



CIRM

An update from the
marine electronics industry

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1. About CIRRM



About CIRM



- Comité International Radio-Maritime (CIRM)
- International association of marine electronics companies
- NGO in Consultative Status to IMO
- 112 member companies

Core scope of interest



Navigation equipment & systems



Radiocommunications & GMDSS



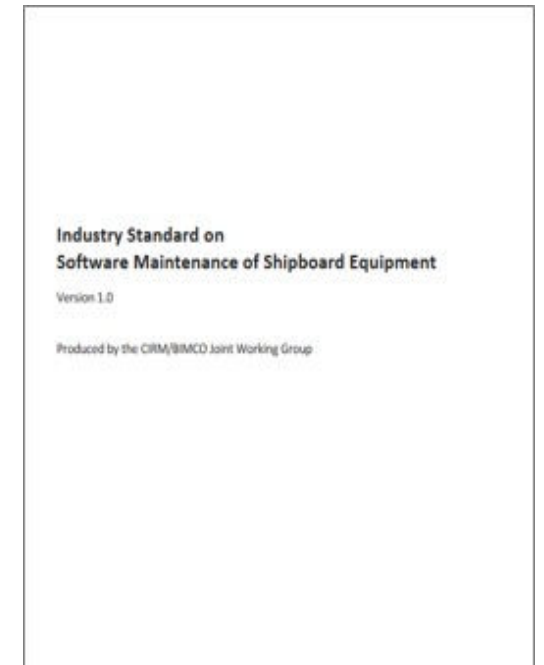
2. Shipboard software maintenance



Shipboard software maintenance



- Industry Standard on software maintenance of shipboard equipment
- Jointly published by BIMCO & CIRM in 2017
- Developed to improve shipboard SW maintenance + management
- Applicable to all shipboard OT systems



Shipboard software maintenance



- Industry Standard covers all actors in shipboard SW maintenance
- Includes five appendices:
 - Appendix 1: Software maintenance competency requirements
 - Appendix 2: Software maintenance planning flowcharts
 - Appendix 3: Checklist for communicating a software problem
 - Appendix 4: Electronic Service Reports
 - Appendix 5: Onboard software log



Shipboard software maintenance



Related ISO work

- ISO 24060 (2021) specifies a Ship Software Logging System (SSLS), and is based on Appendix 5 of the Industry Standard - *Onboard Software Log*
- ISO 24060-2 (2023) specifies an electronic service report and is based on Appendix 4 of the Industry Standard - *Electronic Service Reports*



Shipboard software maintenance



- *Problem: Industry Standard is voluntary to implement*

- In 2022 an Industry Working Group developed MSC 107/17/10:

Proposal for a new output to develop requirements for software maintenance of shipboard navigation and communication equipment and systems

- MSC 107 agreed new output for post-biennial agenda:

Development of guidelines for software maintenance of shipboard navigation and communication equipment and systems



Shipboard software maintenance



- Industry Working Group reconvened this year to develop draft IMO guidelines
- Includes participants from across the shipping industry



Feb 2024 meeting at BIMCO HQ, Copenhagen

3. Next generation ECDIS (S-100)



Next generation ECDIS (S-100)



- S-100 is the IHO's universal hydrographic data model
- Adopted by IMO as basis for technical harmonization of nav info exchange
- Next generation ECDIS will be built upon S-100
- S-100 ECDIS will be able to use different data products, e.g.

S-101 Electronic Navigational Chart

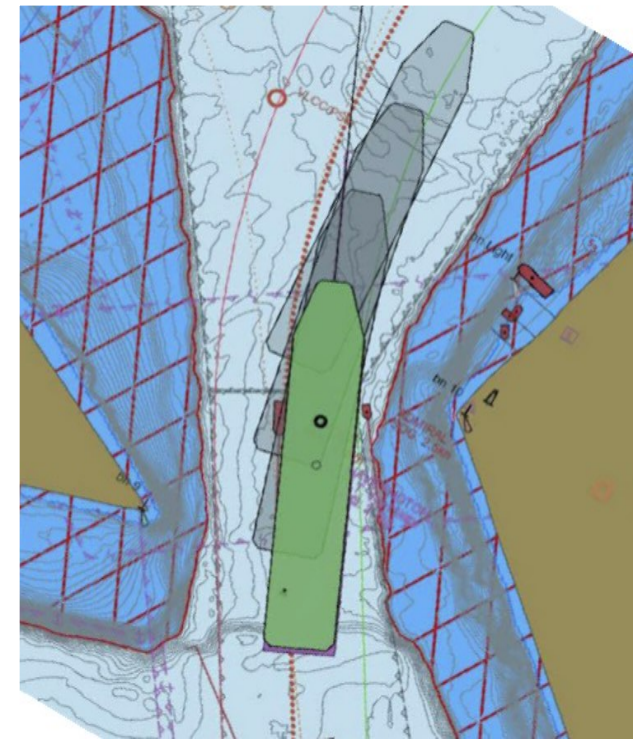
S-104 Water Levels

S-124 Navigational Warnings

S-102 Bathymetric Surface ->

S-111 Surface Currents

S-129 Under Keel Clearance Mgmt.



Next generation ECDIS (S-100)



- MSC.530(106)[Rev.1] introduces support for S-100 in ECDIS
- New installations:
 - voluntary from 1 Jan 2026
 - mandatory from 1 Jan 2029
- ECDIS complying with MSC.530 will be “Dual-Fuel”, to aid transition to S-100
- Existing ECDIS can continue to be used for the time being

Next generation ECDIS (S-100)



- CIRM members foresee benefits to navigators & owners/operators
- ECDIS companies are implementing S-100 in their products
- Main reason to move to S-100 ECDIS - interoperable info layers
- Availability of production data will be essential to success!

Next generation ECDIS (S-100)



Advantages

- Reduces risk of grounding and mariner workload
- Improves safety and operating efficiency
- High-def bathymetry for safety contour creation; automatic water level adjustment
- Interoperable info layers with clutter control
- More cyber secure than current ECDIS

S-100 data already being trialled/used back-of-bridge and in PPUs, etc.

Next generation ECDIS (S-100)



- S-100 demonstrator will be installed in IMO this year (MSC 108)
- Hosted by CIRM, provided by NAVTOR and Hatteland
- Come have a play!!



CIRM

Thank you

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