LIST OF DECISIONS & ACTIONS ARISING FROM S-100WG7 2022

- Draft 2.10 -

AGENDA ITEM	SUBJECT	ACTIONS (in bold, action by)	Remarks (Target)
Opening and Administrative Arrangements			
1	Members	**[Action 7/01] S-100WG** are invited to update the list of S-100WG members and contact details.	*Permanent*
2	Agenda and Timetable	**[Decision 7/01] S-100WG approved** the agenda and associated timetable.	
Matters Arising and HSSC Working Group Reports			
3.1 3.2	S-100WG6 *(Ref. Action 6/06)*	**[Action 7/02] S-129PT Chair** to submit the timeline of Ed.2.0.0 of S-129 product specification compliant to Ed.5.0.0 of S-100 taking into consideration the S-100 Roadmap.	March 2023
	GML *(Ref. Action 6/19)*	**[Action 7/03] SHC(lead), RM and JP** to draft the implementation guidance for Part 10b and **S-100WG Chair** to circulate the draft guidance to the S-100WG for approval.	TSM9(March 2023)
	GML *(Ref. Action 6/21)*	**[Action 7/04] RM** to submit Paper 4.3D to NIPWG for their comments and resubmit to S-100WG for consideration at the next meeting.	TSM9 and S-100WG8
	Units of Measure *(Ref. Action 6/22)*	**[Action 7/05] 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.	TSM9
	S-100 Infra *(Ref. Action 6/26, 27,28,36,34,53)*	**[Action 7/06] 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.	TSM9
	Part15 *(Ref. Action 6/41)*	**[Action 7/07] 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.	TSM9
	Part15 *(Ref. Action 6/42)*	**[Action 7/08] S-100WG Chair** to report the resource requirement on the IHO Sec in regard to supporting the S-100 Security Scheme.	TSM9
	Machine Readability *(Ref. Action 6/46)*	**[Action 7/09] EM** to provide a guidance to PS developers for their action to be compliant with Ed 5.0.0 of S-100.	S-100WG8
3.3 3.4	HSSC Report / Actions *(Ref. HSSC14/11)*	**S-100WG noted** the HSSC14 actions assigned to the S-100WG. **[Action 7/10] S-100WG Project Teams** to align product specifications (S-101, S-102 and S-129 as a priority) to Edition 5.0.0 of S-100 by 2023 and estimate the possible associated costs needed to support this alignment, and report to S-100WG.	HSSC15/ S-100WG8
	(Ref. HSSC14/25)	**[Action 7/11] S-100WG Chair/S-164 Sub-Group** to address and demonstrate, through a security risk analysis on the application of S-100 Part 15, whether the need for SENC distribution is still justified in the S-100 world.	HSSC15/ S-100WG8

AGENDA ITEM	SUBJECT	ACTIONS (in bold, action by)	Remarks (Target)
	(Ref. HSSC14/32)	**[Action 7/12]** **S-100WG Chair** to maintain the Dual Fuel Concept for S-100 ECDIS and provide updates to the next HSSC meeting.	HSSC15/ S-100WG8
	(Ref. HSSC14/45)	**[Action 7/13]** **S-100 Chair** to review the initial description of "Maritime Services in context of e-navigation" and to provide them to NIPWG for further action if appropriate.	HSSC15
	(Ref. HSSC14/63)	**S-100WG** noted analysis made by the **HSSC ISO 9001 Cell** on the development of Ed. 2.0.0 of S-101 and the monitoring of the progress on Portrayal Catalogue development.	
	(Ref. HSSC14/73a)	**[Action 7/14]** **S-100WG Chair** in liaison with **HDWG** to report the progress on the interface connection between the Hydrographic Dictionary database and the IHO GI Registry through the Concept Register to the next HSSC meeting.	HSSC15
3.5	Council Report	**S-100WG** noted the revised Roadmap of S-100 timeline and recognized the prioritized S-100 based product specifications and critical framework such as S-98, S-128 and S-164. **S-100WG** recognized that Ed.1.0.0 of S-164 should be published by end of 2023. Further discussion regarding responsibility of Interoperability Catalogue (IC) production which is required to test Ed 1.0.0 of S-98. **[Decision 7/02]** **S-100WG agreed** to set up a S-98 **Sub-Group** under S-100WG and submit this request to HSSC for approval.	
3.6	S-101 Report	**[Decision 7/03]** **S-100WG approved** Ed 1.1.0 of the S-101 Product Specification main document and Data Classification and Encoding Guide, and agreed to proceed with the approval for the S-101 Ed 1.1.0 FC, PC and Validation through S-100WG Circular Letter in early 2023. **S-100WG** noted the report on ISO 9001 cell and suggest to amend the attendees of the meeting in Monaco in September 2022 and the updated report to be posted on the S-100WG7 meeting page accordingly. **S-100WG** noted that the Ed. 1.1.0 of S-101PS is likely compliant to Ed 5.0.0 of S-100, however Ed 1.2.0 of S-101 is planned to fully compliant with Ed.5.0.0 of S-100. **S-100WG** noted that Exchange Set for the TDS questioned by NIWC. S-100WG Chair pointed to the S-164 Sub-Group to discuss gaps for the tests against Ed.5.0.0 of S-100. Metadata part 17 should be reviewed at the next TSM. **[Action 7/15]** **S-100WG Chair** to issue the S-100WG circular letter for approval Edition 1.1.0 of S-101 FC, PC and Validation. **S-100WG** recognized that S-101PT to establish a feedback mechanism via a dedicated S-101 Resources web page.	April 2023

AGENDA ITEM	SUBJECT	ACTIONS (in bold, action by)	Remarks (Target)
		[**Decision 7/04**] **S-100WG approved** S-101PT to meet face to face twice during 2023 and focus on preparation of Ed 1.2.0 of S-101 and then moving to Ed. 2.0.0 of S-101 based on feedback received.	
		[**Action 7/16**] **S-100WG Chair** to include achievement of S-101PT in 2022 and its plan to develop the operation version Ed. 2.0.0 of S-101 by 2024 in S-100WG report to HSSC15.	HSSC15/ S-100WG8
		[**Decision 7/05**] **S-100WG agreed** to the proposal set up a GI registry Project Team, subsidiary of S-100WG dedicated to the development and maintenance of the GI Registry and tasked to report its activity at S-100WG the meetings.	
		[**Action 7/17**] **S-100WG** to request the HSSC to establish the GI Registry Project Team, subsidiary of the S-100WG**.**	HSSC15
		[**Action 7/18] S-100WG members/Domain representatives** to inform their intention to join the GI Registry Project Team to the S-100WG Chair/IHO Sec at earliest opportunity subject to HSSC approval.	S-100WG8
3.7	S-102 Report	**S-100WG noted** the progress of S-102PS development moving toward Ed 2.2.0 of S-102; and the Github as a platform to develop the standard document.	
3.8	S-121 Report	*Left blank intentionally*	
3.9	S-129 Report	**S-100WG noted** the report of the S-129PT Chair presented at the meeting. **S-100WG Chair** suggested to the next Edition of S-129 should be an Ed.1.x.x for testing; and then going to the operational Edition 2.0.0 which is planned in 2024. Regarding delivery mechanisms for S-129 data from onshore services, the PT should consider potential bandwidth issues for the vessels.The Delivery mechanism of S-129 products should be reviewed with the situation given to the ECDIS.	
3.10	S-128 Report	[**Decision 7/06**] **S-100WG noted** the S-128 report presented at the meeting and agreed to present it as a joint S-100WG/NIPWG paper to WENDWG. **S-100WG** noted the mandate for the S-128 service to be provided to end user systems and recommended focus on the navigational purpose as defined in S-98 moving toward Ed. 2.0.0 of S-128 to NIPWG. [**Action 7/19] S-100WG Chair** to submit the proposed draft joint S-128 service paper to the next WENDWG meeting, in cooperation with contributors (**ROK, Sweden, UKHO, PRIMAR, IC-ENC, IEC, Navtor and IIC**).	Jan 2023
3.11	S1OOP Report	**S-100WG** noted the presentation on status of activities since the last WG meeting. In particular, S-100 web viewer's improvement on the TDS management, Wiki to share S-100 tools, and the progress of Open Source of the KHOA S-100 viewer.	

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3.11		**[Action 7/20] S-100WG Chair/IHO Sec/S-101PT Chair** to build an S-100 repository taking into consideration the proposal from S-101PT regarding the single resource gateway.	S-100WG8
		[Action 7/21]IHO Sec/S-100WG Chair to consider an IHO CL to invite IHO MSs to upload test data in the S1OOP and the S-100 repository (refer to S-164 action also).	S-100WG8
Proposals S-100 Ed 5.0.0			
4.1	Correction to Part 10b and 17	[**Decision 7/07**] **S-100WG approved** the technical corrections to Part 10b and 17 for Ed.5.1.0 of S-100.	*clarification*
4.2	Correction to Part 8, 10a, 10c and 17	[**Decision 7/08**] **S-100WG approved** the corrections to Part 8, 10a, 10c and 17 for Ed. 5.1.0 of S-100 as proposed, with amendments as follows: - **Part17:** Clause 17-4.5 – further discussion required, leave as is for now. - **Part 17:** S100_supportFileformat amended proposal to "TXT_UTF-8" approved. [**Action 7/22**] **PRIMAR** to propose to the next TSM an explanatory note for Part 17 SupportFileDiscoveryMetadata attribute SupportedResource. **S-100WG noted** that requirement to review Part8 of S-100 and invited discussion at the next TSM meeting. S-100WG noted the requirement to review and correct: - Minor inconsistencies in S-100 Part 15 and inconsistencies between Part 15 and xsd schemas. - Missing table in S-100 Part 14 (S100_OC_ServiceDataModel). - Extended explanatory description of ISO 8211 encoding of complex attributes in S-100 Part 10a. [**Decision 7/09**] **S-100WG approved** that corrections will be presented and discussed at the next TSM meeting for inclusion in S-100 Edition 5.1.0.~~S-100WG approved~~ ~~the corrections to be presented and discussed at the next TSM meeting for inclusion in S-100 Edition 5.1.0.~~	*Correction* TSM9
4.3	Management of External Resources	[**Decision 7/10**] **S-100WG approved** the proposed description in general and agreed to add in both S-100 Part17 for generic abstract and the details in S-98. [**Action 7/23**] **PRIMAR/IIC** to submit a draft change proposal to the next TSM meeting.	*Correction* TSM9
4.4	Support File Revision Status	**S-100WG** noted the proposal**.** [**Action 7/24**] **S-164 Sub-Group** to consider the proposal and discuss it at the next TSM meeting. The outcome to be reported at the next S-100WG meeting.	TSM9/S-100WG8
4.5	Portrayal CRS for LineSymbol	[**Decision 7/11**] **S-100WG approved** the proposal adding the portrayal CRS to the CRS Types in the relevant Part of S-100.	*Correction*

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4.6	Line Symbol Placement	**S-100WG** noted the proposal to add visibleParts to LineSymbolPlacement in the relevant parts of S-100 and recommended **OEMs** to participate in the test and re-submit the proposal if appropriate.	*Extension*
4.7	Alert Catalogue	After further discussion, the proposal was withdrawn.	*Correction*
4.8	Information type	[**Decision 7/12**] **S-100WG approved** the proposal for Part13 to add function HostInformationGetAssociatedInformationaIDs.	*Correction*
4.9	Spatial Relations	[**Decision 7/13**] **S-100WG agreed** to forward the discussion to the TSM and re-submit it to the next S-100WG if appropriate. It was also agreed that the results of discussions are to be forwarded to the S-101PT for their consideration in the S-101 data model. [**Action 7/25**] **IHO Sec (TSSO)** to provide feedback to S-101PT on the outcome of S-100WG discussions.	*(Extension)* S-101PT10
4.10	Part13 align with FC model	[**Decision 7/14**] **S-100WG approved** the proposal to update Part 13 to align with FC model.	*Correction*
4.11	Table Index Part 10c	[**Decision 7/15**] **S-100WG approved** the proposal to reorganize the table numbers of Part 10c.	*Clarification*
4.12	Table Reference Part 10c	[**Decision 7/16**] **S-100WG approved** the proposal to change table reference in Part 10c as proposed.	*Clarification*
4.13	S100_Vertical AndSounding Datum	[**Decision 7/17**] **S-100WG approved** the proposal to move all references to S100_VerticalAndSoundingDatum (including in UML) from S-100 Part 17 to Part 10c. However it was agreed that this should be located at clause 10c-10 instead of 10c-9 as proposed in the Paper. 10c-10 is "Common enumerations and dictionaries". [**Action 7/26**] **IHO Sec (TSSO)** to apply changes to Part 10c and Part 17, noting the location in Part 10c as clause 10c-10.	*Correction* TSM9
4.14	Editorial in Part10a	[**Decision 7/18**] **S-100WG approved** the proposed editorial changes in Part 10a.	*Clarification*
4.15	Clause Numbering Part10a	[**Decision 7/19**] **S-100WG approved** the proposed changes to fix clause numbering for Part 10a. **S-100WG recognized** the changes referenced in other parts of S-100 and some S-100PS for instance S-101. **SevenCs(HB)/IHO Sec(TSSO)** to reflect the changes to S-101PS accordingly.	*Clarification*
4.16	ISO/IEC8211	[**Decision 7/20**] **S-100WG approved** the proposal to add summary of ISO 8211 in Part 10a as proposed.	*Clarification*
4.17	Record Order ISO8211	[**Decision 7/21**] **S-100WG approved in principle** the proposal to introduce a general rules for the order of records in ISO8211 encoding in S-100 Part 10a and finalize it at the TSM9 in March 2023. [**Action 7/27**] **DG, JP, TP and HA** to work on concerns from the meeting and report recommendation to the next TSM.	*Extension*
4.18	Scale Properties	[**Decision 7/22**] **S-100WG approved** the proposal to clarify the definition of scale properties at relations from feature objects to geometry as proposed to Part 3 and Part 10a of S-100.	*Clarification*

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4.19	Schema namespace in XSD/XML	[**Decision 7/23**] **S-100WG approved** in principle the proposal to fix namespace issues in XSD and XML files used for portrayal and finalize it at the TSM March 2023. [**Action 7/28**] **SevenCs, NIWC, T-~~CHRIS~~CARIS, IIC** to work further and submit a change proposal at the next TSM9 meeting.	*Correction* TSM9
4.20 4.20A	Primary association	**S-100WG noted** that the issue should be fixed and agreed to defer in-depth discussion. [**Action 7/29**] **NIWC, SevenCs, IIC, T-CARIS to submit** a change proposal taking into consideration both Papers 4.20 and 4.20A to the next S-100 TSM meeting in March 2023; and submit the outcomes to HSSC for approval if agreeable solution is made.	*Clarification* TSM9
4.21	Part 9a default line join style	[**Decision 7/24**] **S-100WG approved** the proposal to correct the Part 9a default line join style to match the default specified in Part 9 (Miter).	*Correction*
4	All Change Proposals	[**Action 7/30**] **Proposers and/or IHO Sec(TSSO)** to prepare a final redline version as approved during the meeting and **IHO Sec(TSSO)** to incorporate into the draft Edition 5.1.0 of S-100. **S-100WG Chair** submits the draft Ed.5.1.0 of S-100 to the S100WG via Circular Letter and then to HSSC15 for approval.	March 2022/ HSSC15
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S-98 Interoperability Specification			
5.1	S-98 Interoperability	[**Decision 7/25**] **S-100WG noted** that there were "*unresolved comments*" since Edition 1.0.0 of S-98 and tasked the S-100TSM to review and determine the way forward. [**Action 7/31**] **S-100WG Chair** to report the outcome and report the next version of S-98 to the next S-100WG meeting for approval.	TSM9 S-100WG8
5.2	Portrayal Shared Edge	**S-100WG** recognized the issue presented during the meeting. [**Action 7/32**] **S-100WG** invited **OEMs** (**NIWC, SevenCs, T-CARIS, Fruno**) to discuss a way forward and report to TSM meeting.	*Clarification*
		Left blank intentionally	
S-100 General Topics			

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6.1	IMO ECDIS Performance	**S-100WG** noted the presentation of **IHO Director (Kampfer)** on the successful revision of IMO ECDIS performance standards approved by IMO MSC 106, Nov 2022. S-100 ECDIS will be legal to use after 1 January 2026 and from 1 January 2029 new systems must comply with the new IMO Resolution on ECDIS Performance Standards (MSC.530(106)). **IHO Director (Kampfer)** encouraged IHO MS to achieve substantial coverage of S-101 and related products by 2026 and requested that active MS contribution in S-100 related WGs and PTs must be increased. Challenges to S-100 timeline: It was mentioned that operational standards, production tools and training courses etc were the key elements to achieve the planned timeline. **S-100WG** noted that Sweden in cooperation with other EU MS will submit a new input paper on the inclusion of route exchange to IMO NCSR10 in May 2023. IALA will share the message with their members.	
6.2	Update S-100 Infra	**S-100WG** noted the update plan of the S-100 infra system to be in line with S-100 Ed. 5.0.0; and invited KHOA to report the progress status at TSM9 taking into consideration the impact on the development of Product Specifications. **S-100WG** noted that Validation functions are to be considered in the S-100 tool kits.	
6.3	Producer Code Register	**[Decision 7/26] S-100WG agreed** to enavle the S-100 Producer Code Register and endorse the inclusion of a management guideline for the Producer Code Register in S-99. **[Action 7/33] IHO Sec/KHOA** to submit a change proposal regarding S-100 Producer Code Register in Part2 of S-100. [**Action 7/34**] **S-100WG** invites **KHOA** to set the Producer Code Register up in the GI Registry operational. **IHO Sec** to announce its operational status to relevant domain representatives of S-100.	Jan 2023 Feb 2023
6.4	GI Registry Guidelines (S-99 Annex A)	**S-100WG** noted the progress made on the development of the guideline document for users of the GI Registry	
6.5	Concept Register/HD database	**S-100WG** noted the progress on the interface between the Concept Register and HD database system by KHOA. [**Action 7/35**] **S-100WG** to report the progress on the interface between the GI Registry and HD database.	HSSC15
6.6	Data Coverage	**S-100WG** noted the paper raised issues for management of extended coverage areas such as Radio or Rader coverage.	

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6.7	Part15 Identifiers & Procedures	[**Decision 7/27**] **S-100WG endorsed** the implementation by the Scheme Administrator (SA) (IHO secretariat) of Part 15 using formalised identifiers for participants in the data protection scheme according to the proposed formats and only signed content in accordance with Part 15 for content distributed by the IHO secretariat. [**Action 7/36**] **IIC/IHO Sec/ PRIMAR** to develop a guideline document to implement the digital certificate as proposed during the meeting and report it at the next S-100WG meeting. **IIC** announced that non-commercial application for the digital certificate will be released soon.	S-100WG8
6.8	Dataset Naming Convention	**S-100WG** noted proposal to harmonise approach to S-1xx naming convention across S-1xx Product Specifications. [**Action 7/37**] **IC-ENC** to share the proposal with the NIPWG and TWCWG for their comments, and report the next TSM for further discussion; and submit to S-100WG8 for approval.	TSM9/ S-100WG8
6.9	Dual Fuel	**S-100WG** noted the paper	
S-164			
		S-100WG noted the progress report presented by **IIC(JP)** and identified items and/or gaps needed to develop further.	

AGENDA ITEM	SUBJECT	ACTIONS (in bold, action by)	Remarks (Target)
7.1		[**Decision 7/28**] **S-100WG agreed** that TSM is to create one landing page for IHO S-164 and draft an initial package of Ed 1.0.0 of S-164 for review at TSM. [**Action 7/38**] **S-100WG Chair** to circulate the draft package of S-164 to S-100WG for endorsement and submit to HSSC for approval. The Ed. 1.0.0. of S-164 should include at least; ● Landing page contents and links ● Up to date contents from existing S-64 and existing S-164 S-101 cells. ● S-98 interoperability considerations ● Test drafts for user selected safety contour, Part 17 service aspects and Part 15 authentication and (optionally) encryption. ● Documented Test data schemes, versions, scenarios and user manual ● Datasets packaged as edition 5.0.0 exchange sets (including specific FC/PC/IC) ● S-128 contents ● Initial Dual Fuel tests ● Test data in conformance with Ed 5.0.0 of S-100, draft where necessary [**Action 7/39**] **S-100WG Chair** to submit the draft package of S-164 to HSSC for approval**.**	March 2023 HSSC15
S-100 Validation			
8.1	Validation	**S-100WG** noted the report presented by the S-100WG Chair; and noted that the S-100 Validation Checks will need ~~to be assigned a Specification number~~to have a designated home that allows for ease of maintenance, either as its own specification or an Annex to S-100. The S100WG chair will note this as part of the report to HSSC (for example S-158 or Annex to S-100). [**Action 7/40**] **Validation Sub-Group** to develop S-100 validation document and submit the draft at the next S-100WG meeting for endorsement.	S-100WG8

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8.2	Validation workshop	**S-100WG** noted that explanation of background, existing work and discussion around potential issues. [**Action 7/41**] **S-100 Validation Sub-Group** to update the validation diagram taking into consideration discussion during the meeting and report to the next TSM meeting for discussion. [**Decision 7/29**] **S-100 Validation Sub-Group** to work taking into consideration of related papers from the DQWG. [**Action 7/42**] **S-100WG Chair** to report the progress on the validation, with a focus on delivering in time for Edition 2.0.0 for S-104 and S-111, and request funding from the IHO Special Projects Fund for the validation work at the next HSSC meeting.	Feb.2022 HSSC15
8.2	Validation workshop	[**Action 7/43**] **S-100 Validation Sub-Group/IHO Sec** to set up an IHO Github for the validation tasks. [**Decision 7/30**] Validation workshop organized by the **S-100 Validation Sub-Group** to be hosted in Middle of 2023 in Monaco.	TSM9
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S-100 Test Bed Reports			
9.1	Test Bed	**S-100WG** noted the test bed report presented by KHOA/NOAA	
9.2	Test Bed	**S-100WG** noted the test bed report presented by PRIMAR	
		Left blank intentionally	
External Liaison Reports			
10.1	ENCWG	*Left blank intentionally*	
10.2	NCWG	Noted verbal report from the NCWG Chair.	
10.3	NIPWG	*Left blank intentionally*	
10.4	DQWG	*Left blank intentionally*	
10.5	ISO	*Left blank intentionally*	
10.6	OGC	*Left blank intentionally*	
10.7	IEC	Noted verbal report from the IEC/T80 Chair.	
10.8	IEHG	**S-100WG** noted the presentation. **S-100WG** noted consideration on the inclusion of S-401 in S-98 data interoperability.	
10.9	JCOMM/WMO	*Left blank intentionally*	
10.10	S-124PT	*Left blank intentionally*	
10.11	IALA	Noted verbal report from IALA technical representative.	
		Left blank intentionally	
Any Other Business			
11.1	Office bearers *(Ref. HSSC14/103)*	**IHO Secretariat** reminded the Office Bearers that according the ROPs of WGs, elections of Chair and Vice-Chair are decided at the 1st meeting after ordinary sessions of the Assembly. [**Action 7/44**] Call for nominations need to be issued in advance of the next S-100WG meeting.	Sep. 2023
		Left blank intentionally	
Date & Location of the next meetings			

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12	Meetings	[**Decision 7/31**] **S-100WG agreed** to hold its series of S-100WG meeting as followings. - **TSM-9**: 7 - 10 March 2023 / Rep. of Korea - **WG-8**: 13 - 17 Nov 2023 / Singapore - **TSM-10**: Spring 2024 / Monaco - **WG-9**: Fall, 2024 / TBD	