

SUB-COMMITTEE ON NAVIGATION,
COMMUNICATIONS AND SEARCH AND
RESCUE
9th session
Agenda item 16

NCSR 9/INF.14
18 April 2022
ENGLISH ONLY
Pre-session public release:

**REVISION OF ECDIS GUIDANCE FOR GOOD PRACTICE (MSC.1/CIRC.1503/REV.1)
AND AMENDMENTS TO ECDIS PERFORMANCE STANDARDS
(RESOLUTION MSC.232(82))**

**Considerations on the implementation arrangement for onboard
ECDIS updates in relation to IHO standards**

Submitted by China

SUMMARY

Executive summary: This document provides preliminary considerations on the future implementation of onboard ECDIS updates in relation to IHO standards.

Strategic direction, if applicable: 7

Output: 7.14

Action to be taken: Paragraph 10

Related documents: MSC.1/Circ.1503/Rev.1; MSC 100/17/5; MSC 102/24;
NCSR 7/INF.20 and NCSR 8/13/1

Background

1 The Maritime Safety Committee (MSC), at its 100th session, considered document MSC 100/17/5 (China) and agreed to include in its post-biennial agenda an output on "*Revision of ECDIS - Guidance for good practice (MSC.1/Circ.1503/Rev.1)*" (hereinafter referred to as the Guidance), assigning the NCSR Sub-Committee as the coordinating organ, with two sessions to complete the output. NCSR 7 agreed that the amendments to resolution MSC.232(82) could be considered under the existing output on the Committee's post-biennial agenda on "*Revision of ECDIS - Guidance for good practice (MSC.1/Circ.1503/Rev.1)*" pending approval by the Committee. MSC 102 agreed with the recommendations of the NCSR Sub-Committee regarding expansion, consolidation and renaming of the output (MSC 102/24, Paragraph 21.14).

2 China submitted NCSR 7/INF.20, providing comments on six areas for consideration while revising the Guidance. In particular, it is proposed that consideration should be given to the transition arrangement of applicable ECDIS standards from S-57 to S-100 and the interpretation of the term "latest".

3 NCSR 8 noted the information provided in document NCSR 8/13/1 (IHO) reporting on ECDIS issues, and invited interested Member States and international organizations to contribute to the work of IHO in the preparation of amendments to resolution MSC.232(82) and MSC.1/Circ.1503/Rev.1. The document introduced the "Dual Fuel" concept, whereby IHO is committed to ensuring that identical coverage will be provided for S-57 ENC's and S-101 ENC's for a transition period¹ to support legacy S-57 ECDIS.

The latest applicable IHO standards

4 According to paragraph 6.3 of the Guidance, where an ECDIS is being used to meet the chart carriage requirements of SOLAS, it must be maintained to be compatible with the latest applicable IHO standards. As indicated in document NCSR 7/INF.20, there are different understandings of "the latest applicable IHO standards". IHO website specifies that the up-to-datedness of the ECDIS in regard to the installation of the latest edition of the standards is represented by the first two digits of the edition number, and the third digit of the edition number (in brackets) indicates a clarification version of the standard and has no impact on the safety of navigation or ECDIS performance. This means that not every latest IHO standard will require ECDIS updates onboard. Therefore, it would be beneficial if the definition of IHO standards Edition number is referenced in the Guidance via a footnote to harmonize interpretation by stakeholders as below:

- .3 be maintained so as to be compatible¹ with the latest applicable International Hydrographic Organization (IHO) standards;

¹ The up-to-datedness of the ECDIS in regard to the installation of the latest edition of the Standards is represented by the first two digits of the edition number. The third digit of the edition number (in brackets) indicates a clarification version of the Standard; clarifications have no impact on the safety of navigation or ECDIS performance. For details, see www.iho.int/en/standards-in-force

Procedures for onboard ECDIS updates to be compatible with the latest applicable IHO standards

5 After reviewing the ECDIS-related standards developed by IHO, IMO and IEC (see annex) and bearing in mind the IHO's Roadmap for the S-100 Implementation Decade (2020-2030), with the newly revised ECDIS performance standards expected to enter into force on 1 July 2025, it is foreseeable that relevant IHO standards will continue to be improved and revised, taking into account that S-100 is a new technology.

6 Based on the past experience gained from the S-57 related onboard ECDIS updates, it is considered that the implementation of a general procedure for onboard ECDIS updates is vital to ensure smooth organization of S-100 updates onboard worldwide and that shipowners are well prepared to update onboard ECDIS to be compatible with the latest applicable IHO standard.

¹ According to IHO's Roadmap for the S-100 Implementation Decade (2020–2030) (<https://iho.int/en/s-100-implementation-strategy>), the governance document of the "Dual Fuel" concept should be presented at the third session of the Assembly (April 2023) after endorsement at the sixth meeting of the Council (October 2022)

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- 7 The general procedures and elements to be considered may include the following:
- .1 in the event of IHO S-100 standard updates, IHO is invited to inform and advise the NCSR Sub-Committee:
 - .1 whether the latest version of the IHO standard requires a mandatory update for onboard ECDIS units and if so, the commencing date; and
 - .2 the time frame for retrospective application, if applicable.IHO is encouraged to consolidate and arrange mandatory updates in a structured manner.
 - .2 the NCSR Sub-Committee, depending on each individual case, decides on the deadline for onboard ECDIS update by issuing a circular;
 - .3 the following factors are suggested to be taken into consideration when determining a transition period for onboard ECDIS updates;
 - .1 the time needed for IEC to revise standards such as IEC 61174 et al. following IHO new standards;
 - .2 the time for ECDIS manufacturers to develop software and hardware, if necessary, in accordance with applicable IHO/IMO/IEC standards and to report to type approval authority (TAA); and the time to train their authorized service providers and filed engineers. Normally, the time needed should be no less than one year;
 - .3 the time for TAAs to assess the ECDIS updates reported by manufacturers, which should be no less than one year; and,
 - .4 the time for manufacturers and shipping companies to conduct ECDIS updates and for competent authorities or recognized organizations to perform field verification. The time needed should be no less than three years, but can be shortened to two years under exceptional circumstances if approved by the NCSR Sub-Committee, for example in the case of urgent IHO standard updates. The instrument or report required in part B of the Guidance can be a survey item for annual, intermediate or renewal survey of ships.

8 The above-mentioned procedures and elements to be considered for IHO standard update could be issued as a separate MSC circular or included in MSC.1/Circ.1503/Rev.1 as a standalone new part (i.e. H).

9 To this end, China is intending to submit a separate document to the next session of the Sub-Committee and welcomes input from the interested Member States and international organizations on the above issues.

Action requested of the Sub-Committee

10 The Sub-Committee is invited to note the information provided in this document.

ANNEX

Different application or publication dates for ECDIS-related IHO/IMO/IEC standards

IHO		IMO		IEC	
Reference/ Edition in force	Publication date	Application date	IMO document	Publication date	Standard version
S-57 Edition 3.1	November 2000, in conjunction with: - Supplement 3 (June 2014) - S-57 Maintenance Document No. 8 (March 2002)	2009.1.1-	MSC.232(82)	2015.8.20	IEC 61174 2015-08 (E 4.0)
S-52 Edition 6.1.(1)	October 2014- with Clarifications up to June 2015	2000.1.1-2008.12.31	A.817(19) as amended by MSC.86(70)	2008.9.26	IEC 61174 2008-09 (E 3.0)
S-52 (annex A) Edition 4.0.(3)	October 2014 - with Clarifications up to December 2020-	1999.1.1-1999.12.31	A.817(19) as amended by MSC.64(67)	2001.11.27	IEC 61174 2001 (E 2.0)
S-64 Edition 3.0.(3)	December 2020	1996.1.1-1998.12.31	A.817(19)		IEC 61174 1998 (E 1.0)
S-61 Edition 1.0	January 1999				
S-63 Edition 1.2.(1)	March 2020				