Review of Guidance Documents

Submitted by IHB

SUMMARY
Executive Summary: This document provides up-date details of amendments to resolutions MSC.148(77) on NAVTEX, MSC.306(87) on Inmarsat-C EGC (SafetyNET) and MSC.252(83) on INS are proposed to provide for interconnection, bridge alert management and display of NAVTEX and SafetyNET warnings on navigation display systems.
Action to be taken: Paragraph 2.
Related documents: NCSR 3/13 dated 22 December 2015

1.   See attached document.

2.   The Sub-Committee is invited to note the information provided and take action as appropriate.

INTERNATIONAL
MARITIME
ORGANIZATION

SUB-COMMITTEE ON NAVIGATION,
COMMUNICATIONS AND SEARCH AND
RESCUE
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Agenda item 13

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INTERCONNECTION OF NAVTEX AND INMARSAT SAFETYNET RECEIVERS AND THEIR DISPLAY ON INTEGRATED NAVIGATION DISPLAY SYSTEMS (TBA)

Proposed amendments to resolutions MSC.148(77), MSC.306(87) and MSC.252(83)

Submitted by the United States

	SUMMARY	
Executive summary:	Amendments to resolutions MSC.148(77) on NAVTEX, MSC.306(87) on Inmarsat-C EGC (SafetyNET) and MSC.252(83) on INS are proposed to provide for interconnection, bridge alert management and display of NAVTEX and SafetyNET warnings on navigation display systems	
Strategic direction:	5.2	
High-level action:	5.2.4	
Output:	5.2.4.4	
Action to be taken:	Paragraph 10	
Related documents:	MSC 92/23/5; resolution MSC.148(77), resolution A.807(19) as amended by resolution MSC.68(68), annex 4 and resolution MSC.306(87), and resolutions MSC.252(83) and MSC.302(87)	

Introduction

1   The Committee at its ninety-second session considered document MSC 92/23/5 proposing to amend performance standards as necessary to allow Inmarsat-C Enhanced Group Calling (EGC) SafetyNET Maritime Safety Information messages to be presented on an integrated navigation display system, and agreed to include, in the post-biennial agenda of the Committee, an output on "Interconnection of NAVTEX and Inmarsat SafetyNET receivers and their display on Integrated Navigation Display Systems" with one session needed to complete the item, assigning the NCSR Sub-Committee as the coordinating organ.

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2   Although GMDSS SafetyNET is the sole means ships have for receiving essential maritime safety information in some locations, no means exist for routing that information to integrated navigation displays or other centralized systems for displaying information when desired. Instead it must be received on printed sheets of paper at the location the GMDSS SafetyNET equipment is installed. Coastal maritime safety information received by NAVTEX, on the other hand, may be distributed to an integrated navigation display, if that display is capable of accepting such information. As currently configured, urgent time-sensitive maritime safety information may not be immediately accessible to the mariner.

Data interface

3   Resolution MSC.148(77) (*Revised Recommendation on Performance Standards for Narrow-Band Direct-Printing Telegraph Equipment for the Reception of Navigational and Meteorological Warnings and Urgent Information to Ships (NAVTEX)*) provides that NAVTEX receivers "include at least one interface for the transfer of received data to other navigation or communication equipment" and that "all interfaces provided for communication with other navigation or communication equipment should comply with the relevant international standards", i.e. IEC 61162. Resolution MSC.252(83) (*Performance Standards for Integrated Navigation Systems (INS)*) requires the "presentation of received safety-related messages, such as AIS safety-related and binary messages, NAVTEX" in the list of mandatory display functions, includes NAVTEX as an example of navigation control data for manual control, and also states that "standardized and approved communication protocols for interfaces should be used where possible", i.e. IEC 61162.

4   However neither resolution A.807(19) as amended by resolution MSC.68(68), annex 4 (*Performance Standards for Inmarsat-C Ship Earth Stations Capable of Transmitting and Receiving Direct-Printing Communications*) nor resolution MSC.306(87) (*Revised Performance Standards for Enhanced Group Call (EGC) Equipment*) provide for a data interface other than for ship's position information. Additionally, resolution MSC.252(83) makes no provision for receipt of Inmarsat-C EGC maritime safety information. The necessary Inmarsat-C EGC data interface sentences have been developed, are specified in Edition 4 of IEC 61174 (ECDIS) published in August 2015 and will be included in Edition 5 of IEC 61162-1 expected to be published by spring of 2016. ECDIS equipment conforming to the optional requirements for SafetyNET and NAVTEX detailed in Edition 4 of IEC 61174 will, if properly interconnected, be capable of displaying maritime safety information from both Inmarsat-C EGC SafetyNET and NAVTEX. However, Inmarsat-C equipment does not yet include the necessary data interface.

Dedicated printer

5   Inmarsat-C EGC SafetyNET could follow the example of NAVTEX in allowing connection to an integrated navigation system or a dedicated display device in place of a dedicated printer. IMO resolution MSC.148(77) (*Revised Recommendation on Performance Standards for Narrow-Band Direct-Printing Telegraph Equipment for the Reception of Navigational and Meteorological Warnings and Urgent Information to Ships (NAVTEX)*) provides that NAVTEX receivers comprise either "an integrated printing device; or a dedicated display device, printer output port and a non-volatile message memory; or a connection to an integrated navigation system and a non-volatile message memory". On the other hand, resolution A.807(19) (*Performance Standards for Inmarsat-C ship earth stations capable of transmitting and receiving direct printing communications*) as amended by resolution MSC.68(68), annex 4, and resolution A.664(16) (*Performance standards for enhanced group call equipment*) only provide that the equipment be capable of producing a printed copy or received SafetyNET information on a printing device provided for that purpose.

Bridge Alert Management

6   Resolution MSC.252(83) provides that GMDSS equipment be included in alert management as far as possible. NCSR 2 also noted the information provided by IEC regarding the measures toward the handling of GMDSS alerts in the Bridge Alert Management system (NCSR 2/23). While both NAVTEX (resolution MSC.148(77)) and Inmarsat-C EGC SafetyNET provides for an alarm at the position from which the ship is normally navigated, only NAVTEX reports an alarm condition via a serial interface[1]. Neither are fully compatible with resolution MSC.302(87) (*Performance Standards for Bridge Alert Management).*

Effective date

7   Proposed amendments to resolutions MSC.252(83) (*Revised Performance Standards for Integrated Navigation Systems (INS)),* MSC.306(87) (*Revised Performance Standards For Enhanced Group Call (EGC) Equipment)* and MSC.148(77) (*NAVTEX)* are provided in the annex. These amendments should be incorporated in the respective MSC resolutions not later than 1 January 2018.

Liaisons

8   MSI outputs from NAVTEX and Inmarsat-C EGC SafetyNET equipment will continue to be displayed on paper printouts, on LCD displays and on navigation displays systems. Limited graphical display capability is available on these navigation displays. Consequently, care may be needed in formatting MSI messages for broadcast to ensure they remain clear and easily readable regardless of how they are displayed. The Sub-Committee therefore may wish to invite IHO's World-Wide Navigational Warning Service Sub-Committee to review any necessary changes to the NAVTEX Manual, International SafetyNET Manual or other manuals as a consequence to these performance standard changes.

9   The Sub-Committee may also wish to invite IEC's Technical Committee 80 to consider any changes, if necessary, to their certification standards.

Action requested of the Sub-Committee

10   The Sub-Committee is invited to:

   .1   recommend to the Committee that it amend its resolutions MSC.252(83) (*Revised Performance Standards for Integrated Navigation Systems (INS)),* MSC.306(87) (*Revised Performance Standards For Enhanced Group Call (EGC) Equipment)*, and MSC.148(77) (*NAVTEX)* per the proposed amendments in the annex, and

   .2   consider extending invitations as discussed in paragraphs 8 and 9 under the "Liaisons" section.

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[1]   IEC 61097-6 requires that an alarm condition be reported via an ALR command on the INS serial port. Inmarsat C SafetyNET has no such port.

ANNEX

Proposed amendment to resolution MSC.148(77) *Performance Standards for Narrow-Band Direct-Printing Telegraph Equipment for the Reception of Navigational and Meteorological Warnings and Urgent Information to Ships (NAVTEX)*

Add to 9 INTERFACES:

§9.4 An interface for alert management (i.e. with the Bridge Alert Management (BAM)).

Proposed amendments to resolution MSC.306(87) *Revised Performance Standards For Enhanced Group Call (EGC) Equipment*

§1.   INTRODUCTION

Modify §1.2:   The equipment should be capable of producing a printed copy of received information <u>unless connected to an integrated navigation system recognized by the Organization</u>. …

Add a new Section: §6. INTERFACES

§6.1   The equipment should include at least one interface for the transfer of received data to other navigation or communication equipment.

§6.2   The equipment should include an interface for alert management (i.e. with the Bridge Alert Management (BAM)).

§6.3   All interfaces provided for communication with other navigation or communication equipment should comply with the relevant international standards[2].

Proposed amendments to resolution MSC. 252(83) *Revised Performance Standards for Integrated Navigation Systems (INS)*

Add to the bottom of table 2 in §3.5 Acceptance of INS as navigational equipment:

Allow for accepting the INS in compliance with as	INS in compliance with	
…	…	…
NAVTEX	Meteorological warnings (7.2.3) Navigation and SAR warnings (7.3.2)	MSC.148(77)
Inmarsat-C EGC SafetyNET or other IMO-recognized GMDSS system	Meteorological warnings (7.2.3) Navigation and SAR warnings (7.3.2)	A.807(19) as amended by MSC.68(68), annex 4, MSC.306(87)

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[2]   Refer to IEC 61162.

§7.   Task and functional requirements for an INS

§7.3.2 Additional mandatory functions

The INS should provide capability for:

Add:
- ….
- Navigational warnings
- Search and Rescue (SAR) warnings
- Meteorological warnings

§7.3.3 Optional Functions

Delete: NAVTEX

§7.5.2.1 Modify:

- …..
- safety-related messages, e.g. AIS safety-related and binary messages, NAVTEX, Inmarsat-C EGC SafetyNET, messages from an IMO-recognized GMDSS provider

§ 7.7.1 Modify:

- …
- presentation of received safety-related messages, such as AIS safety-related and binary messages, NAVTEX, Inmarsat-C EGC SafetyNET, messages from an IMO-recognized GMDSS provider

Appendix 1   DEFINITIONS

Modify:

External safety-related messages	Data received from outside of the ship concerning the safety of navigation, through equipment listed in SOLAS chapter V and/or NAVTEX, Inmarsat-C EGC SafetyNET or messages from an IMO-recognized GMDSS provider.

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