

## S-101 PROJECT TEAM (S-101PT)

### 6<sup>TH</sup> (REMOTE) MEETING – 23-24 FEBRUARY 2021

#### MEETING RECORD

S-101PT6 VTC (23 – 34 February 2021)
<b>Logistics Information</b>
<b>Main Meeting</b>
Time: 12:00 – 15:00 CET – (11:00 to 14:00 UTC)
Type: Remote ( <i>Go To Meeting</i> )
Please join the meeting from your computer, tablet or smartphone using the following link;
<b>NOTE: GoTo meeting link for both days:</b> <a href="https://global.gotomeeting.com/join/207170445">https://global.gotomeeting.com/join/207170445</a>
<i>Please contact <a href="mailto:jeff.wootton@iho.int">jeff.wootton@iho.int</a> for assistance with connecting to the meeting.</i>

All Papers for the S-101PT6 meeting, including presentations, have been posted on the S-101PT6 meeting page at <https://iho.int/en/s-101pt6-2021>.

#### Abbreviations:

Chair	Tom Richardson	(IC-ENC)
Vice-Chair	Alvaro Sanchez	(Australia)
CM	Christian Mouden	(France)
DG	David Grant	(USA – NIWC)
EH	Elizabeth Haheesy	(Denmark)
HA	Hugh Astle	(Teledyne Caris)
HB	Holger Bothien	(SevenCs)
HP	Hannu Peiponen	(Furuno)
IK	Iji Kim (Izzy)	(Korea (Republic of))
JP	Jonathan Pritchard	(IIC)
JW	Jeff Wootton	(IHO Sec)
KD	Kevin Dickens	(USA – NGA)
KO	Klaus Östergren	(Sweden)
MB	Megan Bartlett	(USA – NOAA)
MH	Mikko Hovi	(Finland)
PIB	Pol Le Bihan	(Geomod)
RB	Rogier Broekman	(Netherlands)
RG	Robert Greer	(iXblue Defence Systems)
RF	Richard Fowl	(Denmark)
RM	Raphael Malyankar	(Portolan Sciences)
VB	Verena Bosselmann-Borsos	(New Zealand)
VP	Valentino Palma	(Italy)
YB	Yong Baek	(IHO Sec)

#### Tuesday 23 February 2021:

##### Welcome/Logistics

The meeting commenced at 1200 CEST. The S-101PT Chair, Tom Richardson, welcomed attendees to the meeting, noting that the substantial attendance at this meeting and the papers submitted were an

encouraging sign that S-101 development continues to be considered by HOs and industry to be a priority. He acknowledged the challenges of holding substantive meetings in the current situation of the COVID-19 pandemic and thanked those participants that were attending the meeting from substantially different time zones.

Introductory remarks were then made by IHO Director Abri Kampfer. He stressed the importance of S-101 as a priority as identified in the S-100 Roadmap. He noted the number of attendees and thanked all for attending.

#### **S-101PT6-01 – Meeting Participants**

The Chair was pleased to acknowledge 64 registered attendees for the meeting. Unfortunately the VTC format for the meeting precluded an “around the table” individual introduction of attendees.

#### **S-101PT6-02 – Agenda** [Chair]

The meeting Agenda was approved, noting that there were a couple of late papers submitted that have subsequently been added to the Agenda. The Chair indicated that if time becomes an issue the INF papers submitted may not be discussed, however he encouraged attendees to look at any papers that cannot be addressed due to time constraints and pass any observations/opinions to the Project Team.

#### **S-101PT6-03 – Election of S-101PT Officers** [IHO-Sec]

YB explained that the S-101PT was required to hold elections for its Officers at its first full meeting after each Session of the IHO Assembly. He called on any interested Project Team members to nominate by email for the positions of Chair and Vice-Chair before the beginning of day 2 of the meeting, noting that the current Chair and Vice-Chair were willing to continue in these roles.

There being no new nominations before the start of day 2 of the meeting, Tom Richardson (UK) and Alvaro Sanchez (AU) were affirmed as the S-101PT Chair and Vice-Chair, respectively, for the current intercessional period.

#### **S-101PT6-04 – S-101PT5 Report** [Chair]

The report from S-101PT5 was approved without amendment.

#### **S-101PT6-05 – S-101PT Actions** [Chair]

[Docs: S-101PT Actions @ 20210222 (.xls)]

All actions listed as completed/closed in the Actions list were confirmed.

All other Actions from previous meetings remain ongoing.

S-101PT4-11: A paper was presented to the ENCWG Catch-Up meeting earlier in February 2021 and revised guidance approved for inclusion in the S-57 UOC. This guidance will also be reflected in the S-101 DCEG.

Actions S-101PT5-01, S-101PT5-02, S-101PT5-12 and S-101PT5-26 are all subjects of paper submitted to this meeting.

Further updates were provided for actions S-101PT4/14, S-101PT5/13 and S-101PT5/25.

Decisions/Actions:

**Action S-101PT6-01:** S-100 Validation Checks developers to pick up the invalid geometries issue to confirm checks cover this; and guidance on what systems should do when receiving such data exists. **(JP)**

### **S-101PT6-06 – DCEG Update** [JW]

[Docs: DCEG Report\_V2; Draft S-101 Ed. 1.0.1 (clean and redline); Change Control Log (.xls)]

JW reported on the current status of the S-101 DCEG; outcomes of the S-101 DCEG Sub-Group meeting held in January 2021; the main changes that have been made to the S-101 DCEG since S-101PT5; and highlighted the potential changes that may result from discussions on Paper S-101PT6-12.

It was agreed to establish a Sub-Group, initially at the S-101PT level but may require exposure at the S-100WG level, to review all specification/guidance related to Associations.

It was agreed to establish a Sub-Group to review ECDIS dataset load/unload processes.

The publication of S-101 DCEG Edition 1.0.1 was approved, pending changes to be applied as a result of outcomes of discussions on Paper S-101PT6-12 and any other S-101PT6 Papers.

#### Decisions/Actions:

**Decision:** Sub-Group to be established under the S-101PT to review all specification/guidance related to Associations (IHO Sec lead).

**Decision:** Sub-Group to be established under the S-101PT to review ECDIS dataset load/unload processes (CM (SHOM) lead).

**Decision:** S-101 DCEG Edition 1.0.1 to be finalised and published, including all additional changes approved at S-101PT6.

**Action S-101PT6-02:** PT members interested in participating in the Associations Sub-Group to notify JW by email ([jeff.wootton@iho.int](mailto:jeff.wootton@iho.int)) at the earliest opportunity. **(S-101PT)**

Members: IHO Sec (lead), TR, RM, JP, DG, KD, HB, RF, VB, MB, HA, RB

**Action S-101PT6-03:** PT members interested in participating in the S-101 Dataset Load/Unload Sub-Group to notify JW by email ([jeff.wootton@iho.int](mailto:jeff.wootton@iho.int)) at the earliest opportunity. **(S-101PT)**

Members: CM (lead), JW, RG, PIB, MB, VB, KD, HA, RM, HB, IK, AS, DG

**Action S-101PT6-04:** Prepare final redline and clean versions of S-101 DCEG Edition 1.0.1 and publish on the IHO web site and the IHO GI Registry by end of February 2021. Include any changes approved as a result of discussions on Paper S-101PT6-12 and any other Papers for S-101PT6. **(JW)**

**Action S-101PT6-05:** Investigation to be conducted into possible amendments to the UOC resulting from the change in terminology from “Emergency Wreck Marking Buoy” to “New Danger Marking Buoy” (for ENCWG6). **(JW)**

### **S-101PT6-07 – Portrayal Progress** [Vice-Chair]

[Docs: Portrayal Sub-Group Summary Report]

The key objective of the Portrayal Sub-Group is to finalise Edition 2.0.0 of the S101 Portrayal Catalogue. AS reported on the activities of the Sub-Group since S-101PT5. He reported that there were currently 27 issues identified in the dedicated Portrayal Sub-Group GitHub (<https://github.com/S-101-Portrayal-subWG>). Due to meeting time constraints, the issues could not be discussed individually, however Project Team members were encouraged to visit the GitHub and contribute to any of the issues under discussion. It was agreed that this feedback was to be provided before 04 April 2021. It was also agreed that a S-101 Portrayal Catalogue Development repository is to be established in the IHO GitHub.

A link to the Portrayal Sub-Group GitHub has been added to the S-101PT section (S-100WG/Basic WG Documents) on the IHO web site for ease of access for Project Team members. However, it was noted that this GitHub is outside the IHO GitHub space; a new Portrayal Sub-Group repository has been set up in the IHO GitHub space, but up to now there has been no success in transferring the issues in the current active GitHub to the new repository. It was agreed that the issues in the “current” GitHub would be closed on 04 April 2021 and from this date all new issues would be placed in the Portrayal Sub-Group repository of the IHO GitHub.

AS reported progress on the initial work being done to populate a version of the “S-57 Removed\_Remodelled Items” spreadsheet containing additional columns to identify any portrayal considerations. This work initial work is being done by AS and JW, with the initial pass of the spreadsheet almost completed. A link to the spreadsheet has been included under Issue #23 of the GitHub.

Continued liaison with the NCWG on issues related to portrayal symbology in ECDIS was acknowledged. In particular, reference in this regard was made to the portrayal considerations as included in the “S-57 Removed\_Remodelled Items” spreadsheet; and additional work that was done by Germany and USA (NOAA) post-S-101PT4.

#### Decisions/Actions:

**Decision:** Feedback on the Portrayal Sub-Group GitHub issues to be provided by 04 April. On this date all issues will be closed and all future issues are to be placed in the Portrayal Sub-Group repository in the IHO GitHub.

**Decision:** It was decided to include a dedicated repository for S-101 Portrayal Catalogue development in the IHO GitHub, noting however that this may require a gradual migration.

**Decision:** Recommendations on the issues raised in the GitHub are to be aligned with S-101 DCEG Edition 1.0.1.

**Action S-101PT6-06:** Project Team Members to provide feedback on any of the Portrayal Sub-Group GitHub issues before 04 April 2021, noting that subject to no adverse comments this will be taken as S-101PT endorsement of the decisions/actions agreed by the Portrayal Sub-Group. **(S-101PT)**

**Action S-101PT6-07:** Add a dedicated area for S-101 Portrayal Catalogue development under the IHO GitHub. **(IHO Sec)**

**Action S-101PT6-08:** Ensure that all S-101 portrayal considerations as included in the “S-57 Removed\_Remodelled Items” spreadsheet have been amalgamated with the work that has been done by Germany and US (NOAA) before 04 April. **(JW/AS)**

#### **S-101PT6-08 – Validation Update** [Chair]

[Docs: Validation Checks Update]

The Chair reported good progress has been made on the drafting of S-101 Validation Checks; particularly acknowledging the contributions of Denmark (S-101 specific Checks), SevenCs/Nautical Dimensions (ISO 8211 encoding aspects) and IIC Technologies (geometry-related Checks). Once this initial work has been completed a draft Validation Checks document will be prepared by the Validation Sub-Group at which point finalising Check syntax, incorporating S-58 Edition 7.0.0 changes, expansion of Checks to incorporate new or changed S-101 functionality and development of test datasets will take place.

JP reported that a paper proposing a review of the rules for geometry levels in S-100 Part 7 will be presented to TSM8 (end of February 2021); this issue has been identified as a result of the validation work that has been done by IIC Technologies.

While it was reported that some work had already been done on creating test datasets for S-101 data validation tools, funding for this activity was no longer available and a request may be required to provide funding from the IHO Special Projects fund.

The importance of ensuring that all draft Validation Checks and associated Test Datasets are aligned to specific versions of the relevant documents (S-100, S-101, S-101DCEG) was stressed.

Decisions/Actions:

**Action S-101PT6-09:** Investigate the possibility of submitting a request to fund the development of S-101 test datasets utilising the IHO Special Projects Fund (for HSSC13). **(Chair)**

**Action S-101PT6-10:** Incorporate process to ensure alignment of all draft Validation Checks and test datasets to single versions of related publications (S-100/S-101/S-101DCEG) in the overall Validation Checks development process. **(Chair)**

**S-101PT6-09 – S-101PT Workplan Update** [Chair]

[Docs: S-101PT Workplan Update]

The Chair stepped through the five key themes of the S-101PT Workplan (DPS Main Document, DCEG and Feature Catalogue; Portrayal Changes, Portrayal Catalogue and associated Annex(s); Validation Checks; Test Datasets; and Finalisation) and the proposed timeline in order to align S-101 Edition 1.1.0 with the publication of S-100 Edition 5.0.0. He reported that out of necessity some of the dates may be flexible, particularly given the many interdependencies in the S-101 development process; and invited Project Team members to provide any comments as required. Included in this timeline is the capability to publish “interim” Feature Catalogues, with a version 1.0.1 Feature Catalogue expected by the end of March 2021; it was confirmed by KHOA that if the Edition 1.0.1 DCEG was available by the end of February, the corresponding Feature Catalogue should be completed by the end of March. The Chair also suggested that consequential impacts of the work being done by the S-57 to S-101 Conversion Sub-Group and any changes to current ENC Standards (for example S-58 Edition 7.0.0) may impact on this timeline.

While not an immediate consideration, it was suggested that preparations should commence in the near future on soliciting stakeholder engagement for S-101 Edition 1.1.0, through the possible formation of an Outreach Sub-Group.

It was requested that if possible test datasets should be made available earlier than January 2022. There was some discussion on creation and access to test data; work has been done on developing test datasets for S-164 (however progress had almost stopped on this due to lack of funding) and SHOM reported that they have converted datasets in support of the S-57 to S-101 Conversion Sub-Group that may be used for testing. It was considered possible that “development” test data may be available as soon as 01 September 2021, assuming the availability of the Edition 1.0.1 Feature Catalogue. A key to the development of test datasets is access to funding; this may be achieved through access to the IHO Special Projects fund (see Action S-101PT6-09). Repositories suggested for accessing test datasets included the GitHub and the IHO GI Registry (Test Bed area).

NIWC raised concerns about notification and access to tools in support of S-101 development. The Chair responded that the IHO will not provide further tools but by working collaboratively across the group and with the S-57 to S-101 Conversion Sub-Group there should be tools available to support this.

RB (DQWG Chair) raised a concern with the timeline in that the DQWG review of the draft S-101 Edition 1.1.0 was expected to be conducted during the Northern Hemisphere summer months. The Chair responded that, as much as possible, as components are finalised they will be submitted to the DQWG so as to avoid a peak of activity.

[Post-Meeting note: UKHO has now made S-101 and S-102 test datasets available here: <https://data.admiralty.co.uk/portal/apps/sites/#/marine-data-portal/pages/s-100>

Decisions/Actions:

**Decision:** The draft Workplan was accepted, with the caveat that if possible test datasets should be available earlier than January 2022.

**Action S-101PT6-11:** Pending completion of the Edition 1.0.1 DCEG (Action S-101PT6-04), version 1.0.1 of the S-101 Feature Catalogue to be prepared by end of March 2021. **(IK/KHOA)**

**Action S-101PT6-12:** Establish a repository for S-101 test datasets, with “development” test data to be made available by 01 September 2021. **(Chair/IHO Sec)**

**Wednesday 24 February 2021:**

**S-101PT6-10 – S-101 Roadmap** [Chair]

[Docs: Roadmap Working Draft 1.2 20210201]

The chair briefly described the progress on revising the S-101 Roadmap which had not been updated for some years. He invited volunteers to form a Drafting Group to continue the review and development of this document which amongst other things sets out the Project Team approach to stakeholder engagement.

Decisions/Actions:

**Decision:** Drafting Group to be established under the S-101PT to review the draft S-101 Roadmap.

**Action S-101PT6-13:** PT members interested in participating in the S-101 Roadmap Drafting Group to notify the Chair by email ([thomas.richardson@ic-enc.org](mailto:thomas.richardson@ic-enc.org)) at the earliest opportunity. **(S-101PT)**

Members: Chair (lead), JW, VP, HP, AS, RG, LH

**S-101PT6-11 – S-101 Issues Log** [Chair]

[Docs: S-101 PT6-11 Issues Log DRAFT 20210128]

The chair briefly highlighted the Issues Log and noted that it is intended to provide a repository for open issues; and in future could capture items identified through testing and trials. He invited Project Team members to review the Log at their leisure and send any revisions or new items to JW and himself.

Decisions/Actions:

**Action S-101PT6-14:** PT members to review the draft S-101 Issues Log and supply any amendments or additions by email ([thomas.richardson@ic-enc.org](mailto:thomas.richardson@ic-enc.org) and [jeff.wootton@iho.int](mailto:jeff.wootton@iho.int)) at the earliest opportunity. **(S-101PT)**

**S-101PT6-12 – Bathymetric Data Quality** [JW]

[Docs: Modelling of Quality of Bathymetric Data (Rev1)]

JW presented the proposed remodelling of S-101 features based on the DQWG recommendations (endorsed at HSSC12) related to improving the indication of bathymetric data quality in ECDIS. Each of the recommendations were then discussed individually.

Recommendation 1: Approved. There was some discussion as to the recommendation that the categoryOfZoneOfConfidenceInData attribute only be retained in S-101 for the S-57 to S-101 transition period, with DG adding that the functionality of displaying the quality indicator as a marginal legend in

the ECDIS must be catered for. It was agreed that a decision as to whether the attribute is to be retained permanently will be made during testing.

Recommendation 2: Approved, however it was determined that the attribute is to remain mandatory for the next testing phase. For implementation of the new complex attribute spatialAccuracy, it was decided to include both options in the DCEG so as to allow for both scenarios to be tested.

Recommendation 3: Approved as proposed.

Recommendation 4: Approved as proposed.

Recommendation 5: Approved as proposed.

Recommendation 6: Approved. There was some discussion on this recommendation, particularly from the perspective of familiarity for the end-user, however it was decided to retain the current name for the next phase of testing.

#### Decisions/Actions:

**Decision:** It was approved to add attribute categoryOfZoneOfConfidenceInData to the QualityOfBathymetricData feature.

**Decision:** It was approved to retain attribute categoryOfTemporalVariation as a mandatory attribute. Apply remodelling of spatial accuracies into a new complex spatialAccuracy to both the QualityOfBathymetricData and SpatialQuality features for the next phase of testing.

**Decision:** It was approved to remove verticalUncertainty from the geo features Obstruction, Sounding, UnderwaterAwashRock and Wreck. Mandate encoding of an associated instance of SpatialQuality to these features of depth 30 metres or less.

**Decision:** It was approved that vertical and horizontal uncertainty is to remain optional in relation to clearance heights.

**Decision:** It was approved to add new Boolean attribute displayUncertainties to features Obstruction, Sounding, UnderwaterAwashRock and Wreck.

**Decision:** It was approved that QualityOfBathymetricData is to retain this name.

**Action S-101PT6-15:** Changes to be applied to the draft S-101 DCEG Edition 1.0.1 as approved by the S-101PT in regard to the recommendations on remodelling of S-101 features based on the DQWG recommendations related to improving the indication of bathymetric data quality in ECDIS (for inclusion in finalised Edition 1.0.1 DCEG). (JW)

#### **S-101PT6-13 – Portrayal of Small Craft Mooring Areas**

[Vice-Chair]

[Docs: Portrayal of Small Craft Mooring Areas]

AS presented the proposal to amend the portrayal of small craft mooring areas to be more in line with S-4 and provide an indication of physical features within the area that may be an obstruction to navigation. The proposal was supported by the meeting noting that specific depiction was to be agreed by the Portrayal Sub-Group with the final resulting change to be endorsed by the Project Team.

The Vice-Chair noted that this would be a post dual fuel change on the basis that S-52 could not be changed at this stage and that differing symbology between S-52 and S-101 in a Dual-Fuel ECDIS would need to be avoided.

The Chair noted that this is the sort of change that will impact end users in S-101 and queried whether GitHub allowed users to distinguish these from changes of a purely technical nature via a tag. It was confirmed that GitHub supports labels as a means to do this [Post-Meeting note: Labels have now been implemented].

Decisions/Actions:

**Decision:** The proposal to develop new portrayal in S-101 for small craft mooring areas was endorsed.

**Action S-101PT6-16:** Submit a proposal to the Portrayal Sub-Group requesting the development of new symbology for the portrayal of small craft mooring areas in S-101. **(AS)**

**S-101PT6-14 – Quality of Horizontal Measurement** [CM]

[Docs: Quality of Horizontal Measurement]

CM provided a brief history of the reason for the submission of this paper, which goes back to S-100WG1 (2016). It was agreed to reduce the values noting that this only affects S-101 and does not prohibit production systems/databases holding other values, which will be retained in the IHO GI Registry for now, for paper chart production purposes. It was felt that this change supports the move to giving more quantitative information in ENC, which is not easily supported in the paper chart format. The possibility of replacing qualityOfHorizontalMeasurement with a Boolean type attribute may be further discussed with testing.

It was suggested that the relevant clauses in S-4 should be reviewed in regard to this decision and the requirements for ENC reflected accordingly.

Decisions/Actions:

**Decision:** It was agreed to restrict the allowable values of the attribute qualityOfHorizontalMeasurement in S-101 to the values 4 (approximate) and 5 (position doubtful).

**Action S-101PT6-17:** Amend the allowable values of the attribute qualityOfHorizontalMeasurement in S-101 to the values 4 (approximate) and 5 (position doubtful), for S-101 DCEG Edition 1.0.1. **(JW)**

**Action S-101PT6-18:** Raise the decisions made in relation to the restriction of the values of the attribute qualityOfHorizontalMeasurement to the NCWG for possible impacts on S-4 and INT1. **(CM/MH)**

**S-101PT6-15 – S-101 Improvements During and After Dual-Fuel** [CM/Vice-Chair]

[Docs: S-101 improvements during and after the Dual Fuel period]

Due to time restriction, this paper was not presented. This Paper will be presented at the next S-101PT meeting. The chair noted the value of this discussion and noted an associated HSSC action that will hopefully provide a clearer definition of Dual-Fuel for future discussions.

Decisions/Actions:

**None.**

**S-101PT6-16 – Placement of Texts in S-101** [CM]

[Docs: Placement of Texts in S-101]

CM presented this Paper, requesting that the textPlacement feature in S-101 is reviewed and suggesting a couple of options that may be considered in this review.

HB confirmed that the original reason for including the SMAX and SMIN subfields in the SPAS field was to allow for encoding of multiple geometries for a single Geo feature (for example a feature that is surface type at larger scale and the same feature as a point type at smaller scale). He suggested that a better way to implement a similar functionality with textPlacement would be to include this as attribution on the association between the textPlacement and its associated geo feature. This



functionality to include attributes on associations is yet to be implemented in any S-100 based Product Specification.

It was agreed to establish a small discussion group to further develop recommendations for the S-101PT, noting that a Github issue has also been created in the Portrayal Sub-Group space and discussions are well underway.

**Decision:** Sub-Group to be established under the S-101PT to review the implementation of the textPlacement feature in S-101, noting discussions taking place within the Portrayal Sub-Group.

**Action S-101PT6-19:** PT members interested in participating in the S-101 Text Placement Sub-Group to notify CM by email ([christian.mouden@shom.fr](mailto:christian.mouden@shom.fr)) at the earliest opportunity. **(S-101PT)**

Members: CM (lead), IK, KO, HA

### **S-101PT6 INF Papers**

Due to time restriction, the following INF Agenda items were not presented:

**S-101PT6-INF-01 – Units of Measure in S-100** [Chair]

This item will be discussed at the forthcoming S-100TSM8 meeting.

**S-101PT6-INF-02 – S-57 to S-101 Conversion** [JP/CM/JW]

Further information on discussions related to S-57 to S-101 conversion may be obtained by contacting the S-57 to S-101 Conversion Sub-Group (under ENCWG) Co-Leads at [jonathan.pritchard@iictechnologies.com](mailto:jonathan.pritchard@iictechnologies.com) or [christian.mouden@shom.fr](mailto:christian.mouden@shom.fr)

**S-101PT6-INF-03 – Roles in Feature Catalogues** [RM]

This item will be discussed at the forthcoming S-100TSM8 meeting.

**AOB** [Chair]

[Docs: ]

**Next meeting:** The Chair suggested that a short (one day) VTC meeting is held shortly after the HSSC13 meeting. It was tentatively agreed to hold this meeting on 18 May 2021(time TBD).

In the interim, it is expected that the Sub-Groups will meet via VTC as required.

Decisions/Actions:

**Decision:** S-101PT6 to be held late November / early December 2020 (date TBD).

Appendices:

- A: S-101PT5 Agenda.
- B: S-101PT5 Consolidated List of Decisions and Actions.
- C: S-101PT5 Participants.

**Appendix A – S-101PT6 Agenda**

<b>Agenda</b>			
<b>Time</b>	<b>Topics</b>	<b>Document</b>	<b>Issues for discussion and required outcomes</b>
23/02/2021 (12:00 to 15:00 - CET)			
	Participants	S-101PT6-1	List of registered participants <b>[Chair]</b>
12:00	Agenda	S-101PT6-2	Meeting starts - duration - 3 hours
12:00 - 12:05	Welcome /Logistics		Welcome and Logistics <b>[Chair]</b> / <b>[IHO Sec AK]</b>
12:05-12:15	S-101PT Election	S101PT6-3	S-101PT Letter 1/2021 refers
12:15-12:20	S101PT5 Report	S101PT6-4	<b>[Chair]</b>
12:20-12:30	S101PT5 Actions	S101PT6-5	Review actions and update as required <b>[Chair]</b>
	DCEG Update	S101PT6-6	<b>[JW]</b>
	Portrayal Progress	S101PT6-7	<b>[AS]</b>
	Validation Update	S101PT6-8	<b>[Chair]</b>
	Workplan Update	S101PT6-9	<b>[Chair]</b>
	S-101 Roadmap	S101PT6-10	<b>[Chair]</b>
	Issues Log	S101PT6-11	<b>[Chair]</b> (S-101PT5-12)
15:00	Session Closes	N/A	
24/02/2021 (12:00 to 15:00 - CET)			
12:00	Session Opens		Duration of session 3 hours
	Bathymetric Data Quality	S-101PT6-12	<b>[JW]</b>
	Portrayal of Small Craft Mooring Areas	S-101PT6-13	<b>[AS]</b>
	Quality of Horizontal Measurement	S-101PT6-14	<b>[CM]</b>
	S-101 Improvements During and After Dual-Fuel	S-101PT6-15	<b>[CM/AS]</b>
	Placement of Texts in S-101	S-101PT6-16	<b>[CM]</b>
	Units of Measure in S-100	S-101PT6-INF-01	S-101PT5-26 <b>[Chair]</b>
	S-57 to S-101 Conversion	S-101PT6-INF-02	<b>[JP/CM/JW]</b>
	S-57 to S-101 Conversion	S-101PT6-INF-02	<b>[JP/CM/JW]</b>
	Paper for Consideration by S-100TSM8 - Roles in Feature Catalogues	S-101PT6-INF-03	<b>[RM]</b>

14:50	AOB		Any Other Business
15:00	Meeting ends		

### **Appendix B – S-101PT6 Consolidated List of Decisions and Actions**

<b>No.</b>	<b>Agenda</b>	<b>Action</b>	<b>Who</b>
S-101PT6-01	S-101PT6-05 – S-101PT Actions	S-100 Validation Checks developers to pick up the invalid geometries issue to confirm checks cover this; and guidance on what systems should do when receiving such data exists.	JP
Decision	S-101PT6-06 – DCEG Update	Sub-Group to be established under the S-101PT to review all specification/guidance related to Associations (IHO Sec lead).	
Decision	S-101PT6-06 – DCEG Update	Sub-Group to be established under the S-101PT to review ECDIS dataset load/unload processes (CM (SHOM) lead).	
Decision	S-101PT6-06 – DCEG Update	S-101 DCEG Edition 1.0.1 to be finalised and published, including all additional changes approved at S-101PT6.	
S-101PT6-02	S-101PT6-06 – DCEG Update	PT members interested in participating in the Associations Sub-Group to notify JW by email ( <a href="mailto:jeff.wootton@iho.int">jeff.wootton@iho.int</a> ) at the earliest opportunity.	S-101PT
S-101PT6-03	S-101PT6-06 – DCEG Update	PT members interested in participating in the S-101 Dataset Load/Unload Sub-Group to notify JW by email ( <a href="mailto:jeff.wootton@iho.int">jeff.wootton@iho.int</a> ) at the earliest opportunity.	S-101PT
S-101PT6-04	S-101PT6-06 – DCEG Update	Prepare final redline and clean versions of S-101 DCEG Edition 1.0.1 and publish on the IHO web site and the IHO GI Registry by end of February 2021. Include any changes approved as a result of discussions on Paper S-101PT6-12 and any other Papers for S-101PT6.	JW
S-101PT6-05	S-101PT6-06 – DCEG Update	Investigation to be conducted into possible amendments to the UOC resulting from the change in terminology from “Emergency Wreck Marking Buoy” to “New Danger Marking Buoy” (for ENCWG6).	JW
Decision	S-101PT6-07 – Portrayal Progress	Feedback on the Portrayal Sub-Group GitHub issues to be provided by 04 April. On this date all issues will be closed and all future issues are to be placed in the Portrayal Sub-Group repository in the IHO GitHub.	
Decision	S-101PT6-07 – Portrayal Progress	It was decided to include a dedicated repository for S-101 Portrayal Catalogue development in the IHO GitHub, noting however that this may require a gradual migration.	
Decision	S-101PT6-07 – Portrayal Progress	Recommendations on the issues raised in the GitHub are to be aligned with S-101 DCEG Edition 1.0.1.	
S-101PT6-06	S-101PT6-07 – Portrayal Progress	Project Team Members to provide feedback on any of the Portrayal Sub-Group GitHub issues before 04 April 2021, noting that subject to no adverse comments this will be taken as S-101PT endorsement of the decisions/actions agreed by the Portrayal Sub-Group.	S-101PT
S-101PT6-07	S-101PT6-07 – Portrayal Progress	Add a dedicated area for S-101 Portrayal Catalogue development under the IHO GitHub.	IHO Sec
S-101PT6-08	S-101PT6-07 – Portrayal Progress	Ensure that all S-101 portrayal considerations as included in the “S-57 Removed_Remodelled Items” spreadsheet have been amalgamated with the work that has been done by Germany and US (NOAA) before 04 April.	AS/JW
S-101PT6-09	S-101PT6-08 - Validation Update	Investigate the possibility of submitting a request to fund the development of S-101 test datasets utilising the IHO Special Projects Fund (for HSSC13).	Chair
S-101PT6-10	S-101PT6-08 - Validation Update	Incorporate process to ensure alignment of all draft Validation Checks and test datasets to single versions of	Chair

		related publications (S-100/S-101/S-101DCEG) in the overall Validation Checks development process.	
Decision	S-101PT6-09 - S-101PT Workplan Update	The draft Workplan was accepted, with the caveat that if possible test datasets should be available earlier than January 2022.	
S-101PT6-11	S-101PT6-09 - S-101PT Workplan Update	Pending completion of the Edition 1.0.1 DCEG (Action S-101PT6-04), version 1.0.1 of the S-101 Feature Catalogue to be prepared by end of March 2021.	IK/KHOA
S-101PT6-12	S-101PT6-09 - S-101PT Workplan Update	Establish a repository for S-101 test datasets, with "development" test data to be made available by 01 September 2021.	Chair/IHO Sec
Decision	S-101PT6-10 - S-101 Roadmap	Drafting Group to be established under the S-101PT to review the draft S-101 Roadmap.	
S-101PT6-13	S-101PT6-10 - S-101 Roadmap	PT members interested in participating in the S-101 Roadmap Drafting Group to notify the Chair by email ( <a href="mailto:thomas.richardson@ic-enc.org">thomas.richardson@ic-enc.org</a> ) at the earliest opportunity.	S-101PT
S-101PT6-14	S-101PT6-11 - S-101 Issues Log	PT members to review the draft S-101 Issues Log and supply any amendments or additions by email ( <a href="mailto:thomas.richardson@ic-enc.org">thomas.richardson@ic-enc.org</a> and <a href="mailto:jeff.wootton@iho.int">jeff.wootton@iho.int</a> ) at the earliest opportunity.	S-101PT
Decision	S-101PT6-12 - Bathymetric Data Quality	It was approved to add attribute categoryOfZoneOfConfidenceInData to the QualityOfBathymetricData feature.	
Decision	S-101PT6-12 - Bathymetric Data Quality	It was approved to retain attribute categoryOfTemporalVariation as a mandatory attribute. Apply remodelling of spatial accuracies into a new complex spatialAccuracy to both the QualityOfBathymetricData and SpatialQuality features for the next phase of testing.	
Decision	S-101PT6-12 - Bathymetric Data Quality	It was approved to remove verticalUncertainty from the geo features Obstruction, Sounding, UnderwaterAwashRock and Wreck. Mandate encoding of an associated instance of SpatialQuality to these features of depth 30 metres or less.	
Decision	S-101PT6-12 - Bathymetric Data Quality	It was approved that vertical and horizontal uncertainty is to remain optional in relation to clearance heights.	
Decision	S-101PT6-12 - Bathymetric Data Quality	It was approved to add new Boolean attribute displayUncertainties to features Obstruction, Sounding, UnderwaterAwashRock and Wreck.	
Decision	S-101PT6-12 - Bathymetric Data Quality	It was approved that QualityOfBathymetricData is to retain this name.	
S-101PT6-15	S-101PT6-12 - Bathymetric Data Quality	Changes to be applied to the draft S-101 DCEG Edition 1.0.1 as approved by the S-101PT in regard to the recommendations on remodelling of S-101 features based on the DQWG recommendations related to improving the indication of bathymetric data quality in ECDIS (for inclusion in finalised Edition 1.0.1 DCEG).	JW
Decision	S-101PT6-13 - Portrayal of Small Craft Mooring Areas	The proposal to develop new portrayal in S-101 for small craft mooring areas was endorsed.	
S-101PT6-16	S-101PT6-13 - Portrayal of Small Craft Mooring Areas	Submit a proposal to the Portrayal Sub-Group requesting the development of new symbology for the portrayal of small craft mooring areas in S-101.	AS
Decision	S-101PT6-14 - Quality of Horizontal Measurement	It was agreed to restrict the allowable values of the attribute qualityOfHorizontalMeasurement in S-101 to the values 4 (approximate) and 5 (position doubtful).	

S-101PT6-17	S-101PT6-14 - Quality of Horizontal Measurement	Amend the allowable values of the attribute qualityOfHorizontalMeasurement in S-101 to the values 4 (approximate) and 5 (position doubtful), for S-101 DCEG Edition 1.0.1.	JW
S-101PT6-18	S-101PT6-14 - Quality of Horizontal Measurement	Raise the decisions made in relation to the restriction of the values of the attribute qualityOfHorizontalMeasurement to the NCWG for possible impacts on S-4 and INT1.	CM/MH
Decision	S-101PT6-16 - Placement of Texts in S-101	Sub-Group to be established under the S-101PT to review the implementation of the textPlacement feature in S-101, noting discussions taking place within the Portrayal Sub-Group.	
S-101PT6-19	S-101PT6-16 - Placement of Texts in S-101	PT members interested in participating in the S-101 Text Placement Sub-Group to notify CM by email ( <a href="mailto:christian.mouden@shom.fr">christian.mouden@shom.fr</a> ) at the earliest opportunity.	S-101PT
Decision	AOB – Next Meeting	S-101PT6 to be held late November / early December 2020 (date TBD).	

## Appendix C – S-101PT6 Participants

S101PT6 VTC Meeting 23-24 February2021		
List of Participants (25 February 2021)		
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