

MARITIME SAFETY COMMITTEE  
89th session  
Agenda item 24

MSC 89/24/3  
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## ANY OTHER BUSINESS

### Operating anomalies identified within ECDIS

**Submitted by Australia, Canada, Chile, Japan, Norway, the United Kingdom,  
the International Chamber of Shipping (ICS) and the International Federation  
of Shipmasters' Associations (IFSMA)**

#### SUMMARY

*Executive summary:* This submission supplements the report of the outcome of a workshop organized by the International Hydrographic Organization (IHO) to discuss the issues raised during MSC 88 regarding "Operating anomalies in Electronic Chart Display and Information System (ECDIS)", reported in document MSC 89/24/2 and proposes further steps which ought to be taken

*Strategic direction:* 5.2

*High-level action:* 5.2.4

*Planned output:* 5.2.4.1

*Action to be taken:* Paragraph 9

*Related documents:* SOLAS chapter V, SN.1/Circ.266/Rev.1, MSC.1/Circ.1221, MSC.1/Circ.1389, MSC.1/Circ.1391, MSC 88/25/6, MSC 88/26, paragraphs 25.19 to 25.22 and MSC 89/24/2

#### Introduction

1 This document is submitted in accordance with paragraph 4.10.5 of MSC-MEPC.1/Circ.2 "Guidelines on the Organization and Method of Work of the Maritime Safety Committee and the Marine Environment Protection Committee and their Subsidiary Bodies". The sponsors of this submission propose that the Committee considers further steps which ought to be taken to address operating anomalies identified within ECDIS. It builds on document MSC 89/24/2 submitted by the International Hydrographic Organization (IHO) with regard to ECDIS anomalies.

2 In document MSC 88/25/6, Japan, Norway, the United Kingdom, the International Chamber of Shipping (ICS) and the International Federation of Shipmasters' Association (IFSMA) brought to the attention of the Committee certain issues that had been identified within ECDIS. That submission was introduced recognizing the growing number of type-approved ECDIS displaying official Electronic Navigational Charts (ENC) which are carried and used in ships voluntarily, and the impending mandatory carriage requirement

introduced through SOLAS chapter V regulation 19, starting from 1 July 2012. It also recognized the work achieved by the IMO in updating the ECDIS training requirement through the revised STCW Convention in 2010.

3 The IHO, in a verbal statement to the Committee, as reported in document MSC 88/26, paragraph 25.20, indicated its intention to host a meeting of interested parties in early 2011 to discuss the issues raised and to attempt to identify both short-term remedies and longer term actions to address such issues when they are reported.

4 The Committee endorsed the proposal from Japan, Norway, the United Kingdom, ICS and IFSMA and approved MSC.1/Circ.1391 on "Operating Anomalies Identified Within ECDIS".

### **Meeting of interested parties**

5 The IHO hosted a workshop at the International Hydrographic Bureau in Monaco on 15 and 16 February 2011. It has reported its proceedings to IMO in document MSC 89/24/2. The co-sponsors of this document support the outcomes of the workshop and they acknowledge the IHO workshop's valuable contribution in progressing this issue.

### **Further proposals for action**

6 In addition to the actions requested of the Committee contained in the IHO report in document MSC 89/24/2, this submission proposes that the Committee should consider further and more detailed steps which might be taken to ensure that potential anomalies in the performance of ECDIS are discovered systematically, then analysed and communicated to all those who need to know and take action. The actions being taken should be communicated to the industry.

7 These additional steps are considered to be as follows:

- .1 the publication of clear, precise and detailed guidance for the mariner concerning potential anomalies which could occur in any ECDIS, with examples of anomalies which have already come to light and what action they can take to mitigate resultant risk and thereby provide enhanced emphasis on type-specific training for the ECDIS system to be used by the mariner on board ship so that any equipment-exclusive anomalies can be appreciated;
- .2 the collation, analysis and publication of results of all the data gathered in accordance with MSC.1/Circ.1391 dated 7 December 2010, so that maximum advantage is gained from feedback from mariners;
- .3 the creation, hosting and regular updating of an information outlet which might include a web presence, where relevant and concerned bodies and organizations can access the latest information and developments in the reporting and analysis of ECDIS anomalies and the actions taken or proposed to reduce risk; in this connection, in addition to Flag States, it is proposed that the following organizations would be involved in this activity:
  - .1 International Maritime Organization (IMO);
  - .2 International Hydrographic Organization (IHO);
  - .3 International Electrotechnical Commission (IEC);
  - .4 Original Equipment Manufacturers (OEMs);
  - .5 Shipowners and ship operating companies;
  - .6 Seafarers;

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- .7 Seafarer training establishments;
  - .8 NAVAREA coordinators;
  - .9 Contracting Government Maritime Administrations;
  - .10 Port State Control;
  - .11 Hydrographic Offices;
  - .12 Accident Investigation Authorities; and
  - .13 Lighthouse Authorities
- .4 increasing the awareness of shipowners, ship operating companies and seafarers that the software operating their ECDIS systems requires monitoring and maintenance to ensure that all official Electronic Nautical Chart (ENC) data can be correctly displayed to the mariner, and that their ECDIS complies with SOLAS V regulation 16;
- .5 the incorporation into ECDIS of generic and type-specific training of sufficient information to permit instructors and students to gain a clear understanding of the potential anomalies they may encounter in the display of official ENC data on ECDIS and the steps they can take to reduce risk; and
- .6 the exploration of the potential to develop and subsequently deliver and employ a User Validation Test data set which would help the mariner and Port State Control inspectors to appreciate any limitations in using the ECDIS displaying official ENC data.

8 This document recognizes the vital importance of document MSC 89/24/2, paragraph 9, which concerns the need to ensure coherence between the three international sets of standards in IMO, IHO and IEC. In view of the cross-organizational nature of the work to tackle potential anomalies in ECDIS, it is proposed that the IMO would take the coordinating role in ensuring a coherent programme of activities to address the issues raised in documents MSC 88/25/6 and MSC 89/24/2. One way to achieve this may be to re-establish the IMO/IHO Harmonization Group on ECDIS (HGE), expanded to include membership from Contracting Governments, Comité International Radio-Maritime (CIRM), IEC, accident investigators and training organizations and there may be other options for consideration.

#### **Action requested of the Committee**

- 9 The Committee is invited to:
- .1 consider this proposal together with that contained in document MSC 89/24/2;
  - .2 consider how to gain the maximum advantage from feedback from seafarers;
  - .3 consider whether and, if so, how the IMO could adopt the role to coordinate the necessary programme of activities to address the issues of potential anomalies in type-approved ECDIS using official ENCs;
  - .4 consider establishing processes, capabilities and modalities to achieve 9.2 above if that decision is taken; and
  - .5 take any further action the Committee considers appropriate.