USCHC46-10C

Status on Implementation of the S-100 Roadmap (US)

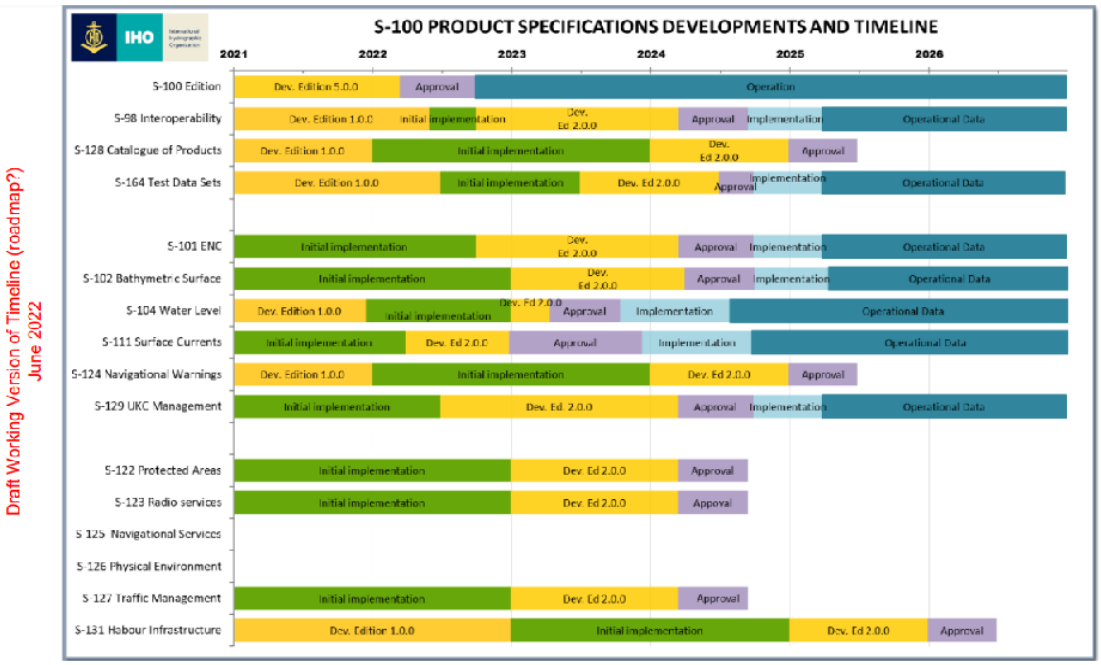
2023

WORKING DRAFT

Please note the current status of the eight prioritized S-100 product specifications noted in the S-100 timeline.[1] This summary is generated for the general awareness and to share expectations among member states.

	Product Specification	**Key Governmental Stakeholders**
S-101	Electronic Navigational Chart	NOAA (OCS, NGS)
S-102	Bathymetric Surface	NOAA (OCS)
S-104	Water Level Information	NOAA (COOPS)
S-111	Surface Currents	NOAA (COOPS)
S-122	Marine Protected Areas	NOAA (National MPA Center), US. Department of the Interior. state and local governments
S-123	Radio Services	U.S. Coast Guard
S-124	Navigational Warnings	NGA, NOAA National Weather Service
S-129	Under Keel Clearance Management	NOAA (OCS)

[1] Roadmap For the S-100 Implementation Decade (2020-2030) Version 1 Rev 1. https://iho.int/uploads/user/About%20IHO/Council/S-100_ImplementationStrategy/S100_Roadmap_Decade_v1Rev1_EN_16Nov2020.pdf



S-101 Electronic Navigational Chart

- Edition 1.0.0 (December 2018) (English)
- IHO Roadmap Operational Data Target: early 2025
- *NOAA is working toward being ready to release our first S-101 ENCs in 2026, in accordance with the IMO timelines recently put forward by the Maritime Safety Committee's adoption of updated ECDIS performance standards to address S-100. We are currently preparing a detailed S-101 transition plan, reviewing various S-57 to S-101 conversion options, ensuring that our existing S-57 ENCs are conversion-ready, and preparing updates to our Nautical Information System database to handle the S-101 schema."*
  The local availability of S-101 ENCs will bare on the availability of additional S-100 product specifications.

  further information:
  CAPT E.J. Van Den Ameele, NOAA
  Chief, Marine Chart Division
  NOAA Office of Coast Survey
  edward.j.vandenameele@noaa.gov

S-102 Bathymetric Surface (High Resolution Bathymetry)

- S-102 Edition 2.0.0 (October 2019) (English)
- IHO Roadmap Operational Data Target: early 2025

- NOAA is currently demonstrating prototype S-102 products for Los Angeles/Long Beach, New York/New Jersey and lower Mississippi River. The release of Edition 3.0 will be required before operational services are available.

  further information:
  Anthony Klemm
  Physical Scientist, Atlantic Hydrographic Branch
  NOAA Office of Coast Survey
  Anthony.r.Klemm@noaa.gov

S-104 Water Level Information

- S-104 Edition 1.0.0 is currently under development
- IHO Roadmap Operational Data Target: mid 2024
- NOAA is developing prototype S-104 water level forecast data using the Global Storm Surge and Tide Operational Forecast (STOFS) model. NOAA hopes to offer this data experimentally by fall 2023.

  Further information:
  Julia Powell
  Chief Navigation Services Division
  NOAA Office of Coast Survey
  Julia.Powell@noaa.gov

  Darren Wright
  Precision Marine Navigation (PMN) Program Manager, Navigation Services Division
  NOAA Office of Coast Survey
  Darren.Wright@noaa.gov

S-111 Surface Currents

- S-111 Edition 1.0.0 (December 2018) (English)
- IHO Roadmap Operational Data Target: latter 2024
- NOAA is testing prototype S-111 surface current data in many ports around the U.S. See Precision Navigation Data Gateway for locations (click "Select Region" under "Surface Currents" in the legend on the right).

  Further information:
  Julia Powell
  Chief Navigation Services Division
  NOAA Office of Coast Survey
  Julia.Powell@noaa.gov

  Darren Wright
  Precision Marine Navigation (PMN) Program Manager, Navigation Services Division
  NOAA Office of Coast Survey
  Darren.Wright@noaa.gov

S-122 Marine Protected Areas

- S-122 Edition 1.0.0 (January 2019) (English)
- IHO Roadmap Operational Data Target: not specified
- The U.S. does have a recognized national inventory of Marine Protected Areas. The National MPA Center is a partnership between NOAA and the Department of the Interior. S-122 is not

part of the initial S-98 interoperability phase and is not ready for testing and implementation. The specification needs to be updated.

S-123 Radio Services

- S-123 Edition 1.0.0 (January 2019) (English)
- IHO Roadmap Operational Data Target: not specified
- The U.S. Coast Guard has not started work to transition the Radio publication to S-123 and will wait until edition 2.0 is completed before we begin.

Further information:
R. David Lewald
Program Analyst – Navigation Systems
U.S. Coast Guard
Robert.D.Lewald@uscg

S-124 Navigational Warnings

- S-124 Edition 1.0.0 is currently under development and expected to be approved by HSSC15, June 2023; Edition 2.0.0. will likely be approved in 2025
- IHO Roadmap Operational Data Target: The HSSC report to IRCC13 had the operational target date of 2026
- NGA expects to begin development of a capability to create and start testing S-124 Edition 1.0.0 in 2024 for NAVAREA IV and XII, and expects to be able to provide operational data for these two areas in 2026.
- The U.S. and information providers in general are concerned with how to deliver S-124 data. The current terrestrial broadcast method, NAVTEX, cannot support S-124. Satellite systems (Inmarsat and Iridium) do not seem to have the bandwidth to support S-124 for the same number of navigational warnings broadcast today and would certainly not be able to absorb the 10-fold increase required to fill the gap from NAVTEX. There would also be a lengthy period of parallel operations, dramatically increasing the amount of broadcast data via today's available and approved methods. Finally, there is not an approved method for an ECDIS to receive S-124 data, although using S-98 is being discussed.
- Responsibility for S-124 Navigational Warnings lies with NGA

Further information:
Christopher Janus
Branch Chief, Maritime Safety Watch
NAVAREA IV/XII Coordinator
Maritime Safety Office
National Geospatial-Intelligence Agency
Christopher.g.janus@nga.mil

S-129 Under Keel Clearance

- S-129 Edition 1.0.0 (June 2019) (English)

- IHO Roadmap Operational Data Target: early 2025
- S-129 Services is a function of an internal system that will display go-no go areas in a standardized manner. While NOAA S-100 products may be used in the calculation of S-129, NOAA will not be responsible for a S-129 service.

Further information: