**LIST of DECISIONS & Actions arising from S-100WG6 2022**

* Final Draft -

| **AGENDA**  **ITEM** | **SUBJECT** | **ACTIONS**  **(in bold, action by)** | **Remarks** |
| --- | --- | --- | --- |
| **Opening and Administrative Arrangements** | | | |
| 1 | Members | **[Action 6/01] S-100WG are invited** to update the list of members of the WGs and contact details. | Permanent |
| 2 | Agenda | **[Decision 6/01] S-100WG6 agreed** that discussion items to the meeting proposed by the Chair should focus on the following items that the WG are to submit to the next HSSC for approval and/or consideration taking into consideration the IHO Work Programme and prioritization of the WG.   * S-100 Edition 5.0.0 finalization * S-98 Edition 1.0.0 finalization * S-102 Edition 2.1.0 finalization * Dual Fuel Governance Document   **Remaining items** will be considered if the WG has an opportunity during the meeting or by further meeting(s) via a teleconference platform or by Working Group letter depending on the subject and consideration given to the Work Programme. |  |
| **Matters Arising and HSSC Working Group Reports** | | | |
| 3.1  3.2 | S-100WG5/ VTC 2021 Minutes and Actions | [**Decision 6/02**] **S-100WG approved** the draft Minutes of S-100WG5 and the WG VTC2 2021 respectively which were posted on the S-100WG meeting page each.  **[Action 6/02] S-100WG members invited** to provide update on the actions from the previous meeting at their earliest opportunity. | *The final version uploaded on each page.*  *Done* |
| 3.3  3.4 | HSSC Report / Actions | **S-100WG reviewed** the HSSC 13 Decisions and Actions reported by the IHO Sec. and assign the S-100WG Actions to be monitored by the WG.  **[Action 6/03] S-100WG members invited** to participate in the Sub-Group to review and propose amendments to M-3 and inform to Chair and Sec of their contribution by end of Feb. 2022.  **[Action 6/04]** **Chair to prepare** a proposal by which the S-100 Strategy supersedes to the S-100 Master Plan. In addition to the relevant updates to be made to the main text of the S-100 Implementation Strategy.  **[Action 6/05] S-100WG Project Teams to consider** aligning product specifications (S-101, S-102 and S-129) to S-100 Edition 5.0.0 by 2023 and **submit** their plan to the S-100WG Chair by end of Feb. 2022.  **[Action 6/06**] **S-129 Project Team to submit** a proposal on Ed 2.0.0 for endorsement at the next S-100 WG meeting.  **[Action 6/07] Chair to** contact S-121 Project Team leader and request submission of their plan for the development of Ed. 1.1.0 as recommended by HSSC13.  **[Action 6/087] IHO Sec/GI Registry Manager** to consider the possibility of arranging a 2nd Educational Workshop at the earliest opportunity.  **[Action 6/09] Chair/France** to develop a paper for the SENC delivery issues raised by France and circulates to the WG for consideration at the next S-100WG meeting. | *Ref. HSSC13/05*  *Completed*  *IHO CL38/2022*  *Ref. HSSC13/08*  *Completed*  *HSSC14/28*  *Ref. HSSC13/16 and 17*  *Deadline: February 2022*  *Done. HSSC14/11*  *Ref. HSSC13/21*  ***On going***  *Ref. HSSC13/22*  ***On going***  *Ref.HSSC14/27*  *Ref. HSSC13/24*  *Done.*  *Ref. HSSC13/27*  *Done.*  *HSSC14-5.1E* |
| 3.8 | DQWG report | Noted |  |
|  |  | *Left blank intentionally* |  |
| **Proposals S-100 Ed 5.0.0** | | | |
| 4.1  4.1A | Part 16 Interoperability | [**Decision 6/03] S-100WG approved** the proposed S-100 new Part 16 and Part 16A - Harmonised Portrayal of S-100 Products into S-100 Ed 5.0.0.  **[Action 6/10] Part16 CG (lead by S-100WG Chair) to** conduct a final review of the new “clean” version to ensure that all the inconsistencies have been resolved noting that IIC will provide and update diagram. | *Deadline: middle of Feb. 2022*  *Done* |
| 4.2A | Discovery Metadata Catalogue | [**Decision 6/04] S-100WG approved** the proposed New Part of S-100 for Discovery Metadata for Information Exchange Catalogues and agreed to assign as **Part 17**.  **[Action 6/11] Metadata CG to conduct** a final review of the new “clean” version of S-100 Part 17 to ensure that all the inconsistencies have been resolved. | *Deadline: middle of Feb. 2022*  *Done* |
| 4.2B | Vertical Datums | [**Decision 6/05]** **S-100WG agreed** to move forward with a small group to discuss comments made by RM, HB and IIC about enumerations vs codelists etc.  [**Action 6/12**] **Small Group (BSH, RM, HB, TD and JP)** to discuss via VTC the issue of enumerations vs codelists and submit the suggestion to S-100WG Chair. Chair incorporates it into the redline version of S-100 Ed. 5.0.0 for final review and approval by the WG. | *Deadline: middle of Feb. 2022*  *Done* |
| 4.2C | Metadata Temporal Attributes | [**Decision 6/06] S-100WG approved** the proposal of Metadata Temporal Attributes.  **[Action 6/13] Metadata CG to conduct** a final review of the new “clean” version of S-100 Part 17 to ensure that all the inconsistencies have been resolved. | *Deadline: middle of Feb. 2022*  *Done* |
| 4.2D | Supporting Resources | [ **Decision 6/07**] **S-100WG approved** the proposal to be incorporated to the New Part 16.  **HB**: concerned with using digital signature when implemented. Chair suggested to have further discussion offline and report back to the meeting before the end of S-100 proposal session.  **JP, RM, AC(UKHO) and HB have** an offline talk and report the outcome to the meeting.  **[Action 6/14] CG to review** the proposal for Part 4a taking into consideration the impact on other S-100 Parts; and **submit** the final change proposal to the S-100 WG for approval. | *Deadline: before the day-2*  Deadline: Feb. 2022  *Done* |
| 4.2E | Part 4a | [**Decision 6/08] S-100WG approved** the change proposal to S-100 Part 17.  **[Action 6/15] Metadata CG to conduct** a final review of the new “clean” version of Part 4a to ensure that all the inconsistencies have been resolved. | *Done* |
| 4.2F | Part 4a ISO 19115 | [**Decision 6/09] S-100WG agreed** with the proposal in general and **deferred to the CG** a change proposal to S-100 Part 4a (New Part 17) regarding ISO 19115 conformal Metadata Files in an exchange set as a way forward.  **[Action 6/16] CG to review** the proposal for Part 4a taking into consideration the impact on other S-100 Parts and submit the final change proposal to S-100WG for approval.  Noted: Kevin (NGA), Tom (ESRI), Alison (UKHO) joined the CG. | *Deadline: middle of Feb. 2022*  *Done* |
| 4.2G | Part 4a (New Part 17) proposal | [**Decision 6/10] S-100WG agreed** to update S-100 Part 17 with comments from RM, SevenCs and IIC as presented at the meeting in general.  [**Decision 6/11]** S-100 WG agreed to defer to the CG for adjudicating comments via VTC by the middle of Feb 2022 and circulate to the WG for the final comments.  [**Decision 6/12] S-100WG approved** S-100 Part 17 for inclusion in S-100 Ed. 5.0.0 and submit to HSSC14 for endorsement. | *Deadline: February 2022* |
| 4.3A  4.3C | GML Schemas in Exchange Sets  Part 10b GML revision | It was established that NIPWG and other invested groups such as the S-124PT are aware of the proposed changes.  **DG(NIWC):** Raised possible issue of inconsistency between the GML Schemas and the associated FC. It should be possible to generate one from the other in order to resolve this issue. But it’s noted this is possible but is not a simple process.  [**Decision 6/13] S-100WG approved** the proposal of the addition of “GMLSchema” to the S-100 Exchange Set catalogue enumeration, S100\_CatalogueScope and addition of amplifying comments in the text concerning the transport of such schemas for all GML specified products.  **[Action 6/17] JP, HS (CARIS) and RM provide** the redline version in consultation with the NIPWG chair.  [**Decision 6/14] S-100WG agreed** tothe revision to S-100 Part 10b as presented at the meeting in principleand **agreed** to review the change proposal by S-100WG Letter and then **incorporate** into Ed. 5.0.0.  **[Action 6/18] IIC to submit** the redline version of the S-100 Part 10b as updated for this proposal. | *Deadline: middle of Feb. 2022*  *Done*  *Deadline: middle of Feb. 2022*  *Done* |
| 4.3B | GML to Spatial Reference Systems | [**Decision 6/15] S-100WG agreed** for the proposalto be considered in the revision of the Part 10b so as to add an implementation guidance to S-100 Part 10b.  **[Action 6/19] SHC(Taiwan, lead), RM and JP to draft** the implementation guidance for Part 10b and **S-100WG Chair to circulate** the draft guidance to the S-100WG for approval.  **[Action 6/20] CG produce** the final redline for part 10b by end of Feb. via NIPWG for their comments. S-100WG invited to participate in the development of the redline version. | *Deadline: Feb. 2022*  *Deadline: Feb. 2022*  *Done* |
| 4.3D INF | GML Format Way Forward | **JP:** The work proposed in this paper is not achievable in the time-frame for S-100 Ed 5.0.0 publication. Suggested that this be taken up within the general GML community in slower time in regard to the suggestions that have not already been included in the IIC paper.  **EM:** Is not seeing any impact of this paper on activities that are happening right now. Raised concern over possible inconsistencies in regard to the GFM in addition to the time constraint.  **JP**: suggested that any future discrepancies/issues could be resolved in S-97 and S-98.  [**Action 6/21**] RM to submit Paper 4.3D to NIPWG for their comments and resubmit to S-100WG for consideration at the next meeting. | *Deadline: S-100WG7* |
| 4.4 | Part 10C Attribute Chunking | [**Decision 6/16] S-100WG approved** the redline version for HDF and attribute chunking as presented at the meeting. |  |
| 4.5 A  4.5 B | Feature oriented discrete coverage | **[Decision 6/17] S-100WG approved** the redline versionwhich wasthe extension of the scope of S-100 Ed 5.0.0 Part 10c to include a feature oriented discrete coverage in HDF5.  **RM**’s comments. **BSH** response was that the change was considered necessary so as to not have an impact on any datasets already produced. **RM** invited to consider submission his comments to the next meeting if appropriate. |  |
| 4.6 | Units of Measure | **[Decision 6/18] S-100WG confirmed** that Unit of Measure information should be held in the GI Registry and **approved** the updating of the GI Registry and the Feature Catalogue Builder to support this information.  **[Action 6/22] IHO Sec/KHOA** to amend the GI Registry to be consistent in terms of fields and terminology with S-100 2a-4.2.11 and to expose a Units Of Measure Codelist for users. | *Report the progress at the next WG7* |
| 4.7 | Real Time Data | **DG**: noted that S-100 Part 9 already includes the model as proposed in the paper. He suggested that the removal of the guidance in Part 9 should be part of the action from this paper.  **[Decision 6/19] S-100WG approved** to move forward with the redline version, including amendments to Part 9, nothing that some minor clean-up is required.  **[Action 6/23] JP, RMM and DG to update** the redline version of Part 1 and 3 and amend Part 9 with this proposal and submit to Chair for inclusion in Ed. 5.0.0. | *Deadline: middle of Feb*  *Done* |
| 4.8 | Portrayal of Discrete Coverage | **[Decision 6/20] S-100WG approved** the change proposal to Part 9 and 9a as presented at the meeting.  [**Note**] NIWC - Support the proposal, but note that this implements a capability that is not described in Part 8. It will be discussed for the next version of S-100. |  |
| 4.9 | Roles in FC | **[Decision 6/21] S-100WG approved** the change proposal to S-100 Part 5 section 4.2.5.2, 4.2.5.3 and App 5-A as presented.  **NIWC**: suggested that an action should be taken to notify PTs to update their FCs as soon as possible.  **YB**: further commented that the related tools required a time-line for updating in order to support changes in S-100 Edition 5.0.0.  **JP**: suggested that this should commence on endorsement by HSSC and KHOA will be kept in the loop for the entire development process.  **[Action 6/24] Chair/IHO Sec to prepare** the change log and share with KHOA so as to develop a timeline for updating the FCB tool for Ed. 5.0.0.  **[Action 6/25] KHOA to submit** a timeline for updating toolkits taking into account of Action 6/24 and **report** onthe progress at the next S-100WG meeting. | *Deadline: March 2022*  *Done*  *S-100WG7-6.2*  *Deadline: April 2022*  *Done*  *S-100WG7-6.2* |
| 4.10 | Empty Display Modes | **[Decision 6/22] S-100WG approved** the change proposal for Ed.5.0.0 draft redline Part 9 Figure 9-20 and clause 9-13.3.18 as presented.  **[Action 6/26] Chair/KHOA/IHO Sec to check** the S-100 Infrastructure for the S-100 PCB, UML Models and S-100 GitHub Schemas and updates as required. |  |
| 4.11 | Multiple Viewing Groups | **[Decision 6/23] S-100WG approved** the change proposal to Part 9 and 9a to allow assignment of multiple viewing groups perdrawing instruction as presented.  **[Action 6/27] Chair/KHOA/IHO Sec to check** the S-100 Infrastructure for the S-100 PCB, UML Models and S-100 GitHub Schemas and updates as required. |  |
| 4.12 | Portrayal for Cross-Feature Dependencies | **[Decision 6/24] S-100WG approved** the change proposal to Part 9 and 9a to clarify Portrayal of Cross-Feature Dependencies.  **[Action 6/28] Chair/KHOA/IHO Sec to check** the S-100 Infrastructure for the S-100 PCB and updates as required. |  |
| 4.13 | Part 9a Line Placement | **[Decision 6/25] S-100WG approved** the change proposal to Part 9a to correct applicability of LinePlacement.  **[Action 6/29] IHO Sec to apply** the change to the Part 9a redline. | *Done* |
| 4.14 | ISO 639-2/  T language code | **[Decision 6/26] S-100WG approved** the revised change proposal to Part 10b to ensure consistent usage of three letter language codes as presented at the meeting with minor editorial amendments.  **[Action 6/30] DG (NIWC)** to amend the change proposal for minor editorial changes as discussed at the meeting and perform a consistency check throughout S-100, and provide the amended proposal to the IHO Sec for updating S-100 Part 10b. | *Done* |
| 4.15 | Part 10a | **[Decision 6/27] S-100WG approved** the change proposal to Part 10a to add guidance for encoding unknown attribute values with a minor amendments proposed by **HB**.  **[Action 6/31] DG (NIWC) and HB (SevenCs) to update** the redline version of Part 10a and to submit to IHO Sec for the Ed. 5.0.0. | *Deadline: middle of Feb*  *Done* |
| 4.15A | Attribute encoding | **HB**: Stated that some issues in the paper are not clear enough in the change proposal and invited to discuss a way forward.  **HB**: Codelist should be revisited to be clear for all S-100 Parts with some options.  **RM**: How should codelists be encoded in Part 10a. Acceptable options as proposed by HB.  **JP**: In principle, the codelist can be included in Part 10a.  **DG**: Suggested that interested parties (including HB, RM, JP) resolve this in the S-100WG Github. GFM should be resolved as well.  **[Decision 6/28] S-100WG decided** to resolve the issues raised in the paper taking into consideration discussion at the meeting in the S-100WG Github.  **[Action 6/32] HB/DG/JP/RM and S-100 experts to discuss** the Codelist issue of the paper in the S-100 Github and submit the change proposal to the S-100WG for approval.  The meeting reviewed the Table included in the paper.   * Boolean: agreed on 1(True) and 0 (False). * Real type and encoding of “infinity”: DG opinion is that if this is not allowed in 8211 it should not be allowed in any of the encodings. * Truncated date: RM noted that truncated date has been removed from ISO. Agreed that if the year is not to be included it should be 4 dashes, not 3.   **[Decision 6/29] S-100WG agreed** in principle with the proposal, nothing that further work is to be done**.**  **[Action 6/33] HB (SevenCs) to submit** the revised version of the change proposal to S-100WG for approval. | [*https://github.com/IHO-S100WG/TSM8/issues*](https://github.com/IHO-S100WG/TSM8/issues)  *Deadline: middle of Feb*  *Done*  *Deadline: middle of Feb*  *Done* |
| 4.16 | PC Display Mode | **[Decision 6/30] S-100WG approved** the change proposal to Part 9 in section 9-13.3.17 that the displayMode multiplicity should be amended to 0..\*. |  |
| 4.17 | Vertical CRS | Withdrawn the proposal incorporated into agenda 4.2 |  |
| 4.18 | Validation of Portrayal Input | **[Decision 6/31] S-100WG approved** the change proposal to Part 9 and the XSLTPR Schema as presented.  **S-101PT Chair**: Supported this and for S-101 although optional it is needed and is an example where we can build documented information into the model to provide flexibility and more machine readability.  **[Action 6/34] Chair/KHOA/IHO Sec to check** the S-100 Infrastructure for the S-100 PCB, UML Models and S-100 GitHub Schemas and updates as required. |  |
| 4.19 | Part 9 input XML | **[Decision 6/32] S-100WG approved** the change proposal to Part 9 as proposed in the redline version which describe how to generate generic input XML for portrayal processing, rather than describing how product specification developers can create product specific input schema.  **[Action 6/35] DG/IHO Sec to consolidate** all the NIWC proposals approved by the S-100WG in a revised Part 9.  **[Action 6/36] Chair/RM to check** the S-100 Infrastructure for the S-100 UML Models and S-100 GitHub Schema, and updates as required. | *Deadline: middle of Feb*  *Done*  *Next WG7 meeting* |
| 4.20 | Data type Format | **[Decision 6/33] S-100WG approved** the change proposal to be retained for ISO and GML compatibility as presented.  **[Action 6/37] IHO Sec to apply** the changes related to data type format to Part 1 as proposed. | *Done* |
| 4.21 | S-100 Part 2 | **[Decision 6/34] S-100WG approved** the S-100 Part 2 revision reflected in the current GI registry system and operation such as Concept Register and Data Dictionary Register that agreed upon the previous WG meetings in principle as a way forward.  **[Action 6/38] S-100WG to invite** to review the redline version of Part 2 and submit comments to IHO Sec by mid-February 2022. | *Deadline: middle of Feb*  *Done* |
| 4.21A | S-99 Ed.2.0 | **[Decision 6/35] S-100WG approved** the S-100 Part2 revision as a reflection of the current GI Registry implementation including the Concept Register and Data Dictionary Register as agreed upon at previous WG meetings in principle as a way forward.  **[Action 6/39] S-100WG is invited** to review the redline version of S-99 Ed. 2.0.0 for editorial comments and submit feedback to IHO Sec by mid-February 2022. | *Deadline: middle of Feb*  *Done* |
| 4.22 | S-100 Part 15 | **[Decision 6/36] S-100WG approved** the proposal as followings**;**   * The redline version of Part 15 as presented. * The creation of New IHO Technical Resolution detailing the algorithms used by S-100 for data protection and authentication. * The creation of procedural documentation by the IHO Secretariat, Member States and Industry participants covering the details of the implementation of the IHO security scheme under S-100 based on the proposed content at the meeting as a guide.   [**S-101PT Chair**:](res://\\G2MResource_en.dll/%3cA%20HREF=%22%3conLeftClick%3eeCMD_SetChatTo%20128%3c/onLeftClick%3e%3conRightClick%3eeCMD_DoAttendeeContextMenu%208388620%3c/onRightClick%3e%22%3e%3c/A%3e) No specific comments on Part 15 but noting the consequential action re producer codes, propose that 4 digit codes are all registered rather than the current padding of the 2 digit codes with zeroes, which seems a little "loose".  **YB**: Replied to S-101PT Chair comment. IHO Sec/KHOA is working on a revision to the Producer Code Register to support 4 digit Producer Codes.  **HB**: Pointed out that there are still some examples of “old” encoding in Part 15 – these will need to be addressed.  **S-100WG Chair**: There is a resource requirement on the IHO Sec in regard to supporting the S-100 Security Scheme. **JP** agreed in that for a time the IHO Sec would need to support both S-63 and S-100. This needs to be reported to the HSSC.  **[Decision 6/37] S-100WG agreed** to form S-100 a Data Protection Correspondence Group (DPCG) to draft the IHO Technical Resolution and a Guidance Document for the details of the implementation of the S-100 security scheme. The DPCG will be disbanded when their duty has been completed.  **[Action 6/40] S-100WG Members to inform** the S-100WG Chair of their intention to participate in the S-100 DPCG at the earliest opportunity.  **[Noted]** Kevin(NGA), PRIMAR, JP, Alison(UKHO), IHO Sec joined the DPCG during the meeting.  **[Action 6/41] DPCG (lead by JP (IIC)) to submit** the redline version of the Guidance Doc. for implementation of the S-100 Security Scheme to the S-100WG for approval.  **[Action 6/42] S-100WG Chair to report** the resource requirement on the IHO Sec in regard to supporting the S-100 Security Scheme.  **[Action 6/43] DPCG to submit** a draft an IHO Technical Resolution regarding S-100 Security Scheme algorithms for approval.  **[Action 6/44] KHOA/IHO Sec to report** on the progress of Producer Code Register in the GI Registry at the next WG meeting. | *Done*  *Deadline: middle of Feb 2022*  ***On going***  *HSSC14*  ***On going***  *Deadline: Next WG7 meeting*  ***On going***  *Deadline: Next WG7 meeting*  *Done* |
| 4.23 | Machine Readability | **[Decision 6/38] S-100WG approved** the proposal to be included in the S-100 Ed.5.0.0 for Recommendation #1 and #2.  **[Action 6/45] EM(CCG) to submit** the redline version to the relevant S-100 Parts for Recommendation #1 and #2.  **[Action 6/46] EM to provide** a guidance to PS developers for their action to be compliant with Ed 5.0.0 of S-100. | *Deadline: middle of Feb 2022*  *Next WG7* |
| 4.24 | Multilingual Support | **[Decision 6/39] S-100WG approved** the proposal incorporated into Ed. 5.0.0 of S-100 in principle subject to meet to the deadline for submission to HSSC14.  [**Noted**] There was general support for this proposal, it was considered that the timeframe to do the development work and reconcile with all PSs being developed in conformance with Ed. 5.0.0 was far too tight. **S-100WG Chair** suggested that this item is tabled and **EM** convene a separate VTC and report back on Thursday.    **[Action 6/47] EM/HB/DG/RMM to convene** an out of session meeting to discuss a way forward for the proposal and report the outcome to WG6 by Friday, 14th Jan. 2022.  [**Noted**] Recommendation of the offline VTC discussion was for the inclusion of a new Part 18 “Multi Language Functionality “in S-100 Edition 5.0.0.  **[Action 6/48] EM (Canada) to submit** the redline of the translation file schema and a new S-100 Part 18 as agreed at the meeting that outlines how Multi Language Functionality of S-100 XML resources works using translation files; for Ed. 5.0.0 of S-100 **.** | Completed  *Deadline: Feb 2022*  *Completed* |
| 4.25 | S-100 Part 9 for Area Fills | **[Decision 6/40] S-100WG approved** the change proposal to clarity that boundary must be included.  **[Action 6/49] IHO Sec to apply** the change related to area fills to Part 9 as proposed. | *Done* |
| 4.26 | Part 5 Feature Catalogue | **[Decision 6/41] S-100WG s**upported this minor addition to Part 5 of S-100 in the forthcoming edition 5.0.0 in order to greatly simplify feature catalogue creation and maintenance as well as improve the quality of the data being produced.  **[Action 6/50] IHO Sec to apply** the change related to the Feature Catalogue model to Part 5 as proposed.  **[Action 6/51]** **KHOA** in consultation with **HA (CARIS)** to update the FCB tool as required and report on the progress at the next WG meeting. | *Deadline: February 2022*  *Done*  *Next WG7 meeting*  *Done* |
|  | Wrap up | **[Decision 6/42] S-100WG agreed to finalize** redlines for accepted proposals and any remaining issues to be resolved by correspondence and if needed have a special Technical Editing Session at the end of Feb. 2022 and **to submit** S-100 Ed. 5.0.0 to HSSC14, deadline by 20th March 2022.  **[Action 6/52] S-100WG Chair/IHO Sec to provide** to KHOA a documented list of accepted proposals to Edition 5.0.0 and note if that proposal will have an impact on the S-100 Infrastructure.  **[Action 6/53]** **S-100WG** **Chair/IHO Sec/KHOA to set up** a timeline on updating the infrastructure to S-100 Ed.5.0.0 once Ed. 5.0.0 has been approved by HSSC. | *Deadline: March 2022*  *Done*  *Deadline: August 2022* |
| **S-98 Interoperability Specification** | | | |
| 5.1 | Interoperability Specification | **[Decision 6/43] S-100WG approved** S-98 Edition 1.0.0 as proposed for submission to HSSC14 for endorsement according to IHO Technical Resolution 2/2007.  **[Action 6/54] S-100WG Chair to submit** the draft Ed.1.0.0 of S-98 to the HSSC14 meeting for endorsement.  [**Noted**] The Ed.1.0.0 of S-98 will become the testing and implementation edition and allow the S-100WG to continue to refine the standard.  **S-100WG Chair**: Noted that the focus of the discussion at this meeting was the new Annex C, which includes S-52 guidance that up to this time had no place in any other S-100 related documentation; and details on the implantation of water level adjustment.    **BH** (Sweden): Suggested to invite ENCWG, NCWG to be involved in the S-98 Correspondence Group (CG) and hold and S-98 workshop involving cartographers and mariners for the refinement of S98.  **S-100WG Chair**: Other thing to note is that user selected safety contour is included in Annex C-4 as well. This provides safety contours on S-102/S-101.  **[Decision 6/44] S-100WG agreed** to convene a S-98 workshop to demonstrate and test with other experts, cartographers and mariners when the face to face situation is allowed.  **[Action 6/55] S-100WG Chair to consider holding** a S-98 workshop as recommended at the meeting and report the activity to the next S-100WG meeting if as appropriate.  **HSSC Chair**: recommended that the S-100WG Chair provide a demonstration of S-98 functionality and purpose for HSSC and the IHO Council. | *HSSC14*  *Completed*  *WG7/8*  ***On going*** |
| 5.2 | Lights Outside the Display Window | **[Decision 6/45] S-100WG agreed** to consideration of the change proposal for incorporation into the Ed.1.1.0 of S-98.  **[Action 6/56]** **S-101PT Chair/Vice-chair** to develop a harmonized solution on lights located outside the display window and submit to the next S-100WG for consideration.  [**Noted**] **HP**, **HB**, **RF** (Denmark) to participate in the development of the change proposal. | *WG7/8* |
| 5.3 | Mariner Selected Dates and Safety Checks | **[Decision 6/46] S-100WG agreed** to consideration of the change proposal for incorporation into Ed.1.1.0 of S-98 and recommended that further work be done in consultation with the ENCWG in regard to date dependant safety checking.  **[Action 6/57]** **S-101PT Chair** to prepare the revised change proposal on mariner selected dates and safety checks as recommended and submit to the next S-100WG for consideration. | *WG7/8* |
| 5.4 | New Abbreviations | **TSSO**: This proposal needs to go to the NCWG and for consideration to be included in S-4 before it can be included in S-98.  **S-100WG Chair**: Noted that NCWG should take this proposal for discussion at its next meeting (or by correspondence).  **NCWG Chair**: It would be taken into consideration if the proposal is submitted to the NCWG.  [**Noted**] This kind of Abbreviation should be registered in the GI registry and then S-98 would be referring to the GI registry. This approach has been agreed in general. |  |
| 5.5 | Portrayal of S-100 ECDIS | *Left blank intentionally* | INF |
| **S-100 General Topics** | | | |
| 6.1 | SENC and SENC Delivery | *France to do more research so this will be presented at the next S-100WG meeting and likely raise this at HSSC14.* |  |
| 6.2 | Dual Fuel Governance | **[Noted]** During the presentation, there were several issues raised for Metadata, Sanity check for ECDIS, PS versioning, Freezing of S-100 and ECDIS carriage requirements etc.  On “Freezing” Ed. 5.0.0 of S-100, **S-100WG Chair** stated that it is not about freezing S-100 at Ed.5.0.0 however allow clarifications and corrections only. Edition 6.0.0 will be focussed on extensions.  **YB**: DF-Concept doc will be incorporated into the S-100 Implementation Roadmap according to HSSC13/26 (decision), suggest to add some relations to the S-100 roadmap.  [**EM**](res://\\G2MResource_en.dll/%3cA%20HREF=%22%3conLeftClick%3eeCMD_SetChatTo%20173%3c/onLeftClick%3e%3conRightClick%3eeCMD_DoAttendeeContextMenu%2011337740%3c/onRightClick%3e%22%3e%3c/A%3e): in the ECDIS Performance Standard revision discussions, we've proposed to define ENC as chart + npubs. This simplifies the overall ECDIS PS, but the move, if approved, will have some impact on this governance document's attempts of categorization.  **ENCWG Chair**[:](res://\\G2MResource_en.dll/%3cA%20HREF=%22%3conLeftClick%3eeCMD_SetChatTo%20193%3c/onLeftClick%3e%3conRightClick%3eeCMD_DoAttendeeContextMenu%2012648460%3c/onRightClick%3e%22%3e%3c/A%3e) If it’s not in S164 its not tested by type approval and therefore the user cannot be assured that the specification has been implemented correctly  **S-100WG Chair**: Suggested circulating the document for WG review. JP will be happy to receive comments via track-changes incorporated directly into the draft.  **[Decision 6/47] S-100WG noted** the progress and **agreed** to a short comment period for the S-100WG for completion by mid-Feb 2022 and **submit** to HSSC14 for approval.  **[Action 6/58] S-100WG** **to review** the draft proposed at the meeting and provide their comments to **JP(IIC)** and **IHO Sec** by mid-Feb 2022. **JP** to consolidate comments and convene a VTC meeting to solve the issues raised if necessary.  **[Action 6/59**] **S-100WG Chair to report** to the next WENDWG describing the DF Governance document and request to the WG to review and provide feedback in due course.    **[Action 6/60]S-100WG Chair to submit** the draft DF Governance document to HSSC14 for approval. | *Deadline: mid-Feb 2022*  *(Completed)*  *Deadline: Feb 2022*  *Done*  *HSSC14*  *Completed* |
| 6.3 | ECDIS Performance | **IHO Director**, Abri presented. No paper or presentation.   * A correspondence group is about half way through reviewing the IMO Performance Standards documentation. Next meeting will be held end of Jan/early Feb after which outcomes will be presented to IHO MS, with the aim of presenting to NCSR in June 2022 (nothing that this has been included in the NCSR Agenda). * Noted support from CIRM and INTERTANKO |  |
| 6.4 | S-164 | **[Decision 6/48] S-100WG agreed** to set up two Sub-Groups dealing with S-164 and Validation.  **[Action 6/61]S-100WG Chair** to send out a WG letter asking for volunteers to participate in the new S-164 and S-100 Validation Sub-Group.  [**Noted**] S-101PT has a Sub-Group that is looking at validation for S-101. |  |
| 6.5 | Validation | *Deadline: Feb 2022*  *Done* |
| 6.6 | Geodetic Reference and Coordinate Encoding | **[Decision 6/49] S-100WG agreed** to add two work items as proposed at the meeting.   * Analyse potential issues related to the handling of geodetic reference systems and coordinates in S-100 and S-100 based PSs. * In liaison with related WGs and PTs propose solutions for these issues that, on a long-term basis, could be implemented in future versions of S-100, S-100 based PSs and the GI registry.   [**Action 6/62**] **BH** **(Sweden, lead) to report** on the progress of the work item at the next S-100WG meetings.  [**Action 6/63**] **S-100WG members to indicate** their intention to BH and IHO Sec tothe participation in the Sub-Group to further develop the issue of geodetic referencing and coordinate encoding. | *WG7*  *WG7* |
| 6.7 | PS Name/ID | **[Decision 6/50] S-100WG agreed** to be considered in a post-Edition 5.0.0 of S-100 and further guidance may be included in S-97. |  |
| **S-101 Strategic Topics** | | | |
| 7 |  | *Left blank intentionally* |  |
| **S-100 Project Team Reports** | | | |
| 8.1 | S-102 | **[Decision 6/51] S-100WG approved** S-102 Product Specification Ed. 2.1.0 as proposedand agreed to **submit to** HSSC14 for endorsement according to IHO Technical Resolution 2/2007.  [**Action 6/64] S-100WG Chair to submit** Ed. 2.1.0 of S-102 to HSSC14 for approval and prepare a demonstration of S-102 products in accordance with intended S-98 interoperability for navigational purpose; especially the water level adjustment.  **[Noted]** Requests for the non-navigational purpose of S-102 have been continuously raised, and the establishment of a development plan has been requested of the S-102PT.  **[Action 6/65]** **S-102PT Chair to submit** a timeline for the development for the S-102 non-navigational content to the next S-100WG.  **[Decision 6/52] S-100WG requested** S-102PT to discuss a solution for navigation and non-navigation purposes for the PS.  **[Action 6/66]** **S-102PT Chair to submit** a report on the task for a way forward for both, navigational and non-navigation requirements for S-102 to the next S-100WG. | *HSSC14*  *Completed*  *Deadline: WG7*  *Deadline: WG7* |
| 8.1D | S-102 with S-57 | [**Noted] S-100WG Chair:** The proposal is not within the remit of S-100WG. The recommendation of the S-100WG is to submit this proposal to the IHO ENCWG. | INF paper |
| 8.1E | Noted the paper. |  |
| 8.2 | S-121 | *Left blank intentionally* |  |
| 8.3 | S-129 | *Left blank intentionally* |  |
| 8.4 | S-101 | **[Decision 6/53] S-100WG** approved the work plan of S-101PT as presented.  **[Action 6/67]** **S-101PT Chair to** report on the progress of S-101PS development to HSSC14. | *Done* |
| 8.5 | S1OOP | **[Action 6/68]** **S-100WG members** to consider providing Test Data Sets of S-100 products to the S1OOP Project Chair. | *WG7* |
| **S-100 Test Bed Reports** | | | |
| 9 |  | *Left blank intentionally* |  |
| **External Liaison Reports** | | | |
| 10 |  | *Left blank intentionally* |  |
| **Any Other Business** | | | |
| 11.1 | Repository | **[Decision 6/54] S-100WG/S-101PT agreed to migrate** the current S-100WG/S-101PT GitHub repository created by the S-100WG/S-101PT to IHO GitHub managed by IHO Sec and to post information regarding this repository on the IHO homepage.  **[Action 6/69]** **S-100WG Chair/S-101PT Chair/IHO Sec to migrate** the S-100WG/S-101PT GitHub repositories to the IHO GitHub and post the lists and associated information on the IHO homepage, and notify the S-100WG accordingly. | *Deadline: June 2022* |
| 11.1 | Office bearers | **[Decision 6/55] S-100WG elected** Julia Powell (USA) as S-100WG Chair, and Elizabeth Hahessy (Denmark) and Iji KIM (Rep. of Korea) as co-Vice-Chairs.  **[Action 6/70]** **S-100WG Chair** in consultation with Co-Vice Chairs to inform the IHO Sec of the order of acting Chair in accordance with the S-100WG TOR Paragraph 3. e) at the earliest opportunity. |  |
| **Date & Location of the next meetings** | | | |
| 12 | VTC | [**Decision 6/56**] **S-100WG** agreed to hold its next full S-100WG meeting as face-to-face if the circumstances permit, and supported to the plan of S-100WG events as followings.   * **EG**: Feb/March 2022 / Monaco (tbd) * **WG7**: Nov/Dec 2022 / Monaco (tbc) * **TSM9**: Spring, 2023 / TBD * **WG8**: September 2023 / TBD * **TSM10**: Spring, 2024 / TBD   The date for WG7 will be determined around the end of June 2022 and WG members notified accordingly. | *EG(Editing Group for Ed.5)* |