

IHO CSMWG 15
BSH Rostock 2-4 May 2005

Final Minutes
(updated 16 June 2006)

0.0 Open and welcome

Mathias Jonas (MJ) welcomed all members to Rostock to the new BSH premises. The BSH office comprises nautical hydrography, including charting and printing, with about 200 employees located in Rostock. Brief introductions of members were made and logistics were discussed.

The following documents were updated after the meeting and added to IHO web-site: *CSMWG15-1A – List of Docs*, *CSMWG15-1B – List of participants*, *CSMWG15- - Agenda*

Apologies: Lee Alexander (Chairman HGMIO)

(Members' initials in *CSMWG15-1B* are used throughout these minutes).

0.0 Approval of the Agenda

New papers were circulated. The members adopted the agenda (Rev 5). Attention was drawn to Pol le Behan's (PB) new paper to see where it will fit during the meeting. An AML presentation will be given on Tues pm. Liaison with TSMAD will be discussed at agenda item 1.6. Barrie Greenslade (BG), Chairman of the S-57 Extensions SubWg on E4, was welcomed to the meeting.

doc: CSMWG15-2A Rev.5

1.3 Vice-chairman and Secretary

No nominations have been received for Vice-chairman. It was agreed that Chris Roberts (CR) would act as Secretary for this meeting.

1.4 Approval of the minutes of C&S/14 (paper *CSMWG15-3A*) and review of important action items resulting from the decisions made at C&S14 CHS Ottawa, May 2003 (Annex E of Minutes).

The minutes as presented have been adopted and there were no further changes nor additions.

The following items from the action list (Annex E) were discussed:

Items 2-4: S-52 Presentation Library (**PL**) **Edition 3.3** was published Mar 2004. A revised IHO Test Data Set (TDS) was published as S-64 in December 2004. IHO revised letters were sent out to all subscribers of the S-52 Presentation Library on 29 April, 2005 by IHB, clearly stating when the new PL needs to be applied to ECDIS at sea. This letter is logged as new paper (Doc *CSMWG15-3B*) and includes an annex of the original letter sent out 28 June 2004 which also contained advice about when the new PL needs to be applied to ECDIS. There was discussion about how such dates could be enforced.

Action: Extract of the letter with dates to be added to the CSMWG bulletins on the IHO website. (MH and CR)

Items 5-6 and 8 were included in the revised PL Edition 3.3.

Item 9: Three colour tokens ARPAT, SHIPS, RESBL were tested as an **AIS symbol** colour for possible adoption by the IMO/IEC. RESBL (light blue) was advised as the most appropriate colour to IMO/IEC. IMO have since accepted a set of AIS symbols but has not adopted any colour (see IMO SN/Circ. 243). There appears to be no documented location for the colour except within the S-52 symbol description library.

Action: Mathias Jonas (MJ) to follow up WG13/WG7

Item 10: Sven Herberg (SH) completed the addendum of S-52, Appendix 2 containing the complete **description of S-52 symbols** on paper. Discussion included considering making this publication more prominent and/or freely available. Barrie Greenslade (BG) raised interoperability issues with GeoSym.

Michel Huet (MH) reported that **14** copies of the new PL have been purchased at 500 Euros each, **9** new purchases at 1500 Euros and **13** issued gratis. It was concluded that the total number of 36 subscribers can be seen as a realistic number of bodies who are commercially active in the field of ECDIS. Since 1996, the total revenue for the PL has amounted to 50000 Euros which can be used for further maintenance of the PL.

Item 11 TIFF file of **Chart 1**: is on the CD but apparently not on the CSMWG site. **Action:** MH to ensure copy goes onto CSMWG website.

Item 12 **Own ship** symbol: (See later discussion in 3.1 below).

Item 13 **OEF**: UNH has provided a server but no development has been commenced. Previously SevenCs maintained this site. CR advised that the history of discussion function is not working and that Lee Alexander is aware of this. Gert Buttgenbach (GB) reported that about 2 new features per month are being registered on the OEF. The IHO has provided funding for upgrading the OEF and it requires a better interface. GB advised that the OEF provides better control of discussion to Chairman of WGs. The TSMAD has set up a separate site on the IHO website to move focus away from ECDIS to S-57 E4.

Action: OEF to be raised at CHRIS17 as an agenda item.

Items 16-18 **new PL**: The CSMWG proposed a 1 year grace period for the implementation of Edition 3.3 of the PL after publication. After implementation of the new methods for detection and depiction of the 'Safety contour' contained in E3.3, there is no longer any need to encode linear depth areas by HOs producing ENCs. HO's would be happy to stop this laborious encoding.

OEMs were asked how the kernels behave with linear depth areas and how ECDIS might be upgraded to the new method:

SevenCs systems have had the option to use or ignore linear depth areas for some years and it is a simple procedure to turn the option on or off in their software.

Transas has not implemented E3.3 yet and asked how they can test the linear depth area issue. (The IHO TDS still has linear depth areas). GB advised that for software upgrades, it is currently up to the ECDIS customer to request it from their OEMs.

It was suggested that the IHO needs to publish and explain the consequences of such releases of new editions of their standards in magazines likely to be read by mariners such as 'The Digital Ship'. It was suggested that the IMO is the authority who should insist on ECDIS updates being carried out to become E3.3 compliant. It was suggested that the IHO could seek the authority from the IMO to be the regulatory authority in such matters. This issue to be reported to CHRIS17 with a proposed implementation period for Edition 3.3 of the PL explaining when HOs will no longer need to encode linear depth areas after a specified date. There may also be a requirement for IEC 61174 to test new ECDIS regarding the handling of the safety contour once linear depth areas are no longer part of ENCs.

Action: Chairman to include proposal to CHRIS17 as part of the CSMWG report. TDS to be updated to provide a mechanism to test for the removal of linear depth areas (Richard Coombes (RC)).

Day 2 discussion: It was agreed that there should be an overlap between the date OEMs are suppose to adopt the S-52 PL E3.3 and when HOs can stop encoding linear depth areas. It was also agreed to suggest to CHRIS17 that HOs will no longer need to provide linear depth areas **from 1 Jan 2007**. The actual timetable is to be discussed at the Stakeholder's Forum at CHRIS17. Note that **HOs do NOT need to remove linear depth areas by 1 Jan 2007** as these will be ignored by ECDIS using the S-52 PL E3.3.

Further action: a new IHO CL raising the issue to be discussed at the Stakeholders' Forum (MH - IHB)

Item 24: included in new PL E3.3.

Item 26 **RIVERS**: have been moved to Standard Display together with **CANALS** in the new PL. **Action:** add to CSMWG Bulletins as information to ENC encoders (CR)

Item 27 **loading strategies**: IHO CL 47/2004 'Improving ENC Consistency' was issued recommending the use of the SCAMIN attribute for ENCs. Barrie Greenslade (BG) advised there are loading strategies e.g. by navigational purpose scales bands or radar scales and that different OEMs have taken different approaches that have not been harmonised. Some scale bands are not wide enough in some cases. GB reminded the WG that this is an old issue (1997 SCAMIN Workshop). A good solution needs a common approach by HOs to assign ENCs to compilation scales and navigational purposes and OEMs to load and display ENCs. A workshop was suggested for ENC loading strategies at the end of June to discuss and experiment with data between OEMs, IC-ENC and Primar at the very least. Display engine software is a delicate balance for ENCs loading, clipping, etc. The last S-63X meeting experience indicates Hamburg to be a good location for such a workshop for maximum 3 days. CSMWG agreed in principle to support a workshop back to back with another topic such as S-63X if organised and hosted by affected OEMs. It was suggested that OEMs could bring samples of their software to explain effects of SCAMIN and compilation scale settings as well as navigational purpose (usage band) definitions to the loading and display of ENCs. There was also interest from NGA for this workshop to include DNCs.

Action: CSMWG offers a study on ENC Loading strategies (Jonas, Melles) as input to start off discussion. CSMWG to inform members via OEF and gauge interest in a workshop (MJ). MJ intends to attend the workshop if held in Hamburg.

docs: CSMWG15-3A, CSMWG15-3B

Item 28: IHB was requested to build a CSMWG bulletin and FAQ section on the IHO website but this hasn't happened yet.

Action: CR to follow up with Tony Pharaoh (IHB).

1.5 CHRIS – reports and directions

CHRIS16 minutes, *doc: CSMWG15-7A*

CHRIS template for formal proposals to CHRIS and subsidiaries

docs: CSMWG15-7B, CSMWG15-7C

CSMWG issues include:

Item 5.2 restructuring S-52 package (main doc) by the exclusion of functional and operational requirements, to be absorbed by applying IMO and IEC regulations. MJ reported this has been done but cannot be published until the exclusions/ changes to the IMO PS on ECDIS have been adopted by IMO/NAV.

Item 6.2 CSMWG report to CHRIS16: Alignment of S-52 to ISO (discussed later – see 2.2 below). Future PL maintenance: requires money, list the options.

Action: Chair to action in CSMWG report to CHRIS17.

1.6 Liaison matters with TSMAD

Study on loading strategy and SCAMIN – see discussion above in 1.4, item 27.

Docs: CSMWG15-8D, CSMWG15-8E, CSMWG153INF3

← --- Mise en forme : Puces et numéros

1.7 Liaison matters with Chart Standardization and Paper Chart WG (CSPCWG)

Presentation of Archipelagic Sea Lanes (ASLs) on paper charts - CSMWG provided input to the CSPCWG discussion which was finally accepted as a common solution for both paper charts and PL. IHB has now published new M-4 specifications regarding ASLs (Apr 05 – see section B-436.10). Currently could be encoded in an ENC as a **CTNARE** or an **ADMARE** with TXTDSC and or INFORM attributed. TSMAD have not issued an ENC encoding bulletin as yet (CR to action). New objects were proposed at the last TSMAD meeting for the axis line and the ASL for S-57 E4.0 but no final decision has been reached as yet (for S-57 E4).

Docs: CSMWG15-9A, CSMWG15-9B, CSMWG15-9C

← --- Mise en forme : Puces et numéros

- Presentation of Environmentally Sensitive Sea Areas (**ESSA**) and Particularly Sensitive Sea Areas (**PSSA**) on paper charts – again the CSMWG provided input to CSPCWG. The new paper chart specifications are published in M-4 B-437 and are available on the IHO website under the CSPCWG section. What is missing in the new PL is a means to portray this transparent ribbon inside a limit like the new paper chart PSSA. It appears that the PL should provide transparent lines. It was suggested to prepare for the future requirement and introduce this element for the line styles (such as 25%, 50%, 75% transparencies and variable widths). For BSH the whole Baltic is a PSSA. Visualisation is not really appropriate in this case for an entire cell. More intelligent handling may be appropriate. GB suggested PL could make use of the S-57 attribute

SCAMAX that is currently prohibited for ENCs. By means of this such limits as ESSA and PSSA could be shown in certain usage bands, i.e. 'general' of smaller scale only, whereas the limits would be suppressed in coastal, approach and harbour ENCs. There is no urgent need to produce this symbol at the moment because of the missing objects/attributes in S-57 but there may be a decision at CHRIS17 to handle these new features before S-57 E4.

Action: build a list of possible future work – within Annex A

Docs: CSMWG15-9D, CSMWG15-9E, CSMWG15-9F

- Presentation of “entry prohibited” and “Wind turbines”

CSPCWG adopted symbols very close to the PL for the wind turbine and the entry prohibited symbol.

No further action for CSMWG.

docs: CSMWG15-9G, CSMWG15-9J

- Status Report Revision of **INT1**

A new version is being published at this time by BSH and will be available in printed form at the end of May. There will also be a digital form available but format and cost of provision is still being discussed within BSH.

2.1 GeoSymb activities (*docs: CSMWG15-8B, CSMWG15-8F*)

David Turnbull (DT) presented a Power Point presentation produced by Dan Gleason on GeoSymb which was published in June 2004 as MIL-DTL-89045 as the first edition. It includes hydro (close resemblance to S-52), aero and topo symbols but does not currently follow ISO standards. The 2nd edition is expected in the fall of 2005 and will include additional topo symbols for the US Army. The ultimate solution will be ISO/OC+GC compliant. Any questions should be addressed to Dan and cc David (see contacts list).

CSMWG discussion: MH: do we need an IHO registry for S-52 symbols such as the new symbol specifications library? Should a registry include only hydro symbols? MJ: INT 1 could be regarded as a register as is S-52. There is a move towards Internet based symbols and CSMWG may need to address this sooner or later. GB: what would the register be for? OK as a 'blueprint' but if machine readable, it is downloadable and useable without further work. MH: IMO-IHO recognised the need to standardise ECDIS displays and the private industry was invited to participate. The result is the S-52 PL. If not appropriate, industry is open to make suggestions to the CSMWG.

Action: For now observe what NGA is doing and consider later to what extent (if any) we can benefit.

2.2 Liaison matters with TSMAD Status Report S57 Edition 4 (*Docs: CSMWG15-8A and CSMWG8A+*)

- Work package “Portrayal” of S57, Edition 4
- Alignment of S-52 with ISO 19117

Barrie Greenslade (Chairman of S-57 Extensions (E4) SubWg) provided a Power Point presentation. In summary TSMAD is trying to let people know that E4 is much more than just ENCs. S-57 Edition 3.0 was released in Nov 1996, Edition 3.1 in Nov 2000. Users of S-57 currently only think ENCs. Issues for E4.0 include an inflexible maintenance regime; encapsulation restrictions; Web enablement; current ENC PS lists prohibited objects. Future editions will separate ENC content to allow additions and contain features that are all inclusive of this product; facilitate interoperability (especially with DGIWG); new register and product feature catalogues; and IHO is a class A member of ISO TC211 developing ISO 19100 series of standards and the lifespan of new ISO standard development is now 3 years or it starts again;

At the register level, there will be no binding of features and attributes, however type A attributes will be listed to provide an indication of how the feature may be used.

A template (application schema) will provide examples of how you do things, which will lead to a more fully developed application schema of the Product Specification.

S-57 E3.1 will continue to be used for many years to come. E4 will not initially include a new ENC PS. No decision has been made to supersede or replace the current ENC PS (will be discussed at CHRIS17).

New procedures are being set up to process the new draft specifications. Committee drafts (CD) will be available on the IHO E4 forum for anyone to make suggestions, especially industry.

Portrayal (ISO 19117): new formats are required; embedded portrayal catalogue especially for a web interfaced data; registries/registers are a possible candidate for portrayal; core S-57 standard expected by late 2006.

A new forum has been set up for discussing S-57 E4 issues. If interested please register on the IHO website.

Action: PB is contracted as a consultant to determine which parts of the PL are potentially affected by reorganisation according to ISO 19117 and to give advice about usefulness of transmission of exiting PL to this standard.

2.3 Additional military layers (AMLs)

CMDR Frey (German Naval Officer) spoke to a power point presentation: AMLs are extensions of S-52 for military purposes. NATO REP concept (Recognised Environmental Picture) was presented as was REA (Rapid Environmental Assessment). Maritime foundation data includes ENC, ARCS and DNC if needed. Encyclopaedic data (static). In-theatre data collection may include bathy data to fill gaps, etc. There are interoperability issues with this. Neither carrier format nor symbology is specified for AMLs. Geo data is in very limited formats and some (Germany) would like S-57 as the main exchange standard. Common Operational Picture (COP) and Joint Operational Picture (JOP) was also portrayed with examples. S-57 has been extended for military purposes, concentrating on vector data. DNC and ENC tests have been conducted. Lot of VPF land data was available. It is complicated to produce and maintain an update service. ENC coverage is growing every day with updating established. DNC converter has been developed with SevenCs to create world wide 'ENC like' data. **MAROBJ** (Maritime Object) have been developed. Also converted VMAP to S-57 to produce littoral warfare data. New S-57 extensions for VMAP-data (40100 numbers in OEF feature dictionary). Presentation developed for topo built on top of S-52 (extended). WECDIS = ECDIS + AML (STANAG 4564) which is for sea going war-fighters. 6 (+ 3) AML Performance Specifications based on STANAG 7170 have been developed by the NATO **GMWG** (Geospatial Maritime WG) responsible for these PS and STANAGs. There is still no specified carrier format. No one interested in creating AML in VPF format. AML symbology was initially ignored by AMLs but have created possible (not mandatory) symbol sets for review, but no-one currently looking at this. They looked at UKHO default symbology (not satisfactory) based at feature level; S-52; GeoSym 4; INT 1 and other sources (aero symbols). GER INT 1 in AML was created with symbols at attribute levels. Germany is proposing all land features into Beach Survey layers. Metoc is dynamic data based on STANAG 2019 or 2090? Examples were presented of the 1300 symbols used. Again extended S-57 information. Tactical overlays require simple tools not available in ENCs. Tactical overlays can be created in S-57. The S-57 attribute PICREP was adopted and extra pickable data made available. S-57 is the perfect structure for NATO RMP. One exchange standard provides stable work routines and update service. Separation of ENCs opens up multi-functional consoles for commercial and military use.

Questions: Symbology is outside AML standards. GMWG is concentrating on features and attributes. No practical testing carried out to date but using simulators. In comparison to the PL, 6-7 extra colours have been adopted so far and displayed for night operations, on a slightly different approach to S-52. They need % transparent lines, to see what's underneath. The AML object and attribute catalogue is developed and open to public at UK AML home page together with test data, etc. Land catalogues not published yet.

MJ: satisfaction with S-52 concepts allowed enhancements for these new applications. GB: S-52 elements adopted, what was missing for overlays.

Action: CSMWG members to monitor progress and report anything of relevance to our WG

2.4 Liaison matters with IMO

- Proposed changes to the IMO ECDIS Performance Standards

In 2003 the CSMWG approved exclusion of all functional/operational aspects of ECDIS from IHO publication S-52 main document and to refer items to other bodies such as IEC and IMO. MJ prepared a clean version of S-52 main (paper CSMWG15-10C) which is greatly condensed compared to the previous edition. This S-52 (main doc) was submitted to CHRIS16 and adopted in principle. However, it can only be published as a new edition of the standard after other bodies have absorbed the exclusions. In the meantime IHO and Greece submitted a revised ECDIS PS to IMO NAV51 for consideration. This revision contains exclusions from S-52, as well as additions regarding the S-63 encryption standard. NAV51 will split into a separate WG during the meeting to consider these and other submissions regarding ECDIS. MJ requested members to inform national delegates to IMO NAV of the need to review the changes to the IMO PS very carefully. it is assumed that the IMO will establish a correspondence group to draft a comprehensive revision of the ECDIS PS at NAV52 in 2006, CSMWG may produce their own contributions to this group

Action: All CSMWG members to inform their national IMO NAV delegates about the situation.

docs: CSMWG15-10C, CSMWG15-10D, CSMWG15-10E

- **IMO Performance Standards Display of Navigational symbols**

IMO NAV49 thought that navigational aids were too important for IEC to deal with and returned responsibility back to the IMO, which has made a new correspondence group, headed up by Germany. As a result of this, NAV50 adopted the named PS which will require mandatory symbols from 2008. Because IMO navigation symbol standards do not contain any colour definition, it was suggested that the CSMWG should retain the authority to suggest colours for navigational symbols. It was noted that Danger highlight, event marker and mariner's info are not included in the Navigational Symbols PS.

Action: MJ and SH to draft a deferred amendment to the Addendum containing the AIS symbology and circulate to CSMWG members for acceptance.

doc: CSMWG15-10A (suggested symbols)

- **Proposed layout for AIS symbols on navigational displays** (*doc: CSMWG15-10B*)

A diamond symbol on a buoy may be incorporated but it may obliterate the buoy on the display. There are differences between real buoys and virtual buoys. Virtual buoys do not exist but are broadcast as a message from a shore-based station about a location. It was considered more appropriate to transmit other lines of a fairway instead of single buoys. **No action**

2.5 AIS-Liaison matters with Chart Standardization and Paper Chart WG (CSPCWG)

Presentation of AIS on paper charts.

Virtual buoys cannot be depicted on paper charts. Only real buoys will have the proposed notation. CSPCWG has issued its own CL 04-2005 on AIS symbols seeking advice from IHO MS on the requirement to chart such features. Comments are to be in to CSPC Chair by 26 May 05.

Action: follow any actions by CSPCWG and report back to CSMWG (CR)

docs: CSMWG15-9H, CSMWG15-INF1, CSMWG15-INF2

3.1 OEF discussions about S-52 matters since CSMWG14

Soundings over dangers (*doc: CSMWG15-6A*)

Two options are provided in the paper. Konstantin Ivanov (KI): suggested separating seabed information from isolated dangers. This has been implemented in Transas. Can switch isolated dangers on/off. GB: we could treat wrecks and obstructions like soundings as in PL SOUNDG02 CSP (SNDFRM03). Needs to be optimised to also look for wrecks and obstructions. PL: currently VALSOU is called up as sub-procedure. CR suggested that any new CSP display DRVAL1 as a sounding for **DRGARE** and possibly **SWPARE**. It was agreed the concerns are valid for portrayal and needs to be tackled. It was agreed that there is a need for a complex CSP for a group of feature objects which has not been used before in the PL. The new CSP would need to take into account various features and attributes.

Action: MJ to ask CARIS to forward source diagrams to SH. SevenCs provides processing software for Nassi & Shneiderman diagram. SH, PB and OW to prepare new or amended CSPs to be another possible deferred amendment.

← --- Mise en forme : Puces et numéros

Cursor picking (including PICREPs) (*doc: CSMWG15-6B*)

S-52 currently gives generic guidance If this guidance is too weak, more precise guidance rather than strict rules should be developed by R&D projects, funded from the CSMWG fund.

Action: MJ to prepare a submission to CHRIS17, asking as core responsibility of the IHO for this issue and if so, can it be R&D funded as future deferred action item?

← --- Mise en forme : Puces et numéros

Lost own ship (*docs: CSMWG15-6C, CSMWG15-6D*)

OW: Red colour is not an option. Standard ship symbol is dangerous in some circumstances. The waterline outline of the ship may be more useful. GB: OEMs should have the freedom to build ship outline if OEMs desire it. Colour fill could be helpful in some situations. MJ: symbol is the responsibility of IEC, red not suitable as reserved for dangers. It was agreed that there should be leeway for OEMs to portray true shape. Colour fill may also be variable. Conclusion: more detailed ships outline supported but forward to WG ?? to reflect in a new edition of IEC 61174.

Action: MJ to refer to WG7/WG13 to explicitly allow the ship symbols to be styled in the true shape of superstructure and the hull

← --- Mise en forme : Puces et numéros

3.2 Pending CSMWG issues:

Port Security Limits (*doc: CSMWG15-11A*).

CR presented the issue. As these areas contain restrictions, they will more than likely be encoded in ENC's as **RESARE** but this has not been discussed at TSMAD. The US has advised that they actually use physical cables and buoyed obstructions across naval berths and these can be adequately encoded as existing object **OBSTRN** with CATOBS 9 (ground tackle) or 10 (boom). An IHO CL was issued to MS and response so far indicated there is not much support for these limits on charts, (preferring to add the information to associated nautical publications, rather than on the chart). Area patterns for large areas doesn't appear to be suitable, as it may not necessarily be navigational in nature. By means of SCAMAX such limits could be shown in certain navigational purposes, i.e. 'general' or smaller scales only, whereas the limits would be suppressed in coastal, approach and harbour ENC's. No requirement for CSMWG at present and it appears there is no requirement for a new S-57 object.

Action: Monitor and see if anything required of CSMWG (CR)

Presentation of chart scale boundaries on SENC.

PB presented the issues. The PL requires **M_CSCL** to show boundaries between significantly larger and smaller scale areas. This is particularly an issue when parts of an area are compiled by different HO's and there is a small gap or different navigational purpose. An example can be seen in the S-64 TDS (PB's graphic). Suggests the area be symbolised with a dash pattern, rather than the boundaries. KI: Small gaps between data sets causes this problem. Suggests small gaps be ignored by ECDIS. PL: new ENC consistency has looked at the data gap issue (producer's problem). RENCs are aware of this problem and it was suggested that they should solve this problem before issuing data. However some HO's are not in a RENC and may not be aware of this problem. If no RENC and a national boundary is in dispute, CSMWG cannot solve such issues. Odd Breivik (OB): this has been raised in RENCs (TEWG). RC: re-scheming is being made between producer nations. MJ: should be raised at regional hydrographic commissions with examples.

Action: MJ will prepare a short paper for HCs and also for the new CSMWG bulletins.

doc: CSMWG15-13A

Second paper on IHO **Test data Sets** (TDS): PB explained the use of S-57 feature to feature pointers. The ENC PS recommends pointers not be used across cells. TDS has no example of the use of dates, only using updates. An example of a time dependant object would be useful in the TDS. Could request Hannu to correct TDS. If he cannot do this, other arrangements to be considered (PB?).

Action: UKHO (RC) to have an example of a time varying object added to TDS.

Another issue is the TDS has an obstruction that falls off a cell. The update must be rejected but this is not clear in the specifications. GB: originally it wasn't clear if the data quality check was the producer or ECDIS responsibility. ECDIS should not have to check quality issues. RC: RENCs should filter out these errors. Could be tidied up in IEC 61174 if a new edition is later produced (WG 7).

No immediate action required.

Third issue '**unknown objects**' symbolised with a '?'. The file appears to be corrupt in INVBASE (point 5).

Action: UKHO (RC) to address in the tidy-up of the TDS new edition of S-64.

GB: the experts in CSMWG easily agree to these issues, but it takes time to communicate and fix TDS, etc. Type approval is carried out every month and inspectors have no idea of what goes on at CSMWG and rely on the TDS. Suggests bulletin board between IHO and IEC to include statements for type approval authorities. Could be on OEF as well. May conflict with IEC 61174 but the bulletin board will only contain comments without authority. MH: S-64 be corrected ASAP with note on CSMWG bulletin board. CR: if another issue comes up next week, discuss on OEF, conclusions circulated by correspondence to CSMWG members and to be approved for adding to the bulletin board.

Action: separate section to be set up on the CSMWG bulletin board with educated advice (CR and MJ to draft up wording).

CSP issues:

PB advised that there were corrections required to DEPCNT03. It was agreed that this will eventually lead to a deferred amendment.

Mise en forme : Puces et numéros

LIGHTS05 is missing a loop to look for another non-sectored light at the same location. Agreed that an amendment may be required but is to be further investigated by the experts, which may be a future amendment.

Action: PB to add this issue to the OEF for OEMs to consider and respond to CSMWG (with a time limit on discussion).

Complex line styles: there are single unit and composite line styles, but no attribute to distinguish between the two at the machine-readable level. There is also inconsistency between .dai and symbol descriptions. GB: .dai files are no longer maintained (was based on HPGL). Is the syntax describing complex linestyles supported by C&S? Printed description will suffice. It is up to OEMs how to draw the line. SH: we now have only 2 types of line styles, simple and complex.

Action: wording to be corrected in PL 3.2. PB, SH, OW and MJ to review and correct and eventually become a deferred amendment and promulgated on the new CSMWG bulletin board.

3.3 Visions for visualisation – how to proceed with S52?

docs: CSMWG15-12A, CSMWG15-12B, CSMWG15-12C)

General discussion by MJ: what is the future strategy for the continued maintenance of the ECDIS presentation library? The new edition of the PL was basically a success. Only a few minor mistakes got through. Programmers appear to be happy with it. 36 subscribers purchased the new PL. On the other hand, there are not many contributions from the HO community to CSMWG anymore, they appear to be concentrating on data creation. There is also low attendance at CSMWG meetings from HOs (5), from industry (2 OEMs) with no input papers. It is understood that the existing PL mirrors computer graphics technology of the mid 90s (end 80s) and some ECS are more advanced in graphical display already. Adapting to technology such as graphic cards and processing power would for example allow more centred symbols and better line styles. It is also understood that a new Edition of S-57 may lead to a serious reconsideration of the presentation mechanism. There are several options open to use:

Option one:

IHO release control of the electronic chart display in full. Considering the efforts IMO spent to harmonise Navigational Symbols, it is not likely that IMO would accept a diversity of chart displays which may result from the release of control.

Option two:

PL refit: IHO could hire a consultant or group of experts who travel around all of the OEMs who are interested to contribute and collect good ideas for re-design for areas that need re-design and consolidate the PL. They could draft desirable changes for design and present this to the CSMWG for discussion. Such enhancements could then be built into a new edition of the PL. This could however be expensive.

Option three:

The CSMWG is currently tasked with a low level maintenance function. Minor corrections such as CSPs can be done under contract by capable consultants promulgated on the new CSMWG bulletin board. Minor adaptations of the symbology, e.g. as for ASL can be handled via correspondence. This option accepts that the construction of the PL is no longer a modern computer chart presentation in a technical sense.

Comments: MH: CHRIS has confirmed IHO's role in standardisation of the display of chart information. The problem is that a number of HOs are not (supposedly) concerned about display issues. For safety of navigation, there is a need to standardise chart information similar to the paper chart. Mariners complaints may get back to the IHO or HOs. It is not clear what the consultants would do with the redesign of the PL. We could simplify the organisation of the PL – too many annexes, etc. Partly ISO format may help to resolve simplification. IHO is relying on ISO and CSMWG cannot avoid moving in this direction. We need an assessment of the PL compared with ISO 19117 requirements (current work item of this group).

Outcome of discussion: CSMWG supports the continuing low level maintenance of the existing PL Edition 3.3 - renaming this a PL-Moratorium – until more clarity about the future application of S-57 E4 ENC production has been reached. It is understood by the group that this strategy will set the existing PL further behind the progress technology. At the next CSMWG in 2006, the Chairman will invite type approval authorities to attend in order to discuss the scope of interpretation of PL items and the allowed deviations.

Action: MJ report to CHRIS17 outlining issues as discussed. Closer liaison with type approval authorities is to be encouraged.

3.4 Any other business

MJ: The new S-57 ENC PS will not be published before 2008, which corresponds nicely with the high speed craft rules, then the 2010 follow on. These requirements will accelerate all future requirements for S-52. Carriage requirement should boost the whole importance of ECDIS.

RC advised a typo error in the PL E3.3 section 12.2.2 (subsection 4.2, Page 114)

Action: deferred amendment and CSMWG bulletin.

2.3 Next meeting (venue, dates)

Monaco next year or if there is sufficient interest, could be held immediately after the formula one race. (After meeting IHB is available are 29-31 May 2006)

2.3 Close

Annex A

Action items resulting from the discussions made at the meeting:

No	Minutes Ref	Description	Who	By when	Completed
1	1.4 Items 2-4	CSMWG forum to include extract from letter to holders of S-52 PL with dates of implementation	CR, MH	Jun 05	
2	1.4 Item 9	Advise WG13/WG7 about AIS symbol colour	MJ	30 Jun 05	
3	1.4 Item 11	Check if Chart 1 TIFF file on IHO website	IHB (MH)	31 May 05	
4	1.4 Item 13	OEF to be added to CHRIS17 agenda	OEF report	July 05	
5	1.4 Items 16-18 (Day 2)	Grace period to adopt PL E3.3 re linear depth areas to CHRIS17 and Stakeholder's Forum (IMO proposal) – raise with S-52 agenda at CHRIS17 and issue IHO CL to MS raising the issue.	MJ MH	July 05 July 05	
6	1.4 Items 16-19	Update TDS for linear depth areas (area with them in, area with them removed)	RC	Before CHRIS17 if possible	
7	1.4 Item 26	Add to CSMWG Bulletins that S-57 objects RIVERS and CANALS are now in Standard Display	CR	Jun 05	
8	1.4 Item 27	Workshop on ENC loading strategies discussion back to back with S-63x workshop. Open cswg OEF discussion on topic.	MJ, GB	Jun 05	
9	1.4 Item 28	CSMWG bulletins and FAQs for CSMWG IHO website	CR, IHB (AP)	Jun 05	
10	1.4 Item 31	CSMWG + TSMAD encoding bulletins re USAG and linear depth contours	CR, PB	Jun 05	
11	1.4 Item 32	CSMWG + TSMAD encoding bulletins re new CSP for WRECKS	CR, PB	Jun 05	
12	1.4 Item 34	CSMWG + TSMAD encoding bulletins re obstructions, rocks and wrecks	CR, PB, ME	Jun 05	
13	1.5	List PL maintenance option in CSMWG Report to CHRIS17	MJ	Jul 05	
14	1.7	Future work: agreed symbols for ASLs may need LUT when S-57 creates new objects, experiment with see through lines for features such as ESSA and PSSA		Future work	
15	2.1	GeoSym symbols to be monitored for possible future action (IHO register?)	DT & all members	ongoing	
16	2.2	Investigate usefulness of transporting PL to ISO 19117	PB	When???	
17	2.3	AML development to be monitored for ideas for S-52	All members	ongoing	
18	2.4	Amended IMO ECDIS PS. Members to advise national IMO NAV delegates of current situation.	MJ, all members review	When???	
19	2.4	Deferred amendment re use of AIS symbols and RESBU and circulate to members for acceptance.	MJ, SH	Jun 05	
20	2.5	Monitor action of IHO CSMWG re depiction of AIS on paper charts and inform CSMWG members of actions.	CR	ongoing	
21	3.1	Portrayal of VALSOU and DRVAL1 as soundings – prepare new CSP. CARIS source	MJ, CARIS, SH, GB, OW and PB	Dec 05	

22	3.1	Cursor pick reports and PICREP – issue to CHRIS17 for possible R&D funds	MJ	Jul 05	
23	3.1	Own ship symbol – refer to WG7/WG13	MJ	30 Jun 05	
24	3.2	Port limits – symbol requirements to be monitored	CR	ongoing	
25	3.2	Scale boundary gaps and overlaps – short paper for hydrographic commissions and CSMWG Bulletin.	MJ	30 Jun 05	
26	3.2	TDS issues to be added to and corrected, possible new edition of S-64, Part of CSMWG report to CHRIS17. Explanation as CSMWG Bulletin. Review of TDS plots (Hannu)	RC, MH, MJ CR and MJ Hannu	Before CHRIS17 if possible	
27	3.2	CSP issues – prepare discussion for OEF, then draft amended CSPs for amendment	PB	31 May 05 (on OEF)	
28	3.2	Complex line styles – wording in PL to be reviewed and corrected for deferred amendment	PB, SH, OW, MJ	30 Jun 05	
29	3.3	Options for future S-52 PL to be presented to CHRIS17	MJ	15 Jul 05	
30	3.4	PL editorial correction – amendment	RC, SH	30 Jun 05	
31		Draft Minutes (Record of discussion), place on OEF and IHO CSMWG site	CR	End May 05	
32		Update membership/contact list	CR	End May 05	
33		Add new CSMWG15 papers to IHO website	CR, MH	End May 05	
34		Prepare discussion items for Stakeholders' Forum – OEF, CSMWG bulletins, type approval issues, own-ship symbol, deferred amendments,	MJ	15 Jul 05	
35		Assessment of ISO 19117 possible application to S-52 as part of contract.	PB	Mar 06	