



14th Meeting of the Hydrographic Services and Standards Committee

Report of the Nautical Information Provision Working Group

Agenda Item 5.3

HSSC-14, Denpasar, Bali, Indonesia - Hybrid Event, 16 – 19 May 2022



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MEMBERSHIP

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<i>Chair:</i>	Eivind Mong, Canadian Coast Guard, CA
<i>Vice-Chair:</i>	Stefan Engström, TRAFICOM, FI
<i>Secretary:</i>	Laura Hall-King, UK
<i>Member States:</i>	Argentina, Brazil, Canada, Denmark, Estonia, Finland, France, Germany, Japan, India, Italy, Republic of Korea, Netherlands, Norway, Poland, Russian Federation, South Africa, Spain, Sweden, UK, USA, (and IHB),
<i>Expert Contributor Organisations:</i>	Anthropocene Institute, CARIS, CIRM, EEC, IHMA; IIC, KRISO, NV Chats Germany, NOVACO, NTOU, University of New Hampshire, Portolan Sciences

Numerous VTC Meetings Held During Reporting Period

Next Planned Meeting

NIPWG VTC, multi-sessional virtual meetings in June & December, 2022

NIPWG 9, Face to face/hybrid meeting in September, 2022 in Brazil



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PRINCIPAL ACTIVITIES AND ACHIEVEMENTS

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1. Work is being conducted in accordance with the HSSC Work Plan.
2. S-131 developement moving well towards edition 1.0.0
3. S-131 Project kick off
4. S-128 developement submitted for edition 1.0.0 approval
5. S-123 comments adjudication and planning for Edition 1.1
6. S-125 developement towards edition 1.0.0 in cooperation with IALA



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HSSC ACTIONS

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5.3	S-100 System Architecture, IMO's Maritime Services	HSSC13/35	Noting different expectations, HSSC welcomed the offer made by NIPWG in liaison with S-100WG to complement the S-100 System Architecture by a submission paper addressing the what/how/when the S-100 based products should work together in a future S-100 ECDIS environment.	HSSC-14	
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- Action Item HSSC13/35 is started with Canadian Coast Guard surveying navigators within its fleet for views on how NPUBs should work in an ECDIS. This work is ongoing and there are dependencies S-12x portrayal, on S-100 Edition 5.0.0 metadata and S-98. Work has therefore not progressed as far as anticipated and additional time is needed to complete the action item.



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HSSC ACTIONS

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5.3	S-131	HSSC13/36	<p>HSSC agreed on the way forward proposed by NIPWG to consider the possibility of setting up a digital infrastructure to collect S-131 compliant Harbour Information.</p> <p>NIPWG to provide the necessary data elements description.</p> <p>HSSC/IHO Secretariat to consider the most suitable options for establishing this IHO infrastructure (IHO GIS Infrastructure within which S-131 database is managed). Possible project to be considered by Joint IHO-SG Lab for experimentation.</p>	HSSC-14	HSSC-14/-15
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- Action Item HSSC13/36 is completed and details provided in the S-131 section of the report.



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HSSC ACTIONS

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5.3	Maritime Services, e-navigation	HSSC13/37 (former HSSC12/32, HSSC11/36)	HSSC tasked the responsible HSSC WGs [and will invite also the IRCC/WWNWS-SC] to review the initial descriptions of “Maritime Services in context of e-navigation” under their remit and to provide them to NIPWG for further action if appropriate. NIPWG to send reminders as appropriate.	Permanent Deadline to be confirmed by NIPWG
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- Action Item HSSC13/37 is a permanent action item and therefore ongoing; reminders were sent to relevant working groups, feedback has been received from TWCWG regarding MS 15;



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HSSC ACTIONS

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5.3	Maritime Services, e-navigation	HSSC13/38	HSSC tasked NIPWG to act as the responsible IHO WG to monitor and contribute to the IMO Expert Group on Data Harmonization (EGDH).	Permanent
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- Action Item HSSC13/38 is a permanent action item and therefore ongoing; work of the EGDH is being monitored with help of working group participants.



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HSSC ACTIONS

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5.3	Scale Dependent (SD)/Scale Independent (SI)	HSSC13/40	After having considered an IALA outline paper describing how S-201, S-124, S-125 may work together, HSSC tasked NIPWG to provide a paper discussing SD/SI data handling aspects.	HSSC-14
5.3	S-100 Whole Picture	HSSC13/41	HSSC welcomed the offer by NIPWG to develop an outline paper, in liaison with S-100WG, describing the whole S100 picture in close cooperation with stakeholders, inside and outside the IHO community and with IMO in particular.	HSSC-14

- Actions HSSC13/40 and HSSC13/41 are in progress with dependencies on the discussions with IALA on S-124, S-125 and S-201 interaction, as well as S-128 and S-100 Edition 5.0.0.



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PRINCIPAL ACTIVITIES AND ACHIEVEMENTS

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1. S-122 - Marine Protected Area
2. S-123 - Marine Radio Services
3. S-125 - Navigational Services
4. S-126 - Physical Environment
5. S-127 - Marine Traffic Management
6. S-128 - Catalogue of nautical products
7. S-131 - Marine Harbour Infrastructure
8. S-12 - Standardization of List of Lights and Fog Signals
9. S-49 - Recommendations concerning Mariners' Routeing Guides (MRG)
10. M-3 - Resolutions of the IHO



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S-122 - MARINE PROTECTED AREA

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- During the work period few new comments have been made to the S-122 Product Specification.
- NIPWG has been informed that OGC has initiated an MSDI project focused on Marine Protected Areas. As this project evolves, additional comments are expected.
- Moreover, the anticipated edition 5.0.0 of S-100 has kept any work on the product specification on hold.
- NIPWG is soliciting input for how portrayal may best be created.



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S-123 - MARINE RADIO SERVICES

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- Significantly more comments have been received for S-123 due to test data creation by Canada.
- A Task Group, led by Ms. Bridget Gagné of Canadian Coast Guard, has been formed to review the comments and propose actions for how to adjudicate these. Proposals are being drafted with S-100 Edition 5 in mind.
- NIPWG is soliciting input for how portrayal may best be created.



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S-125 - NAVIGATIONAL SERVICES

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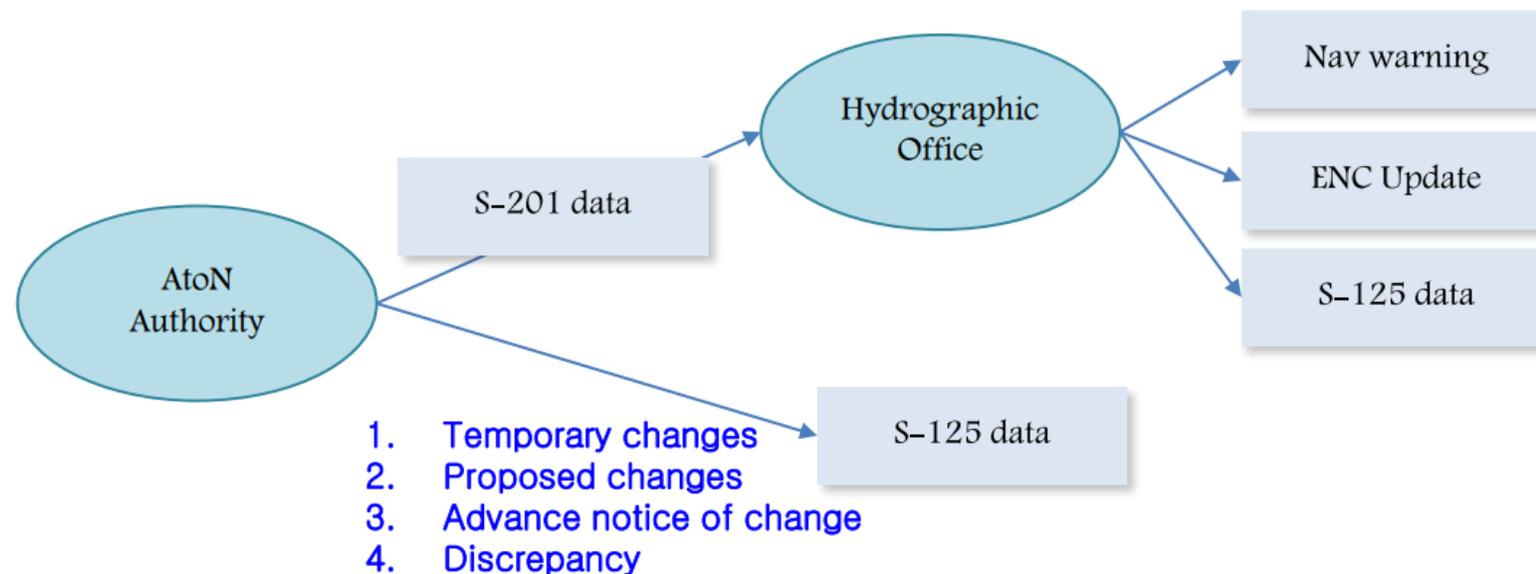
- IALA has presented an early draft version of the product specification and elaborated that S-125 will be a subset of S-201 focusing on the navigational function of Aids to Navigation (AtoN) and their status.
- S-125 is being developed as a digital list of AtoNs with near real time data.
- **The products will include data about temporary change, proposed change, advanced notice of change and discrepancies.**



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S-125 - NAVIGATIONAL SERVICES

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- IALA is developing a technical service description for S-125 services in the context of e-Navigation.
- A high level S-125 Vision Outline is under development by IALA in response to NIPWG feedback to the original vision outline. As this work is ongoing and is an important component in describing how S-201, S-124 and S-125 will work together, work on action HSSC13/40 has not progressed as far as anticipated and NIPWG need additional time to complete the action.



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S-125 - NAVIGATIONAL SERVICES

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- IALA ARM Committee and NIPWG discussed the name of S-125 since there have been some concerns raised about the current name
 - Marine Navigational Service, being somewhat ambiguous to the intent of the product specification. Especially it has been pointed out when considering data services like those envisioned under IMO Maritime Services.
- The discussions concluded with NIPWG recommending the chair to **seek HSSC approval to amend the name of S-125 to “Marine Aids to Navigation (AtoN)”**. NIPWG feels this name better communicate the intention behind and content of S-125



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S-126 - PHYSICAL ENVIRONMENT

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- The S-126 product specification is progressing with low priority.
 - The work has started on the data model side and portrayal side.
- Some hydrographic offices have expressed more interest this development and a task group is being formed to progress the work with more vigour.



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S-126 - PHYSICAL ENVIRONMENT

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- The S-126 product specification is progressing with low priority.
 - The work has started on the data model side and portrayal side.
- Some hydrographic offices have expressed more interest this development and a task group is being formed to progress the work with more vigour.



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S-127 - MARINE TRAFFIC MANAGEMENT

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- Several comments have been received following tests by several organizations.
 - Additionally, Canada and Germany are working on test data sets and these activities are expected to generate significant input.
- Production software is starting to become available with improved support in familiar production tools and development of new ones.
- Portrayal is still lacking and NIPWG is soliciting input for how portrayal may best be created.
- Edition 5.0.0 of S-100 will also necessitate an update of the S-127 product specification and NIPWG will make a plan for how to move this forward.
 - It is likely that some funding support will be required to move this work forward.



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S-128 - CATALOGUE OF NAUTICAL PRODUCTS

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- NIPWG is developing the S-128 product specification as a Catalogue of nautical products.
- The work has in a large degree been supported by the Republic of Korea and Korean Hydrographic and Oceanographic Agency (KHOA) who is leading the development work.
- The development has reached a sufficiently mature stage that a candidate package for going to Edition 1.0.0 can be submitted for HSSC approval.



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S-128 - CATALOGUE OF NAUTICAL PRODUCTS

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- Since the development began, the scope of S-128 has changed from a pure catalogue of products to both a catalogue of products and a service to provide a machine readable way to verify the up-to-dateness of the SENC.
- The current draft has made more progress in the original scope and need further testing and development to fully meet the extended scope. Comments received to the draft have been categorized into those that improve on the original scope and those that are extensions into the new scope.
- The latter have mainly been placed on hold pending version 1.0.0 of the product specification.



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S-128 - CATALOGUE OF NAUTICAL PRODUCTS

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- S-128 contains three basic product types;
 - nautical product,
 - electronic chart,
 - and paper chart.
- It may be necessary to classify each S-1xx product into one of these categories of product type, and this type of classification should be done harmoniously to avoid any confusion.
- NIPWG has started work on drafting a proposal for how this classification can be done.



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S-128 - CATALOGUE OF NAUTICAL PRODUCTS

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- The candidate Product specification documents for edition 1.0.0 has been submitted as HSSC14-05.3B
- HSSC is invited to approve S-128 for Edition 1.0.0
- HSSC is invited to encourage stakeholders to establish S-128 testbeds and share experiences with NIPWG



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S-128 - CATALOGUE OF NAUTICAL PRODUCTS

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- The extended scope comes with an extended responsibility placed on data producers and may in fact move the production of S-128 from optional to mandatory to fully provide the data consumer with the services needed to give an accurate report of up-to-dateness of the onboard data holding.
- NIPWG has recognized that there are several outstanding questions about S-128 use for dissemination of S-1XX products before S-128 services can be set up. There are further potential implications that must be answered regarding the responsibility of stakeholders in producing and distributing S-128.
- These questions are mainly operational in nature and focuses on implications of S-128 in the S-100 eco system; these are questions such as if S-128 service becomes a mandatory requirement for any S-100 product service targeting ECDIS.



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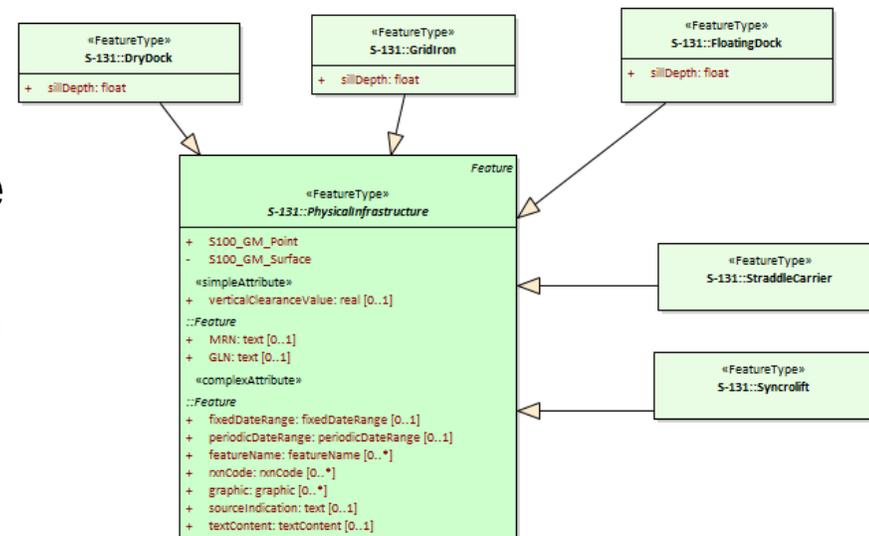
S-128 - CATALOGUE OF NAUTICAL PRODUCTS

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- Annex A of HSSC14-05.3B contains a draft list of questions that should be addressed in regard to S-128 services.
- HSSC is invited to consider if the optimal way of addressing the questions raised in Annex A is within NIPWG or should a wider group be involved.



- NIPWG Task group stood up in 2020;
 - Developed a data model that considered the desired information.
 - Challenges in defining the degree of overlap with ENC.
- Contractor working on developing the product specification to candidate for edition 1.0.0 that will be sent to HSSC for approval.
- Dependency on release of S-100 Edition 5.
 - Expected Q3 2022.



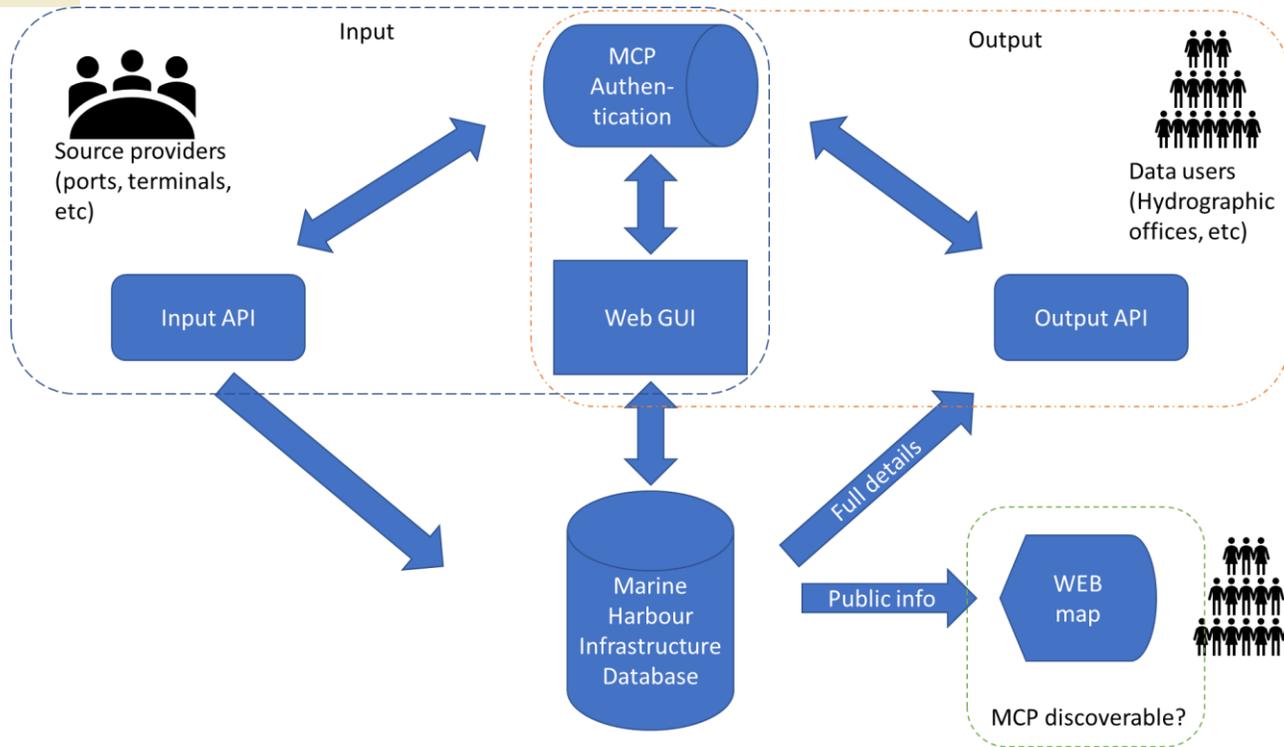


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PROJECT OVERVIEW

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S-131 project overview and aim, how it aims at improving the information flow



- Design and development database infrastructure
- Design and implementation of API
- Design and implementation of GUI
- Documentation of operating and training manuals for port and HOs
- Implementation and testing coordination and support for ports and HOs
- Updating S-131 with observations from the project
- Project documentation



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PROJECT OVERVIEW

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The project will receive financial support from Canada, in-kind support from the National Taiwan Ocean University, with software development, and NIPWG member subject matter expert support. Infrastructure funding is being sought from Singapore via the IHO-Singapore S-100 Lab.

Project kicked off on April 22, 2022; Charline Giffard (CHS) as Project Lead.

- Several ports in Canada, Norway, Netherlands, Singapore, and in Taiwan Island have been identified to participate.
- Working with International Harbour Masters Association to market the project.



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WORK PLAN

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- The NIPWG work plan has been updated to reflect the ongoing activities.
- HSSC is invited to approve the work plan as presented in the NIPWG report.



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THANK YOU