IHO CSMWG 17
NHS Stavanger, Norway 11-13 June
2007

MINUTES of MEETING
(Including the combined TSMAD/CSMWG meeting issues)
(Updated 20 July 07)

1. Open and welcome

The meeting was opened by Mathias Jonas (MJ) who was appointed Chairman of the joint meeting. There were about 22 members present representing 6 MS, 7 manufacturers and the IHB. Members of the WGs introduced themselves. The latest papers were circulated for downloading by members.

Docs: CSMWG17-01ARev3 - Document list

CSMWG17-01BRev2 – Participants (to be completed at the meeting)

CSMWG17-01CRev1 Membership and contacts of CSMWG (to be circulated at meeting for updates)

Apologies: Lee Alexander.

Papers CSMWG17-01B and 01C were circulated for updating by those in attendance and for any of the TSMAD members who want to be on the contacts list for CSMWG issues. **Action:** Sec to update both for posting on the IHO website.

2. Approval of the Agenda

doc: CSMWG17-02ARev 3 -Draft Agenda

Note this draft agenda covers both the combined CSMWG/TSMAD meeting held on 11 June, as the CSMWG17 meeting 12-13 June. The combined meeting Agenda is listed first in this doc.

The agendas of the combined meeting and CSMWG17 were agreed . MJ outlined the order that the issues would be discussed, giving priority to important issues (grey highlight).

3. The following numbering refers to the agenda items for the combined CSMWG/TSMAD

3.1 IALA Emergency Wreck marking Buoys (*CHRIS action 18/6*) [coded as BOYSPP].	CSMWG17-03.1A TSMAD14-8.G

MJ provided background on these buoys. A ship sunk near a main channel, 4 isolated danger buoyage were added but 2-3 more ships hit the wreck. IALA invented this new buoy for a trial. FR and UK intend to make use of these buoys (Germany is against this). TSMAD suggests it may be encoded as **BOYSPP**. Buoys should only be in place 1-3 days (CSMWG17-3.1A) so do we need a new symbol. Time limit is questionable and an AIS virtual buoy may be more likely. **BOYSPP** symbol is all yellow, but there with is no symbol with blue and yellow. Barrie Greenslade, Chairman of TSMAD (BG): OBJNAM will be used for 'Emergency wreck marking buoy'. As trial, suggests we do not make any large effort to portray this. ENCs can be encoded using existing S-57 E3.1 attributes. As software takes so long to implement, suggests we do not make any special symbol. Olaf Wentzel (OW): we need to reduce the number the symbols, so stay with existing **BOYSPP**.

The CSMWG agreed that we use existing symbology.

Inga Tellefsen (IT) mentioned that these buoys had been discussed at the CSPCWG3 meetings and as they are proposed to be positioned on the wreck, if the wreck is still floating, this would be difficult to do.

Action: TSMAD will issue an ENC Encoding Bulletin on this shortly. No action for CSMWG. Topic closed.

| 3.2 | CHRIS WGs support e-navigation (CHRIS18 4.4) | CSMWG17-03.2A |

MJ: Working paper, buzz word to generate funds. Anything to raise the importance of navigation is useful for ECDIS. A NAV 53 paper relates. At end of paper is a definition (in red) for e-nav.

Julia Powell (JP): this is a political paper on the issues but there is no mention of IHO S-52 standard, only mention of IEC.

MJ: If opportunity arises, let IMO reps know that IHO also plays a part. IALA involved with traffic management issues.

For interest only. IHO are veterans of e-nav.

Action: Topic closed

| 3.3 | TSMAD and CSMWG collate information on E3.1.1 matters requiring consideration by IEC for CHRIS19 in Nov 2007 (Action 18/17). |

Pol Le Bihan (PB): S-64 TDS still needs to be updated (separate agenda item).
MJ: for type approval issues, new TDS, new object classes, new portrayal concepts.

Action: combined paper to be prepared by the Chairs of TSMAD and CSMWG for CHRIS19.

| 3.4 | Continuation of coding of linear depth areas (CHRIS17 Item 5.2), (CHRIS18 Item 6.2, page 14) | CSMWG**16**-6.3A |

MJ referred to the paper from CSMWG16 and explained it can be laborious work for encoders. HOs keen not to encode them. Safety contour can be portrayed without encoding. Shortfall has now been corrected and is now part of MD05 (to be discussed later). Date to stop encoding these linear depth areas (LDAs)? Mandatory function of ECDIS proposed as 1 Jan 2008 when new PL comes into force. BG: legacy ECDIS, how long before they will update their PL? Many ships will not update their ECDIS. JP: IMO also considering compulsory updates to software including ECDIS (NAV 53 in 2007). MJ NAV 52 released revised ECDIS PS to come into force **1 Jan 2009** so we could coincide stopping ENC production of linear depth areas with this date. Alarming of safety contour will continue even if the older systems do not highlight the bold line of the safety contour. Chris Roberts (CR) advised that LDAs will not have to be removed from existing ENCs.

Actions: CSMWG will revise CPB No4 on the bulletin board (CR) and MJ will advise stakeholders of the proposed dates. TSMAD may prepare an ENC EB? (Jeff Wootton (JW))

| 3.5 | Encoding 'unknown' objects – proposed ENC EB from CSMWG16 actions 4 and 5 | CSMWG17-03.5A |

CR: TSMAD didn't want to support this approach with an encoding bulletin. Could be issued as a Chart Presentation Bulletin (CPB).
MJ: Very little to do with encoding, suggested possible IHO CL to MS, especially regarding the NtM suggestion.

Action: MJ to include in CSMWG report to CHRIS19

| 3.6 | ENC Encoding Bulletin for PELs (CSMWG16 Action 33) **TSMAD14**-8D |

MJ: all singing all dancing symbology for ECDIS could be the final result in the longer term, but not realistic at present (see the www ref in the doc).
Richard Coombes (RC): wrote an information package on PELs, and TSMAD are preparing an ENC Encoding Bulletin (JW). PELs have a similar purpose to a directional light but using new technology.
CR: CSMWG members please let JW or CR know if you would like to contribute to the ENC EB.
Richard Fowle (RF): suggested referring such EBs to both WGs.
MJ: CSMWG will consider such new proposed ENC EBs such as oscillating lights.

Action: AU as TSMAD SubWg coordinator, to send draft ENC Encoding Bulletin to CSMWG members for information before posting on IHO website.

| 3.7 | Object classes not symbolised in current S-52 PresLib   CSMWG17-03.7A (CSMWG16 Action 47). |
| | Point BRIDGE not symbolised |

Konstantin Inanov (KI): all S-57 objects have an entry in the LUT or default. Sometimes there are no rules in the LUTs, which results in no display.
MJ: what is the practical use for point **BRIDGE** – encoders cannot see a use.
CR: refer doc to TSMAD for further requests
BG: commented that aggregation objects will be removed from S-100 to be replaced with new named association features, modelled slightly differently. Eg. **TSSAGR** or something similar. Wont be in S-101 unless an intelligent use can be adopted for ECDIS. What benefit to the mariner? (3.13 issue)
MJ: may relate to synchronised lights as aggregations.
JP: this paper mentions EEZ not being symbolised.

Action: possible enhancement to S-52 wording regarding EEZ. No CSMWG action regarding the document. Topic closed.

| 3.8 | ENC Encoding Bulletins current status |

JP: as previous coordinator of SubWg for ENC EBs. Withdraw (cancel?) existing ENC EB re **LNDARE** line features. Involve CSMWG is new EB. AIS is symbolised on paper chart
MJ: AIS is to be displayed on ECDIS but not encoded as such in ENCs. ECDIS receives the signal and displays it accordingly. New symbol under IMO requirements. No ENC EB is required regarding how to encode AIS. Reminded members to check IHO website under TSMAD for ENC EBs.
BG: TSMAD considering IHO CLs for all new ENC EBs
CR: RENCs considering publishing ENC EBs in their newsletters
MJ: suggested circulating to RHCs as well

Action: TSMAD to consider wider circulation of ENC EBs including RHCs. Topic closed.

| 3.9 | **LNDARE** line features –   CSMWG17-03.9A |

Raised in 3.8 above regarding existing ENC EB.
MJ: opened discussion as follow on from last CSMWG meeting. Only point and area features listed for symbolisation. AU raised question why not line objects. Text for lines is an issue and unusual. Could invent a LUT entry.
BG: line **LNDARE** is usually small scale
RF: IC-ENC has found numerous line **LNDARE**, not so uncommon.

OW: wouldn't hurt to add to LUT

MJ: this aspect of the problem was already sorted out and solved during the draft process of MD 5. Agreement to add LUT to symbolize OBJNAM

PB: FR encoded point **LNDRGN** to see name of **BUAARE** – double encoding.

JP: ENC EB for **BUAARE** has been issued.

Action: add new LUT for **LNDARE** line to be added to MD05.

3.10	S-101 new ENC Product Specification	

BG Gave a presentation on what is being discussed by TSMAD as ideas and concepts. Would appreciate any feedback.

Multiple cells: currently inefficient structure of cells and issues with updates. Possibility of one layer with all nav marks as an example. Some objects only occur in one layer or could still be in several cells. Small scale ENCs possibly not scaleable.

Information objects: overuse of **CTNARE** to be avoided. Information objects being considered in a far more efficient manner, may not have geometry. Attribute of an attribute concept. Data types to be cleaned up to reduce complex formatting.

Encapsulation: ISO 8211 or GML? 8211 still will do everything we want, but will require a few changes. SENC delivery. CHRIS18 insisted that forward compatibility (S-57 → S-101) be maintained.

New geometry (Geodesic interpretation). Concepts include ability to include projected lines, complex or composite curves made up of different components, particularly for large areas. Will also help to overcome issues with areas split at cell boundaries and linking across cells.

Themes: currently only groups 1 and 2, but features cannot be shared between themes. This will be made possible.

Cartographic representation, especially text. Concept of new attributes such as anchor point, angle, etc. particularly for buoys along a channel or dredged area to avoid clutter in channels.

Missing attribute values: questionmark symbols for missing mandatory attribute for unknown objects. There is no point listing something without knowing what it is. Portrayal and or term to be further investigated. More intelligent attributes eg secret, unknown or not supplied intentionally. OW: asked who will be responsible for portrayal in S-101. BG replied that this needs to be debated and discussed further.

Cell sizes: to be reviewed (5MB no longer realistic). Not encoding linear depth areas will help, tests to be conducted by TSMAD.

Text and picture files: redundant files are an issue. No method to overwrite old files is explained in the specifications. Update mechanism being considered. Probably dump TIFF for S-100 and considering JPEG 2000. Use of colour pictures – SNPWG sailing directions.

File naming convention: 8 letter restriction, make more meaningful. More information in the catalogue file.

Navigational Purposes: disconnect nav pur to data use. Only use 'display scale', not compilation scale. Nav pur may be retained for cataloguing purposes only.

Feature display attribution: taking S-57 E3.1.1 concepts further

Upgradeable ECDIS: Feature Catalogue and Presentation Library sent out with data set.

S-57 compatibility: same geometry to retain forward compatibility

OEM input: TSMAD desperately needs input possibly via workshops with all stakeholders.

Updating mechanism: 'modify' being considered.

Need to **mandate far more to force consistency**. Better explanations to make it clear what is expected, how it is anticipated attributes will be used.

Action: No action for CSMWG at this time. Could have another combined meetings as S-101 is further developed (see date and venue for next meeting – item 12.

3.11 Revised SCAMIN paper by IC-ENC	CSMWG17-03.11A

MJ: SCAMIN workshop was held in 1997 and problems are basically still the same. In 2003 the first consistency paper on SCAMIN was issued and this has now been updated and improved in the current paper. Europe, Singapore and AU are all in general agreement of this approach to SCAMIN but for Canada and USA there is some disagreement with the specified method. Demonstrates the weakness of the IHO in not being able to mandate such procedures. FR suggested that CSMWG should consider SCAMIN being automatically applied by the PresLib.

RF gave a brief presentation. JTEWG (May 2007) agreed to the paper with slight changes as a proposal for S-101. There were also several software manufacturers at the TEWG meeting who will enhance their software to help make encoding SCAMIN easier. This SCAMIN procedure was subsequently endorsed by the TSMAD and a CHRIS CL will be issued shortly, but the suggested method is still not mandatory and agreement was not reached to adopt it for S-101. Tony Pharaoh (TP) read out the TSMAD motion to CHRIS and advised that the gross differences in the use of SCAMIN, especially between adjoining ENCs was the real issue. He expects the proposed method to fix 80% of the issues, if adopted.

Issues from the paper for CSMWG:

MJ: p5 of Apr version of the paper refers to the revised ECDIS PS revision of the components of the display base. The only change is to buoys and beacons which will be in standard display. OW: should we apply SCAMIN to display base. Could clarify and identify those objects which should not have SCAMIN applied – an encoding issue. PB: value of the safety contour also influences **WRECKS** for example. SCAMIN paper has a list of S-57 object classes (at the back) that may be used as a guide. Michel Huet (MH): 2004 IHO CL suggested a Technical resolution (TR), but TRs doesn't give more strength to the recommendations, only provides more visibility and a holding place until adopted into a standard. All recommendations should be included in an IHO standard or TR. CHRIS agreed that SCAMIN had not been applied widely enough and the discussion was how to make such issues more highly visible. MH needs to discuss with the IHO directing committee as how to best publicise these new SCAMIN recommendations. JP: only the SCAMIN part of the 2004 CL has been updated, but there are other issues such as compilation scales, etc. 2004 CL probably needs to be reviewed. JW: not just SCAMIN but the compilation scale issues (to be discussed later).

BG: in certain cases, HOs should be able to apply SCAMIN to display base features. Either controlled by TSMAD or list of object classes in S-52. OW: TSMAD should have control. Needs to be clarified in S-52 as different manufacturers handle this differently. KI: display base cannot apply SCAMIN (Transas interpretation). CSPs complicate this issue. OW: leave control of SCAMIN with encoders, suggested minor clarification to S-52.

Agreed to add a clarification to the proposed CHRIS CL stating that any S-57 object that has SCAMIN, should be applied to the display.

Action: Combined TSMAD/CSMWG response to CHRIS19. (See TSMAD14 Minutes for further details on the endorsement of this paper by TSMAD).

3.12	Portrayal issues raised by TSMAD members:	
	Radar range display scale standardisation	
	Portrayal of narrow sectors on directional lights	CSMWG17-03.12A
	Strip light portrayal issues with PL 3.3 – SAHO	CSMWG17-03.12B
	Strip light portrayal issues with PL 3.3 – UKHO response	CSMWG17-03.12C

Radar range display scale standardisation (also referred to in 3.13 and 3.14 below)

MJ: part of proposed loading strategy workshop. (see 3.14 below)

Portrayal of **narrow sectors** on directional lights (CSMWG17-03.12A)

AU: sectors smaller than 1 degree, presentation is no longer valid. OW: even if the CSP is changed, resolution of ECDIS displays would restrict clear depiction. Tests by SevenCs didn't improve the display. Default flare is the issue for portrayal. Is this a directional light? Difficult to depict this narrow light from sea. Best approach would be to widen the sector in the field.

OW: explained the situation on the whiteboard. The problem is that for sectors less than 1 degree, the CSP for LIGHTS05 checks the difference between SECTR1 and SECTR2 and if <1 degree or = 360 degrees, portrays a light flare. The issue affects both all round lights and narrow sectors. Check of M-4 and S-57 provided no specific advice on encoding narrow or all round lights (CR to raise this at respective meetings). Proposal is to change the CSP so that all round 360 degree light and narrow sectors will be portrayed as sectors, not as light flares. There appears to be no explanation as to why the check was added to the original CSP, except that it is almost impossible to discern narrow sectors at sea. There is an S-58 check for identical SECTR1 and SECTR2.

MJ: tentatively agree to adopt this solution, but we should have a test before promulgation of the revised CSP as a deferred amendment in MD05.

RF: will the light flare appear when SECTR1 or SECTR2 is not defined. OW: Yes.

KI: has seen circles on ENCs. SevenCs has specific software to portray them for all round lights.

Action: Change CSP LIGHTS05 to portray all sectors. Apply test check (BSH), and add to MD05.

Strip light portrayal issues with PL 3.3 – SAHO (CSMWG17-03.12C)

Issue, when encoded as CATLIT (strip light) the characteristics do not portray. When not encoded as strip light, characteristics display.

John Klippen (JK): After further investigation it was found that SAN has only encoded one light, whereas if two lights had been encoded (one for the nav light and a second for the strip light), the portrayal would have been correct. It should be noted that the light characteristics for strip lights, flood lights and spot lights are NOT portrayed. This could be a new CPB.

MJ: this example showed the importance of having both encoding experts and C&S experts at these meetings.

Actions: JK to draft explanatory text for technical details of coding.
MJ to prepare a letter to South Africa regarding strip lights, pointing out that the issue is an encoding matter and that PresLib does not portray the characteristics of strip lights, flood lights and spot lights.

3.13	Special S-100 attributes to simplify symbology for S-101 ENCs	CSMWG17-03.13A

Matter mentioned in 3.7 and 3.10 above. Could also apply to features such as synchronised lights. May be discussed in future combined meetings as S-101 is further developed.

Action: No current action

3.14	Cell loading policy	

(Including 3.16 update mechanism). RF: there is a trend for ECDIS to display small scale data at a larger scale, rather than large scale data at a smaller scale. We need a common loading strategy to overcome this. OW agreed there are issues. Also consider radar range display tables. MJ: more harmonised portrayal of data is required. SevenCs previously suggested a loading strategy workshop which was rejected. Could make this a fixed requirement in S-52 but may get opposition from industry. OW: suggests a 'best use scale' as a possible attribute for S-101. BG: must change concept of 'compilation scale' away from 'source scale'. This is not understood by many encoders. Want a 'display scale' concept. MJ: will need more technical experts from OEMs involved in decisions.

BG: IC-ENC experimentation with SCAMIN. Viewing at compilation scale. RF: OEMs use different step values when zooming in or out. JW gave an example of issues faced in AU with compilation scales.

Night viewing picture files: problem on human perceptions. Why display at night? Suppress picture files at night. Issue for S-101, not for S-57 unless a simple solution is found.

Action: MJ will report this matter to CHRIS19 for next stakeholder's meetings with proposed action of a possible workshop on cell loading issues in particular. Specific input papers would have to be prepared for such paper addressing the problems from both data production and OEM side.

3.15	S-100 IHO Portrayal and symbol register – (status of S-100)	CSMWG17-08A refers

PB gave a presentation on the proposed portrayal register for S-100. The first version will not involve navigational aspects of the PresLib (anti-grounding implementations). Used the new version of ISO 19117 but didn't follow it exactly, trying to retain the current language of the existing PresLib. Need to decide which database implementation, access, format, management. Need at least one person to maintain the portrayal register.

As an example, **WRECKS** CSPs have been converted to XML file format. Introduced attribute rules as generic rules.

Could have a catalogue for paper chart and for SENC. It is proposed to keep them separate in the model.

No mechanism to handle colour tables. No solution yet? Only encoded day mode of operation. Had a problem with associating viewing groups. Examples of rules for paper chart symbolization have been made.

Links between rules has to be made.

Similarly, a separate model to handle symbol rules. Search tools developed.

Simple line styles listed as a register. More complex symbols are divided into components. Need to consider management of these in an efficient manner.

Pattern symbols proposed to be described once, rather than as separate components as is done in the current PresLib. Relationships built between simple symbols and complex line styles. When the same symbol has a separate anchor point, it is proposed to have one symbol with links somehow to the different anchor points.

Still considerable work to complete this task. Need to raise some of the issues with the continuing development of 19117 which is under review.

Comments: BG was very pleased with this approach, fits in perfectly with S-100. Potential solution to the whole portrayal issue. XML highly suited to this approach. PB putting 19117 into practice has found some issues. Benefit of closely following standard is better for interoperability. Next meeting of 19117 will be in China with next ISO Plenary. DGIWG considering a super register of IHO and their own symbols. Need to stay in touch with DGIWG work. Application of management of register (ISO 19135). Version controls is important as is proposal mechanism for new symbols or symbol rules.

KI: investigate including all CSPs into the model? All except those affected by anti-grounding complexity.

PL: Maintenance of the registers will be a real issue.

JP: need an XML interface so that anyone can maintain this once in a register.

MJ: Special rules for anti-grounding may not need to be in the register as very specialised use.

BG: format for symbology?

OW: who will be liable for portrayal? IHO? OEMs have no control any more so cannot be liable. Who will do the maintenance? IHB to note requirements for portrayal register manager.

BG: how is type approval involved if a version of the register fails.

BG: ISO 19117 still being edited so we have time to react to IHO requirements. Need expert involvement in 19117 editing group.

MJ: can we endorse the work by PB and continue this work. Members agreed.

Action: MJ to confirm the completion of the work according to the contract in place and to extend contract with PB for further steps in development.

3.16	Update mechanism required for text and picture files within ECDIS.	

See discussion above in 3.14 and TSMAD14 minutes for more details.

3.17	Symbolization of EEZ border and continental shelf	

MJ: CSPCWG considering continental shelf boundary symbol.

CR: AU requires EEZ symbology on ECDIS similar to paper charts

JP: should be displayed as issues for US charts for maritime enforcement

OW: Lookup table entry already has a simple line style (grey line).

MJ: text of S-52 says otherwise. Members agreed that the grey line is an adequate symbol.

Action: Amendment to S-52 wording regarding EEZ (is symbolised) for MD05

3.18	CSMWG17-03.18A Portrayal/Display of MIOs	CSMWG17-03.18A

MJ: options for CSMWG involvement in MIOs.

JP: USA seeking standardisation of portrayal for coral reefs, marine protected areas and other features.

OW: thinks that screen dumps like Chart1 is all that is being asked for as guidance for manufacturers.

MJ: MIOs want to display something and asking for guidance which way they should go. We need testing and practise. Currently MIO have the freedom to develop something, as long as they can register it. MIO should forward proposals to CSMWG for consideration and comment.

BG: Robert Ward's recent email referred to this matter, there is concern that IMO may ask IALA to manage this of IHO doesn't take a lead role.

MJ: as MIO is not the permanent display, they should be given flexibility to meet their own requirements, but not conflicting with S-52. Build their own register.

BG: could be a register under the IHO registry. Could be some funding involved.

MH: 'MIO development procedures' developed by RW, MH and LA and includes a section on C&S encoding, which was approved by CHRIS. This text should be examined for possible update to agree with the following conclusion.

MJ conclusion:

MIO symbology is not considered as part of the permanent display of ECDIS. Instead, MIO object and symbolization serves for planning tasks and general synopsis rather than for route monitoring and collision avoidance. MIO is therefore free to invent and propose useful symbology considering rules and guidance within S-52 App. 2. A period of consultation between HGMIO and CSMWG and practical testing of the usefulness of the proposed symbology should be followed by the registration of the resulting MIO symbology. In this registration process MIO symbols will NOT be added to the CSMWG/S-52 PresLib register which is currently under preparation under IHO umbrella. Instead, HGMIO will build their own register for MIO-symbols within the IHO registry or an OEF register for the interim.

Action: MJ to inform HGMIO chairman and to include response in CSMWG report to CHRIS19

Conclusion of combined meeting:
MJ and BG thought the combined meeting was very useful and was encouraged by the progress being made with IHO registers. Still some uncertainties, and a few open items to deal with at CSMWG17. Both Chairmen thanked all TSMAD participants and thought the combined meeting was a very good example how CHRIS working groups should cooperate.

CSMWG17 meeting (commenced Tues 12 June 2007)

4.	Agenda issues for CSMWG17 - Issues with the minutes of previous meeting	CSMWG17-04A

MJ: any comments to previous minutes of CSMWG16?
No comments, Topic closed

5.	Chairman, Vice-chairman and Secretary	
	Chairman:	Mathias Jonas
	Vice-Chairman:	vacant
	Secretary:	Chris Roberts will act as Secretary for this meeting.

MJ opened discussion regarding these positions. This will be the second last meeting of the Chairman after 6 years and the last meeting of the acting Secretary after 13 years and nominations for all 3 positions should be made. If anyone is interested, please advise MJ and or the IHB. Preferred reasonable English, especially for Secretary. (If no nominations, an IHO CL will need to be drafted to all MS, seeking new office bearers).
CR: IHB keeps a compilation of the tasks of the position of Secretary if anyone would like to know more about the responsibilities.
MH: grateful to CR for many years of work and to MJ for his excellent work as Chair. Useful for prospective Chairperson to be identified. Prefer someone to come forward now, any volunteers for Vice-Chairman. Possible Chairperson. Anyone in mind as Secretary?
JP: volunteered as Vice-Chairman, with possibility as Chairperson for 2009. Will need to confirm in 2008. Will check with NOAA if support position of Vice-Chairperson.
MH: if volunteers, only needs to be ratified by CHRIS. If not, an IHO CL will need to be issued.

MJ: 2 years time is a long way off and circumstances can change.

Julia Powell elected to the post of Vice-Chair(wo)man by acclamation of the group.

Action:　　　　MJ to include results in CHRIS19 Report.

6	Maintenance of Presentation Library
	Organisational Issues
6.1	IHO CSMWG website – CPBs

CR: Chart Presentation Bulletins: currently we have 6 bulletins on the IHO website. They apply to various issues from general information to advice to encoders.
CSP 3 regarding canals and rivers could be updated referring to MD05 but an implementation date should be indicated.
CSP 4 refers to linear depth areas and should be cancelled and a new CSP 7 issued explaining the proposed date that HOs no longer need to encode to linear depth areas.
New CSP 8 regarding how OBSTRNs, WRECKS and UWTROC will display VALSOU when soundings are displayed, but will revert to isolated danger when safety depth is specified (using the anti-grounding procedures).

Action:　　　　CR to draft revised and new CPBs for approval of MJ and forward to RENCs.

6.2	Public discussions about S-52 matters: **Open ECDIS Forum** use by CSMWG, alternative site on IHO server or other facility, when	CHRIS18 item 9 discussion (p19)

MJ the issue was widely discussed at CHRIS18 and the decision was that the forum is no longer to be paid for by IHB and plan to establish an IHB site.

KI: Currently OEF still exists and items can be sent but no automatic email outs on new topics.

MH: S-100 discussion forum funded by UKHO. CHRIS18 minutes explains the outcome in full.

JP: TSMAD is building an IHO registry to hold all the OEF objects and attributes register, Inland ECDIS register, Hydro register and possibly AML register. Is the OEF still required once the registers are complete?

OW: producer codes, where do these go and who will manage these? Recently German Water Police made training data and required a producer code. Who manages this now (was Dan Pillich).

RC: there is a link to OEF on IHO website for private producers.

MH: not considered an IHO function.

MJ: could be raised at the Stakeholders' Forum regarding private producer codes.

Action: to be raised in CHRIS19 report as proposed for the agenda of the Stakeholders' Forum (MJ)

	Technical Issues
6.3	Review of CSMWG entries on the IHO web site

See above in section 6.1

6.4	Revision of **S-64** test data sets.	CSMWG**16**-6.5A
		CSMWG**16**-6.5B

MJ opened discussion and it was being handled by NOAA under contract.

JP: mostly completed, wasn't sure how to handle NEWOBJ in TDS. Does it need to be included in the bad update? Tricky encoding. NOAA nor IIC can prepare the plots. Examples of point, line and area would be useful. Or separate TDS just for E3.1.1?

MJ: anyone else who may be able to contribute.

OW: will prepare some data for NOAA

RC: CIRM is redrafting Edition 3 of IEC 61174 and need to be aware of any changes, particulary to TDSs.

RF: SCAMIN could also be added to the TDS as example of best practice.

MJ: plots involve screen dumps off an ECDIS for base display, standard display, soundings on and off, etc. Finland (Hannu and HydroService) produced the plots last time, paid for by IHB. Plots are the proof that ECDIS is in compliance (or not). Hannu has agreed to do this.

CR: how to advise stakeholders that new TDS is available.

MH: New edition of S-64 approved by CHRIS then IHO CL and letter to Stakeholders. Advise stakeholders in November.

Action: JP, OW and RF prepare new TDS including examples for SYMINS-objects for all members of CSMWG to review.
HP to prepare new plots, all to be completed and available before end 2007.

6.5	Review of draft Maintenance Document No. 5 **MD05**	CSMWG17-06.5A
		CSMWG17-06.5B

MJ: core business of this meeting, hope to have resolved by noon as must be issued ASAP. Work through the draft item by item.

Immediate Amendment 5
ESSAs and PSSAs: JP consistency ESSA and PSSA line calls and symbol names. Correct in the master.
PB: check listings for the LUTs for area plain and symbolised boundaries are the same? (OW and MJ)
JP: Symbol explanation should be ESSA and PSSA, already correct in the master version.

ASL: no changes

NEWOBJ: symbol can be encoded into the data for an existing symbol, or defaults to the exclamation mark. Needs extra work to the ECDIS kernel. New S-57 E3.1.1 includes the new object classes and attributes.
JP: add text from E3.1.1. to 8.3.3.11b about MUST be approved by both CSMWG and TSMAD before it can be used on ENCs.
CR: symbol explanation should be 'new object' not 'unknown object' – both point and line symbols.
OW: spelling error in line 6 to 8.3.3.11b 'die' should be 'to'.
JW: end quotes after symbolization.
PB: an example of encoding of SYMINT would be useful. There is an example in E3.1.1. Add example to MD05 from E3.1.1. PB to check example.

Deferred Amendment 7
KI: questioned 8.3.3.7b in co1 the term 'other valid attributes'. This was explained. Could be an issue for ECDIS software as it is slightly different to S-57 E3.1. Not an issue for SevenCs.

co6: two solutions were proposed at CSMWG16 and this is the outcome. Now handled in c19.

co14 only recorded for information as a holding place for these AIS symbols.
KI: OEMs not responsible for AIS, should be IEC responsibility. Colour added by IHO after investigation, as it was left out of IMO documentation. Provided contrast under all light conditions. There was opposition to this blue. Diamond used if buoy carries a working transponder. If charted buoy is in the same location as the transponder, the buoy symbol should be within the blue diamond. This is the real value of the AIS symbol which is better than paper chart. Could also work for virtual AIS as well. These of course can only be seen on the ECDIS display.
MH: IALA is developing virtual AIS as an MIO. Will possibly need new attributes for S-100.
JP: IEC 62288 includes a section on presentation and is almost complete. At Committee Draft (CD) vote stage, before final standard released. Contacted Joe Ryan and asked about the colours, and IEC has recommended a different colour to the IHO res-blue, but currently refers to the IHO suggestion of resblue, but this may be removed in the final standard.

co16: MJ introduced the topic seeking input from manufacturers. Originated from PB. Complex linestyles comprise lines with symbols between. Single unit is regularly spaced on straight sections, whereas complex composite type calculates intervals along curves as well. There was inconsistency between the S-52 text and digital versions. Only comment was from Atlas who don't have a problem with composite type.
MJ: limit to only composite complex only changing the text. Ilkka Waskuri (IW): Furuno doesn't support this change.
KI: only a minor issue as they use digital version (which is not part of the standard).
MH: 5.2.3 reword start slightly to clarify.

co18: OW: p40 digital version, co18 refers to 2 linestyles, need clearer explanation. Duplicate from co 16 5.2.1, agreed.

co19: substitute of former co6: MJ: soundings shown on demand, also isolated obstructions such as **OBSTRN, UWTROC, WRECKS** but no depth displayed (issue by mariners). The depth (if known) should be displayed when soundings are turned ON. New viewing group and changes to CSPs will; now do this. **OBSTRN, UWTROC, WRECKS** can be turned on or off, but anti-grounding rules still detect these and produce the isolated danger symbol. If this happens, the sounding is suppressed by the magenta isolated danger symbol. If soundings are made visible, the VALSOU will be displayed, until anti-grounding rules are applied.

OW: suggest we retain isolated danger symbol as is as it is well known. Few mariners turn ON soundings. Mariners avoid the isolated danger symbol.

MJ: CSMWG agrees with the solution proposed in this correction. Agree not to change existing rule for isolated danger symbol (will not include depth within the isolated danger symbol).

P50 note last paragraph regarding issue with line primitive OBSTRNs – conflict with VALSOU. SevenCs show shadow text to all soundings which overcomes the conflict with the symbolised line.

KI: issue with contour values when many short contours are encoded. Raise at next meeting after further investigation. Asked for clarification about affect of deferred and immediate amendments and implementation dates. MJ confirmed that immediate amendments in this case will trigger a new version of the PresLib which will in effect mean that all deferred amendments also must be applied by 1 Jan 2008.

OW: generic problem of features and text overlapping.

PB: raised the general problem we have is that we have a solution, but no tools to update these CSP diagrams.

Actions:

- MJ will follow up digital version of diagrams from CARIS who were contracted to prepare these updates.
- co9 covers **LNDARE** lines. Once issued, existing ENC EB may be correct, CR to check.
- Should produce a CPB on c19. CR to discuss with Mike Eaton.
- Date of publication proposed for MD05 by end of July 2007. MJ is coordinating
- Appendix 2 also needs to be revised and published as a new edition 4.3. Issue at IHB coordinated by MH
- Because of the new edition of IMO PS a new edition of S-52 main document with the former App 2 as core element will be procuced. MJ to draft for CHRIS19

| 6.6 | Use of FOULGND1 for WRECKS of CATWRK 3 | CSMWG**16**-6.11A |

This issue has already been actioned.

6.7	Revised CSPs to visualize Soundings over dangers - CSMWG**16** Actions 36-39	CSMWG**16**-6.13A
		CSMWG**16**-6.13B
		CSMWG**16**-6.13C
		CSMWG17-6.7A

MJ: soundings over dangers was discussed in MD05, co19, (see item 6.5) no further discussion

6.8	Future Abstention from single unit complex line style	CSMWG17-06.5A

MJ: covered in MD05 discussion.

6.9	Placing of numerical values of planned tracks according to their horizontal angle.	CSMWG17-06.9A

MJ: Potential DA with solution to improve portrayal. Original discussion was to orient the text parallel to the corresponding line. This paper was the only response to this problem, retaining horizontal text but centred along the line. This is an improvement.
OW: few years ago with older versions of PresLib, had rotated text and more fonts available which were more attractive. In future may again need these features and avoid overlapping text.
MJ: reminded members that we must come up with proposals in reports for CSMWG to consider for future action.
CR: could be embedded I dat for S-101. JP suggests another combined meeting as S-101 is developed further.

Action: Propose to adopt as a deferred amendment as part as MD05. Agreed and closed topic.

7.	**Proposed PresLib Edition 3.4**	
7.1	Roadmap for publication and setting into force	CHRIS18 Minutes, page 14, Action 18/18

MJ to report to CHRIS19 – see discussion under item 10.3

7.2	Needs for adaptation of associated - ECDIS Chart 1	CSMWG17-07.2A

MJ: comparable to INT1 but for ECDIS. As symbols changed, Chart1 needs to be up-dated. What technology to base this on? SevenCs were contracted to come up with a proposed solution.
OW: SevenCs investigated the problems and prepared the paper with a suggestion for consideration. Cells loaded to ECDIS selectable by mariner. Currently uses a different mode of operation in ECDIS but not conforming to ENC Product Specs. New approach is proposed to retain special cells. Options: remain cartographic objects, adopt MIOs for issues such as north arrow, scale bars, etc or adopt E3.1.1 approach. If E3.1.1 ap-proach adopted, older ECDIS will not be able to display new Chart1.
KI: agrees to new E3.1.1 object approach but not MIO approach, supported by SevenCs. Questioned purpose of colour tables included in Chart1.
MJ: supports newer solution and good base for type approval
MJ: suggested CSMWG endorse second approach in the paper and SevenCs to go ahead to develop but not as part of MD05. Agreed.

Action: SevenCs to develop new Chart1 under contract making use of NEWOBJ mechanism of S-57 Supplement No. 1.
To be noted in CHRIS19 report.

8.	**Setup of a portrayal registry as part of IHO Registry - CHRIS17 Item 5.2**	CSMWG**16**-7A
		CSMWG17-08A

Covered at combined CSMWG/TSMAD-meeting

9.	Liaison matters to committees other than TSMAD

	DGIWG	
9.1	Call for technical resources	CSMWG17-09.1
		CSMWG17-09.2

See discussion on 9.2 below.

Action: CR to ensure papers on IHO website.

9.2	Call for portrayal resources	CSMWG17-09.2

MJ opened discussion, advising DGIWG call for experts in portrayal to help develop *the ISO 19117 (or DGIWG standards – check paper)*. Second last para relevant to CSMWG and Pol's work with IHO portrayal register.
PB: format of symbols and format for delivery of symbols. Complex linestyles is an issue. Has attended DGIWG in the past and made comments on their docs and delivered IHO PresLib to them, but never received any response. One solution for IHO, as outlined in PB report, is to use the DGIWG registry. PB is working on the DGIWG task 2 in their list.
OW: formal request from DGIWG?
MJ: for information only. If IHO had more capacity to attend, this would be useful. But more formal letter from IHB for Pol's input may improve relations between the groups. We hope for interoperability, but difficult to work with such groups.
MH: there is a cooperation agreement between IHO and DGIWG in existence and this Pol's responses may be improved if sent via IHB letterhead. DGIWG has divided the task into several items to build their register.
JP: DGIWG is profiling 19117 for GeoSym as we are doing for IHO symbols and rules. Could share experiences but BG thinks IHO is moving faster than DGIWG.
OW: has issues with CSMWG giving away IHO development on portrayal register as it is IHO funded activity.
JP: cooperative agreement. DGIWG has helped with IHO registry and S-100 register issues. They should be interested in IHO activity because of the link to AMLs.

Action: MJ and MH to prepare covering letter advising of CSMWG activity in portrayal issues. Open door to further cooperation.

	CSPCWG	
9.3	Synchronized and/or sequential lights	CSMWG**16**-8.3A

Covered by aggregation discussion with S-101

9.4	CSMWG contributions to CSPCWG Circulars 2006/2007
	New **SPLARE** symbol <u>proposed</u> for M-4 B-449.6

Sea Plane Landing area new symbol adopted for paper charts. Could use S-52 airport symbol but would require a new LUT entry.
KI: current MD or future? Don't want too many new changes to PresLib.
MJ: try to include in MD05.
PB: currently symbolised as CTNARE with exclamation mark in a circle.
MJ: how important is this for ECDIS. Could use brown airport symbol but in magenta. There are many paper chart symbols that have not been adopted in the PresLib.
KI: prefers generic approach rather than many new symbols, as does SevenCs.

MJ: CSMWG agreed not to introduce a new symbol for PresLib 3.4. Could be considered for S-101.

No action.   Topic closed

9.5	Paper chart symbol being considered for: EEZ border and Continental Shelf Limit (M-4 B-440.8) – CSPCWG Letter 03/2007

CR: CSPCWG is likely to recommend a solid magenta line with text.
Symbolisation of EEZ-border and continental shelf is already in PresLib.

No action.   Topic closed

	SNPWG
9.6	Presentation of pick report content on ECDIS – CSMWG**16**-8.6A CHRIS17 Item 5.4

MJ opened discussion and during Stakeholders' Forum reported appearance and functions are not standardised. Was given to SNPWG but was later transferred to CSMWG, but little to do with chart design, but more with interfaces. Chairman of MIO suggested support from academia. To date nothing has happened and CSMWG does not have the technical support to do this work. Suggests guidelines rather than standards. Users complain of large differences in user interfaces, so it needs to be addressed. IMO refer to guidelines in such cases, but manufacturers and type approval authorities usually do not pay much attention to such guidelines.
CR: CSMWG could produce principles and send to IEC 61174 for adoption. MJ doesn't think WG7 would include such issues. CSMWG not the forum to prepare this.
KI: thinks it shouldn't come from industry as they would be biased. MJ things the academic approach may be best.
PB: guidelines for the results of such a query without providing a design.
KI: suggests navigational experts should have input on priority of information displayed.
MJ: asked for any suggestions for academia.

Action: MJ to remind Chairman of MIO of his offer to engage academia, but CSMWG funding may be required.

	ECDIS Stakeholders Forum of WEND
	None

	IEC
9.7	IEC TC80 WG13 – Status of development of IEC 62288

JP: IEC 62288 (Navigation Display) - Apparently, this is still regarded as a CD version. Since WG13 has existed more than 4 years, this effort has to become a "new" work item proposal. It is now hoped that a CDV will be completed by September 2007. It is still not completely clear if (or how) IEC 62288 will influence the display of chart-related symbols on ECDIS and/or MIOs.

	CHRIS18 issues other than those specifically dealt under previous agenda items	CHRIS18 Minutes
9.8	Currency of ECDIS software (Action 18/1) –	CSMWG17-9.8A CSMWG17-9.8B CSMWG17-9.8C

See discussion in 9.9 below.

9.9	Shortcomings in ECDIS	Letter to manufac-tures - Response

MJ reported CSMWG activities of CSMWG16, which included the issues with loading E3.1.1 data. Various tests involving 'unknown' objects resulted in inconsistent por-trayal. As directed by CHRIS a letter was sent to all customers of the PresLib regarding these issues, with some vocal responses and one written response from KH conforming they will change there functionality.
OW: SevenCs is not an ECDIS manufacturer.
MJ: up-to-dateness of ECDIS software at sea. CHRIS has prepared an IHO paper to NAV outlining the issues (see CSMWG17-9.8C) and suggesting an SN circular. The paper was displayed and comments asked for.
KI: Annex B, para 3 questioned the reference to the emergency wreck buoy. MJ: this was only an example of the possible use for NEWOBJ (S-57 E3.1.1.).
MJ: drew attention to items 8-9 which is the real impact. Will impact back on national administration to ensure this happens.
OW: agreed to putting pressure on ship owners, rather than OEMs, but really isn't prac-tical.

Action: information only.

9.10	Changes to IHO standards	CHRIS principals and procedures consid-ered at 17th IHC (Item 4.2, page 4) CHRIS18 minutes

MJ: Annex G to CHRIS18 minutes, diagram of interest to CSMWG. Bringing new and revise d standards into force. Not for minor technical issues. Method used by the avia-tion industry and approved by CHRIS. Good model for CSMWG issues involving test-ing and development in the ideal case.
MH: circulated by IHO CL for all MS approval, closed 1 June.
OW: who is the committee approver and IHO approver? MH: issued to all MS by CL or at IHC, need for majority of total number of MS approval (currently >40 for adoption).
MH: does this apply to a new edition of an existing Standard. MJ: text after the diagram explains the situations, so applies to immediate amendments and new editions of the PresLib.

Actions: for future development CSMWG need to follow these procedures.

9.11	Reorganisation and harmonization of S-52	CHRIS18 item 6.2 outcome.

Discussed in 10.3 below

9.12	Revised Terms of Reference after IHC approval of new CHRIS ToR -	CHRIS18 item 8.3 outcome (p19)

MJ opened discussion on inconsistency in office bearers of WGs. Election of new Chairman and Vice Chairman must be a representative of the IHO MS and be voted on after the ordinary IHC (at least every 5 years). (see Annex I, sections 2.5, 2.6 to the paper). Must have an election at this meeting.

Dr Mathias JONAS (BSH) re-elected as Chairman of CSMWG with Vice Chairperson Julia POWELL (NOAA). Secretary is vacant after CSMWG17.

Action: MH to query procedure for Chair changing between ordinary IHCs. MJ to advise in CSMWG report to CHRIS19.

10.	**Strategic issues**	
	IHO	
10.1	Reorganisation of CHRIS as HSSC	CSMWG16-9.1A

MH opened discussion: IHO MS and IHC approved the reorganisation of IHO WGs to have 2 main committees of IHO – one technical (HSSC) and other (IRCC) including mainly RHCs and CBC.

HSSC (replacing CHRIS) will have 3 sub-committees (see paper) with CSMWG coming under SDPS. SDPS will have 3 WGs, PCP (paper presentation), DCP (digital presentation) and Nautical pubs. Should be implemented from 1 Jan 2009.

An extra level of administration may complicate the processes and raise resource issues.

MJ: renaming doesn't prevent cooperation between WGs. The reorganisation is now more closely aligned to the IMO structure. How can the extra layer be handled, extra meetings? Not answered yet. HSSC may have separate sessions?

KI: Nov 2007 meeting will still be CHRIS.

Action: Information only

10.2	Contribution to IHO work program 2008 – 2012	CSMWG**16**-9.2A
		CSMWG**16**-9.2B

MJ: CSMWG contributions were raised at CHRIS and adopted for the period. If anyone would like a copy of the approved program, ask MJ. The report does not include details, only general topics.

Action: Information only

	IMO	
10.3	Revised ECDIS PS and resulting implications to S-52	CSMWG17-10.3A

MJ advised this was a huge event by IMO initiated by CSMWG. S-52 includes operational requirements as well as IHO C&S issues. The operational functionality should be under the responsibility of IMO and resulted in the revision of the ECDIS PS. Not everything was adopted in the revised IMO PS. How do we revise S-52 in line with these changes. PresLib after 12 years of discussion, buoys and beacons have moved from Display Base to Standard Display which will affect our LUTs. Review Annex 24 of the paper, it contains the revised PS. All members asked to review this and try and find any other changes that are needed to the PresLib and or S-52.

JP: ASLs in Standard Display (MD05)

KI: what are fixed structures in new PS?

MJ: IMO terms cannot be mapped one to one with S-57 Object Catalogue, but was interpreted many years ago when LUTs were developed.

Dates: MD05 July 2007, New S-52 PresLib 1 Jan 2008; new IMO PS 1 Jan 2009

Resulting changes to LUTs required before 1 Jan 2009, but how to implement this and set into force? Could be an immediate amendment (MD07?) and subsequently a new edition of PresLib 3.5 by 1 Jan 2009 to include buoys and beacons. Only have 1 year between new editions of the PresLib which is not normal CSMWG practice.

KI: amendment to PS 3-4 months work for OEMs.

OW: will be new S-52 (main doc) as well, when will this be published. Main doc not responsibility of CSMWG. CHRIS asked MJ in person to do this work.

KI: A new MD06 issued before end 2007 would provide 12 months notice for new Pres-Lib 3.5. Doesn't think it is a big issue technically. Substantial change for buoys and beacons, but likely to be other smaller changes that need to be approved by CSMWG.

JP: CSMWG Letter seeking endorsement if issues could be discussed at the Stake-holders' Forum. New Edition of IEC 61174 must be out well before 1 Jan 2009 to align with IMO PS. 61174 is in the drafting stage and must also be coordinated with 62288. AIS is being circulated for vote for IEC 62288.

MH: who is providing input to 61174 from IHO? RC is advising regarding S-63. Appears to be no-one from IHO. If IHO provides symbols for AIS, could there conflict with 62288 when published. MJ: shape and appearance of the AIS do not conflict. For ECDIS IHO suggests resblue. Prefer to leave AIS in IHO S-52 addendum as it may be adopted in time.

MJ: 61174 should be published before 62288 so that type approval can be started. Management of the new editions of the PresLib is an issue in the short timeframe. Cannot avoid 2 new editions of PresLib in short succession – potential impact. Software updating of existing ECDIS at sea will be on the IMO agenda more and more. Volunteers to help review new IMO PS and possible effects to S-52 PresLib. JP and CR, then CSMWG Letter to CSMWG members for consolidated view for Stakeholders' Forum.

Actions:
- Will drive another new edition of the PresLib 3.5 to be discussed at CSMWG18 next year.
- Add to agenda for CSMWG18.
- MJ to report impending new PresLibs and S-52 to CHRIS19 and raise at Stakeholders' meeting.
- KI, JP and CR to review IMO PS and new edition of S-52 main doc and PresLib.
- MJ to inform Dave Blevins about issues that may effect IEC 61174.

11.	**Other business** (only if time)

RF: JTEWG and TSMAD last week, soundings with EXPSOU = 2. Gave short presentation highlighting issue with shoal soundings not being highlighted as underwater hazards on ECDIS using standard display. Within DEPARE 30-100, isolated soundings had EXPSOU = 2 (shoaler than surrounding depth area). TSMAD issuing an ENC EB. Perhaps could be treated as underwater hazard CSP. Soundings turned off.

KI: should be encoded as OBSTRNs. UOC mentions this.

JP: significantly shoaler could be an OBSTRN, but 100m sounding in 300m may not be regarded as OBSTRN.

CR: could be added via NtMs as soundings.

PB: requirement to portray these soundings as underwater hazards. Encoding practice is very poor. Alarms not triggered without corresponding DEPAREs or point OBSTRNs.

RF: valid use of EXPSOU = 2 in non-maintained DRGARE, but this example was bad practice.

RC: could be more soundings close by.

MJ: not valid to change CSP.

JP: consider DRGARE example in ENC EC.

Action: TSMAD ENC EB

12.	**Next meeting (venue, dates)**

Apr-May 2008 with fallback being Monaco
TSMAD15 proposed for South Africa in 2nd week in April 2008.
For CSMWG18, possibly have a combined meeting for one day after TSMAD15, then our usual CSMWG18 meeting. Those interested from CSMWG could attend TSMAD15.

Action: MJ to consult Sid Osborne in South Africa if feasible?

13.	**Close**

MJ thanked NHS for their exceptional hosting of the meeting, set a new standard for CSMWG meeting hosts. Also thanked CR for Secretarial tasks over many years.
MH: thanked MJ for Chairing the meeting so well.

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Action items resulting from the discussions made at the meeting:

Action No	Minutes Ref	Description	Who	By when	Actions made	Date completed
1	3.3	Combined paper on E3.1.1 issues regarding data and display to be prepared for CHRIS19	MJ and BG	Sep 07		
2	3.4	CPB on CSMWG section of IHO website advising date no longer need to encode LDAs. Advise stakeholders of date TSMAD ENC EB? CHRIS19 Report	CR, MJ MJ JW MJ	Aug 07 Nov 07 Sep 07		
3	3.5	Unknown objects to be part of CSMWG report to CHRIS19	MJ	Sep 07		
4	3.6	ENC EB for PEL (TSMAD14 action) CSMWG members for info	JW CR, MJ			
5	3.7	Change to S-52 documents re EEZ (is symbolised). MD05 DA	CR, MJ	ASAP		
6	3.9	LUT for LNDARE line features to be symbolised. MD05	CR, MJ	ASAP		
7	3.11	Add note to CHRIS report to apply SCAMIN to any objects where SCAMIN is valid.	BG	Nov 07		
8	3.12	Revised CSP LIGHTS05 tested for sectors, then DA for MD05. Request to CARIS for digital files of all CSPs Letter to South Africa re strip light New CPB advising strip, spot and flood light characteristics not portrayed	OW, MJ MJ JK, MJ CR	ASAP		
9	3.14	Suggestion to call Cell strategy loading workshop in CHRIS19 report	MJ	Nov 07		
10	3.15	S-100 Portrayal register – extend contract. Note in CHRIS19 report need for Portrayal Register Manager	PB, MH, MJ	June 07 Nov 07		Done
11	3.18	Include response in CSMWG Report to CHRIS19 re MIOs behaviour with defn of MIO symbology	MJ	Nov 07		
12	5	Vice-Chairperson CSMWG Secretary CSMWG in CHRIS19 report.	JP IHO MS, MJ	Nov 07		
13	6.1	Revised and new CPBs for Linear Depth Area date, VALSOU over OBSTRN, WRECKS, UWTROC	CR, MJ	Sept 07		
14	6.4	Prepare new TDS for all members of CSMWG to review. Add SCAMIN example. Prepare new plots, before end 2007.	JP, OW, RF HP	Aug 07		
15	6.5	New CPB re VALSOU on OBSTRN, WRECKS, UWTROC Finalise MD05 (6.9) Issue MD05 Draft consolidated version App 2 incl MD05	CR, MJ MJ MH – IHB MH, CR	June 07 July 07 Oct 07	Separate item	
16	6.9	Numerical values of planned tracks, new DA for MD05	June 07			Done
17	7.1	Roadmap for S-52 docs – report to	MJ	Nov 07		

Actio n No	Minut es Ref	Description	Who	By when	Actions made	Date completed
		CHRIS19 (see also 10.3). Draft revised S-52 main doc	MJ, JP, CR			
18	7.2	New Chart1 – develop under contract	MJ, MH, OW	Oct 2007		
19	9.2	IHB letter to DGIWG regarding IHO portrayal register activity	MJ, MH	June 07		Done
20	9.6	Pick Reports to be raised with Chair MIO aiming to working paper for CSMWG18	MJ	June 07		Done
21	9.12	Discuss Chairman vacated between IHCs Report on election to CHRIS19	MH MJ	Nov 07		
22	10.3	NE of the PresLib 3.5 report to CSMWG19 next year. Add to agenda for CSMWG18. Report for Stakeholders' Forum Review IMO PS and NE of S-52 main doc and PresLib Inform Dave Blevins about issues that may effect IEC 61174	MJ CR MJ KI, JP, CR, JP, MH MJ	Apr 08 Nov 07 Oct 07 July 07	Tidy up this one	
23		Ensure all CSMWG17 papers are on the website, including revised agenda	CR, MH	July 07		
24		Update participants list on website	CR, MH	July 07		
25		Update CSMWG contacts list on website	CR, MH	July 07		
26		Prepare draft minutes and circulate to all CSMWG17 participants	CR	July 07		
27		Once minutes approved, circulate to all CSMWG contacts, add to IHO website	CR, MH	July 07		
28		Start draft agenda for CSMWG18	CR	July 07		
29		Date and venue for CSMWG18	MH	July 07		