

**19th Transfer Standard Maintenance and Application Development
Working Group (TSMAD)
Minutes.**

26th to 30th October 2009 (Sydney, Australia)



Chairman: Barrie Greenslade (UKHO)
Vice Chairman: Jean-Luc Deniel (SHOM)
Secretary: Tony Pharaoh (IHB)

Annexes:

- Annex A – List of Documents
- Annex B – Agenda
- Annex C – List of Participants
- Annex D – List of Action Items.

1. Opening and Administrative Arrangements

Commodore Rod Nairn welcomed members to the 19th TSMAD meeting and to Australia and wished the meeting good progress. He noted that it was a long way to travel to Sydney however this enabled participants from this region to attend the meeting and also enabled organizations from the southern regions to improve their recognition by hosting important Working Group meetings. Australia has been an active participant in the TSMAD Working Group and has hosted four TSMAD meetings over the past 10 years. Commodore Nairn highlighted the importance of the TSMAD Working Group, and noted that, as the focus of development work shifted from S-100 to S-101, the progress of the WG would most certainly solicit greater interest from the broader hydrographic and stakeholder communities.

Barrie Greenslade (BG) noted that the TSMAD Working Group attempts to be as inclusive as possible in all its work activities, and pointed out that there has been broad participation from many IHO member states, and stakeholder participants.

1.1 Introduction and Welcome.

The Chairman Barrie Greenslade welcomed members to the meeting and thanked the Australian delegation, for the time, effort and financial support spent arranging the meeting.

The secretary reminded members of the sad news concerning the death of the Vice Chairman Don Vachon who passed away shortly after the 18th TSMAD meeting that Canada had hosted (at the CCHS Ottawa) in May. He noted that Don Vachon had been a strong advocate for the development of S-100, and was the first chairman of the sub- working group set up to develop the new standard.

The Chairman informed the meeting that Jean-Luc Deniel (SHOM) had been elected as the new Vice Chairman, and thanked him for the help that he had provided in organizing the documentation for the 19th TSMAD meeting.

2. Approval of Agenda.

The agenda (document TSMAD19-02) was approved without amendment.

3. Minutes of the 18th TSMAD & 1st DIPWG Meeting, 4th to 8th May 2009 (Ottawa, Canada)

Minutes were accepted by the meeting.

4. Matters Arising

4.1 From HSSC 1

Action/Ref		Who	Paper/Status
18/10	Clarify/Validate who approves different levels of changes to S-100. (HSSC1-06.1B)	BG/JLD	Done
<p><i>JLD reported that the TSMAD paper to HSSC1 (HSSC1-06.1B) provided the framework for procedures for maintaining IHO publications and the GII register. The proposals contained in the paper, as presented by JLD were accepted by HSSC1.</i></p> <p>Action: TSMAD to amend S100 maintenance section based on the proposal and to prepare new procedures for the registry (outlining who/how changes to S-100 are approved). There is also need to look at the proposed Technical Resolution. (BG/JP)</p>			
18/09	S-100 to be submitted to HSSC1 for final approval after which it is to be sent out to MS via CL for final approval. (HSSC1-06.1H)	BG/IHB	Ongoing
<p><i>BG reported that some comments had been received from Turkey. A few additional updates taking into account comments received from HSSC1 will be included, after which the document will be ready for distribution. (This is to be completed during the course of the meeting and a Circular Letter announcing the release of the document will be sent out within the next few weeks.</i></p> <p>Action: Notification of the publication of S-100 is to be sent out to MS via CL. Document to be included on the IHO web site.</p>			
4.1.1	New Work Item Proposal for the Establishment of a Standard for the Integration of Multiple Layers of S-100 compliant Auxiliary Navigational Information (S.10x) (HSSC1-06.1F)	BG	HSSC1-06.1F
<p><i>BG reported that Mr Sean Hinds CHS had made several good proposals at HSSC1 meeting and this had been accepted as a new TSMAD work item.</i></p> <p><i>BG noted that this is an ongoing item of work, and should continue as is. He requested that those members with an interest in this topic should participate in this work. PB noted that this may be of interest to the AML community. These proposed layered products also need to include input from OEMs, as they will implement them in their systems (ECDIS). TSMAD needs to ensure that there is a common template for those types of products that will be included in ECDIS. This could be added as an annex to the S-101 Product specification.</i></p> <p>Action: Develop a paper outlining how multiple Layers of S-100 compliant Auxiliary Navigational Information can be integrated with S-101 ENC data. The paper is for circulation to TSMAD members and OEM's for report back by the next TSMAD (2010 - Rostock) meeting. (BG)</p>			
4.1.2	Information overlays in ECDIS	BG	HSSC1-INF3
<p><i>BG reported on the TSMAD paper (HSSC1-INF3) outlining the need to make provision for the development of a generic MIO product specification based on S-100 that would including common characteristics. HSSC1 agreed that this should be added to the TSMAD work program.</i></p>			

4.2 Other working group actions

Action/Ref		Who	Paper/Status
18/03	Cooperate with TWLWG & other relevant WGs to develop tidal prediction data exchange format.	TM/AP	Done
<p><i>TM reported that he presented the issues discussed at the TSMAD 18 meeting. The two concepts that TSMAD developed at that meeting were based on conventional depth areas and the use of a tin models as an overlays. TM reported that HSSC1 concluded that it would not be possible to have a common prediction</i></p>			

Action/ Ref		Who	Paper/ Status
<i>model and it was therefore decided that this was too complex to implement in S-57, and should be included in S-101. He reported that HSSC1 will task TWLWG to develop this further and TSMAD should liaise with TWLWG as required.</i>			
CHRIS 20/6	To send digital copy of the Canadian tidal / gridded proposal to AP.	Can	Done
	To present the existing tidal specification to HSSC and request that this should be added to the TSMAD / TWLWG work program.	TM	Done
<i>TM Reported that this action item had been completed.</i>			
18/13	Chairman to enquire whether the TWLWG have a requirement to set up a register for tidal purposes or whether they want to include their requirement within the hydro register. They should be made aware of the full ramifications of setting up and maintaining a register.	BG	Ongoing
<i>The Chairman reported that due to the reorganization of the directory structure this item had not been implemented.</i>			
18/45	Request the "Data Supply and Certification WG" to study and provide recommendations on an appropriate mechanism for including updates as part of an exchange set.	S-101 WG JP/TM/ RF	Ongoing
<i>JP noted that they were not ready to undertake this action item. She noted that this action should also include input from the DSPWG (S-63) Working Group.</i>			
18/52	Concerning the discussion paper about the inclusion of nautical publication in ECDIS, the chairmen of TSMAD and SNPWG are to discuss all proposed S-10X product specifications, to ensure that work activities and products are harmonized.	BG	Done
<i>BG reported that he attended the SNPWG where this was discussed. He noted that this was also the focus of an HSSC1 paper which outlined the issues concerning the how nautical publications and ENC information should be integrated in an ECDIS. Cooperation between the TSMAD and SNP Working Groups is required to determine what the links (relationships) should be between these two products in order to minimize the duplication of information, and to facilitate safe and efficient product updating procedures.</i>			
4.2.1	EUWG – T&P Notices to mariners : Use of « New Object » as Information objects alternative to caution area objects should be developed.		HSSC1-06-10A
<i>JLD reported that the ENC updating WG had been tasked to study T&P NtMs and rewrite Appendix 1 of S-52. The study also looked at S-57 T&P notices to Mariners, but had not considered new concepts that could be implemented in S-101. He noted that the use of the "New Object" class had been considered as part of this study however he reported that the intent of this object class was only to be used for items that were required to satisfy SOLAS requirements. RF stated that the overuse of "caution areas" was causing mariners to switch these areas off and this compromised vessel safety. He was of the opinion that the use of "New Object" class to provide prelim information of impending changes was safer than including an extra caution area on the ECDIS display.</i>			
<i>It was decided that this needs further study by TSMAD and C&SMWG to see what affects this will have on ECDIS, especially concerning the portrayal of caution areas. This should also include testing by OEMs before TSMAD condones any solution. EK noted that the new Test Data Set includes a few new object class instances.</i>			

Action/ Ref		Who	Paper/ Status
4.2.2	CSPCWG : Report to TSMAD19 on CSPCWG Activities	JW	TSMAD19-4.2.2
<p><i>JW provided a brief report on the activities of the Chart Standardisation and Paper Chart Working Group (as outlined in his paper) and noted that the WG had not had a meeting since the last TSMAD meeting. He highlighted some of the issues that should be of relevance to TSMAD, and noted that as a result of the structural reorganization of the IHO, the M-4 and M-11 publications had been renumbered to S-4 and S-11 respectively (in line with other standards) and this could impact on references to these documents in the S-100 document. He also noted that parts of Section B (of M-4) had been renumbered, and this may also have consequences for references in the S-100 document. Several new paper chart symbols (pipeline tunnel entrance, wave energy devices, and wind farms) have been developed by CSPCWG and will have to be translated into feature classes and will have to be included in the registry.</i></p>			
4.2.3	Report on the DIPWG activities of relevance to TSMAD		No document
<p><i>No report was provided – the last meeting was a combined TSMAD/DIPWG meeting, so no report was necessary.</i></p>			
4.2.4	Report on the SNPWG of relevance to TSMAD.		No document
<p><i>BG reported that he had attended the last SNPWG meeting. The Working Group had made significant progress with their data modeling and had identified a number of feature classes and attributes which have now been included in the IHO Registry. He also noted that the Marine Environmental Protection Product Specification work item had been transferred to SNPWG as its content was more aligned with SNPWG work.</i></p>			

4.3 GII – Registry Actions

Action/ Ref		Who	Paper/ Status
CHRIS 20/29 + 18/31	GII content and management. Refine and Clarify the governance for each component (Standards, Specifications & Registers) of S-100 &S-101 in white paper for HSSC. See HSSC1-06.1G	BG	HSSC1-06.1G Done
<p><i>BG reported on the paper (6.1 G) submitted to HSSC1 which outlined proposed changes to the IHO Registry. There will now only be two S-100 registers for each of the existing register types. One will be maintained for IHO items, and a supplementary register will be maintained for non-IHO hydro-related requirements e.g. MIO's. He noted that this new simplified structure will significantly reduce the management requirements for the GI registry. The registry will physically be located on the IHB server infrastructure. Management of the system will be done using normal permission and security arrangements.</i></p>			
18/01	CHRIS action 16/6.1. Missing enumerations lists need to go into the registry.	TM	Ongoing
<p><i>TM reported that this item was ongoing.</i></p>			
18/14	Hydro register content : Collate all papers from past TSMAD meetings and send to Chairman.	AP	Done
<p><i>TP reported that this had been completed.</i></p> <p>Action: It was decided that TSMAD members should review old proposals that were not accepted for inclusion, or were not considered at previous meetings and resubmitted them if they were still relevant. (All)</p>			
18/21	Send paper TSMAD18-11.2C (from Jeppesen) to the chart specifications working group for review and comment. Based on	BG	Ongoing

Action/ Ref		Who	Paper/ Status
	their response, it should be decided which classes / attributes to include in the register.		
<i>BG reported that this item was still ongoing.</i>			
18/26	USA (NOAA) will work with Jepessen to enter new features and attributes into the Hydro register. Coordinate with CSPCWG regarding additional topmark attribution.	JP	Ongoing New Action
<p><i>JP noted that this work was ongoing. She highlighted issues concerning how top marks that are used for national purposes (i.e. don't conform to IALA) should be included, and noted that only using the INFORM attribute was not appropriate. Can these be included as non IALA topmarks in the register? She questioned whether it would be possible to create a generic attribute that could be used for these non IALA topmark shapes. The meeting decided that these could go into the register as they would only be used as and when required.</i></p> <p>Action: The list of topmarks provided by Jepesson needs to be reviewed for duplicate entries and included in the registry. (JP/TM)</p>			
18/25	Review NOAAs offer to physically host the registry. It may be more appropriate for NOAA to administer the registry, which is currently hosted at the IHB	BG	Done
<i>BG reported that he had not had any further discussion with NOAA regarding their offer to host the Registry. He reported that the registry was now hosted on the IHO server and anyone with a login account would be able to gain access to it.</i>			
18/41	Create Webpage for information about registries.	AP	Ongoing New Action
<p><i>TP reported that he had prepared a web page, however noted that this had not been included on the IHO web site as a result of the proposed changes to the IHO GII Registry structure – as reported in HSSC1-06.1G – (Update on the Proposed Management Arrangements for the GII).</i></p> <p>Action: TP to set up WIKI / CMS for providing information about the GII – registry and S-100.</p>			
4.3.1	How to update S-58 checks? (ex: test for linear depth area). Encoding bulletin or other means.	GU	No paper
<p><i>GU reported that they had discovered that ENC validation software applications were generating many errors which were being caused by the removal of linear depth areas in ENCs. He proposed that there is a need for an encoding bulletin providing notification about this. It was decided to fix this via a new edition of S-58.</i></p> <p>Action: A new edition of S-58 needs to be produce to fix this problem related to errors being generated by the removal of linear depth areas. (GU)</p>			

4.4 S-100 Actions

Action/ Ref		Who	Paper/ Status
18/07	Send final technical edit on S-100 out through TSMAD letter for approval by TSMAD. The amalgamated document is to be circulated via TSMAD letter as soon as the review is completed. S-100 to be submitted to HSSC1 for final approval after which it should be sent out to MS via CL for final approval.	BG	Done

Action/Ref		Who	Paper/Status
<i>BG reported that that this item had been completed. HSSC1 had endorsed S-100 and it will be distributed to IHO Member States for approval and will be included on the IHO web site.</i>			
18/08	Evaluate the status of ISO19117 at the Molde meeting and decide whether to include a profile of 19117 – if yes – include and distribute via another TSMAD letter.		Done
<i>BG reported that he and TP had attended the 19117 WG meeting May and noted that there is another meeting in due to take place in November. It is probable that if the 19117 working group does not produce a committee draft by the end of the year, the publication will be "timed out" by the ISO/TC 211 committee. He noted that TSMAD will use the content as presently included in the current S-100 document.</i>			
18/15	Send out TSMAD letter asking if items on the deferred amendments action list are still valid.	BG	Done
18/24	Create S-100 "Help" webpage prototype.	KF/BG	Ongoing
<i>BG noted that this was still ongoing. Unfortunately it had not been possible for Kelly Fougerousse to attend this or the last meeting and this had hindered the progress of this item.</i>			
18/36	Establish protocol for the coordination among CSPCWG, TSMAD and DIPWG when feature, attributes, symbols and portrayal rules are created or modified.	BG	Done
<i>BG noted that this will be facilitated through the joint DIPWG / TSMAD meetings (Rostock 2010) These Working Groups will need to monitor CSPCWG work.</i>			
18/53	Grid index reference system – Paper and presentation to be developed for HSSC1 requesting this to be included as a WI for TSMAD.	AP/TM	Done
<i>TM reported that the paper had been presented to HSSC1 (as paper HSSC1-06.1C). HSSC1 approved the request for this to be a new TSMAD work item but recommended that other reference systems should be considered. TSMAD should also consider use cases for using grid references and determine if grid references could be included as metadata.</i>			
<i>It was decided that this should be presented at the next stakeholders workshop meeting and should also be discussed at the next TSMAD/DIPWG (Rostock) meeting.</i>			
Action: Present the concept of using a grid reference system at the next Stakeholders meeting. (BG/TM)			
4.4.1	S-100 General Wash-up	BG	No paper
<i>BG reported that S-100 had been approved for release by HSSC1. There were a few minor general edits required which take into account a review of comments received from Turkey, after which it will be placed on the IHO web site and will also be circulated to Member states for final approval.</i>			

4.5 S-101 Actions

Action/Ref		Who	Paper/Status
17/9	To include text in the S-101 introduction page informing members to press "Post" (not "Skip") after they post a comment so that notification of the comment is sent to all members.	JP	Done

Action/ Ref		Who	Paper/ Status
<i>JP reported that this action had been completed.</i>			
17/9.1	To set up a WIKI page. TSMAD members to propose candidate questions on this WIKI page. JP to collate these into a questionnaire and send to training institutions.	JP	Ongoing
<i>JP reported that this is to be reported on during the next (combined TSMAD/DIPWG) meeting, due to take place in May 2010 in Rostock.</i>			
17/9.2	To identify what rules in S-4 (previously known as M-4) should be included in S-101. (These may possibly be included in a separate document).	JW	Ongoing
<i>JW reported that he is giving this more consideration and he will hopefully have a report ready for the next combined TSMAD/DIPWG meeting (Rostock).</i>			
18/04	Open dynamic tides discussions on WIKI	JP	Closed
<i>It was decided that this should be left to the tidal group. JLD noted that if this is only left to the TWLWG it will not get proper consideration. There is a need to cooperate with the TWLWG on this work item.</i>			
Action: TM to open a tidal discussion item on the S-100 WIKI and invite TWLWG members to participate.			
18/38	Need to seek the guidance of the Tides and Water level WG concerning the inclusion of tides in S-101.	BG	Ongoing
<i>BG noted that this needs further discussion with the TWLWG. HB suggested that this could be implemented as an integrated separate product / layer, but it must be able to trigger the ECDIS alarms where appropriate.</i>			
18/39	TSMAD to formally request DIPWG to review S-52 to see what parts should be moved into the S-101 product specification.	BG	Ongoing/ New Action
<i>Done informally. JP noted that there are parts of S-52 that should belong in S-100.</i>			
Action: (S-52 content that should be in S-100). BG to send email requesting DIPWG chair to review S-52 to see what parts of the publication should be moved into the S-101 product specification.			
18/40	Define and document the mechanism required for having portrayal developed (by DIPWG), for newly accepted features. (This process needs to be documented somewhere S-101 WG).	S-101 WG	Ongoing/ New Action
<i>It was proposed that whenever a new feature is submitted to TSMAD, it should also be forwarded to the DIPWG so that the WG can decide on what portrayal is most appropriate (and portrayal register it should be included in). It was questioned whether this should be incorporated in the Register and if so it should also be determined whether the CSPCWG would also use the registry to register symbols for paper chart features.</i>			
<i>It was noted that this should be included as part of the GII process for running the registry. The HSSC also needs to discuss and provide guidance on how different WG should liaise with each other and determine what procedures should be followed when developing new features / portrayal requirements.</i>			
<i>It was decided that this needs further consideration and should be discussed at the Rostock (TSMAD/DIPWG) meeting so that recommendations can be submitted to the to the next HSSC meeting.</i>			
Action: TSMAD to develop a paper for the Rostock meeting highlighting the need for closer cooperation between WGs and outlining some of the issues related to inclusion and subsequent			

Action/Ref		Who	Paper/Status
portrayal of new features in S-101. Following discussion at this meeting a report is to be compiled for the HSSC2 meeting for consideration. (BG/JLD)			
18/42	The incorrect population of M_NSYS with different ORIENTS needs to be reviewed.	JW	Ongoing
<i>JP reported that this requires further work. The S-101 subgroup needs to determine where this should be included in the S-101 product specification, feature catalogue and encoding guide. (Continued development by RF and JP).</i>			
18/44	Develop a strategy for tracking entries included into the FCD. (S-101 development group. This should be posted on the IHO web site). (TM to make up the web page and AP to include on the IHO server).	S-101 WG TM/AP	Ongoing
<i>BG noted that the intention was to include a catalogue builder (in the Registry) that could be used for this function.</i>			
<i>HB stated that there is a requirement to build a standard xml schema that all catalogues can be validated against. A style sheet could then be developed to create standard screen or printer output.</i>			
18/46	Enquire how to include multiple scopes in the S-101 product specification at the ISO/TC211 meeting.	BG/DO B	Closed
<i>(This relates to the question of how to include one for scale dependent cells, and one scope for scale independent products). BG noted that this was discussed at the Taunton focus WG meeting and it was decided to have only one scope.</i>			
18/48	Invite TSMAD members to participate in the Display Scales sub working group.	HE	Closed
<i>HE reported that this has not been done but recommended that it should be discussed at the meeting, and recommended that it could be included in S-101 as is. This was agreed by the meeting.</i>			
Action: Include the recommendations produced by the Display Scales sub working group in the draft S-101 product specification document. (RF/JP)			
18/49	Support file formats. Include a question in the outreach questionnaire asking OEMS and users, which support file formats they would like to have included in S-101.	RC	Ongoing/ New Action
<i>RC reported that this required input from the DSPWG and as Tom Mellor will be taking over from Richard Coombes (who will be retiring), he will take over this task. It was decided that this task should be deferred to the next stakeholders forum meeting for additional feedback.</i>			
Action: To included as a discussion item at the next stakeholders forum meeting for further discussion and feedback. (What do stakeholders want in terms of services, data formats and products). (BG)			
4.5.1	S-101 Project plan	JP	TSMAD19-4.5.1
<i>JP presented the project plan for the move from S-57 to S-101 product specification. This includes a controlled phase of steps that will make provision for the changeover to S-101 ENCs in a set of phased steps. These include the following four main phases:</i>			
<i>Phase 1 will include the implementation of a new Feature Catalogue. It will however only include those features and attributes that are currently in S-57 3.1.2. A Portrayal Catalogue with content equivalent to S-</i>			

Action/ Ref		Who	Paper/ Status
	<p>52 PL 3.4 and an XML implementation of the conditional symbols procedures will also be included. The S-100 General Feature Model and the new 8211 encoding will also be included. ENC's will be delivered as S-101 XXXX .000 files.</p> <p>HB noted that phase 1 should also include the new catalogue and the new geometry types. (BG proposed that consideration should be given to implementing this in two phases (phase 1a and phase 1b).</p> <p>HB noted that it will be very difficult to implement this type of portrayal catalogue during the first phase but proposed that phase 1 should also include all of the 8211 upgrades.</p> <p>Phase 2 – (S-101 draft 0.2) will implement new support file formats and procedures for their management, of new file naming conventions, metadata, improved display scales for ECDIS loading, and new updating procedures.</p> <p>Phase 3 will include new geometry types, multiple language support, the use of cartographic attributes for enhanced display, Additional enhancements to update the Data Capture and Classification Guides, will be required in order to support the new enriched content.</p> <p>Phase 4 - S-101 draft 0.3 will implement the extended model capabilities, complex attributes, and information types. S-101 draft 0.4 will also implement the concept of “scale independent” and “scale dependent” datasets, information objects and complex attributes.</p> <p>The meeting agreed with the proposed approach, and the recommendation that this should be presented at stakeholders meeting for feedback. It was noted that during every phase the new features should be tested to establish if they are implementable.</p> <p>Action: Present the proposed “phased implementation plan to the next Stakeholders forum for feedback. The results of this discussion, is to be reported to the next TSMAD meeting. (BG)</p> <p>FH noted that xml may not be the ideal format for capturing the Conditional Symbol Procedures. Feature catalogue will contain the geometry types (i.e. they have been moved from the S-100 Product Specification).</p> <p>Period and targets of each development phase are as following:</p> <p>Phase 1 (Oct/09 – June/10)</p> <ul style="list-style-type: none"> • Main parts of S-101 ENC to be completed. • No Feature and Portrayal Catalogues. <p>Phase 2 (July/10 – 1st half '11)</p> <ul style="list-style-type: none"> • TSMAD to complete an S-101 ENC data set. This should include the updating mechanisms. • A platform (SW) to demonstrate the new capabilities is to be completed. <p>Phase 3 (Feb/11 – Jun/12)</p> <ul style="list-style-type: none"> • Complete the extended data model. • Complete XML Feature Catalogue, XML Portrayal Catalogue and Data Capture and Classification Guide <p>Phase 4 (Jul/11 – Jun/12)</p> <ul style="list-style-type: none"> • Complete the Finalize Version of the Feature Catalogue and Portrayal Catalogue • Complete the final S-101 ENC Test Data set (version 1.0) 		
4.5.2	Proposed S-101 draft0.1 (phase 1) See associated spreadsheet of additional issues for resolution (First Tab)	JP	TSMAD19-4.5.2 TSMAD19-4.5.3
<i>JP reviewed the spreadsheet containing items for discussion relating to S-101 phase 1. The following items</i>			

Action/ Ref		Who	Paper/ Status
<p>were discussed.</p> <p><i>Temporal extent (1.4) – It was decided that this should not be included.</i></p> <p><i>Data product specification metadata (1.5) should be included as a reference to the TR.</i></p> <p><i>Specification Scopes and Spatial Resolution (3.) – should not be included in this section.</i></p> <p><i>Application schema (4.1). TM reported that he had attempted to include the full application schema however it becomes very large when all attributes are included. It was therefore decided to only include the relationships. This needs to be made clear in the document.</i></p> <p><i>Meta Feature Types (4.3.1). It was concluded that these should stay in the Product Specification document as is. Consideration should be given to using the S-57 alpha code as aliases.</i></p> <p><i>Theme Feature Types (4.3.3). All reference to 8211 need to remove. There is no GRUP subfield in the new encoding. This will be replaced by a new “Skin of the Earth” feature. This feature needs to be included in the feature catalogue. There will be only one theme – skin of the earth. All other themes are made by feature aggregations in the encapsulation. This will need to be described in the S-101 product specification. (Phase 1 will only have a skin of the earth theme). Thematic groups could be used for presentation issues. There is a need to develop use cases for thematic groupings.</i></p> <p><i>Feature Integrity (4.5). It was noted that this can only be checked during the encapsulation or transportation process, and can’t be done at the feature level.</i></p> <p><i>Cells (4.8). The FOID can be used for relating features across multiple cells. JW noted that this was being dealt with via an Encoding Bulletin which is soon to be published. There is a need to include a section that describes how to split features in two cells should be handled. This should be included in the product specification document.</i></p> <p><i>Display Scales (4.10). It was agreed to delete the navigational purpose column – the concept of NP will only be used for metadata.</i></p> <p><i>Geometry (4.11.1). In the figure the curved interpolation needs to change to loxodromic - TM to produce new figure.</i></p> <p><i>Level 3a (4.11). It was noted that the change of direction of coordinate sequences will have an impact on presentation. After further discussion, it was decided to keep the direction as per the ISO description, and include a note highlighting that this may influence presentation.</i></p> <p><i>Vertical and Sounding Datum (5.3). This only needs to be highlighted in the ECDIS when a vessel passes from one vertical datum to another. It was decided that this should be included in phase 2. It was noted that S-57 needs to document which feature classes have +ve and –ve VERDAT. The proposed text should be in section 5.2 (Section 5.4 should only include a statement that “No projection is to be used ...”</i></p> <p><i>The proposed comment for item (5.5) was rejected by the meeting.</i></p> <p><i>Section 8. Dependent on the outcomes of HSSC1, it was decided to include a reference to TR 1.2.1. It was concluded that there is a requirement to develop a scheme for updates versions e.g. updates to the catalogue that won’t prevent the ECDIS from rejecting a cell. Major Changes (e.g. to the model) would result in a full version update.</i></p> <p><i>Section 8.6. It was decided that there is a requirement to populate the table with TSMAD guidelines.</i></p> <p><i>Portrayal (9.). It was noted that DIPWG would be requested to develop this section. The status of the work on the portrayal registry will be reported on during the next combined TSMAD/DIPWG meeting. It should then be possible to decide how to integrate the portrayal work into the Registry.</i></p> <p><i>It was decided that questions relating to issues for S-101 development should be presented at the next stakeholders meeting;</i></p>			

Action/Ref		Who	Paper/Status
<p>Action: Questions for stakeholder forum - BG</p> <ul style="list-style-type: none"> - <i>is there still a need for a cell size limit – e.g. 5MB</i> - <i>should the feature and portrayal catalogues be available for download from the IHO site or distributed with an update CD.</i> <p>Action: Data Quality section of the S-101 product specification. JP to outline the issues concerning data quality and send these to BG. BG to discuss these with the DQWG chairman, with respect to the future development of this WG.</p>			
4.5.3	S-101 Data Classification and Encoding Guide Break Out Group	JP	No paper
<p><i>The discussions that took place during this breakout group are summarized below:</i></p> <p><i>Updating. There is a need to develop an update mechanism that will enable the mariner to see what changes have been made as a result of updates. There should also be a mechanism for the mariner to ascertain the status of his loaded cells with respect to the latest updates released by a producer (HO).</i></p> <p><i>It was noted that a possible solution could be to make use of an information feature (describing the nature of the update) that would be associated with each update. Another possibility would be the use of an additional overlay (similar to VPF method) that includes a simple geometry and attribute(s) describing the updates applied. It was decided to look at the relevant metadata (MD_UpdateInformation) constructs to determine how these could be implemented. It was agreed that this should be a discussion item for the Stakeholder's workshop meeting.</i></p> <p>Action: BG to include the topic for the next Stakeholder's workshop of how best to integrate a mechanism that will enable mariners to determine what changes have been made to an ENC.</p> <p><i>It was also agreed that the reissue concept would not be included in S-101 and that update application should not be included in S-100.</i></p> <p><i>Discussion about associations/aggregations and master slaves relationships. It was agreed that there needs to be strong use cases requirements if these are to be included in S-101.</i></p>			
4.5.4	S-101 8211 Review Breakout Group	JP	No paper
<p><i>It was decided that an S-101 test data set that implements the new ISO 8211 constructs should be produced. The existing Test Data set should be used for this. It was agreed that most of the changes to the existing TDS could be implemented using a data converter i.e. from S-57 Ed 3.1 to the new 8211 structure. The IHB to investigate the possible funding of the development of conversion software by OEMs. It was noted that to test the process properly it will be necessary to convert both ways.</i></p> <p>Action: IHB to investigate the possibility of providing funding for the development of an S-57 to S-101 (Phase 1) ENC conversion SW application.</p>			

4.6 S-102 Actions

Action/Ref		Who	Paper/Status
18/05	All members are asked to circulate the draft S-102 Bathymetric Product Specification document within their offices and ask for feedback, and for hydrographic experts to contribute to this work. All feedback to be sent to Wade Landers.	All	Ongoing

Action/Ref		Who	Paper/Status
See 4.6.1 below			
18/18	Hold a separate 2 or 3 day S-102 meeting.	BG	Done
4.6.1	Report (letter) from the S-102 WG (Status of S-102 and S-10x Proposals)	WL	TSMAD19-4.6.1
<i>BG reported that a letter outlining the present status of this work had been received from Wade Ladner. He encouraged TSMAD members to participate in this work item and proposed that the meeting commends the work done thus far and recommended that the meeting supports the recommendations made by the task group. The meeting agreed with the recommendations provided in the report.</i>			

4.7 S-65 Actions

Action/Ref		Who	Paper/Status
18/02	CHRIS Action 20/18 - BSHC study on ENC consistency and CHS report are to be reviewed and included in S-65 Annex 1.	RF	Done
<i>The Chairman reported that this was accepted by HSSC1.</i>			
4.7.1	S-65 Proposed comments / revisions	AU	TSMAD19-4.7.1
<i>The S-65 comments / revisions were accepted by both TSMAD and HSSC1. BG noted that comments were also submitted concerning the main body of the document. These were not implemented however BG recommended that if members had comments concerning the main body of the document, they should be submitted to the IHB.</i>			
Action: IHB to publish and distribute new version of S-65 when the proposed changes have been circulated to TSMAD members, for approval, and have been agreed. Comments are to be sent to the IHB.			

4.8 Encoding bulletins Actions

Action/Ref		Who	Paper/Status
16/8.3	To reword relevant encoding bulletins and insert links to examples of bad practices. IHB to put on the web site	JW	Ongoing
<i>This action is ongoing.</i>			
CHRIS 20/12	Encoding Bulletin on S-57 Temporal Attribution (done) (EB 24).		Done
<i>JW reported that this action had been completed.</i>			
18/12	Develop a FAQ explaining the ramifications of encoding Areas of Minimal Depiction" for use in ECDIS.	JW	Done
<i>JW reported that this action had been completed.</i>			
4.8.1	Report from the ENC Encoding Bulletin Sub-Working Group	JW	TSMAD19-4.8.1

Action/Ref		Who	Paper/Status
<i>JW reported that since the last meeting the sub-working group had published 5 Encoding Bulletins (EBs) and four FAQs. The group was working on publishing a further two EB and three FAQs.</i>			
4.8.2	<i>Slaves with more than one master</i>	<i>Jeppesen</i>	TSMAD19-4.8.2
<i>Following a discussion on this issue, the meeting recommended that an Encoding Bulletin be drafted. This should be used for developing an S-58 test to detect any slave objects that may have more than one master object, and report this as an error.</i>			
Action: Encoding Bulletin to be developed to advise that slave objects may not have more than one master object. (JW).			
Action: A new test is to be prepared for inclusion in S-58. (GU).			

4.9 Miscellaneous Actions

Action/Ref		Who	Paper/Status
18/17	Change TSMAD terms of reference (TOR) to S-10X standards in general and complete item 3a (iii). Resolved during the 18 th meeting. Submit the new TORs to HSSC1 for approval.	BG	Done
<i>BG reported that this action has been completed.</i>			
18/22	Set up an outreach sub working group (including RF, TM, and BG) to compile and distribute the questionnaire.	JP	Ongoing
<i>RF reported that this action was ongoing.</i>			
18/35	Establish ad-hoc sub group to develop outreach survey questions, including clear instructions and explanation of the intent of the survey.	JP	Ongoing
<i>JP reported that this action was ongoing.</i>			
18/50	High definition gridded bathymetric data : Develop an information paper for submission to HSSC1 motivating to include this as a TSMAD work program item.	Can	Done
<i>BG reported that this had been presented to HSSC1 and was accepted.</i>			
18/51	Robert Sandev (UN) to write to the IHB (Capt Robert Ward) noting that he attended the TSMAD 18 meeting, and presented his requirements for an S-100 based product specification. Request that TSMAD provide some assistance/support with the development of their product specification.	RS	Done
4.9.1	<i>UN: DOALOS Maritime Boundary Data Product Specification</i>		TSMAD19-4.9.1
<i>RS presented the UN DOLAS requirement to develop a specification for the stated to deposit their territorial claims geospatial data. He reported that the draft product specification had been presented to the HSSC1 meeting, and approval had been provided for TSMAD to assist and provide advice concerning the further development of this specification. The meeting proposed that the content model should be checked to ensure that it fits the UN DOALOS requirements and that the definitions in the catalogue should reflect their requirements. It was also noted that the structure of the document needs to be aligned with the template for S-10X product specifications.</i>			

Action/ Ref		Who	Paper/ Status
Action: UN-DOULAS Product specification for maritime boundaries. BG to assist with getting the document aligned with the S-100 product specification template. (BG/RS/TP)			

5 National Papers

Agenda No		Who	Paper
5.1	Australia : Encoding of Mangrove Coast and Mangrove Areas on ENC	JW	TSMAD19-5.1
<p><i>JW note that there has been a change in the S-4 specification for mangrove areas which is not consistent with S-57. In ECDIS base and standard display modes, the mangrove symbols are not visible. He noted that the proposed method of rectifying this will cause an S-58 verification area.</i></p> <p><i>He recommended that an ENC Encoding Bulletin be compiled to advising encoders of the revised guidance. Furthermore JW proposed that the S-58 Sub-Working Group should be tasked to evaluate the revised encoding guidance for possible amendments to the Recommended ENC validation Checks, in particular test 1607. The meeting decided that an FAQ would be more appropriate for this purpose.</i></p> <p>Action: FAQ to be developed to provide advice on how to encode mangrove areas when digitizing from a paper chart. (JW)</p>			

6 Any Other Business

INSPIRE Report – Helen Vos reported that HSSC1 set up a working group to make representation to the INSPIRE Annex 2 themes. She noted that IHO is to make an Official representation to INSPIRE work and also reported that a UN international body has also started working with a similar initiative.

7 Date and Place of next meeting

The next meeting (TSMAD 20) is to take place in conjunction with DIPWG meeting, in Rostock, Germany between 3 and 7 May 2010.

TSMAD 19 – List of Documents

Document No	Document Title
TSMAD19-1A	List of Meeting Documents
TSMAD19-1B	List of Participants
TSMAD19-2	Draft Agenda (updated 15 Oct)
TSMAD19-3	Minutes of the 18th TSMAD Meeting
TSMAD19-4.2.2	Report to TSMAD19 on CSPCWG Activities
TSMAD19-4.5.1	S-101 Project Plan (Power Point)
TSMAD19-4.5.2	Proposed S-101 draft0.1 (phase 1) October 2009 (MSWord)
TSMAD19-4.5.3	S-101 associated spreadsheet of additional issues for resolution (Update Oct 09) (Excel)
TSMAD19-4.6.1	Report (Letter) from the S-102 Bathymetric Product Specification Sub-Work Group
TSMAD19-4.7.1	Revised version of S-65. Comments/revisions from Australia (.zip format)
TSMAD19-4.8.1	Report from the ENC Encoding Bulletin Sub-Working Group
TSMAD19-4.8.2	Slaves with more than one master
TSMAD19-4.9.1	UN: DOALOS S-10X Maritime Boundary Data Product Specification (MSWord)
TSMAD19-5.1	Encoding of Mangrove Coast and Mangrove Areas on ENC (Australia)
Additional relevant documents (from the HSSC1 meeting) for consideration.	
HSSC1-06.1B	Standardized Development, Consultation and Approval Procedures for IHO Technical Standards
HSSC1-06.1H rev.1	Progress Report on the Development of S-100 and its Introduction as an IHO Standard
HSSC1-INF3	Information Overlays in ECDIS
HSSC1-06-10A	Report and Recommendations of EUWG
HSSC1-06.1G	Proposal to Include a Grid Referencing System in S-100

AGENDA
19th TSMAD meeting
Sydney, Australia, 26-30 October 2009

1. Opening and Administrative Arrangements**2. Approval of Agenda****3. Minutes of the 18th TSMAD & 1st DIPWG Meeting, 4th to 8th May 2009 (Ottawa, Canada)**

Approval of 18th TSMAD minutes

4. Matters arising**4.1 From HSSC 1**

Action/ Agenda No		Who	Paper
18/10	Clarify/Validate who approves different levels of changes to S-100.	BG/JLD	HSSC1-06.1B
18/09	S-100 to be submitted to HSSC1 for final approval after which it is be sent out to MS via CL for final approval.	BG/ IHB	HSSC1-06.1H
4.1.1	<i>See agenda item 5</i> <i>New Work Item Proposal for the Establishment of a Standard for the Integration of Multiple Layers of S-100 compliant Auxiliary Navigational Information (S.10x)</i>	BG	HSSC1-06.1F
4.1.2	<i>See agenda item 5</i> <i>Information overlays in ECDIS</i>	BG	HSSC1-INF3

4.2 Other working group actions

Action/ Agenda No		Who	Paper
18/03	Cooperate with TWLWG & other relevant WGs to develop tidal prediction data exchange format.	TM/AP	
CHRIS 20/6	To send digital copy of the Canadian tidal / gridded proposal to TP. To create a new tidal section on the WIKI and include these papers. To present the existing tidal specification to HSSC and request that this be added to the TSMAD / TWLWG work program.	Can TM BG	
18/13	Chairman to enquire whether the TWLWG have a requirement to set up a register for tidal purposes or whether they want to include their requirement within the hydro register. They should be made aware of the full ramifications of setting up and maintaining a register.	BG	
18/45	Request the supply Data Supply and Certification WG to study and provide recommendations on an appropriate mechanism for including updates as part of an exchange set.	S-101 WG JP/TM/R F	
18/52	Concerning the discussion paper about the inclusion of nautical publication in ECDIS, the chairmen of TSMAD and SNPWG are to discuss all proposed S-101 product specifications, to ensure that work activities and products are harmonized.	BG	
4.2.1	<i>EUWG – T&P Notices to mariners : Use of « New Object » as Information objects alternative to caution area objects should be developed.</i>		HSSC1-06-10A
4.2.2	<i>CSPCWG : Report to TSMAD19 on CSPCWG Activities</i>	JW	TSMAD19-4.2.2
4.2.3	<i>DIPWG:</i>		No document
4.2.4	<i>SNPWG:</i>		No document

4.3 GII – Registry Actions

Action/ AgendaNo		Who	Paper
CHRIS 20/29 + 18/31	GII content and management. Refine and Clarify the governance for each component (Standards, Specifications & Registers) of S-100 & S-101 in white paper for HSSC. See HSSC1-06.1G	BG	HSSC1-06.1G
18/01	CHRIS action 16/6.1. Include missing definitions in the FCD.	TM	
18/14	Hydro register content : Collate all papers from past TSMAD meetings and send to Chairman.	AP	
18/21	Send paper TSMAD18-11.2C (from Jeppesen) to the chart specifications working group for review and comment. Based on their response, it should be decided which classes / attributes to include in the register.	BG	
18/26	USA (NOAA) will work with Jeppesen to enter new features and attributes into the Hydro register. Coordinate with CSPCWG regarding additional topmark attribution.	JP	
18/25	Review David Enabnit's offer to physically host the registry. It may be more appropriate for NOAA to administer the registry, which is currently hosted at the IHB	BG	
18/41	Create Webpage for information about registries.	AP	
4.3.1	<i>How to update S-58 checks? (ex: test for linear depth area). Encoding bulletin or other means...</i>	GU	<i>No paper</i>

4.4 S-100 Actions

Action/ AgendaNo		Who	Paper
18/07	Send final technical edit on S-100 out through TSMAD letter for approval by TSMAD. Completed, amalgamated document to be circulated via TSMAD letter as soon as the review is completed. S-100 to be submitted to HSSC1 for final approval after which it should be sent out to MS via CL for final approval.	BG	
18/08	Evaluate the status of ISO19117 at the Molde meeting and decide whether to include a profile of 19117 – if yes – include and distribute via another TSMAD letter.		
18/15	Send out TSMAD letter asking if items on the deferred amendments action list are still valid.	BG	
18/24	Create S-100 "Help" webpage prototype.	KF/BG	
18/36	Establish protocol for the coordination among CSPCWG, TSMAD and DIPWG when feature, attributes, symbols and portrayal rules are created or modified.	BG	
18/53	Grid index reference system – Paper and presentation to be developed for HSSC1 requesting this to be included as a WI for TSMAD.	AP/TM	HSSC1-06.1C
4.4.1	<i>S-100 General Wash-up</i>	BG	<i>No paper</i>

4.5 S-101 Actions

Action/ Agenda No		Who	Paper
17/9	To include text in the S-101 introduction page informing members to press "Post" (not "Skip") after they post a comment so that notification of the comment is sent to all members.	JP	
17/9.1	To set up a WIKI page. TSMAD members to propose candidate questions on this WIKI page. JP to collate these into a questionnaire and send to training institutions.	JP	
17/9.2	To identify what rules in S-4 (previously known as M-4) should be included in S-101. (These may possibly be included in a separate	JW	

	document).		
18/04	Open dynamic tides discussions on WIKI	JP	
18/38	Need to seek the guidance of the Tides and Water level WG concerning the inclusion of tides in S-101.	BG	
18/39	TSMAD to formally request DIPWG to review S-52 to see what parts should be moved into the S-101 product specification.	BG	
18/40	Define and document the mechanism required for having portrayal developed (by DIPWG), for newly accepted features. (This process needs to be documented somewhere S-101 WG).	S-101 WG	
18/42	Need to rewrite rules to have multiple M_NSYS with different ORIENTS and need to figure out where it goes in S-101, the Feature Catalogue and encoding guide Action to update the S-101 Encoding Guide.	JW	
18/44	Develop a strategy for tracking entries included into the FCD. (S-101 development group. This should be posted on the IHO web site). (TM to make up the web page and AP to include on the IHO server).	S-101 WG TM/AP	
18/46	Enquire how to include multiple scopes in the S-101 product specification at the ISO/TC211 meeting.	BG/DOB	
18/48	Invite TSMAD members to participate in the Display Scales sub working group.	HE	
18/49	Support file formats. Include a question in the outreach questionnaire asking OEMS and users, which support file formats they would like to have included.	RC	
4.5.1	<i>S-101 Project plan</i>	JP	<i>TSMAD19-4.5.1</i>
4.5.2	<i>Proposed S-101 draft0.1 (phase 1)</i> <i>See associated spreadsheet of additional issues for resolution (First Tab)</i>	JP	<i>TSMAD19-4.5.2</i> <i>TSMAD19-4.5.3</i>
4.5.3	<i>S-101 Data Classification and Encoding Guide Break Out Group</i>	JP	<i>No paper</i>
4.5.4	<i>S-101 8211 Review Breakout Group</i>	JP	<i>No paper</i>

4.6 S-102 Actions

Action/ Agenda No		Who	Paper
18/05	All members are asked to circulate the draft S-102 Bathymetric Product Specification document within their offices and ask for feedback, and for hydrographic experts to contribute to this work. All feedback to be sent to Wade Landers.	All	
18/18	Hold a separate 2 or 3 day S-102 meeting.	BG	
4.6.1	<i>Report (letter) from the S-102 WG (Status of S-102 and S-10x Proposals)</i>	WL	<i>TSMAD19-4.6.1</i>

4.7 S-65 Actions

Action/ Agenda No		Who	Paper
18/02	CHRIS Action 20/18 - BSHC study on ENC consistency and CHS report are to be reviewed and included in S-65 Annex 1.	RF	
CHRIS 20/18	BSHC and CHS reports : to be included in the Annex on ENC consistency in S-65.	RF	
4.7.1	<i>S-65 Proposed comments / revisions</i>	AU	<i>TSMAD19-4.7.1</i>

4.8 Encoding bulletins Actions

Action No		Who	Paper
16/8.3	To reword relevant encoding bulletins and insert links to examples of bad practices. IHB to put on the web site	JW	
CHRIS 20/12	Encoding Bulletin on S-57 Temporal Attribution (done) (EB 24).		

Action No		Who	Paper
18/12	Develop a FAQ explaining the ramifications of encoding Areas of Minimal Depiction" for use in ECDIS.	JW	
4.8.1	<i>Report from the ENC Encoding Bulletin Sub-Working Group</i>	JW	TSMAD19-4.8.1
4.8.2	<i>Slaves with more than one master</i>	Jeppesen	TSMAD19-4.8.2

4.9 Miscellaneous Actions

Action/ Agenda No		Who	Paper
18/17	Change TSMAD terms of reference (TOR) to S-10X standards in general and complete item 3a (iii). Resolved during the 18 th meeting. Submit the new TORs to HSSC1 for approval.	BG	
18/22	Set up an outreach sub working group (including RF, TM, and BG) to compile and distribute the questionnaire.	JP	
18/35	Establish ad-hoc sub group to develop outreach survey questions, including clear instructions and explanation of the intent of the survey.	JP	
18/50	High definition gridded bathymetric data : Develop an information paper for submission to HSSC1 motivating this to be included this as a TSMAD work program item.	Can	
18/51	Robert Sandev (UN) to write to the IHB (Capt Robert Ward) noting that he attended the TSMAD 18 meeting, and presented his requirements for an S-100 based product specification. Request that TSMAD provide some assistance/support with the development of their product specification.	RS	
4.9.1	<i>UN: DOALOS Maritime Boundary Data Product Specification</i>	RS	TSMAD19-4.9.1

5. National Papers

Agenda No		Who	Paper
5.1	<i>Australia : Encoding of Mangrove Coast and Mangrove Areas on ENC</i>	JW	TSMAD19-5.1

6. Any Other Business

7. Date and place of next meeting

TSMAD19 List of Participants

Barrie Greenslade (BG)	UKHO	barrie.greenslade@ukho.gov.uk	(UK)
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Ellen Voss (EV)	NLHO	em.vos@mindef.nl	(Netherlands)
Robert Sandev (RS)	UN (DOALOS)	sandev@un.org	(United Nations)

Attending for one or more days (but not whole week):

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LIST OF ACTION ITEMS AND DEFERRED OR ON-GOING TASKS

Agenda	Ref	Action	Member
4.1	18/10	TSMAD to amend S100 maintenance section based on the proposal and to prepare new procedures for the registry (outlining who/how changes to S-100 are approved). There is also need to look at the proposed Technical Resolution.	BG/JP
4.1	18/9	Notification of the publication of S-100 is to be sent out to MS via CL. Document to be included on the IHO web site.	BG/TP
4.1.1		Develop a paper outlining how multiple Layers of S-100 compliant Auxiliary Navigational Information can be integrated with S-101 ENC data. The paper is for circulation to TSMAD members and OEM's for report back by the next TSMAD (2010 - Rostock) meeting.	BG
4.3	8/14	TSMAD members are to review old proposals that were not accepted for inclusion, or were not considered at previous meetings and resubmitted them if they are still deemed to be relevant.	All
4.3	18/26	The list of topmarks provided by Jepesson needs to be reviewed for duplicate entries and included in the registry.	JP/TM
4.3	18/41	Set up WIKI / CMS for providing information about the GII – registry and S-100.	TP
4.3.1		A new edition of S-58 needs to be produce to fix this problem related to errors being generated by the removal of linear depth areas.	GU
4.4	18/53	Present the concept of using a grid reference system in S-101 to the next Stakeholders meeting.	BG/TM
4.5	18/04	Open a tidal discussion item on the S-100 WIKI and invite TWLWG members to participate	TM
4.5	18/39	Concerning S-52 content that should be in S-100. Send email requesting the DIPWG chair to review S-52 documents in order to determine what parts of the publication should be moved into the S-101 product specification.	BG
4.5	18/40	TSMAD to develop a paper for the Rostock meeting highlighting the need for closer cooperation between WGs and outlining some of the issues related to the inclusion and subsequent portrayal of new features in S-101. Following discussion at this meeting, a report is to be compiled for consideration by the HSSC2 meeting.	BG/JLD
4.5	18/48	Include the recommendations produced by the Display Scales sub working group in the draft S-101 product specification document.	RF/JP
4.5	18/49	Include a discussion item on “ <i>support file formats</i> ” at the next stakeholders forum meeting - for further discussion and feedback. (What do stakeholders want in terms of services, data formats and products).	BG
4.5.1		Present the proposed “ <i>phased implementation plan</i> ” to the next Stakeholders forum for feedback. The results of this discussion are to be reported to the next TSMAD meeting.	BG

4.5.2		Propose the following questions to the stakeholder forum meeting; <ul style="list-style-type: none"> - is there still a need for a cell size limit – e.g. 5MB ? - should the feature and portrayal catalogues be available for download from the IHO site or distributed with an update CD ? <p>Concerning the Data Quality section of the S-101 product specification. JP to outline the issues concerning data quality and send these to BG. BG to discuss these with the DQWG chairman, with respect to the future development of this WG.</p>	BG/JP
4.5.3		Present the following topic at the next Stakeholder’s workshop; <i>“how best to integrate a mechanism that will enable mariners to determine what changes have been made to an ENC”</i> Conclusions of this discussion to be reported to TSMAD20 meeting.	BG
4.5.4		IHB to investigate the possibility of providing funding for the S-57 to S-101 (Phase 1) ENC conversion software application.	TP
4.7.1		IHB to publish and distribute new version of S-65 when the proposed changes have been circulated to TSMAD members, for approval, and agreed. All comments are to be sent to IHB.	IHB
4.8.2		Slaves with more than one master. An Encoding Bulletin is to be developed to advise that slave objects may not have more than one master object. A new test is to be prepared for S-58 - based on the EB	JW GU
4.9.1		Provide assistance with getting the UN-DOULAS Product Specification for maritime boundaries document aligned with the S-100 product specification template.	BG/RS/T P
5.1		FAQ is to be developed to provide advice on how to encode mangrove areas when digitizing from a paper chart.	JW
Agenda	Ref	Carried Over / Ongoing Action Items.	Member
4.2	18/13	Chairman to enquire whether the TWLWG have a requirement to set up a register for tidal purposes or whether they want to include their requirement within the hydro register. They should be made aware of the full ramifications of setting up and maintaining a register.	BG
4.2	18/45	Request the supply Data Supply and Certification WG to study and provide recommendations on an appropriate mechanism for including updates as part of an exchange set.	S-101 WG
4.3	18/01	CHRIS action 16/6.1. Missing enumerations lists need to go into the registry.	TM
4.3	18/21	Send paper TSMAD18-11.2C (from Jeppesen) to the chart specifications working group for review and comment. Based on their response, it should be decided which classes / attributes to include in the register.	BG
4.4	18/24	Create S-100 “Help” webpage prototype.	KF

4.4	18/53	Present the concept of using a grid reference system at the next Stakeholders meeting.	BG/TM
4.5	17/9.1	To set up a WIKI page. TSMAD members to propose candidate questions on this WIKI page. JP to collate these into a questionnaire and send to training institutions.	JP
4.5	17/9.2	To identify what rules in S-4 (previously known as M-4) should be included in S-101. (These may possibly be included in a separate document).	JW
4.5	18/38	TSMAD need to seek the guidance of the Tides and Water level WG concerning the inclusion of tides in S-101.	BG
4.5	18/42	The incorrect population of M_NSYS with different ORIENTS needs to be reviewed.	JW
4.5	18/44	Develop a strategy for tracking entries included into the FCD. (S-101 development group. This should be posted on the IHO web site). (TM to make up the web page and AP to include on the IHO server).	TM
4.6	18/05	All members are asked to circulate the draft S-102 Bathymetric Product Specification document within their offices and ask for feedback, and for hydrographic experts to contribute to this work. All feedback to be sent to Wade Landers.	All
4.8	16/8.3	EB working group to reword relevant encoding bulletins and insert links to examples of bad practices. IHB to put on the web site	JW
4.9	18/22	Set up an outreach sub working group (including RF, TM, and BG) to compile and distribute the questionnaire.	RF/TM/ BG
4.9	18/35	Establish ad-hoc sub group to develop outreach survey questions, including clear instructions and explanation of the intent of the survey.	JP

BG - Barrie Greenslade,
 JP – Julia Powell,
 TP – Thony Pharaoh,
 KF - Kelly Fougrousse,
 JLD - Jean-Luc Deniel

JW - Jeff Wootton,
 RF – Richard Fowle,
 RS – Robert Sandev,
 HE – Hans Engberg.

RC - Richard Coombes,
 TM – Tom Mellor,
 HB – Holger Bothien
 GU – Guy Uguen