

SUB-COMMITTEE ON NAVIGATION,  
COMMUNICATIONS AND SEARCH AND  
RESCUE  
10th session  
Agenda item 9

NCSR 10/9/1  
20 March 2023  
Original: ENGLISH  
Pre-session public release:

**AMENDMENTS TO ECDIS PERFORMANCE STANDARDS (RESOLUTION MSC.530(106))  
TO FACILITATE A STANDARDIZED DIGITAL EXCHANGE OF SHIPS' ROUTE PLANS**

**Comments on document NCSR 10/9**

**Submitted by ICS, INTERTANKO and IMPA**

**SUMMARY**

*Executive summary:* This document comments on document NCSR 10/9, proposing to amend ECDIS performance standards (resolution MSC.530(106)) to facilitate a standardized digital exchange of ships' route plans, and proposes modifications to the draft amendments to address the risks of over-reliance on exchanged routes.

*Strategic direction,  
if applicable:* 7

*Output:* 7.46

*Action to be taken:* Paragraph 8

*Related documents:* Resolutions A.893(21); MSC.530(106); MSC 104/15/7;  
NCSR 9/16/1 and NCSR 10/9

**Background**

1 This document is submitted in accordance with the provisions of paragraph 6.12.5 of the *Organization and method of work of the Maritime Safety Committee and Marine Environment Protection Committee and their subsidiary bodies* (MSC-MEPC.1/Circ.5/Rev.4) and provides comments on document NCSR 10/9, proposing to amend ECDIS performance standards (resolution MSC.530(106)) to facilitate a standardized digital exchange of ships' route plans.

**Introduction**

2 The co-sponsors of this document thank the co-sponsors of document NCSR 10/9 and note the intention of the proposed amendments to resolution MSC.530(106) is to allow slow steaming, just-in-time (JIT) arrival and to support the *Initial IMO Strategy on Reduction of GHG Emissions from Ships* (resolution MEPC.304(72)).

3 Notwithstanding the emphasis of the proposal on the potential benefits of the standardized and cyber-secure route exchange, the document explicitly identifies and comments upon operational aspects of how exchanged routes are intended to be used (paragraphs 11 and 12).

4 It is understood that performance standards do not address operational aspects of the use of the functions which they prescribe. However, IMPA expects that in the absence of appropriate operational guidance, the shore-ship exchange of routes would have unintended consequences.

5 This expectation is based on the following:

- .1 Interpreting an exchanged route as anything other than an indication of preferred intent is likely to result in an unwillingness to deviate from the exchanged route, even when circumstances dictate.

This is the reason that paragraph 5.5 of the *Recommendation on operational procedures for maritime pilots* (resolution A.960(23), annex 2) makes clear that in the context of pilotage, any route plan is a basic indication of preferred intention and both the pilot and the master should be prepared to depart from it when circumstances so dictate.

- .2 The Organization has already recognized and acted upon the operational risks associated with over-reliance on the static and dynamic information exchanged using the automatic identification system (AIS).

Paragraphs 41 and 42 of the revised *Guidelines for the onboard operational use of shipborne AIS* (resolution A.1106(29)) give guidance on the need to treat AIS as an additional source of information which should not be relied upon as the sole source of information for decision-making. A similar caveat should apply to the shore-ship exchange of routes. Rigid adherence to such routes may be beneficial to JIT, but it may not be helpful in the context of maritime safety and pollution incidents, particularly in pilotage waters.

- .3 The devaluing of the master-pilot information exchange (MPX) by perpetuating an assumption that a shore-ship exchanged route is all that is required to be known by the master and the bridge team for them to monitor the safety of a ship in pilotage waters (NAV 57/9/1, paragraph 10 refers).
- .4 A bias towards bridge teams monitoring deviations from an exchanged route rather than monitoring the absolute safety of a ship given the specific navigation situation, traffic density and disposition, environmental conditions and availability of tugs (NAV 57/9/1, paragraph 10 refers).

6 In addition, providing for digital route exchange in resolution MSC.530(106) does not equate to every ECDIS being able to display an exchanged route correctly. For example, for both straight and curved segments of routes, channel features and turn radii can make it necessary to place waypoints on land. ECDIS can reject these waypoints and/or return impossible turn errors, resulting in the route needing to be modified to fit the theoretical, mathematical assumptions used by ECDIS, rather than being an appropriate representation of the intended movement of a ship. Mandating digital route exchange before ECDIS's ability to properly portray routes is addressed, is premature.

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## Proposal

7 The co-sponsors recommend that the Sub-Committee, in finalizing amendments to resolution MSC.530(106) as proposed in document NCSR 10/9:

.1 limit the mandatory performance requirement to the exchange of the route schedule elements of the standard formats for route plan exchange (NCSR 10/9, annex 1, paragraph 11.3.5 refers). This would enable the efficiency benefits of route exchange to be realized while avoiding the consequences described in paragraphs 5 and 6. Given the issue highlighted in paragraph 6, this is the recommendation of the co-sponsors; or

.2 modify the proposed new paragraph 11.3.4 contained in annex 1 of document NCSR 10/9 as follows<sup>1</sup>:

"...The exchange should be in accordance with standard formats for route plan exchange<sup>2</sup> and should use standard service interfaces including information security protection<sup>3</sup> to allow for secure machine-machine communication. Received route plans should be considered as a basic indication of preferred intention and should be highlighted by ECDIS as "for voyage planning purposes only". The use of the received route plans should be controlled by the master, in accordance with SOLAS regulations V/34 and V/34-1, respecting the master's professional judgement and discretion."

.3 include in the operative paragraphs of resolution MSC.530(106), as amended, the following:

"RECALLS that operational guidance on the ship-shore and shore-ship exchange of static and dynamic voyage information in the context of shipboard automatic identification systems (AIS) has been adopted by the Organization;

RECOGNIZES the need to keep the use of route exchange under review and to develop appropriate operational guidance to be adopted by the Organization; and

URGES all stakeholders in safety of navigation and efficiency of maritime traffic to consider routes exchanged between ship-shore and shore-ship as a basic indication of intent only;...";

## Action requested of the Sub-Committee

8 The Sub-Committee is invited to note the comments provided in paragraphs 2 to 6, consider the proposals in paragraph 7, and take action, as appropriate.

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<sup>1</sup> The proposed new text is shown in grey shading.

<sup>2</sup> IEC 61174/IEC 63173-1.

<sup>3</sup> IEC 63173-2.