TSMAD24/DIPWG4- 11-2A

Paper for Consideration by TSMAD

S-64 – Additional Tests

Submitted by:	UK
Executive Summary:	This paper reports on the status of S-64 following HSSC 3 and sets out an approach to developing the standard as requested by HSSC. It recommends that a small group is formed to prepare a revised version of s-64 with a revised format and additional tests.
Related Documents:	1. S-64 Edition 2.0.0
Related Projects:	1. S-52 Presentation Library Revision

Introduction / Background

1. At TSMAD 22 the UK presented a test dataset for ECDIS which evolved from its work to identify inconsistent display in some ECDIS systems. The UK took an action to prepare documentation to accompany this dataset and incorporate in a revised S-64 Edition 2.0.0. This was endorsed by the HSSC 3, however recognizing the need to provide more intelligent test data HSSC also posed the following task to TSMAD;

"TSMAD tasked to investigate expanding the standard to improve its usefulness for both OEMs and type approval authorities."

2. TSMAD 23 briefly discussed this matter but it is suggested that the joint TSMAD/DIPWG meeting is the best place for detailed discussion given the presence of OEM representatives. It is also suggested that type approval bodies are involved in this revision.

Analysis/Discussion

3. Feedback from OEMs and Type Approval laboratories is that S-64 is difficult to use and requires switching between different datasets and graphic plots to complete tests. Also, S-64 has been identified as an area where additional tests would support improved consistency in display and alarm functionality which is currently variable across ECDIS systems. S-64 is constrained by the specific checks listed in IEC 61174, this revision would expand S-64 to support a wider range of tests which are clearly needed. During this exercise an evaluation will be made as to if and what any changes would be required to IEC 61174. In addition this review should consider whether S-64 supports modular type approval which separates hardware and software testing.

4. S-64 is inextricably linked to the S-57 and S-52 standards it is therefore important to note that HSSC 3 also approved the DIPWG to produce a revised Presentation Library. Given the close links it is therefore suggested that any further version of S-64 (3.0.0) should coincide with the new presentation library and reflect changes in it. Close liaison with DIPWG will be required to ensure changes to the presentation library are reflected in S-64.

5. It is proposed that the revision of S-64 should consist of the following;

- Document restructure to embed graphic plots within the tests, this would simplify the use of S-64. Each individual test would be accompanied by a graphic depicting the expected result. This will make the tests as usable as possible from an OEM and type approval perspective. It should also clarify what the expected outcomes are. Example at Annexe A.

- Provide additional tests to address specific areas of ECDIS display and alarm functionality following the example of the isolated dangers test dataset. The areas to be covered need to be listed and a number of new test datasets designed. This should include route checking and potentially other areas such as cell loading and updating. Proposed listing provided at Annexe B.

- Reconcile and rationalize the number of datasets, particularly those testing updates.

This will require a small group to review the current tests and prepare specifications for new tests. This group would need to include OEM and Type approval representation.

Conclusion

6. S-64 is an important standard for ENCs and the recent ECDIS inconsistencies identified highlight the importance of comprehensive testing. TSMAD has an opportunity to upgrade S-64 to enhance usability, address items not currently covered and therefore provide a more stable basis for S-101 development.

Action Required of TSMAD

- To form a sub-working group of relevant stakeholders including OEM and type approval representatives to undertake the revision of S-64

- To hold a meeting of this group to agree the details of the revision and plan its completion

- To consider and agree the proposed list of additional tests provided at Annexe B

Annexe A

Example layout

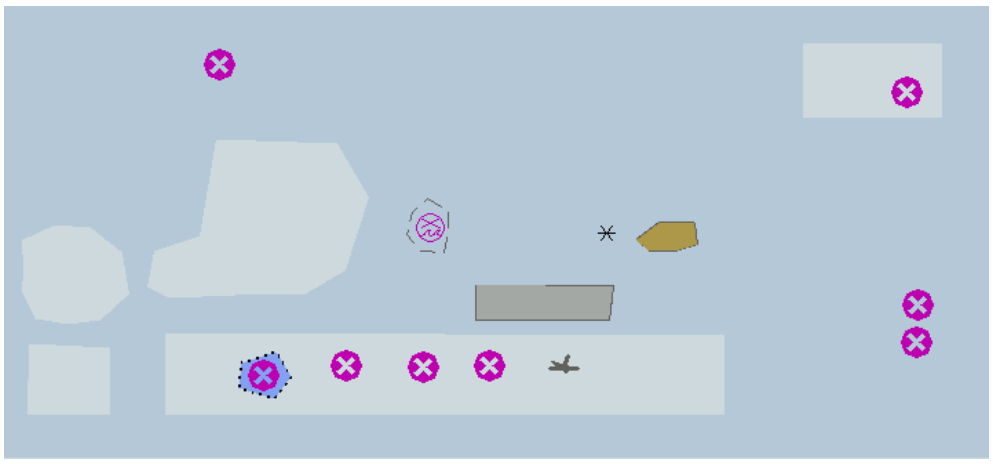
Section title

Section explanation

What it is testing and why

Data loading instructions

Initial parameters etc



7.2 Reference screen sample for above settings.

3) View the Wreck (WRECKS) object at 11°58.385'N 61°48.396'W confirm that it displays with the symbol 'SY(ISODGR01)'

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4) View the Wreck (WRECKS) object at 11°58.317'N 61°46.677'W confirm that it displays with the symbol 'SY(ISODGR01)'

 ☐

5) View the Underwater Rock (UWTROC) object at 11°57.797'N 61°46.651'W confirm that it displays with the symbol 'SY(ISODGR01)'

 ☐

Annexe B

Additional sets of tests for S-64

Display

- Coastline
- Safety Contour
- Underwater dangers
- Above water dangers
- Additional aids to navigation and fixed structures
- Fairways
- Conspicuous features
- Prohibited and restricted areas
- Ferry routes
- Archipelagic sea lanes
- Buoys and beacons
- Traffic routeing

Alarms and Indications

- Route checking (including multiple usage bands)
- Look ahead alarms and indications
- Overscale indication and overscale warning

ECDIS Functionality

- Pick Report
- Cell loading and updating
- Polar data
- Overlapping data
- Temporal attributes e.g. DATEND DATSTA