

**Nautical Information Provision Working Group (NIPWG)**  
**4<sup>th</sup> and 5<sup>th</sup> Monthly dedicated S-128 Meeting**  
**8<sup>th</sup> and 15<sup>th</sup> January 2024 – VTC, Worldwide**

Annex A: List of Action items

Annex B: Agenda

Annex C: List of Attendees

**1. Update Status of the S-128 Product Specification**

- NIPWG noted the presentation.
- HC: New version of the data model to be shared once it has been updated. With there being more time to get to Edition 2.0, along with this new data model for 1.2.0 all the packages of S-128 will also be created. If there are any further comments, then the data model could be updated to 1.3.0 next.

**2. S-57/S-101 Equivalence functionality within S-128**

- Discussion on the provision within S-128 for equivalence between S-101 and S-57 cells.
- JP: You must have some kind of equivalence between S-101 and S-57 because Data Producers have the ability to change both the coverage and the scale. There is no algorithm to determine the S-57 cell from an S-101 cell. How this is done is a separate issue. It can either be done by referring the S-128 to a reference in the product.txt or it can be included in S-128. Data Producers must have to maintain a list of which S-57 cells have been replaced by S-101 cells. The ECDIS must know this because it cannot do the data loading. It was agreed a long time ago, not to put any S-57 information into S-100 but the issue on equivalence between ENC's is specifically excluded, this is the only case you would put S-57 information into an S-100 product.
- TM: Permits govern what gets loaded into the ECDIS not the catalogue, unless it is unencrypted data which is a different use case. It is the data provider on the VAR side who can control the information sent to each specific installation.
- JP: There a part in S-98 Annex C, that says when a dual fuel exchange set is received by the ECDIS, in preference it must load the S-101 cell. That means the dual fuel exchange set is giving the ECDIS a choice. What happens if the user has a permit for the S-57 cell and S-101 cell. The current rules for loading would also apply so if the S-57 cell is slightly larger than the S-101 then the S-57 cell will load instead.
- MB: S-128 is called 'Catalogue of Nautical Products' it is not called 'Catalogue of S-100 Products' and therefore you would expect that S-128 will be a catalogue of all the nautical products and not a subset because the data producer has decided to not put some in to the catalogue.
- EM: Recap. To keep in mind that S-128 is not exclusively for ECDIS, it is not exclusively for the up-to-date status of the content on the ECDIS. It is also for showing the content from a Data Producer. There is no requirement to sell through a VAR or a RENC. ECDIS OEM's have asked for a function to show equivalency between products, it is not a requirement for a producer to do this.
- JP: There is a requirement for S-164 and S-98 Annex C for the ECDIS to make a preference to what it loads. The ECDIS must decided when it gets an exchange set with two cells that represent the same information between S-57 and S-101, It must load the S-101 in preference, if you do not give the ECDIS a mechanism to undertake this function, then this requirement in S-164 and S-98 disappears completely. This can all be optional. If a Data Producer wants to use permits as the method, then the equivalency information can be omitted and the ECDIS will load what it is given. There is a class of VAR's that can create a combined S-128, with their own digital signatures as official aggregators.
- EM: We cannot have tunnel vision by focusing on the ECDIS requirement for S-128. It is the pressing issue, but we must not put S-128 in a difficult position for later when trying to fulfil the non ECDIS requirements due to the initial tunnel vision.
- MK: Question: If the equivalency references are optional in S-128, what will the ECDIS do if it has a situation where it has got two products (S-101 and S-57) and it doesn't have the optional reference populated?
- JP: It will load everything. The default rule will be there is no equivalence so the ECDIS will see everything as separate cells and it will view them based on the compilation scales and the data loading algorithm.

- JP: Solutions to this depend on if S-57 is allowed to be included into S-128. If it is, then a simple reference can be inserted in each of the catalogue items. If S-57 is not necessarily in S-128, then a simple textual list as currently in the data model will have to suffice.
- EM: Both options should be possible. The reference between products should follow a rigorous structure in MRN. This way the description of the other products doesn't have to be included, but there is a clear persistent identifier than be used and built from other sources of information. This will need to be described. If the ENC cell name was wrapped in an MRN and a clear structure. There also needs to be an optional relationship between equivalency and other products.
- JP: Will also need to provide a default, and that will be if you do not provide an equivalency the ECDIS does not anything in preference to anything else and will load what it has been given.
- EM: The product specification is missing the link between equivalency and products within the catalogue, currently there is only equivalency going one way from the product to the information class but not the other way. This is done by simple text, there will need to be optional relationship the other way and a relationship between two catalogue items.
- JP: If the data producer does not produce S-128. Then they will need another mechanism to be able to tell their distributors/VARs to sell S-101 cells instead of S-57.

### **ACTION ITEM 1: Update PS for equivalency functionality. EM & HC. 5<sup>th</sup> S-128 VTC**

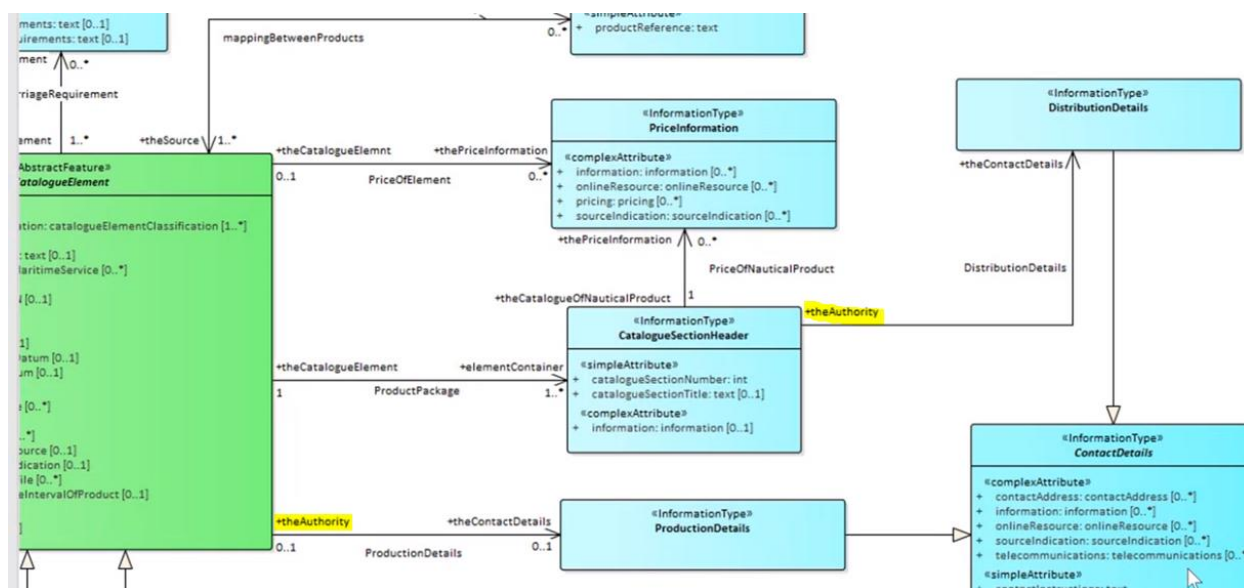
**Discussion resumed below at the 5<sup>th</sup> VTC.**

### **3. Modelling of Equivalence functionality within S-128**

- NIPWG noted the presentation.
- EM: Changes to the modelling are as follows; the association mapping between products is now going both ways and an enumerated attribute has been added to the association (S-100 Preferred and Legacy Preferred).
- JSC: Question: What does it mean that two data set are equivalent? It is quite easy if the coverage is the same but what if they too have different scales? Do we need to model a way to tell the ECDIS what is an S-100 Data set or S-100 catalogue or is it up to the ECDIS to figure out how to load everything and build an internal database? There aren't any rules saying that S-57 and S-101 must align in scales.
- JP: Question: What is the content of productReference attribute?
- EM: This didn't change from the previous data model. It's the place to say what product it is or identifier you would like to attribute it as, an identifier for something that is held externally or internally from S-128. This should probably be an MRN, but that it is not written into the model but in the DCEG. When mapping internally the unique identifier would be of the catalogue element.
- JP: Question: Under what circumstances would the legacy product be preferred over an S-100 product in someone's service?
- EM: we thought about the type of system that the S-128 is trying to service. Within the definitions of those two options. With S-100 Preferred is for Dual Fuel Systems and Legacy Preferred is an S-57 based system.
- JSC: S-128 could be published describing a legacy S-57 system, which is used to generate the files for the legacy system.
- MK: Question: Are all the equivalent attributes optional?
- EM: yes, it is optional.
- HA: Using attributes on associations is complicated and maybe it is over complicating things. It would be simpler if guidance says if you are producing S-101, that in that geographical area then full data stack of S-101 should be available, any geographical position should not be interleaving S-101 and S-57. In this case simple coverage polygons could be used to say in this area use S-101 and in this area use S-57.
- EM: Such a requirement would be external to S-128. There is a reason it is all made optional. the origin of the equivalency was for Nautical Publications and the demand within the IMO OEM community to be very clear on what is equivalent between what they have today and what they get in the future. It is clear in this community that S-101 is equivalent to S-57, however scale bands may complicate things.
- JP: The comment on the model, needs be made clear that this equivalence is not to do with how the ECIDS loads data to the screen, but the only relevance this has is how the data is imported to the system for dual fuel exchange sets.

**ACTION ITEM 2:** Updated Data model to be distributed to working group for review, comments to be supplied by the next S-128 VTC. All. 6<sup>th</sup> S-128 VTC 5<sup>th</sup> Feb 2024

- RM: the role, theAuthority has been used in the data model where it is not an authority (highlighted below). the roles need to be revisited and properly named; the meaning of the role is not the authority because there is no authority there.



#### 4. Updating of Product Specification: How a full dataset is different to an update dataset.

- During the 2<sup>nd</sup> S-128 VTC Agenda item 2, the UKHO paper on S-128 recommendation. Recommendation 5 was discussed; the outcome was for the S-128 product specification to include a section that it is possible to issue updates and that the use will be made of Part 10b updates mechanism within S-100, and examples of how a full dataset is different to an update dataset and how this would work to be added to the DCEG. During this VTC Clarification was asked on who would draft this work. UKHO agreed to undertake this action item.

**ACTION ITEM 2:** UKHO to draft section to be added into S-128 PS and examples for the DCEG. AR & MK. 6<sup>th</sup> S-128 VTC 5<sup>th</sup> Feb 2024

#### 5. UKHO review of mandatory metadata. Action Item 1 from 2<sup>nd</sup> dedicated S-128 VTC

- UKHO to distribute the analysis once it has been reviewed against latest model.

**ACTION ITEM 3:** UKHO to review analysis on mandatory metadata against the latest model and distribute to group. MK. 6<sup>th</sup> S-128 VTC 5<sup>th</sup> Feb 2024

#### 6. S-128 and DQWG

- EM: The Data Quality Working Group (DQWG) should see the product specification before it gets submitted to HSSC. It will be difficult to send 2.0 to DQWG before HSSC so they could receive 2.0 at the same time as HSSC and any show stoppers to be rectified on the submitted version. 1.2.0 can be sent to DQWG for their input.

**ACTION ITEM 4:** S-128 Edition 1.2.0 to be sent to DQWG from comment/review. S-128 PT/Chair Team Middle Feb 2024

#### 7. Close & Next meetings

- Next Dedicated S-128 VTC: 5<sup>th</sup> Feb 2024 12:00 UTC

#### Table of names & initials:

HC	Hyunsoo Choi
JP	Jonathan PRITCHARD
TM	Thomas Mellor

MB	Michael Bergmann
EM	Eivind Mong
MK	Marcey Klimek
JSC	Jens S�e Christiansen
RM	Raphael Malyankar
AR	Andrew Richardson

## Annex A: Action Items

#	Action Item	Agenda Item	Assigned	Status
<b>2nd Dedicated S-128, Nov 2023 – Hybrid Meeting</b>				
1	UKHO to define any of the catalogue metadata fields that's mandatory for the S-128 generation that doesn't originate from the original catalogue.xml	2	AR/MK	3 <sup>rd</sup> S-128 VTC 19 <sup>th</sup> Dec <b>COMPLETED</b> To be discussed at 6 <sup>th</sup> VTC in Feb
2	UKHO discuss with recommendations with IEC and to submit paper through S-98/S-164 meeting.	2	TM/AR	Week Beginning 4 <sup>th</sup> Dec 2023. <b>On Going</b>
<b>3rd Dedicated S-128, Dec 2023 – Hybrid Meeting</b>				
1	List of all missing items to be passed to task group to create definitions	1	HS	22 <sup>nd</sup> December 2023
2	Task group to create definitions for the items that require submission to the registry.	1	EM(Lead), JSC, BG, RB	End of Jan 2024
3	Task group to review comments 1 and 3 and submit proposals back NIPWG	2	SJC(Lead), HS, RB, MK	22 <sup>nd</sup> December 2023 <b>COMPLETED</b>
<b>4th and 5th Dedicated S-128, January 2024 – Hybrid Meeting</b>				
1	Update PS for equivalency functionality.	2	EM & HS	5 <sup>th</sup> S-128 VTC 15 <sup>th</sup> Jan 2024 <b>COMPLETED</b>
2	UKHO to draft section to be added into S-128 PS and examples for the DCEG	4	AR & MK	6 <sup>th</sup> S-128 VTC 5 <sup>th</sup> Feb 2024
3	UKHO to review analysis on mandatory metadata against the latest model and distribute to group.	5	MK	6 <sup>th</sup> S-128 VTC 5 <sup>th</sup> Feb 2024
4	S-128 Edition 1.2.0 to be sent to DQWG from comment/review	6	S-128 PT/Chair Team	Middle Feb 2024 (once 1.2.0 is available)

## Annex B: Agenda

1.0	<b>Update Status of the S-128 Product Specification</b>	HyunSoo Choi
2.0	<b>S-57/S-101 Equivalence functionality within S-128</b>	Jonathan Pritchard
3.0	<b>Modelling of Equivalence functionality within S-128</b>	HyunSoo Choi
4.0	<b>Updating of Product Specification: How a full dataset is different to an update dataset.</b>	Andrew Richardson
5.0	<b>UKHO review of mandatory metadata. Action Item 1 from 2<sup>nd</sup> dedicated S-128 VTC</b>	Marcey Klimek
6.0	<b>S-128 and DQWG</b>	Eivind Mong
7.0	<b>Close &amp; Next meetings</b>	James Weston

**Annex C: List of Attendees**

<b>Attendees</b>				
<b>IHO MEMBER STATES</b>				
<b>Name</b>	<b>Country</b>	<b>Organization / Company</b>	<b>4th</b>	<b>5th</b>
Alper Celebi	Australia	Australian Hydrographic Office	Y	Y
Jamie Murphy	Australia	Australian Hydrographic Office	Y	Y
Bridget Gagné	Canada	Canadian Hydrographic Service (CHS)	Y	Y
Eivind Mong	Canada	Canadian Coast Guard - Chair	Y	Y
Deanna Sokoloski	Canada	Canadian Hydrographic Service (CHS)	Y	
Jens Søe Christiansen	Denmark	Danish Geodata Agency/Geodatastyrelsen (GST)	Y	Y
Stefan Engström	Finland	Finnish Transport Agency Hydrographic Office - Vice Chair	Y	Y
Daniel Zühr	Germany	Bundesamt für Seeschiffahrt & Hydrographie (BSH)	Y	
Philipp SCHWEDAS	Germany	Bundesamt für Seeschiffahrt & Hydrographie (BSH)		Y
Tetsuichiro Yabuki	Japan	Hydrographic Department, Japan Coast Guard		Y
Herman Schouten van der Velden	Netherlands	Hydrographic Service - Royal Netherlands Navy (NLHO)	Y	Y
Richard Flapper	Netherlands	Hydrographic Service - Royal Netherlands Navy (NLHO)	Y	Y
Caroline JOHANSSON	Sweden	SJOFARTSVERKET (SWEDISH MARITIME ADMINISTRATION)	Y	Y
Andrew Richardson	UK	UK Hydrographic Office (UKHO)	Y	Y
James Weston	UK	UK Hydrographic Office (UKHO) - Secretary	Y	Y
Marcy Klimek	UK	UK Hydrographic Office (UKHO)	Y	Y
Thomas Mellor	UK	UK Hydrographic Office (UKHO)	Y	
Alison Contreras	UK	UK Hydrographic Office (UKHO)		Y
Noel Dyer	USA	National Oceanic and Atmospheric Administration (NOAA)	Y	
Michael KUSHLA	USA	National Geospatial-Intelligence Agency (NGA)	Y	
Amilynn Adams	USA	United States Coast Guard (USCG)	Y	
<b>INDUSTRY &amp; TECHNICAL EXPERTS</b>				
Michael Bergmann		Bergmann Marine	Y	
Raphael Malyankar		Portolan Sciences	Y	Y
Yann CORLAY		GEOMOD		Y
Lorenzo Nannini		GARMIN		Y
Petri Tissari		FURUNO		Y
Su Marks		IC-ENC		Y
Jonathan PRITCHARD		IIC Technologies	Y	Y
Hyunsoo Choi		KRISO	Y	Y
Shwu-Jing Chang		NTOU		Y
Svein Skjaeveland		PRIMAR / ECC	Y	Y
Hugh ASTLE		Teledyne Geospatial	Y	Y