

9th S-129 UKCM Project Team Meeting Record of Meeting

0900 – 1700 SGT, 17 November 2023
Rendezvous Hotel Singapore (with VTC via GoToMeeting)

1.1 Welcome and Introductions / Review of Meeting Agenda

The Chair opened the meeting at 0900 SGT and welcomed S-129 Project Team (PT) members as well as other delegates from the S-100 Working Group (WG). Refer to Annex A for the list of participants.

The Chair provided an overview of the draft meeting agenda (Annex B). It was noted that the order of meeting agenda items may change as the meeting progresses.

1.3 Review of Previous Meeting Action Items

The Chair provided an update on the progress of action items from the 8th S-129 PT, which was held on 27 July 2023.

The progress of the action items, as at the 9th PT meeting commencement, are reflected in Annex C, and as follows:

PT8-1 – Obtain feedback from Jonathan (IIC Technologies) regarding suitable S-164 test areas for S-129

The Chair engaged Jonathan Pritchard (IIC Technologies) regarding S-164 test areas for S-129. Jonathan indicated that updated S-129 Feature Catalogue and Portrayal Catalogue were required to start producing S-129 test datasets for Micklefirth. Now that the S-129 FC and PC have been updated to Edition 1.1.0, the Chair will seek to re-engage Jonathan to produce test datasets for S-164 test areas.

PT8-2 - Design and propose UKCM area boundary portrayal (i.e. symbolised magenta line with “UKC” text label)

The Chair, with assistance from KMOU and BlueMap, used the S-100 Toolkit’s SymbolEditor and LineStyleEditor, to mock up the UKCM area boundary. The Chair will continue this process with KMOU and BlueMap until the symbology is agreed within the S-129 PT and approved by the S-100 WG.

PT8-3 – Obtain feedback from Mikko (NCWG) and Izzy (KHOA) regarding portrayal of UKC non-navigable area, UKC almost non-navigable area, and UKCM area boundary

The Chair contacted Mikko and Izzy but no feedback has been provided, to date. The Chair will continue to engage with them with regarding the portrayal of S-129 features.

PT8-4 – Work on or assign compiling of test dataset screenplay

The Chair updated the PT that no work had been progressed, as yet, to compile test dataset screenplay. The PT needs to determine the S-129 use cases and what information the S-129 datasets would comprise for each use case. The Chair will endeavour to work with Hannu and other applicable PT members to compile the required screenplays.

PT8-5 – Discuss Exchange Set preparation with Jonathan Pritchard (IIC Technologies)

The Chair noted only having brief email correspondence with Jonathan with regards to S-129 Exchange Sets, and no work having been done yet. The Chair will discuss this further with Jonathan.

PT8-6 – Update S-129 Product Specification to include *DataCoverage* feature

The Chair engaged different S-100 experts to discuss the advantages and disadvantages of including *DataCoverage* feature. No changes have been made to the S-129 PS, at this stage, and the need for this feature was to be further discussed during the 9th S-129 PT meeting. Should *DataCoverage* be included, necessary changes are to be made as S-129 Edition 1.2.0.

PT8-7 – Update S-129 Feature Catalogue, Portrayal Catalogue, and XML schema to include *DataCoverage* feature

The Chair engaged different S-100 experts to discuss the advantages and disadvantages of including *DataCoverage* feature. No changes have been made to the S-129 FC, PC or XML schema, at this stage, and the need for this feature was to be further discussed during the 9th S-129 PT meeting. Should *DataCoverage* be included, necessary changes are to be made as S-129 Edition 1.2.0.

PT8-8 – Produce test datasets based on S-129 Edition 1.1.0

With the S-129 FC, PC, and schema now updated and submitted for approval, test datasets now need to be produced. The Chair will engage Chris Hens (OMC International) to assist with the effort.

PT8-9 – Submit draft and proposal for S-129 Product Specification Edition 1.1.0

S-129 Edition 1.1.0 was submitted during S100WG08, for S-100 WG approval.

PT8-10 – Provide 1.1.0 FC, PC, TDS to KRISO & NIWC for testing on viewer software

S-129 test datasets based on Edition 1.1.0 need to be produced. The Chair will engage Chris Hens (OMC International) to assist with the effort.

PT8-11 – Identify and incorporate any necessary updates in S-129 Production Specification, pertaining to S-421

While the Chair reviewed existing information pertaining to S-421 in the S-129 PS, no changes have yet been made.

PT8-12 – Provide S-129 SharePoint page access to PT members requesting access

The Vice-chair had not yet provided S-129 SharePoint page access to the PT members, who have expressed interest in the page. The Chair will coordinate this with the Vice-Chair.

PT8-13 – Coordinate the use of IHO GitHub page for S-129

The Chair set up an S-129 repository in the IHO GitHub page, with assistance from Yong Baek (IHO Secretariat).

PT8-14 – Chair to further amend the workplan to include future meeting information

The Chair included planned future meeting dates in the workplan submitted to the S-100 WG during S100WG08

PT8-15 – Chair to propose date for next S-129 PT meeting (VTC)

Since the 8th S-129 PT meeting, no VTC meeting was held.

2.1 “UKC analysis area” portrayal

The Chair presented the current draft of the “UKC analysis area” boundary symbology, as illustrated in Figure 1 below.

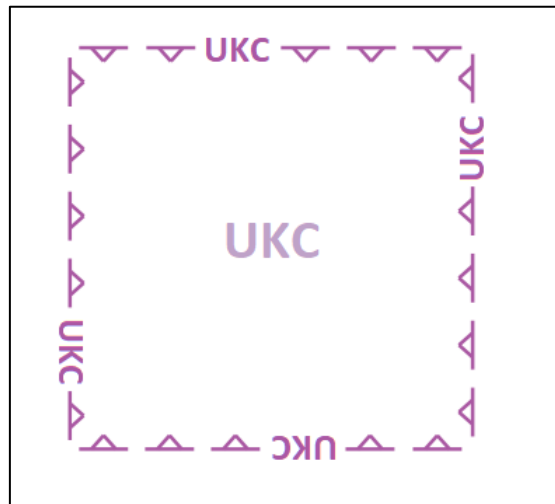


Figure 1 Draft “UKC analysis area”

The PT questioned whether similar UKC-related area portrayal/information were already available via S-101, and therefore whether “UKC analysis area” could cause information overload on end-user systems. While this was unclear, it was reiterated that the purpose of the “UKC analysis area” portrayal was to improve navigational safety by discerning “UKC non-assessed” areas from and areas out of scope for UKC calculations (e.g. areas behind vessel, or areas outside a UKCM area). The PT concluded that the centre symbol (“UKC”) should be removed to mitigate information overload within “UKC analysis areas” when presented on end-user systems.

ACTION PT9-01 –KMOU and Chair to remove centre-symbol from draft “UKC analysis area” in the S-129 portrayal catalogue

The PT also noted that “UKC” text in the “UKC analysis area” boundary line style should be changed to “UKCM”, for more accurate indication of the boundary’s intent.

ACTION PT9-02 –KMOU and Chair to update “UKC analysis area” line style text to “UKCM” in the S-129 portrayal catalogue

It was also noted that transparency should be applied to the “UKC analysis area” boundary. Opacity is to be set through the Portrayal Catalogue. As a start, the PT agreed that the opacity is to be set at 50% in the Portrayal Catalogue.

ACTION PT9-03 – KMOU and Chair to set “UKC analysis area” transparency at 50% in the S-129 Portrayal Catalogue

2.2 KMOU Presentation – A Portrayal Experiment of Under Keel Clearance Service Area

Hoyeon Cho (KMOU) and Hyoseung Kim (KMOU) provided a presentation on “*A Portrayal Experiment of Under Keel Clearance Service Area*”. The presentation outlined KMOU’s research on defining the coverage of the UKC service area (hereafter referred to as the “UKC analysis area”) using a vessel’s maximum steering angle as per the manoeuvring guidelines provided by the International Standard for Ship Manoeuvrability Testing, MSC.137(76). In KMOU’s experiment, the extent of a “UKC analysis area” for a vessel was determined based on a vessel’s estimated arrival time at destination, and its maximum steering angle. The “*Under Keel Clearance Non-Navigable Area*” and “*Under Keel Clearance Almost Non-Navigable Area*” were determined within the resultant “UKC analysis area”.

PT members commented that the PS currently uses “UKC service area” to describe what would be more accurately referred to as “UKC analysis area”. This was deemed misleading, as the phrase “UKC service area” was more analogous to an entire Under Keel Clearance Management Area, whereas the “UKC analysis area” is dynamic, existing within a static “UKC service area”, and only corresponds to areas encompassed by the “go”, “no go”, and “almost no go” areas in an S-129 dataset. Hence, it was agreed that PT members should use the phrases “UKC analysis area” and “UKC service area” distinctively. Furthermore, the spatial attribute description for the *UnderKeelClearancePlan* feature is to be updated accordingly in the S-129 Product Specification.

ACTION PT9-04 – Chair to update description for *UnderKeelClearancePlan*’s spatial attribute in the S-129 Product Specification

As part of the presentation, KMOU also shared the portrayals of “*Under Keel Clearance Non-Navigable Area*” and “*Under Keel Clearance Almost Non-Navigable Area*” used during their research. This allowed the PT to assess the suitability of the current hatch-fill portrayal of the “*Under Keel Clearance Non-Navigable Area*” and “*Under Keel Clearance Almost Non-Navigable Area*” features. The PT agreed that these features should instead be portrayed as solid fill with opacity setting, as solid fill provides improved transparency compared to hatch fill.

ACTION PT9-05 – KMOU to amend - "no-go" and "almost no-go" areas as solid fill with 50% transparency in the S-129 portrayal catalogue.

2.3 “DataCoverage” feature

The Chair opened discussion on including the “*DataCoverage*” feature in S-129 and outlined the perceived advantages and disadvantages of its inclusion previously noted by different PT members.

The PT concluded that a new “*DataCoverage*” feature is not necessary to be included in S-129, however, the “*dataCoverage*” metadata needs to be made mandatory for S-129, if not already mandatory.

ACTION PT9-06 – Chair and Vice-Chair to check multiplicity of “*dataCoverage*” metadata, and make mandatory (if not already)

2.4 Relationship between S-129 and S-421

The chair raised the need for more detail in the S-129 PS pertaining to the relationship between S-129 and S-421. Hannu Peiponen (IEC/Furuno) and Julius Moeller (AMSA) commented that an S-129 Technical Service Specification would be a more suitable place to document the usage of S-421 in conjunction with S-129, rather than the S-129 PS. Details required would include the possible scenarios of S-421 dataset provision, such as route information provided from shore to ship, or route information provided from ship to shore.

In the S-129 PS, the “*UnderKeelClearancePlan*” feature currently consists of the following attributes, currently linked to specific S-421 attributes.

- “*sourceRouteName*” attribute
- “*sourceRouteVersion*” attribute

The PT suggested that remarks against these attributes be amended in the S-129 PS with more generic descriptions, so that they can be associated with, but not limited to, S-421 specific attributes.

“*sourceRouteName*” is to be described as a “route identifier”, which can be provided as MRNs in the future.

“*sourceRouteVersion*” can be used when “*sourceRouteName*” provides insufficient route information (e.g. when there are several route names/identifiers, when clarification to route information needed).

ACTION PT9-07 – Chair and Vice-Chair to update remarks against “ <i>sourceRouteName</i> ” and “ <i>sourceRouteVersion</i> ” attributes as per above in S-129 PS

2.5 Technical Service Specification

The PT started discussions regarding a Technical Service Specification for S-129. Julius commented that, as S-129 datasets would need to be provided in (near) real time, it was important to develop a TSS. The TSS for S-129 would also elaborate the use cases of S-421 for S-129, as well as specifying the relationship between S-129 and S-421 in data exchange and communication protocols. In addition to the TSS, the PT commented that S-98 Annex C would need to provide guidance on how S-129 and S-421 could be displayed and used together by end users.

The Chair asked the PT if there were an existing document template for a TSS. PT members indicated that the TSS template is provided under IALA G1128 (“THE SPECIFICATION OF E-NAVIGATION TECHNICAL SERVICES”).

The PT agreed that an S-129 TSS would need to become available by January 2026.

2.6 S-100 Edition 5.2.0 Changes

The PT noted that S-100 Edition 5.2.0 changes, when available, would need to be reviewed to analyse their impact on S-129, if any. Due dates and redlines of S-100 Edition 5.2.0 are to be advised by the S-100 WG.

ACTION PT9-08 – Chair to coordinate PT review Edition 5.2.0 redlines when available, and analyse impact on S-129 (

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2.7 S-129 Dataset cancellation

Following the paper on ECDIS dataset handling during S-100 WG8 (S100WG8-38; agenda # 6.16), the Chair sought clarification on how S-129 datasets should be cancelled, and if the S-129 PS needs to be amended with regards to dataset cancellation.

The PT agreed that S-129 datasets are to be cancelled as follows:

1. Self-cancelling
 - a. Achieved using "*temporalExtent*" metadata
 - b. If the cancelled dataset endures on screen, an "error message" needs to be displayed on end user system
2. Cancellation by new dataset
 - a. Achieved through:
 - i. Same filename as previous dataset, and
 - ii. "*editionNumber*" metadata
 - b. "*fixedTimeRange*" attribute cannot be used for cancelling

To facilitate the above methods, both the "*temporalExtent*" and "*editionNumber*" metadata need to be mandatory in S-129.

ACTION PT9-09 – Chair to check multiplicity of "*temporalExtent*" and "*editionNumber*" metadata in S-129 PS, and make mandatory (if not already)

The PT noted that S-98 Annex C 21.3 needs to be checked for description of cancellation through same filenames.

ACTION PT9-10 – Chair to check S-98 Annex C 21.3 for any description of cancellation through same dataset filenames

3.1 Bandwidth Considerations

Following S-100 WG7 (Monaco, Dec 2022), the S-100 WG suggested that the S-129 PT consider potential bandwidth issues for vessels (S-100WG7-03.9). As the S-129 PS currently does not stipulate a recommended S-129 dataset size, the Chair sought to start discussing bandwidth and data size requirements for S-129.

As a starting point, the PT agreed to update the S-129 PS to specify an upper dataset size limit of 20MB (similar to the S-127 PS).

ACTION PT9-11 – Chair and Vice-Chair to update S-129 PS Chapter 18 with 20MB data size limit

With regards to delivery mechanisms for S-129 datasets, the PT noted that, while the IMO currently does not mandate internet usage onboard vessels, SECOM is based on IP communication.

3.2 Validation Checks

The Chair proposed to coordinate a VTC meeting to discuss S-129 Validation Checks. This meeting is to be conducted following S100WG's circulation of a template for the validation part of S-100 based Product Specifications (S-100 WG8 Action8/16).

ACTION PT9-12 – Chair to schedule VTC for Validation Check discussions

3.4 Other Business

The meeting was concluded early due to venue availability constraints.

The PT was informed that the Chair will endeavour to submit a revised timeline for S-129 Edition 2.0.0 to S100WG by December.

ACTION PT9-13 – Chair to submit revised timeline for S-129 Ed. 2.0.0 to S100WG by December

3.4 Next Meeting

The Chair advised the PT that tentative dates for the next S-129 PT meeting (VTC) will be proposed in due course.

ACTION PT9-14 – Chair to propose date for next S-129 PT meeting (VTC)

List of Participants:

Name	Organisation
Jason Rhee – Chair	OMC International
Lindsay Perryman – Vice Chair	AMSA
Michael Andrew	AHO
Hoyeon Cho	KMOU
Brian Flick	WR Systems
Hyoseung (Kevin) Kim	KMOU
Seojeong Lee (VTC)	KMOU
Julius Moeller	AMSA
Eivind Mong	CCG
Hannu Peiponen	IEC / Furuno
Petri Tissari	Furuno

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Draft Agenda for the S-129 Project Team Meeting No. 9 (17th November 2023)

Venue:

Rendezvous Hotel Singapore
Hybrid (via GoToMeeting)

Time:

November 17th: 0900 – 1700 SGT (0100 – 0900 UTC)
(GoToMeeting link: <https://meet.goto.com/183974909>)

Chair: Jason Rhee (OMC International)

Vice-Chair: Lindsay Perryman (AMSA)

Time (SGT)	Friday November 17 th (0900 – 1700 SGT)	
0900 – 1030	Session 1 <ul style="list-style-type: none"> • Welcome and introductions • Review of meeting agenda • Review of previous action items 	(All) (Chair) (Chair)
1030 – 1045	Break	
1045 – 1200	Session 2 <ul style="list-style-type: none"> • Summary of S-129 Ed 1.1.0 Product Specification • Presentation – KMOU (topic TBC) • Edition 2.0.0 <ul style="list-style-type: none"> ○ DataCoverage feature ○ UKCM area boundary portrayal ○ S-100 Ed. 5.2.0 changes ○ S-421 ○ S-129 dataset cancellation 	(Chair) (All) (All)
1200 – 1330	Lunch	
1330 – 1500	Session 3 <ul style="list-style-type: none"> • Bandwidth considerations • Other Review of S-129 Ed 1.1.0 PS redlines • Testbed opportunities • Other business 	(All) (All)
1500 – 1530	Break	
1530 – 1700	<ul style="list-style-type: none"> • New action items • Review of timeline • Discussion on technical service specification 	(All) (All) (JM/All)

Project team members are requested to provide comments or change proposals for any of the agenda items to the PT Chair by no later than 10th November 2023.

PT Chair: Jason Rhee - j.rhee@omcinternational.com

Annex C

Previous action items from 8th S-129 UKCM Project Team Meeting

Action	Description	Assignee	Status
PT8-1	Obtain feedback from Jonathan (IIC Technologies) regarding suitable S-164 test areas for S-129	Jason R	In Progress
PT8-2	Design and propose UKCM area boundary portrayal (i.e. symbolised magenta line with “UKC” text label	Jason R	In Progress
PT8-3	Obtain feedback from Mikko (NCWG) and Izzy (KHOA) regarding portrayal of: <ul style="list-style-type: none"> • UKC non-navigable area • UKC almost non-navigable area • UKCM area boundary 	Jason R	In Progress
PT8-4	Work on or assign compiling of test dataset screenplay	Jason R, Hannu P	Outstanding
PT8-5	Discuss Exchange Set preparation with Jonathan Pritchard (IIC Technologies)	Jason R	Outstanding
PT8-6	Update S-129 Product Specification to include <i>DataCoverage</i> feature	S-129 PT	Outstanding
PT8-7	Update S-129 Feature Catalogue, Portrayal Catalogue, and XML schema to include <i>DataCoverage</i> feature	S-129 PT	Outstanding
PT8-8	Produce test datasets based on S-129 Edition 1.1.0	Jason R, Chris H	Outstanding
PT8-9	Submit draft and proposal for S-129 Product Specification Edition 1.1.0	S-129 PT / Jason R	Done
PT8-10	Provide 1.1.0 FC, PC, TDS to KRISO & NIWC for testing on viewer software	S-129 PT / Jason R	Outstanding
PT8-11	Identify and incorporate any necessary updates in S-129 Production Specification, pertaining to S-421	Jason R, Hannu P	Outstanding
PT8-12	Provide S-129 SharePoint page access to PT members requesting access	Jason R, Lindsay P	Outstanding
PT8-13	Coordinate the use of IHO GitHub page for S-129	Jason R	Done
PT8-14	Chair to further amend the workplan to include future meeting information	Jason R	Done
PT8-15	Chair to propose date for next S-129 PT meeting (VTC)	Jason R	Done

Annex D

9th S-129 UKCM Project Team Meeting - List of Action Items:

Action	Description	Assignee
PT9-01	Remove centre-symbol from draft "UKC analysis area"	Jason R / KMOU
PT9-02	Update "UKC analysis area" line style text to "UKCM"	Jason R / KMOU
PT9-03	Set "UKC analysis area" transparency at 50% in S-129 Portrayal Catalogue	Jason R / KMOU
PT9-04	Update description for <i>UnderKeelClearancePlan</i> 's spatial attribute in S-129 Product Specification	Jason R
PT9-05	Amend PC - "no-go" and "almost no-go" areas as solid fill with 50% transparency	KMOU
PT9-06	" <i>dataCoverage</i> " metadata to be made mandatory (if not already)	Jason R
PT9-07	update remarks against " <i>sourceRouteName</i> " and " <i>sourceRouteVersion</i> " attributes as per above in S-129 PS	Jason R, Lindsay P
PT9-08	Review Edition 5.2.0 redlines when available, and analyse impact on S-129	Jason R / S-129 PT
PT9-09	Check multiplicity of " <i>temporalExtent</i> " and " <i>editionNumber</i> " metadata in S-129 PS, and make mandatory (if not already)	Jason R
PT9-10	S-98 Annex C 21.3 to be checked for any description of cancellation through same dataset filenames	Jason R
PT9-11	Update S-129 PS Chapter 18 with 20MB data size limit	Jason R, Lindsay P
PT9-12	Schedule VTC for Validation Check discussions	Jason R
PT9-13	Submit revised timeline for S-129 Ed. 2.0.0 to S100WG by December	Jason R
PT9-14	Propose date for next S-129 PT meeting (VTC)	Jason R