

**IALA COUNCIL**  
**80th session**



**24-28 June 2024**  
**Istanbul, Türkiye**

## **10 – TECHNICAL ACTIVITIES**

### ***10.9 – Digital@Sea***

#### 10.9.1 – Digital@Sea conferences

Note by the Secretariat

### **1. INTRODUCTION**

Since the last session of the Council, two Digital@Sea (D@S) series conferences have been held. Further information about the initiative can be found at Digital@Sea, <http://digitalatsea.org/>. This paper updates the Council on the results and plans for the year 2024 and beyond.

### **2. DIGITAL@SEA NORTH INTERNATIONAL 2024**

The Digital@Sea International Conference was held from 30 to 31 January 2024 in Copenhagen, Denmark. The very successful conference was attended by 129 participants from 22 countries.

In an innovative conference setting, the conference participants progressed on a common understanding of a global vision for digitalization of the maritime sector.

The main conclusions of the conference were:

- There is a need for a common global maritime digital vision to guide the digitalization efforts across nations and international organizations, including IMO, IALA, and IHO.
- Digitalization is not a goal in itself, but presents a significant potential for the maritime industry to improve safety and efficiency at sea, to alleviate administrative burdens as well as to improve the lives of seafarers.
- An important prerequisite will be ensuring cyber security.
- International cooperation is the key to unlock the potentials and to fulfil a global digital maritime vision. Currently, the maritime industry reaps the benefits of more than 10 years of international cooperation and collective projects, based on the IMO E-Navigation concept, which has proven to be a good starting point towards future efforts.
- IALA is an important organization in terms of developing the necessary standards while the IMO needs to ensure harmonization of the use of standards globally.

Based on the valuable outcome from the Digital@Sea International Conference 2024, the DMA and the Digital@Sea partnership will bring suggestions forward at the IMO and IALA, to realize the common global digital maritime vision.

### **3. DIGITAL@SEA NORTH AMERICA 2024**

The Digital@Sea North America Conference 2024 was held from 8 to 9 May, 2024, at Atlantic Beach, Florida, USA. Organized by IALA and RTCM, this conference was the third Digital@Sea North America

conference and the ninth in the North American regional series, following the e-Navigation Underway series. The venue was the One Ocean Resort and Spa, Atlantic Beach, FL, with the theme "Navigating Digital Waterways of the Future: Evolving Navigation through eNavigation."

Presentations covered digitalization and implementation plans by key stakeholders, including U.S. and Canadian government agency representatives, technology experts, mariners, international coastal administrators, and creators of maritime safety information. The conference explored the opportunities and impacts of transitioning from paper to electronic charts, the introduction of S-100, and technological advancements.

The conclusions and recommendations from sessions are attached to this paper.

#### **4. DIGITAL@SEA ASIA PACIFIC 2024**

The Digital@Sea Asia Pacific Conference 2024 will be held from September 10 to 11, 2024, in Busan, Korea. Co-organized by the MOF and IALA, among other organizations, this event will be part of Korea Maritime Week. The conference will highlight cutting-edge technological advancements poised to revolutionize maritime operations and emphasize the importance of global cooperation in fostering maritime digitalization.

#### **5. PLAN FOR 2024 AND 2025**

In 2024 and 2025, the Digital@Sea initiative will continue its influential series of conferences and workshops. The tentative schedule includes:

- Digital@Sea Capacity Building Workshop, 9-11 July 2024, in Daejeon, Korea
- Digital@Sea Asia Pacific, 10-11 September 2024, in Busan, Korea
- Digital@Sea North America, 2025, TBD

#### **6. THE COUNCIL IS REQUESTED TO**

**NOTE** the information provided in this document.

## Annex

## Conclusion of the D@S Asia Pacific 2024

## Conclusions & Recommendations

### CONCLUSIONS

1. Harmonization is underway but not complete. (S-100, API's, MRN, MSW, Etc.)
2. What is most critical is that the chart on board and the chart on shore are harmonized and use the same names for locations, with the same data, especially for depths.
3. S-100 Standards have yet to be finalized, but ECDIS vendors have already started development and testing of new S-100 based products and services.
4. Development of new S-100 services requires joint efforts of multiple Government Agencies both in Canada and the US which complicates their development/testing/implementation and issuance of the required associated rules and regulations. This is further complicated in waterways shared by US and Canada.
5. Gov't Agencies need to plan for transition and delivery of new S-100 based services while continuing delivery of current services ("Dual Fuel") for the foreseeable future for both SOLAS and Non-SOLAS users.
6. Participants preferred fully automatic delivery of S-100 services without end user intervention. Additionally, Government Agencies would like to receive confirmation of receipt/opened of S-100 services by end users.
7. Government Agencies noted the importance of being able to collect data and field observations including weather observations, icing conditions, and marine mammal sightings from mariners.
8. Implementation of new S-100 based services will require update of associated IMO "Model Courses".
9. Authorities and industry will have to articulate the cost and safety benefit to encourage transition and additionally manage the impacts all in the maritime eco system.
10. The delivery of real time information through digital means is a critical component of managing dynamic changes such as changes to speed regulations in marine protected areas. The continued diminishment of natural resources such as protected marine mammals will make these capabilities more and more important in the future.
11. *Internet Protocol (IP) based communications is the most widely available current means of delivering digital services in the bandwidth required.* The use of RESTful API's seems to be a promising way for Gov't Agencies to facilitate delivery of digital products and services to industry and the mariner both directly and indirectly in a way that can then be transferred to mariners ECS/ECDIS over the "last mile".
12. *Administrations should not implement S-100 at the products specification level, but as an overall framework.*
13. There is no IHO identified end date for the production of S-57 based ENC's.

**RECOMMENDATIONS**

1. Updates to S-100 standards should be published periodically and users should be provided with change notices, Should be a means for pertinent entities to be notified of updates to the standards.
2. Government Agencies should make S-100 service easily and readily available to all users.
3. U.S. and Canada should continue to coordinate effort related to S-100 development and deployment.
4. Renewed emphasis on development of S-128 to provide end user the ability to validate they have the most current version of available products. The preferred implementer is the ECS/ECDIS vendor.
5. Collect end user feedback on tests of automatic delivery of S-100 information to his/her screen.
6. Update IMO Model Courses on consuming S-100 information.
7. Market the benefits of S-100 to Ship Owners/Operators.
8. IMO should consider adoption of a transition and training plan and timeline for the deprecation of S-57.
9. IHO should set an end date for production of S-57 based ENC's IHO.