Paper for Consideration by ENCWG7

Update of S-58 test datasets

Submitted by:	S-58 SubWG
Executive Summary:	This paper presents the changes to the S-58 Test Datasets resulting from the changes in the recently published S-58 edition 7.0.0
Related Documents:	S-58 Edition 7.0.0
Related Projects:	S-58 Test datasets

Introduction / Background

As a result of the publication and MS approval of S-58 edition 7.0.0 which introduced 5 new and amended/clarified 7 'Critical' errors, revised versions of six of the existing S-58 test datasets have been prepared.

We would like to thank IC-ENC and IIC for their work in specifying and creating the revised test datasets, and also thanks to Nautical Dimensions, IC-ENC and PRIMAR for carrying out a review of the amended datasets.

Analysis/Discussion

1. The table below contains a summary of the changes made to the S-58 test datasets.

Check No.	Check Description – changes in red	Change in S-58 edt 7.0.0	Test data set	Test Data change
7	For each feature object with invalid AGEN, FIDN or FIDS values.	No change in S-58, however in order to clarify the intent of this check an object has been inserted containing FOID with a valid AGEN code that is different to the AGEN code given in DSID. Validation software should not report this as a Critical error.	AA400014 (00700014.000)	The AGEN code on a LNDMRK feature has been set to GB (540=0x1C02)

54a	For each FORSTC, LNDMRK or SILTNK feature which is not COVERED_BY a BRIDGE, COALNE, DAMCON, FLODOC, HULKES, LNDARE, OFSPLF, PILPNT, PONTON, PYLONS, SLCONS or UWTROC feature object OR a MORFAC feature object where CATMOR is Equal to 1 (dolphin) OR 2 (deviation dolphin) OR 5 (post or pile).	Amended to allow MORFAC- CATMOR = 1 or 2 as acceptable supporting object to FORSTC, LNDMRK & SILTNK	AA400001	MORFAC features with CATMOR 3, 4, 6 & 7 sharing geometry with point FORSTR, SILTNK, LNDMRK of any CATLMK added to trigger additional specific 'Critical' errors. Report updated.
54b	For each DAYMAR feature object which is not a slave in a master/slave relationship AND is not COVERED_BY a BRIDGE, COALNE, DAMCON, FLODOC, HULKES, LNDARE, OFSPLF, PILPNT, PONTON, PYLONS, SLCONS or UWTROC feature object OR a MORFAC feature object where CATMOR is Equal to 1 (dolphin) OR 2 (deviation dolphin) OR 5 (post or pile).	Amended to allow MORFAC- CATMOR = 1 or 2 as acceptable supporting object to DAYMAR Check downgraded to W	AA400001	Removed downgraded Check 54b from report.
77	For each DEPCNT feature object which CROSSES another DEPCNT feature object.[3] [3] Instances where the point of intersection is an intermediate vertex or node, and where one DEPCNT does not cross to the other side of the other DEPCNT, are excluded.	Example of the excluded situation stated in the new postscript added to the dataset, which should not trigger a 'Critical' error.	AA400016	DEPCNTs that touches another DEPCNT at a single vertex and a node added
519a	If the combined coverage of all DEPARE, DRGARE, FLODOC, HULKES, LNDARE, PONTON and UNSARE feature objects is Not equal to the combined coverage of all M_COVR meta objects where CATCOV is Equal to 1 (coverage available).	Check message and solution amended :- Skin of the earth (Group1) objects do not equal the data coverage (M_COVR = 1). Amend to ensure Group1 coverage and M_COVR with CATCOV = 1 are equal.	AA400003	Changes to report only
548a	If the combined coverage of M_COVR meta objects is Not equal to the cell extents.	Check renamed to 548a	AA400003	Changes to report only

548b	For each M_COVR meta object that OVERLAPS or is COVERED_BY another M_COVR object.	New check added to check for overlapping M_COVR meta objects.	AA400003	New M_COVR feature added that overlaps another M_COVR feature
551a	If text attribute values use (C0) characters (C0 as defined in S-57 Part 3, Annex B).	Check for presence of control characters encoded in textural attributes - upgraded to 'C'	AA400012	Control characters 'carriage return' and 'backspace' added to text attribute INFORM
555a	If the order of the data in a base or update file is not correct, except for when: 1. Isolated nodes (SG2D) are listed before isolated nodes (SG3D) OR 2. Connected nodes are listed before isolated nodes (SG3D) OR 3. Connected nodes are listed before isolated nodes (SG2D) OR 4. Geo features are listed before Meta features.	Check 555 split to 555a (C) and 555b (E). Check 555a now excludes non-critical mis-ordering of records.	AA500008	No Changes to dataset Review report – amend as required
1504a	If the value of the VDAT subfield of the DSPM field is Null.	Suffix 'a' added to check number.	AA400003	Edit to report only
1510a	If the value of the SDAT subfield of the DSPM field is Null.	Suffix 'a' added to check number and minor change to wording of the check description.	AA400003	Edit to report only
1515a	For each feature object where a value of DATEND, DATSTA, PEREND or PERSTA does not conform to the formatting defined in ISO 8601:1988 S-57 Appendix B.1, Annex A.	Clarification of accepted date format	AA400004	No changes
1775	For each navigational aid equipment feature object (except DAYMAR) which is COVERED_BY a DEPARE, DRGARE or UNSARE AND does not have a navigational aid structure feature object as a master AND the geometry of which is not COVERED_BY a BRIDGE, CBLOHD, COALNE, CONVYR, DAMCON, (with CATDAM Equal to 3 (flood barrage)), LNDARE, PIPOHD, PONTON or SLCONS feature object.	DAYMAR excluded from check	AA400005	Edits to report only

1795c	For each feature object which is a slave in a Master to Slave relationship AND where DATSTA is Known on the master object AND DATSTA is Not Present or Unknown on the slave object.	New check added to cover all possible mis-encoding of temporal attributes on Master/Slave features	AA400005	Master/Slave relationship created where DATSTA is known on the Master but not present or unknown on the slave
1795d	For each feature object which is a slave in a Master to Slave relationship AND where PERSTA is Known on the master object AND PERSTA is Not Present or Unknown on the slave object.	New check added to cover all possible mis-encoding of temporal attributes on Master/Slave features	AA400005	Master/Slave relationship created where PERSTA is known on the Master but not present or unknown on the slave
1795e	For each feature object which is a slave in a Master to Slave relationship AND where DATEND is Known on the master object AND DATEND is Not Present or Unknown on the slave object.	New check added to cover all possible mis-encoding of temporal attributes on Master/Slave features	AA400005	Master/Slave relationship created where DATEND is known on the Master but not present or unknown on the slave
1795f	For each feature object which is a slave in a Master to Slave relationship AND where PEREND is Known on the master object AND PEREND is Not Present or Unknown on the slave object.	New check added to cover all possible mis-encoding of temporal attributes on Master/Slave features	AA400005	Master/Slave created relationship where PEREND is known on the Master but not present or unknown on the slave

Action Required of ENC WG

The ENC WG is invited to:

a. Accept the amended datasets.
b. Update the S-58 test datasets and references on the IHO Standards and Specifications page