal datums) belonging to the WGS 1984 ensemble.  The allowed horizontal CRSs are controlled in the Product Specifications, and the S-98 sub-group says there is no need to have the same projections, so the generic check S100\_Dev0573 will suffice. | Either delete check or rewrite to allow EPSG codes for CRSs using different realizations in the WGS 84 horizontal datum ensemble. | Agreed |
|  | DE | S98\_Dev2005 |  | te | That check forces S-102 to be in WGS84 (EPSG:4326), but S-102 3.0.0 allows data to be projected.  This test will not work because it does not match the S-102.  See  S-102 3.0.0 4.2.1.1.1.6  &  S-102 3.0.0 Table 10-6 No 3 & 4 | The test should be removed or changed so that projected coordinate systems are also permitted. | **See Dev0560 in the S-158:100 0.2.0 list.**  **Check will be removed from the S-158:98 list.** |
| list | rmm | Dev2010, Dev2011 |  | te | These are product-specific S-111 checks | Delete checks from this list and forward to S-111 for consideration | **Agreed** |
| list | DE | S98Dev\_4002, S98Dev\_4003, S98Dev\_4005 |  | te | Does this test apply to “All” datasets or only raster-based datasets like S-102/S-104/S-111? |  | **Equivalencies:**  **S98\_Dev4002 / S100\_Dev0564**  **S98\_Dev4003 / S100\_Dev0166**  **S98\_Dev4005 / (S100\_Dev0563 + S100\_Dev0567 + S100\_Dev0568)**  **Will remove these checks from S-98 since they are covered by generic checks.** |
| list | rmm | Dev4007, Dev4008 |  | te | Redundant, as Note says. | Delete | **Dev4007 - agreed**  **See reply to DE comment below for Dev4007** |
| list | DE | S98Dev\_4007 |  | te | In S-102 the metadata coverage is based on dataCodingFormat=9, which is derived from dataCodingFormat=2. The check does not allow ECDIS to display information from the metadata coverage. So why have we gone to the trouble of implementing this important information in the PTs? | Extend the check to dataCodingFormat=9 | **As the remark in the S-98 0.2.1 list says, this check is redundant because dataCodingFormat, being one of the HDF5 attributes in the dataset, in the dataset is specified by the respective PS and attribute conformance to the PS is validated by S100\_Dev0573.**  **Delete S98\_Dev4007** |
| list | rmm | Dev4009 |  | te | This check is designated as applying only to S-104. That suggests it is product-specific.  Also, see Notes column: (1) This check would invalidate any dataset that is issued late. (2) timePoint is of type DateTime, and can't be compared only to issueDate | Delete. Refer to S-104 and S-111 teams for consideration as product-specific check. | **Agreed** |
| list | rmm | Dev5001, Dev5002 |  | te | These checks have been on the table for a while but S-98 still has nothing about maximum and minimum resolutions. | Delete.  Re-introduce if and when S-98 has something to say about maximum and minimum resolutions. | **Agreed** |
| list | DE | S98Dev\_5001  S98Dev\_5002 |  | te | That’s not needed. | Remove checks | **Agreed, see comment by RMM** |
| list | rmm | Dev7002 |  | te | Complements 7009 in checking that bathymetry data is not on land.  Amend description to refer to the largest scale ENC, like Dev7009.  In special cases (e.g., S-102 issue #50 <https://github.com/iho-ohi/S-102-Product-Specification/issues/50#issuecomment-1748828458>) it is possible for bathymetry to overlap a land feature Also, there is the possibility of obsolete ENC or cartographic approximation compared to bathymetry cells. | Retain with amended description and amend severity level to W.  Solution should be “Refer to producer”. ECDIS should accept such S-102 datasets if producer says they are valid.  There being no provision in discovery metadata or elsewhere for overriding specific checks, there is no way currently for metadata indicating producer confirmation of validity in spite of triggering this check. Add new discovery metadata field? | **Agreed** |
| list | DE | S98Dev\_7002 |  | te | This is not technically possible. It is not possible to prevent a bounding rectangle from overlaying non-rectangular Group1 objects (other than Dredged Area and Depth Area). | Remove this check or degrade to a warning | **Will downgrade severity to W, see comment by RMM** |
|  | DE | S98Dev\_7003 |  | ge | S-102 can be produced much faster than S-101, which can lead to the short-term production of shallower S-102 products. A warning is therefore completely justified.  Upgrading to Error or Critical Error should not be undertaken under any circumstances, as highly accurate S-102 products would then have to be artificially held back until the S-101 is released. This would in turn raise the question of why S-102 is needed.  Conclusion:  The test is useful, but only as a warning. |  | **Check severity is W in the S-158:98 0.2.1 list.** |
| list | rmm | Dev7004-Dev7005 |  | te | See Notes column. WLA is calculated where S-102/S-104 coverage exists. | Delete checks | **Agreed** |
| list | rmm | Dev7008 |  | te | TWCWG feedback (2023) is that this would be difficult if not impossible to ensure.  NB: Zero is a valid value for water level height and current speed. | Delete check | **Agreed** |
| list | DE | S98Dev\_7009 |  | ge | Even if the check is correct in theory, this procedure cannot be implemented in practice.  There will always be small gaps in the measurement. These should not be closed in the S-102 because the S-102 provides highly accurate data. If possible, these should not simply be interpolated without being able to rule out dangerous shoal spots.  The situation is different for the S-101. The depth areas are already generalized by specifying a depth range. Creating artificially unsurveyed areas here is the wrong way for navigation. | Remove the check | **Not agreed, the current position of the S-98 sub-group is that there should be no “holes” in S-102 data used on ECDIS except around land or unsurveyed areas.**  **Will consider a different formulation if the S-102 PT can provide one. Maybe a formulation based on a spatial tolerance, either a fixed distance (5m? 1m?) or resolution-based (e.g., 2 X max. cell diagonal? 2 X *approximateGridResolution*?)** |
| list | rmm | New |  | te | Add test capturing S-98 C-12.1.1 requirement below. Dev6011 and Dev6012 only check whether the code and role are encoded.  For digitally signed datasets, the CN data producer integer and alpha code elements in the MRN of at least one of the authenticating certificates must match those contained in the dataset and its CATALOG.XML entry | New validation check or S-164 test?  Description: see col. 6  Solution: Amend CATALOG.XML  Severity: E | **Agreed** |
| list | rmm | New |  | te | C-12.1.1 requirements for ST code – the catch-all statement at the end makes all ST field values technically valid. | No action for validation checks.  Revisit as needed depending on developments at S-100 TSM in March 2025 including new checks for authentication. | **Agreed** |
| list | rmm | New |  | te | Discovery metadata for datasets must have extent and either scale or resolution information encoded to allow control of ECDIS loading. | Add check for presence of extent and either display scale or approximate resolution in CATALOG.XML.  Severity: E | **Agreed** |
| list | rmm | New |  | te | S-102/S-104 projections should be compatible.  Severity: E  NB: According to the latest info I have been given from the s-98 sub-group, S-101 need not be on the same projection as S-102/S-104. If this changes similar checks involving S-101 will also be needed. | Add check comparing projections for S-102/S104.  One of the following conditions must be satisfied, for S-102 & S-104 intersection regions:  Both must either specify EPSG 4326 or one of its ensemble members.  Both must specify the same UTM or UPS EPSG code.  Note that in allowed overlap regions (i.e., 1-cell “border”) the overlapping “adjacent region” will not meet this check, which is OK. | **Agreed** |
| list | rmm | New |  | te | Ensure there are no gaps between projected and unprojected datasets in the same product.  Extend/Expand 5m overlap tolerance rule from ENCs? | Description: For datasets which:  (a) belong to the same product, and  (b) have bounding boxes or bounding polygons which OVERLAP or TOUCH one another, and  (c) have overlapping scale ranges or similar *approximateResolution*, and  (d) use different projections, or one is projected and the other unprojected,  ...??? (there must be no sliver polygons between coverages when each is converted to the other projection.)  Message: Gap in coverage between adjacent or overlapping datasets.  Solution: Amend one or both datasets.  Severity: E | **Agreed** |
| list | rmm | All |  | ge | Apply the amendments proposed in the Notes column unless overridden by disposition of review comments. |  | **Agreed** |
| list | rmm | New |  | te | (Checks for certificate authentication. Certificates are described in both S-100 Part 15 as well as S-98 Annex C v. 1.7.4 clause C-12.1.1 so the location of the new check(s) could be this list or the S-100 generic list.) | TBD as of 15 January 2025 | **Agreed** |
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