IHO File N° S3/8151

Possible ECDIS Display Anomalies after ENC Update Procedure

References:
A: ENCWG Letter dated 07 May 2021 - *SevenCs ECDIS Kernel EC2007, ENC updates causing ECDIS display issues*
B: ENCWG Letter dated 25 May 2021 - *SevenCs ECDIS Kernel EC2007, ENC updates causing ECDIS display issues*
C: ENCWG Letter dated 24 June 2021 - *Availability of 7Cs Analyzer Version 5.0.1.2*

Dear Hydrographer,

1.   The IHO Secretariat has been informed by the Chair of the IHO ENC Maintenance Working Group (ENCWG) of an issue that may affect the display of published ENC data in ECDIS.

2.   An ECDIS display anomaly has been identified in some ECDIS under certain circumstances and settings when the following changes to the ENC dataset are applied, using the ENC Update (ER file) mechanism:
- The deletion of a depth or dredged area that overlaps at least one isolated danger feature.
- A change to the geometry of a depth or dredged area in a way that the relationship with the set of isolated danger features that it overlaps is different before and after the change.

3.   It is important to note that the ECDIS alarms and indications are not impacted by this display anomaly in route planning and monitoring mode and all features are visible as expected in IMO display mode "ALL OTHER".

4.   Due to potential consequences for safe navigation or confusion if this display anomaly is encountered, the ENCWG Chair wrote immediately to all Member States by ENCWG Letter (Reference A) informing them of the potential display anomaly, its impact and the actions to be taken in mitigation. An update on progress in addressing the display anomaly has since been sent by ENCWG Letter (Reference B); and a further notification issued by ENCWG Letter informing ENC data producers of the availability of ENC validation software containing checks to identify occurrences of this anomaly in compiled ENC Update datasets (Reference C).

5.   ENC Encoding Bulletin (EB) number 64, which is reproduced in the Annex to this letter, alerts ENC producers to the display anomaly; the mitigation action to be taken; and the availability of ENC validation tools that contain checks to identify the anomaly. Failure to follow the mitigation action, as explained in EB 64, may result in adverse performance of the ENC data in the ECDIS.

6.   ECDIS software patches are currently being deployed by the manufacturer to rectify the display issue in impacted ECDIS. It is expected that the mitigation action will be required

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in the short term. Data producers will be notified when the display issue has been rectified, at which time EB 64 will be cancelled.

On behalf of the Secretary-General
Yours sincerely,

Abri KAMPFER
Director

Annex : ENC Encoding Bulletin (EB) number 64

EB64 UOC Clause 2.6 Updating

An ECDIS display anomaly has been identified in some ECDIS when the following changes to the ENC dataset are applied using the ENC Update (ER file) mechanism:
1. The deletion of a Group 1 feature of class **DEPARE** or **DRGARE** that overlaps at least one **WRECKS**, **OBSTRN**, or **UWTROC** feature.
2. A change to the geometry of a Group 1 feature of class **DEPARE** or **DRGARE** in a way that the relationship with the set of **WRECKS**, **OBSTRN**, or **UWTROC** features that it overlaps is different before and after the change.

NOTE: It may be difficult to determine in some cases if a particular Group 1 Update instruction falls into one of the two above categories. Hence **software tools have been made available to assist Data Producers by applying an additional validation check against any potentially impacted ENC Update file**. This validation check has been included in the following versions of ENC data validation software:

7Cs Analyzer Version 5.0.2.4;
dKart Editor Version 3.4.2.1815; and dKart Inspector Version 6.4.2.3518.

Encoders are strongly advised, therefore, that where such changes to an ENC dataset are required a New Edition of the ENC should be issued, unless validation of the corresponding ENC Update reports no related errors when validated using the versions of the software tools listed in the Note above.

This action is needed in the short term to minimise the risk of some ECDIS not displaying isolated dangers correctly. Data Producers will be notified when the anomaly has been rectified.