

Paper for Consideration by HSSC16

S-124 Data Dissemination issues related to e-navigation

Submitted by:	Germany
Executive Summary:	This paper addresses the status of Maritime Service No 5 in terms of e-navigation and the dissemination of Maritime Safety Information after the World Radio Conference 2023
Related Documents:	S-124
Related Projects:	e-navigation, ITU-R Radio Regulations (RR) Art. 33.39 up to 33.50, MSC.468(101), IMO A.705(17), MSC.1/Circ.1645

Introduction/Background

The IMO e-Navigation strategy intends to fulfil the needs of the mariner and to provide reliable information within the statutory framework of IMO and ITU. One e-navigation pillar is the Maritime Service Number 5 “Maritime safety information (MSI) service”.

The term “Maritime Safety Information (MSI)” means navigational and meteorological warnings, meteorological forecast and other urgent safety-related messages. The IMO urged Member States to promulgate MSI in accordance with IMO Recommendation MSC 468(101).

Noting the IHO interests in MSI dissemination to fulfil e-navigation service No 5 requests, the ITU-R Resolution 361 (WRC-15) invited IHO in 2015 (see Annex) to contribute to ITU-R studies related to e-navigation and MSI dissemination.

In 2019 the IMO revised the Resolution MSC.468(101). The purpose of this Resolution is to set out the organization, standards and methods which should be used for the promulgation and reception of Maritime Safety Information (MSI).

The S-100 based product specification S-124 is under development by the IMO WWNWS and the IHO. The IHO is affected by being responsible to ensure that S-124 is according to the S-100 Edition.

Analyses/Discussion

According to the MSC.468(101), an MSI service of the Global Maritime Distress and Safety System (GMDSS) is the internationally and nationally coordinated network of broadcasts containing information which is necessary for safe navigation, received on ships by equipment which automatically monitors the appropriate transmissions, displays information which is relevant to the ship and provides a print capability.

In SOLAS Chapter V Section 5.3 it is defined that the MSI is to be transmitted with the priority prescribed by the ITU-R RR and that this transmission is to be carried out as a transmission “to all stations” which is consistent with Res. A.706(17) and MSC.468(101). It is further stated that all ship stations must conform to the provisions of the Radio Regulations.

The MSI dissemination systems information transmission options identified by IMO MSC.1/Circ.1645 (16 May 2022) coming into force 1. January 2024 noting that the systems listed fulfil the obligations in SOLAS IV/7.4 and in the ITU-R Radio Regulations (RR) Art. 33.39 up to 33.50. MSC.1/Circ.1645 will be updated to include NAVDAT in the near future.

The Radio Regulations Art. 33.39 up to 33.50 define the systems for MSI dissemination. Those are NAVTEX, HF-MSI and Maritime Safety Information via satellite (Inmarsat and Iridium). These Radio Regulations also include the operating frequencies of these systems. The World Radio Conference 2023 identified NAVDAT as a new system for MSI dissemination based on Member States contributions. The Conference finalized the assessment of e-navigation strategy requests after two study cycles and unanimously agreed, that beside NAVDAT no changes to the RR are necessary for the implementation of the IMO e-Navigation strategy.

Radio frequencies are required to disseminate MSI. These frequencies are protected by a regulatory framework and therefore, listed in the App 15 of the Radio Regulations. This protection ensures that every vessel can receive the broadcasted MSI. Therefore, a systems can only be listed in the Radio Regulations App 15 if it has a primary allocation and no other regular allocated system can interfere with them.

The transmission of MSI using VDES-SAT is excluded as VDES-SAT has only a secondary allocation. VDES frequencies may also be used in some countries by other land mobile users and such usage would exclude the usage of VDES frequencies for MSI dissemination.

The provision of MSI by SECOM or other information provision systems is not part of this input paper and is not covered by regulations in force by ITU and IMO.

The provisions within IMO SOLAS IV and SOLAS V and ITU-R Radio Regulations are interrelated and modifications would need to be carried out in the regulatory framework of both organisations.

Recommendation

The information provided should be considered for further development of S-100 product specifications under IHO responsibility (S-124) and of those that are under the WMO custodianship (S-411 up to S-414).

Justifications and impacts

IMO e-Navigation strategy has started to fulfil the needs of the mariner and to provide reliable information within the statutory framework of IMO and ITU.

Germany detected potential delays in the S-124 implementation at least until 2031 if additional methods of the MSI dissemination are identified now. Germany assumes that this implementation date will be further delayed if these other means for dissemination are necessary and that the necessary actions will not be initiated in the nearest future.

The implementation of new transmission methods has to be concluded and implemented in the frameworks of IMO and ITU. Both UN specialized organisations have their field of responsibility and they only review documents providing information that is related to the other organization.

As MSI is part of the GMDSS, a new transmission method can only be implemented in the GMDSS structure by modifying the Radio Regulations. This modification can only be carried out by a World Radio Conference (WRC). These conferences take place every 3 to 4 years and the request for an Agenda Item has to be applied by Member States on a previous conference to which the decision should be taken. In the time between the conferences ITU-R Study Groups are carrying out compatibility studies to verify that the technical and regulatory requirements set out are met.

WRC will only add MSI provision by S-124 data as an Agenda Item if it is confirmed by the IMO that work is initiated to implement MSI provision by S-124 into the IMO framework. The application for a new IMO work item has to be applied at the Maritime Safety Committee by an IMO Member State. If agreed, IMO MSC will add the work item to the work schedule of the NCSR Subcommittee for further deliberation.

Seeking WRC 2027 application for an Agenda Item at WRC 2031, it seems necessary that the following tight scheduling can be achieved. An MSC work item at the 2024 autumn meeting would be directly sent to NCSR in the spring 2025. Two NCSR meetings considered sufficient to discuss and solve the issue and to forward the

request to the 2027 WRC. Otherwise, the next possibility to add a WRC Agenda Item would be in 2031 for the conference tentatively scheduled for 2035.

Action required of HSSC16:

The HSSC16 is invited to:

- a. Note the paper,
- b. Consider the potential issues,
- c. Consider informing IMO and ITU if further demands on MSI provision by S-124 (and potentially S-411 to S-414) are not covered in current ITU Radio Regulations and SOLAS IV and SOLAS V, and that possible incorporation should be addressed at the earliest possible opportunity.
- d. Consider potential impacts on S-104 and S-111 (MS 15 – Real-time hydrographic and environmental information services) provision in relation to carriage requirements and spectrum needs.

Annex A



Resolution 361
(WRC-15).pdf



Resolution
361(WRC-19).pdf