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NAVIGATION, COMMUNICATIONS AND SEARCH AND RESCUE

Comments on the report of the tenth session of the Sub-Committee
Real-time exchange of S-100 products

Submitted by New Zealand

	SUMMARY
Executive summary:	This document seeks to understand how the Organization envisages the real-time exchange of all S-100 product specifications, including S-124 navigational warnings, noting that the exchange of an S-421 route plan should use a standard service interface and information security protection. With the impending timeline for development of S-1xx products to support route monitoring, this matter should be urgently addressed.
Strategic direction, if applicable:	7
Output:	7.46
Action to be taken:	Paragraph 14
Related documents:	MSC 108/12; NCSR 10/9, NCSR 10/22 and NCSR 10/22/Add.1

Introduction

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 the Marine Environment Protection Committee and their subsidiary bodies* (MSC-MEPC.1/Circ.5/Rev.5) and contains comments on document MSC 108/12.

2   The International Hydrographic Organization's (IHO) implementation timeline[1] for the S-100 *electronic chart display and information systems* (ECDIS), supporting the recommendations in resolution MSC.530(106), prioritizes development of S-1xx product specification layers used in route monitoring,[2] which includes S-124 navigational warnings. These layers are intended to be operational in 2026.

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[1]   *Roadmap for the S-100 Implementation Decade (2020-2030)* https://iho.int/en/s-100-implementation-strategy.

[2]   Phase 1 (route monitoring) includes: S-101 Electronic Navigational Chart (ENC), S-102 Bathymetric Surface, S-104 Water Level Information for Surface Navigation, S-111 Surface Currents, S-124 Navigational Warnings, and S-129 Under Keel Clearance Management.

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3   New Zealand is of the view that the additional S-1xx product specifications, such as S-124 navigational warnings, are critical to the success of an S-100 ECDIS. This view was also highlighted at an S-100 stakeholders session held during the fifteenth session of the IHO Hydrographic Services and Standards Committee (HSSC). Stakeholders were of the opinion that S-101 alone adds little benefit, without the availability of the additional S-100 layers.

S-421 route plan

4   In document MSC 108/12, paragraph 3.5, the Committee is invited to adopt the draft resolution MSC.530(106)/Rev.1 on *Performance standards for electronic chart display and information systems (ECDIS)* contained in document NCSR 10/22/Add.1, annex 4. New Zealand supports the adoption of this resolution by the Committee at its 108th session.

5   The draft resolution states that route plan (S-421) exchange between ship and shore-based maritime service providers "should use standard service interfaces including information security protection to allow for secure machine-machine communication" (paragraph 11.3.4). The standard for information security protection is IEC 63173-2 – Secure communication between ship and shore (SECOM) (footnote 9).

IEC 63173-2 – Secure communication between ship and shore (SECOM)

6   The SECOM standard (IEC 63173-2) is designed to enable shore-to-ship and ship-to-shore exchange of all S-100 product specifications.

7   It contains a technical service interface design that is in accordance with guidelines and templates from IALA and S-100. Its goal is to facilitate interoperability and service discovery and reduce the need to support many different proprietary service designs for the delivery of S-100 products.

8   The SECOM standard is not designed to provide a communication bearer from a shore-side S-100 service interface to end-user equipment (ECDIS) on board a ship (and vice versa). However, to practically implement a standard service interface like SECOM for shore-to-ship and ship-to-shore connectivity, a suitable communication bearer/system needs to be determined. This was highlighted as a dependency when defining a standard service interface (NCSR 10/9 (Austria et al.), paragraph 8).

Shore-to-ship exchange of S-100 product specifications

9   New Zealand would like to understand how the Organization envisages the real-time shore-to-ship and ship-to-shore exchange of S-100 products will occur, including S-124 navigational warnings.

10   New Zealand is also of the view that the Organization should determine whether:

.1   a standard service interface, including information security protection, is required for all S-100 products;

.2   if existing shore-to-ship communication systems are intended to exchange S-100 products; and

.3   if these existing shore-to-ship communication systems have the capability to do so.

11   Paragraph 8 of document NCSR 10/9 (Austria et al.), noted that adding the functionality of a standardized and cyber-secure method for route exchange from ship-to-shore and from shore-to-ship to support ECDIS, would require the availability of a radio link, which has not been defined.

12   Amendments to SOLAS, performance standards and guidance may need to be developed, and if so, this needs to be addressed in a timely manner.

13   New Zealand notes draft resolution MSC.530(106)/Rev.1 states in operative paragraph 4 the need to develop appropriate operational guidance to be adopted by the Organization for the purpose of exchange of route plans.

Action requested of the Committee

14   The Committee is invited to note the information provided and, instruct NCSR 11 to consider any necessary actions by IMO to support the implementation of S-100 products, including such issues as the dissemination and real-time exchange of information in S-100 format, and advise MSC 109, as appropriate.

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