

## **Impact Assessment**

### **Problem**

ENCWG letter dated 6/5/21 informed IHO member states older versions of the SevenCs SDK EC2007, used to render ENC data in ECDIS, had a number of display issues. In a certain set of circumstances, the isolated danger symbol either did not display or was being displayed incorrectly. It was understood that the issue presented when a depth area was deleted and reinstated via an ENC update.

The ENCWG issued encoding bulletin to inform MS on how to manage the issue, producing NEs instead of updates to mitigate the safety risk posed to shipping.

7Cs provided validation software to IHO Member States to capture the data which would cause the display issue before it reached users. They also supplied their validation test to other validation software tool manufacturers.

RENCs were informed and monitored the ENC data to capture the ENC updates that may cause display anomalies before they were issued to VARs for onwards dissemination to Mariners

An impact study was conducted with all OEMs on the S-63 security scheme, the results identified the display issue was not just confined to 7Cs but was also being experienced by Furuno and Transas (Wartsila)

Information received from the OEMs affected indicated they would supply software patches to customers to fix the issue.

Based on all the hard work of the ENCWG and the impact study that had been conducted HSSC 14 agreed to the production of a NE of S-64 which would include a set of skin of the earth tests.

The draft standard, S-64 NE 4.0.0 was shared with OEMs via the IHO github repository for open access and comment by OEMs in Jan 2023. The IHO secretariate requested OEMs registered within the IHO S-63 security scheme review and comment on the NE changes by end Feb 2023. Communications were also sent to the CIRM ECDIS WG and UKHO OEM technical partners asking for their feedback on the proposed NE changes. Only four manufacturers have fed back comments to the ENCWG.

Of the feedback received the comments raised related directly to the transition period of the old standard to the new S-64.

IHO S-64 is an undated reference in the ECDIS testing standard IEC61174 edition 4.0 and therefore all new ECDIS systems going through type approval must use the latest S-64. This effectively means on publication of an S-64 NE by the IHO it immediately comes into effect. Of significant note is that all new ECDIS have to implement the IMO guidelines for the standard interface by 1st Jan 2024.

It is recommended that the current edition of S-64 is superseded but is still valid and runs in parallel with the NE 4.0.0. It is recommended the old edition be retained on the IHO webpage 'Standards in Force', with a retirement date set for 1st Jan 2029. The impact of the introduction of this NE is then limited to only new ECDIS systems going through the type approval process and would not affect current ECDIS in use at sea. The transition time has been selected to co-inside with the retirement of the IMO ECDIS performance standard that references S-57.

## **HOs**

The impact on HOs for additional ENC processing to mitigate errors in ECDIS will remain the same irrespective of any decision made to either publish S-64 edition 4.0 or not. As OEMs cannot guarantee all in service ECDIS will be upgraded to fix the display errors HOs will be required to permanently manage the risk on the data production side.

1. How much additional time is used validation checking NEs because of the display issue
2. Can you give a figure on the number of NEs you have had to produce because of the OEM display issue
3. Have you had to employ additional staff because of this OEM display issue
4. Can you quantify the cost to you as an HO of this OEM display issue

There are still a number of HOs that are not following the encoding guidance and are issuing data that causes a display issue in a number of ECDIS.

As of week22 2023 out of a total 19194 ENCs there are 34 cells that have a significant issue which could result in isolated dangers not displaying in ECDIS that have experienced this SOE problem.

## **OEMs**

By keeping the dates suggested shipping companies will have a decision, either update old in service ECDIS to comply with S-64 edition 4.0 or buy a new S-100 ECDIS.

There is a cost of type approval against a NE of S-64 edition 4.0 even though my ECDIS does not have this problem!

Backwards compatibility with old version of S-64 is good so there is a long lead time for upgrading older ECDIS at sea

## **RENCs**

### **ENC customers**

Download cost of ENC NEs is more than over smaller ENC update files

Compliance issues with PSC Inspectors

### **Notified Bodies**

### **PSC Inspectors**