|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| S-98 Annex C | UKHO | C-9.1.1 | S-128 datasets used for ECDIS Update Status reports | te | With reference to the following:  **AGGREGATOR** S-128 producers – aggregate data together for the purposes of running a service for end users. They can only digitally sign S-128 datasets which support exchange sets and the production of update status reports.  Aggregators may create S-128 for their service which may not equate to a single exchange set. S-128 could be delivered separately to an exchange set. | **AGGREGATOR** S-128 producers – aggregate data together for the purposes of running a service for end users. They shall create and digitally sign S-128 datasets which support their service offering and the production of update status reports. | 1. **Accept.** |
| S-98 Annex C | UKHO | C-12.2.1 | Para 4 | ge | Since the HO will not issue a data coverage diagram, the ECDIS should compile a graphical index of the HO ENC data available……  Why would the ECDIS compile for a given HO rather then an aggregated service (maybe using S-128)  *Would welcome further discussion/clarification on the use of S-128 in graphical indexes.* | ….., the ECDIS should compile a graphical index of the ENC data available….. | 1. **Accept, proposed delete clause for now,.** |
| S-98 Annex C | UKHO | C-22 |  | te | Section 11.5 references the use of XML for additonal information in text form. The footnote also suggest that TIFF in sot recommended for pictures embedded in HTML.  This seems in conflict to C-22 Support File Formats. |  | 1. **XML/HTML needs to be agreed stlll and is informative in current draft.** |
| S-98 Annex C | UKHO | C-12.11.2.6 | Table C-24 | ge | Area primitive stated in table | Replace ‘Area’ primitive with Surface or amend ‘Curve’ to ‘Line’ to be consistent | 1. **Agree**. |
| S-98 Annex C | UKHO | C12.7 |  | ed | Consistent terminology | Replace ‘Hydrographic Office’ with ‘HO’ | 1. **Agree** |
| S-98 Annex C | UKHO | Appendix C-4 | C-1.1  Para 3 | ge | NOTE: Also, in the case of S-101 or S-57 the user sets the value for the safety contour, but if the exact fit is not found from the available depth information in S-101 or S-57 then the safety contour defaults to the next deepest which may be over 10 metres deeper situation than the situation based on the value set by the user.  Would welcome discussion as to make the highlighted text clearer, use of ‘situation’ is unclear |  | 1. **Agree, reworded, think this is typo.** |
| S-98 Annex C | UKHO | C-6.1.2 |  |  | This lists S-122 S-123 etc but no display is available currently for these products suggest moving to C-6.1.3 Future Data Products.    Justification - by including these without corresponding catalogues or S-164 tests the resulting display will be a problem. |  | 1. **Discuss. The list is actually informative. OEM needs to implement S-100, not individual product specs. Need to dscribe this.** |
| **S-98 Annex C** | **UKHO** | **C-7.1** |  |  | **S-98 should make it explicit if both Lua and XSLT portrayal must be supported.** |  | 1. **Added mandatory to support both. Discuss.** |
| S-98 Annex C | UKHO | C-11.5 |  |  | Needs to reflect .txt and .tif as S-101 retains these. |  | 1. **Referenced section from C-11.5** |
|  |  |  |  |  |  |  |  |
| S-98 | FR | C-2.1 |  | ed | S-98 refers to S-98 itself | Delete S-98 in the table of references. | 1. **May need to refer to specific parts for interoperability.** |
| S-98 | FR | C-4.1 |  | ed | The sentence “For S-100 purposes, the System Database is compiled from multiple S-100-based products.”is in italic, but it’s not a quote of MSC530(106) | Delete italic style. | 1. **Agree, de-italicised.** |
|  | FR | C-12.6.4 |  | te | We understand that manual chart correction to ENC and to non-ENC use the same process. But how will the 2 type of information be managed in the ECDIS and populated into the appropriate viewing groups? |  | 1. **By using a standard set of symbols. Annex to be added.** |
|  | FR | C-21.2.1 |  | te | The overlapping buffer between adjoining ENCs can be less than 5 metres. | Replace "a 5 metre overlapping buffer zone may be used." by : "an overlapping buffer zone of up to 5 metres may be used." | 1. **Agree** |
|  | FR | C-21.2.1 |  | te | We suggest there is no indication “overlap” when it is less than 5 metres. | Replace: “Where an overlap of two or more datasets exists the ECDIS must only display one dataset for the overlap area and provide a permanent and persisting indication “overlap”.  By: “Where an overlap of more than 5 metres between two or more datasets exists the ECDIS must only display one dataset for the overlap area and provide a permanent and persisting indication “overlap”. | 1. **Proposed** |
|  | FR | C-21.2.2 |  | te | We suggest there is no indication “overlap” when it is less than 5 metres for S-104 and half resolution for S-102. |  | 1. **Clarify?** |
|  | FR | Appendix C-2 | Figure C-2-2 | ed | Change SENC to system database |  | 1. **In progress, agree.** |
|  | FR | Appendix C-3 |  | te | Report content: it’s confusing to see S-102 and S-102 shown in the ENC Update Status report |  | 1. **Done**. |
|  | FR | Appendix C-3 |  | te | Is ENP defined in a high level document? Not found in MSC530(106). |  | 1. **Not sure. Discuss. Added to references.** |
|  | FR | Appendix C-4 |  | ed | Appendix C4 paragraphs are numbered C1… | Review the numbering in C4 Appendice. | 1. **Formatting. Will fix at end.** |
|  | **FR** | **Appendix C-4** | **C-1.3 Implementation** | **te** | **Shouldn’t S-102 also replace Soundings from S-101** | **Add: 4. Soundings to the list of objects suppressed by S-102.** | 1. **I don’t believe this is the case.** |
|  | FR | Appendix C-4 | C-2.2 | te | An overlap of less than 5 metres for example should be permitted for S-104. The text OVERLAP is shown only if the overlap is more than 5 metres. |  | 1. **Proposed. Needs work.** |
|  | **FR** | **Appendix C-4** | **Substitution and adjustment of depth values** | **te** | **This section is sometimes difficult to understand:**   * **There are references to substitution of valueOfSounding. This attribute is on Wrecks, Obstructions, etc., but there is no mention of the Z value of sounding features. Should it be included here?** * **What if an S-101 ENC contains a wreck, based on an CATZOC B survey, but a more recent CATZOC A1 survey in S-102 product shows no wreck. Will valueOfSounding of the Wreck be adjusted with the depth in S-102?**   **The former remark relates to S-101 and S-102 product consistency. Our feeling is that S-102 MUST always be as safe as S-101. Due to time needed by HOs to process their ENCs, and the need to deliver S-102 ASAP, both products cannot be always consistent. S-102 . We think guidance is needed somewhere in S-98 for data providers.** | * **Add more figures to better illustrate depth substitution between S-101 and S-102 + S-104.**   **Add a section dealing with consistency principles between S-101 and S-102 (for data providers and maybe also for implementers (ECDIS consistency checks?).** | 1. **Added comment in header. Think this may require interaction with validation and other groups. We can deal with this separately.** |
|  |  |  |  |  |  |  |  |
| S-98 Annex C | ntou | C-15.2  Pick report descriptions | first paragraph | te | The 1st paragraph implies a pick report function on the displayed symbol, in addition to that on features.  Portrayal catalogue contains many elements, including the portrayal rule which describes the transformation of feature data into drawing instructions. The question is: where/how to get the “explanation” of the as drawn symbols from portrayal catalogue?  Take ‘Lateral Beacon’ as an example (see BeaconLateral.lua). The symbols to be finally drawn might be CAIRNS01.svg (because of the shape) plus that from TOPMAR01.lua, not BCNLATxx.svg; then the description would be simply “cairn” (plus that of the topmark). On the other hand, name of that feature class is ‘Lateral Beacon’ (in S-101, Ed.1.2.0), which seems readily understandable.  For ‘Harbour Facility’ (following HarbourFacility.lua), the symbol could be CHINFO07.svg in S-101 and the description would be “HO information note”.  C-15.1 (1) states that “full feature and attribute names” should be displayed. It is referring to names of the types in Feature Catalogue, right? | Revise C-15.2.  Provide clarifications.  If appropriate, use only those contained in the Feature Catalogue for the pick report descriptions. | 1. **Agree this is not clear, needs requirement to be checked before providing two cursor picks.** |
| S-98 Annex C | ntou | C-16  Alerts and Indications | 2nd paragraph | te | C-12.9.7, C-12.9.8, and C-12.9.11 all state that “The ECDIS must implement support for the Alert and Indications Catalogue which may be provided within each product’s Portrayal Catalogue.”  C-16 states that the product specification “should specify any feature combinations that match one or more of the areas for which alarm or indication should be given” “using a machine-readable Alerts and Indication Catalogue”.  That means, for example, whether Bridge and PylonBridgeSupport are to be detected can only be found by checking whether AlertReference:NavHazard is added in their lua rules.  It seems rather risky to specify such feature combinations only in a machine-readable “alert” catalogue (with the actual feature combinations scattered in the rules of the Portrayal Catalogue).   1. How does a data producer know whether the feature combination could trigger a detection, so as to make encoding decisions accordingly? 2. How to make sure that the alert/portrayal catalogue has fully and correctly captured those need to be included. 3. How to prepare training material for the end user/mariner to know what are being detected?   Has ‘alerting/indication’ of dangers or areas with special condition been discussed during the modelling/remodelling for product specifications; is there an SOP between the review/decisions and the alert catalogue?  One observation as an example:  Wind Turbine is a new feature type in S-101. Although wind turbine ‘in the water’ is added to ECDIS base display (view group), AlertReference is not found in ‘WindTurbine.lua’.  Another observation as an example:  Traffic separation zone is among the list of areas for which special conditions exist (MSC.530 (106) Appendix.4). In S-57, TSEZNE can only be of area type, while TSELNE is for the line type. In S-101, TSEZNE and TSELNE are merged into one ‘Separation Zone or Line’ feature type.  S-101 PC (SeparationZoneOrLine.lua) only adds AlertReference:ProhAre to the case of Surface type.  What the COLREGs rule 10 (TSS) says is “keep clear of a traffic separation line or separation zone”. Why is the same concept/feature treated differently? | To minimize the risk and facilitate related developments/review/validations  Add, e.g. to DCEG, human-readable lists of feature combinations for which alarm or indication should be given; in particular, which are considered a ‘danger’ and ‘area with special conditions’ that should be detected according to MSC.530(106).  Note the case of ‘Wind Turbine’, and consider to add AlertReference:NavHazard (in S-101 PC) for the detection of offshore wind turbines.  Clarify/ discuss the case of ‘Separation Zone or Line’ in S-101. | 1. **Agree with this but this isn’t an S-98 Annex C issue I believe but a broader one.** |
|  |  |  |  |  |  |  |  |
|  | rmm | 3.3 |  | te | Other IHO S-1xx standards and specifications use “must” to denote mandatory requirements | Conform to IHO convention or propose a revision of the convention | 1. TSM resolved to use ***MUST*** |
|  | rmm | 3.3 |  | Te | I don’t think the use of “informative” is limited to the particular usage described. If it’s defined that restrictively every use of “(informative)” in the document (actually, in headings) will have to be checked to confirm that it conforms to the conditions described here. | Verify usage of “(informative)” or | 1. **Agree, needs work. Will clarify in next version.** |
|  | rmm | 8.3.1 |  | Ed | Empty tables like the one in 8.3.1 were intended as placeholders for potential future additions. Since nothing has turned up since Edition 1.0 was published, it can be removed. | Replace text and table in 8.3.1 (General Navigation Functions) with a sentence to the effect that “This document does not define any general navigation functions in addition to those in IMO/IEC standards”. | 1. **Done.** |
|  | rmm | 8.3.2 |  | Ed | Stricken text was retained for review purposes. | Delete stricken text before finalization | 1. **Done**. |
|  | rmm | 8.3.5 |  | Ed | (See similar comment for 8.3.1) | (As for 8.3.1, mutatis mutandis) | 1. **Done**. |
|  | rmm | 10.5 | Comment | ge | “This is all of them” – there is no what some product specification might decide to add... | (might not be literally “all of them”) | 1. **ok** |
|  | rmm | 10.6 | Comment | ge | Comment “is this required functionality” Yes, this is describing pick reports. | Retain | 1. **I think this needs mandatory language, I don’t think these are guidelines?** |
|  | rmm | 11.5 | Comment | Te | “Should” is the right language here. Leave it to the ECDIS developers to decide what works best. | Works OK as guideline, no need to make things mandatory |  |
|  | rmm | 11.5 | Comment Bullet 1 | Te | How can it be otherwise? Users can’t be expected to decipher HTML. | Retain as is. | 1. **IT’s a question of how much HTML should be implemented by the OEM. If that can be specified then we’re ok. Discuss separately then include.** |
|  | rmm | 11.5 | Comment bullet 5 | Te | Concerns not allowing access to off-system links.  “where is it specified”” - it is specified here.  Annex C should be conservative about security. | Unless the security experts explicitly allow off-site links on operating ECDIS, or mandate a firewall, links should be disabled. | 1. **Needs discussion** |
|  | rmm | 11.5 | Comment bullet 6 | Te | Again, it is specified here.  This is a user interface issue. Opening a largely white background PDF file might destroy night vision. | Retain | 1. **Agree, the question is really an S-164 question, not an S-98 Annex C one.** |
|  | rmm | 21.1 | Item 5 in enumerated list | Te | Why is it impossible for a PC to be updated without a concomitant update to the feature catalogue? What if there is an update to the symbol for a feature type but no changes to the properties of the feature class? |  | 1. **Ref TSM 2024 discussions.** |
|  | rmm | 22 |  | Te | XML is required for codelist dictionaries and language packs. The languages list, for example, is in XML. | Retain XML | 1. **Portrayal to use is the issue, not transfer onto the system.** |
|  |  |  |  |  |  |  |  |
|  | rmm | Appendx C-4 | C-2.4 | ed | “WLA can only be carried out in areas of coincidental S-102 and S-104 coverage”  This (“coincidental”) can be interpreted in several different ways many of which are much more restrictive than described in the details later in this clause. | Rephrase as:  WLA can be applied only in areas where there is data from both S-102 and S-104; (etc., etc.) | 1. **Needs clarification, needs to reference nodata values I believe.** |
|  |  |  |  |  |  |  |  |
| S-98 | DE | Annex C | Footer | ed | The Footer states May 2022 Edition 1.0.0 | The Footer must be changed to February 2024 Edition 1.2.0 | 1. **Done** |
| S-98 | DE | C-2.1  C-4.2  C-5.1  C-5.2  C-7.2.10  C-9.1.1  C-9.5  etc… |  | ed | Text contains double spaces | Remove the double spaces | 1. **TBD once wording is complete.** |
| S-98 | DE | Annex C | several | ed | The notation of the information (informative) is not uniform in the document. The following notations were found.  (informative)  (informative)  [INFORMATIVE]  [Informative] | Change all occurrences to (Informative) as described in chapter C-3.3.  Alternatively, change all occurrences to [INFORMATIVE]. We think that this notation makes the information clearer. Chapter C-3.3 would then also have to be updated. | 1. **Agree. Will revise.** |
| S-98 | DE | C-1 | 3rd paragraph | ed | For consistency “standards” should be used. | Replace “principles” by “standards” | 1. **Agree. Done.** |
| S-98 | DE | C-2.1 | Reference S-100 | te | Annex C currently refers to S-100 ed. 5.0.0.  Is this correct? Shouldn't all documents be adapted to S-100 ed. 5.2.0? | Change the reference to S-100 ed. 5.2.0 | 1. **Should be 5.2.0 (when approved)** |
| S-98 | DE | C-2.1 | Item 3 | ed | IEC 61174 edition 5 is the one intended to be used for dual fuel S-100 ECDIS | Replace Edition 4.0, 2015 by Edition 5.0, 202X | 1. **Agree. Done.** |
| S-98 | DE | C-2.2 | Line 2 | ed | MSC.232(82) should be deleted. | MSC.232(82) should be deleted | 1. **Done except for a descriptive reference as the origin of ENDS in C-4.1** |
| S-98 | DE | C-3.3 | Whole section | ge | Use of “informative” is very confusing. When functional requirements are listed, partly as quotation of IMO, IEC or IHO standards and complemented by implementation specifications, this should not be “informative”. As it is in PresLib S-52 it should be normative text with mandatory (must) and optional (may) requirements to ensure harmonized behaviour.  Implementers may read only the non-informative parts and thus miss relevant requirements. | Use “informative only where it is really informative only. | 1. **Agree, it’s confusing. Will redraft.** |
| S-98 | DE | C-4 | Title | te | The clause is a mixture of informative and normative content so that it should not be titled “informative. | Remove:  [INFORMATIVE] | 1. **Done.** |
| S-98 | DE | C-4.2.1 | 1st sentence | te | The WLA is required by MSC.530(106) 5.10. | Change to:  The adjustment of depth information by water level is provided: | 1. **Not sure?** |
| S-98 | DE | C-4.2.1 | 2. | te | Align with Appendix C-4, 2.3. | Change to:  2.  a. Selected single date and time;  b. Selected date and time period;  c. Linked to an estimated route schedule with selected check distance and time resolution. | 1. **Proposed new wording – clarify?** |
| S-98 | DE | C-6.1 | Title | te | S-98 should be the document to specify which product specifications are mandatory to be handled by ECDIS (phase 1). Therefore this section should be normative and not informative. It has to be amended when the second phase of the IHO Roadmap for the S-100 Implementation Decade comes into force.  It cannot be expected that an S-100 DF-ECDIS type approved by applying S-164 edition 2.0.0 tests and on the market beginning of 2026 will be compliant to all S-100-based data products developed after phase 1.  S-164 in the first implementation phase is rather testing compliance with the product specifications listed for phase 1 than testing compliance with all aspects of S-100. For further data products there will be not yet any test data. So it cannot be guaranteed that the type approved ECDIS is fully compliant to S-100 as a whole.  The expectation is that S-164 will be amended for phase two to include test data for the additional product specifications. This would mean that the type approval has to be repeated each time new product specifications are introduced. | Remove:  [Informative] | 1. **Needs discussion. I’m not sure this is the case as OEMs implement S-100 and Phase 1 and Phase 2 are IHO constructs, not IEC requirement. The requirement is S-100 only.** |
| S-98 | DE | C-6.2 | 1st paragraph | ed | Reference should be “MSC.1/Circ.1609” | Change reference to:  MSC.1/Circ.1609 | 1. **Replaced throughout document.** |
| S-98 | DE | C-8.3 | 2nd paragraph | te | As S-98 Annex C is dedicated for ECDIS and for ECDIS it is mandatory to implement S-98 the restraint in this paragraph is confusing. | Remove paragraph. | 1. **Done.** |
| S-98 | DE | C-9.1.1 | 1st paragraph | ed | IMO Performance Standards (MSC.530(106) section 1.5) states that ECDIS should enable the mariner to execute all route planning, route monitoring, and positioning at present performed on the paper chart. “at present performed on the paper chart” not part of the section 1.5) in the PS MSC.530(106) | Remove “at present performed on the paper chart” | 1. **Done**. |
| S-98 | DE | C-9.7 | 1st paragraph | ed | Reference to ECDIS PS incorrect | Replace Circ by MSC | 1. **Done**. |
| S-98 | DE | C-9.7 | 2nd paragraph | ed | References should be aligned with the new PS ( MSC.530(106)) | 4.5 should be deleted. Replace 4.6 by 4.5 and 4.8 by 4.7. | 1. **Done**. |
| S-98 | DE | C-11.3 | Title | te | This section should be normative.  Currently the text selection is mandatory in IEC 61174. | Remove:  [Informative] | 1. **Functionality is mandatory but the viewing groups are in the PC. Needs to clarify.** |
| S-98 | DE | C-11.5 | 1st footnote | ed | Typo in footnote 7 | Footnote 7: “HTMIL” should be “HTML” | 1. **Done.** |
| S-98 | DE | C-12.1.2.1 | Whole section | ge | To be marked as under development. There are ongoing discussions about MaximumDisplayScale and OptimumDisplayScale. | The section is to be marked as under development. | 1. **Agree. Will resolve. We should probably draft on the basis it’s agreed though.** |
| S-98 | DE | C-12.1.3 | 2nd paragraph | ed | Why do we have the display priority 9 instead of 3 according to S 52 (10.1.9.1)? | Replace 9 by 3, if the change was unintentionally. | 1. **Changed. Not sure if this is correct though.** |
| S-98 | DE | C-12.1.4 | Last paragraph | ed | For example if the display scale of the situation in the data coverage diagram was 1/3,500 the area compilation scale 1/12,500 would have an overscale indication of X 3.6 but would have no OVERSC01 area fill.  May need to be amended, when final decisions on OptimumDisplayScale issue is available. | Replace Compilation scale by maximumDisplayScale. | 1. **Revise following ENC PT.** |
| S-98 | DE | C-12.1.5 | 1st paragraph | te | This section does not duplicate functional requirements described by former sections. This requirement indicates that larger scale data are available if the selected display is smaller. Typical situation when coming from sea to harbour, in order to inform the mariner that chart data with higher precision and more details are available and can be selected by enlarging display scale. | Keep the section. | 1. **Agree.** |
| S-98 | DE | C.12.9.7 | 1st paragraph | ed | Clause 11.3.5 Text should be aligned with MSC 530 (106). | Clause 11.3.5 Route Planning states: A graphical indication should also be given if the mariner plans a route closer than a user-specified distance from a user-selectable category of point objects, such as a fixed or floating aid to navigation or isolated danger. | 1. **Done**. |
| S-98 | DE | C.12.9.7 | 2nd paragraph | ed | Clause 11.4.6 Text should be aligned with MSC 530 (106). | Clause 11.4.6 Route Monitoring states: ECDIS should give a warning or caution or indication as selected by the mariner and related graphical indication if, continuing on its present course and speed, over a specified time or distance set by the mariner, own ship will pass closer than a user-specified distance from a user-selectable category of danger (e.g. obstruction, wreck, rock) that is shallower than the mariner's safety contour or a user-selectable category of aid to navigation. | 1. **Done**. |
| S-98 | DE | C.12.9.7 | New paragraph | te | Clause 11.4.8 should be added from MSC 530(106). New requirement for monitoring of current and the next leg in the ECDIS PS. | Clause 11.4.8 Route Monitoring states: A graphical indication should also be given if the selected route goes closer than a user-specified distance from a user-selectable category of point objects, such as a fixed or floating aid to navigation or isolated danger. |  |
| S-98 | DE | C.12.9.8 | New paragraph | te | Clause 11.4.8 should be added from MSC 530(106). New requirement for monitoring of current and the next leg in the ECDIS PS. | Clause 11.4.8 Route Monitoring states:  A graphical indication should be given if the current or the next leg of the selected route goes closer than a user-specified distance from the boundary of a user-selectable category of prohibited area or a geographic area for which special conditions exist (see appendix 4). | 1. **Done**. |
| S-98 | DE | C.12.9.10 | 1st paragraph | ed | Clause 11.3.4 Text should be aligned with MSC 530 (106). | Clause 11.3.4 Route Planning states:  A graphical indication is required if the mariner plans a route closer than a user-specified distance from own ship's safety contour. | 1. **Done**. |
| S-98 | DE | C.12.9.10 | 2nd paragraph | ed | Clause 11.4.3 Text should be aligned with MSC 530 (106). | Clause 11.4.3 Route Monitoring states:  It should be possible to select that ECDIS gives an alarm and related graphical indication if, within a specified time or distance set by the mariner, own ship will pass closer than a user-selected distance from the safety contour. | 1. **Done**. |
| S-98 | DE | C.12.9.10 | New paragraph | te | Clause 11.4.7 should be added from MSC 530 (106). New requirement for monitoring of current and the next leg in the ECDIS PS. | Clause 11.4.7 Route Monitoring states:  A graphical indication should be given if the current or the next leg of the selected route passes closer than a user-specified distance from the safety contour. | 1. **Done**. |
| S-98 | DE | C-12.9.13 | 1st paragraph | ed | 11.4.12 should be aligned with MSC 530 (106). | Replace “An alarm” by “A warning” | 1. **Done**. |
| S-98 | DE | C-13 | List of types of coverages and time series data | te | In our opinion, the list of data types does not comply with S-100 Part 10c. | The list of data types should be amended in accordance with S-100 10c-6 "S-100 profile of HDF5". The information in S-100 10c-6 also corresponds to the later sections of S-100 Part 10c, such as Table 10c-4 and Table 10c-20. | 1. **Needs further discussion on what ECDIS is required to do** |
| S-98 | DE | C-13 | Last Paragraph | te | “A single data product may […]”  Technically, it is possible to have several spatial types in one product, but we do not see a use case here either.  The example of the S-102 is also no longer up to date. The S-102 no longer uses different spatial types. The tracking list no longer exists in the S-102. | Remove the paragraph | 1. **Deleted**. |
| S-98 | DE | C-13.2 | Text  Table C-25  Figure C-4 | te | In one of the last S-102 PT meetings, Raphael told us that the "sun-illuminated" portrayal is not compatible with the S-100. We are therefore wondering why the representation is also mentioned in the S-98 Annex C.  What is correct? Is the portrayal possible or not? | If it is not possible to use "sun-illuminated" portrayal, it should also be removed from S-98 Annex C. | 1. **Taken out for now. Needs further discussion.** |
| S-98 | DE | C-15.3 |  | te | There are three states of the "S100\_FC\_AttributeVisiblity" attribute (public, protected, private). If "private" is the opposite of "public" and "private" is not displayed in the pick report, then "public" is logically displayed.  What does "protected" stand for?  Either something is displayed or not (true or false). | The purpose of the "protected" value should be explained in more detail here. How should "protected" affect the pick report? | 1. **Not sure what it means but we can ask. Clarified in text.** |
| S-98 | DE | C-15.3.4  C-15-8 |  | ge | The sections appear to be intended to cover very similar content based on the heading. Duplication of information should be avoided. Otherwise, we see the risk that the information provided will become inconsistent with each other in the event of future changes. | Perhaps one of the sections is not needed and can be removed. | 1. **Agree. Deleted 15.8 All interoperabilityIdentifier content will be in 15.3.4** |
| S-98 | DE | C-17 | Last paragraph | te | What shall happen with the context parameters when an ECDIS has to handle different versions of PC for a data product with different context parameters? | Add text for clarification;  and test in S-164 if not yet included. | 1. **Don’t know, short answer. Maybe it’s a combined superset.** |
| S-98 | DE | C-20.4.1.1 | 3rd paragraph | te | Square symbol and indices in formula are incorrect. | Adjust formula:  Δ(u\*,v\*) = SQRT [ (u2\*-u1\*)2 + (v2\*-v1\*)2 ]  ΔE\* = SQRT [ (L2\*-L1\*)2 + (u2\*-u1\*)2 + (v2\*-v1\*)2 ] | 1. **done** |
| S-98 | DE | C-20.4.1.1 | 4th paragraph | ed | Square symbol in unit is incorrect. | Adjust unit:  cd/m2 | 1. **I think this is ok, it’s superscript.** |
| S-98 | DE | Appendix C-1 | Introduction | te | **It should be clearly stated that manual updates are official data entered manually into the ENDS/ENC. Manually entered updates shall be marked by specific symbols. Indications and alerts should be triggered as for all official ENC data.**  **In discussions manual updates were mixed with mariner’s notes/information, which are means to enter a defined set of objects (see S-52, 2.3.1b).** | Add appropriate text. | 1. **Agree. Words to be defined. Added notes in bullets to the section.** |
| S-98 | DE | Appendix C-2 | Title | te | Error codes are normative | Remove:  (informative) | 1. **Agree**. |
| S-98 | DE | Appendix C-3 | Title | te | Rules for generation of ECDIS update Status Report are normative | Remove:  (informative) | 1. **Done**. |
| S-98 | DE | Appendix C-3 | 3rd paragraph | ed | Typo in the 3rd paragraph. | Replace “objecst” by “objects” | 1. **Done.** |
| S-98 | DE | Appendix C-4 | Title | te | This Appendix should be normative as WLA is required in ECDIS (MSC.530(106)).  Requirements for USSC and treatment of depth and water level related S-101 features should also be normative to ensure defined functionality. | Remove:  (informative) | 1. **Done.** |
|  |  |  |  |  |  |  |  |
| S-98 Annex C | DK | Whole document |  | ge | **Is it intended to follow the DCEG convention wrt language which states:-**  ***“Must” indicates a mandatory requirement;***  ***“Should” indicates an optional requirement, that is the recommended process to be followed, but is not mandatory;***  ***“May” means “allowed to” or “could possibly”, and is not mandatory*.** | Review to ensure all mandatory requirements are specified using ‘Must’ | 1. **No, I believe it’s SHALL instead of must. TSM Agreed this.** |
|  |  |  |  |  |  |  |  |
| S-98 Annex C | DK | C-4.2 (c) | 2nd sentence | ed | Current wording is muddled | Integration of tracked radar targets provided for collision avoidance radar (ARPA), or targets tracked by AIS (Automatic Identification System) can be integrated into the ECDIS display ~~is another option~~, as well as other navigational information which may be added to the ECDIS display. | 1. **Done**. |
| S-98 Annex C | DK | C-4.2 (h) | 1st sentence | ed | Change ‘’will have’ to ‘contain’ | In the initial period of S-100 roll-out, S-100 compatible ECDIS are likely to be “dual-fuel” in that they ~~will have~~ contain both S-57 and S-101 ENCs. | 1. Done. |
| S-98 Annex C | DK | C-4.2.1 (2b) |  |  | If a mariner specified date and time have been set should there be a indication displayed? |  | 1. **Yes, believe it is is in the annex.** |
| S-98 Annex C | DK | C-5.1 | 2nd bullet last sentence | ed | Is this sentence required? ‘However, over-strict standardisation will hamper development of an effective interface.’ | Delete last sentence of 2nd bullet point | 1. **Done**. |
| S-98 Annex C | DK | C-5.2 | 1st sentence & para 2) | ge | Should we be talking about *symbols for navigationally-related features and functions* rather than *symbols for navigationally-related symbols and functions* ? | IMO Circulars SN.243/Rev.2 and MSC.1609 define symbols for navigation-related features~~symbols~~ and functions. For ECDIS and INS, this entails the following requirements and recommendations: | 1. **Done.** |
| S-98 Annex C | DK | C-5.2 | para 2) | ge | For consistency if the above change is accepted | For navigation-related features ~~symbols~~, the symbols and icons defined in Annex 1 to SN.243/Rev.2 are strongly recommended. The terms and abbreviations in Annex 2 to SN.243/Rev.2 should be used where terms or abbreviations are needed in the user interface. | 1. **Done**. |
| S-98 Annex C | DK | C-6.1.1 | Last sentence | ge | Last sentence ‘*The list specifies S-100 data products which ~~much~~must be supported in ECDIS*.’ Repeats the first sentence is it really required ? | Delete last sentence | 1. **Done.** |
| S-98 Annex C | DK | C-7.11 | 1st sentence | ge | Should we add *on/off* after *toggled* ? | A viewing group layer defines a collection of viewing groups whose visibility can be simultaneously toggled on/off by an application. | 1. **Done.** |
| S-98 Annex C | DK | C-7.12 | 1st sentence | ge | Should we add *on/off* after *toggled* ? | A display mode defines a collection of viewing group layers which can be simultaneously toggled on/off by an application. | 1. **Done.** |
| S-98 Annex C | DK | C-7.16 | 2nd paragraph last sentence | ed | I may be confused but my understanding is that if a time interval is ‘right-open’ then a dateStart has been specified without a specified dateEnd, If that is the case would it be clearer to use ‘start’ or ‘beginning’ rather than ‘end’ | — if the same interval is specified as “right-open” the start ~~end~~ time point is midnight at the beginning of the specified day (000000 in ISO 8601 terms). | 1. **Needs clarification.** |
|  |  |  |  |  |  |  |  |
|  | SM | C-2.1 |  | Te | The normative references include a dated reference to IEC 61174:2015, which is problematic because this is not the edition that will specify test requirements for the S-100 ECDIS. | An undated reference to IEC 61174 is preferred, together with the statement (taken from IEC 61174:2015) that “For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.”  To avoid referencing an as yet unpublished edition of IEC 61174, the quote from IEC 61174:2015 given in C-12.9.1 “Scale bar and latitude scale” should be deleted, together with the preceding words “as follows”, as a consequential change. | 1. **Suggest we leave for now, and fix once 61174 is in place. Will check undated reference idea with IEC.** |
|  | SM | C-2.1 |  | Te | The dated reference to IEC 61924-2:2012 is out of date because a new edition was published in 2021. However, the standard should not be in the list of normative references anyway because it is not referenced in the body text. | Place an undated reference to IEC 61924-2 in a bibliography. | 1. **Took out. Is it useful? We could create a bibliography.?** |
|  | SM | C-2.1 |  | Te | IMO’s amendments to MSC.252(83) in MSC.452(99) are not recognised. | Reference MSC.452(99) in a manner consistent to the way IMO’s amendments to MSC.191(79) are referenced, or add both amendments to the Bibliography (given that neither amendment is referenced in the body text) | 1. **Biblio? Not sure I understand the amendment issue?** |
|  | SM | C-3.3 |  | Te | The initiative to distinguish between normative and informative test is supported as this will:   1. Assist OEMs in their implementation   Support an assessment of S-164 for test coverage of mandatory requirements | The use of the word “shall” to indicate mandatory requirements will support uniform understanding as OEMs are familiar with this usage from IEC test standards. | 1. **TSM 2024 agreed.** |
|  | SM | C-4.2 | Bullet b | Ed | The words “b) ECDIS, used together with official data, [is] accepted as complying with the up-to-date charts carriage requirements for nautical publications required by regulation V/19 of the 1974 SOLAS Convention amended in 2009” would benefit from refinement. | Suggest “b) ECDIS, used together with official data, [is] accepted as complying with the up-to-date nautical chart and nautical publication~~s~~ carriage requirements ~~for nautical publications~~ required by regulation V/19 and V/17 of the 1974 SOLAS Convention amended in 2009.” | 1. **Done**. |
|  | SM | C-4.2 | Bullet c | Te | ECDIS is not intended to be used for collision avoidance.  AIS targets are reported, not tracked. | Reword to “Integration of tracked radar targets ~~provided for collision avoidance radar (ARPA)~~, targets ~~tracked~~ reported by AIS (Automatic Identification System) into the ECDIS display… ” | 1. **Done.** |
|  | SM | Throughout |  | Te | The term “alarm” is used in place of “alert” | Correct in   * C-4.2 bullet f * C-4.2 unnumbered bullet list * C-9.2.1 bullet 1 * C-16 * C-21.3.4 bullet b (twice)   Other instances of “alarm” are correct. | 1. **Done (ther may be others).** |
|  | SM | C-4.2.1 | Bullet 2 | Te | Clarify that the ability for the mariner to select depth adjustment is mandatory. | “The mariner shall be able to ~~may~~ select one of the following methods” is appropriate.  Other usages of “may” in the document need to be considered similarly. | 1. **Done. Agree others.** |
|  | SM | C-4.2.1 | Bullet 3d | Te | Clarify which “relevant times” are to be available. |  | 1. **Think this is temporal extent.** |
|  | SM | C-4.3 |  | Ed | The list of bullets goes beyond “considerations related to portrayal and user interaction” and duplicates material in IMO’s INS PS. Duplication of requirements is generally not encouraged for maintenance reasons. | Suggest rewording as follows:  “The considerations related to portrayal ~~and user interaction for an~~ that are in addition to the requirements already embedded in the INS standards are outlined below:”  Retaining bullets b and c, since they relate to ECDIS/S-100.  Delete the other bullets as they overlay requirements already in the INS standards and are not intended as additional requirements. | 1. **Done.** |
|  | SM | C-5.1 |  | Te | The statement that “The guidelines in IMO MSC.1609 (Guidelines for the Standardization of User Interface Design for Navigational Equipment) ***must*** be applied to the design of user interfaces for navigation systems.” is not correct as MSC.466(101) enforces only MSC.1/Circ. 1609 Appendices 2 & 3, and not the entire guidelines. | Reword to “The guidelines in IMO MSC.1/Circ.1609 (Guidelines for the Standardization of User Interface Design for Navigational Equipment) ~~must be~~ apply~~ied~~ to the design of user interfaces for navigation systems such as ECDIS and INS” | 1. **Done**. |
|  | SM | C-5.1 |  | Te | This paragraph duplicates, and in some cases (e.g. flashing) conflicts with, IMO & IEC requirements | Retain only the first paragraph, revised as per preceding comment. | 1. **Done**. |
|  | SM | Throughout |  | Ed | Non-standard referencing to IMO circulars | Correct references to read “MSC.1/Circ.1609” and “SN.1/Circ.243/Rev.2” as applicable | 1. **Done**. |
|  | SM | C-5.2 | Bullets 2 and 3 | Te | This doesn’t align with MSC.466(101), and in any case duplicates requirements already in IEC 62288.  Bullet 2 says icons should conform to SN.1/Circ.243 and bullet 3 says icons should conform to MSC.1/Circ.1609.  The issue of which MSC.1.Circ.1609 Appendices are mandatory and which were not was the subject of intense discussion at IEC during the drafting of IEC 62288:2021. The published standard records the international consensus on how MSC.1/Circ.1609 should be applied, and aligns with MSC.466(101), and S-98 should not conflict with these standards. | It’s probably easiest to delete bullets 2 and 3, safe in the knowledge that the requirements are fully tested on type approved equipment by IEC 62288.  Should a decision be taken to retain the requirement then align the mandatory requirements with MSC.466(101):  “5.2.3 Text should be presented using simple unambiguous language that is easy to understand. Navigation terms and abbreviations should be presented using the nomenclature defined in the Guidelines for the presentation of navigation-related symbols, terms and abbreviations (SN.1/Circ.243, as revised) and appendix 2 of the annex to MSC.1/Circ.1609 on Guidelines for the standardization of user interface design for navigation equipment.  5.2.4 When icons are used, their purpose should be intuitively recognized by appearance, placement and grouping as defined in appendix 2 of the annex to MSC.1/Circ.1609 on Guidelines for the standardization of user interface design for navigation equipment." | 1. **Done**. |
|  | SM | C-5.2 | Bullets 8 and 9 |  | The issue of which MSC.1.Circ.1609 Appendices are mandatory and which were not was the subject of intense discussion at IEC during the drafting of IEC 62288:2021. The published standard records the international consensus on how MSC.1/Circ.1609 should be applied, and aligns with MSC.466(101), and S-98 should not conflict with these standards.  There’s no need to duplicate requirements in IEC 62288. | Delete the bullets.  Should a decision be taken to retain the bullets then reword to:  8) ~~Access to user interface functions should be consistent with~~ Appendix 4 of MSC. 1.Circ.1609 provides guidance on access to user interface functions, ~~keeping in mind the clarifications in the Introduction to that Appendix~~.  9) ~~Management of default and user settings should be consistent with~~ Appendix 5 of MSC.1.Circ. 1609 provides guidance on default and user settings. | 1. **Deleted**. |
|  | SM | C-6.1.1 |  |  | The heading is “Basic products and layers” is said to be Informative but contains mandatory requirements.  Alerts are not a layer.  “Course with other data” is unclear. | Suggest restyling this paragraph as “Product Specifications” and list the mandatory phase 1 S-1xx Product Specifications only. | 1. **Done**. |
|  | SM | C-6.1.1 | Bullet 2 |  | By making “Target data from RADAR or AIS “ mandatory S-98 conflicts with MSC.530(101) clause 1.6 which states “The ECDIS display ***may*** also be used for the display of radar, radar tracked target information, AIS and other appropriate data layers to assist in route monitoring”. | Delete “• Target data from RADAR or AIS” | 1. **deleted** |
|  | SM | C-6.1.1 | Bullet 4 |  | Does “Mariner-plotted information such as mariner-plotted hazards” relate to the S-52 para 2.3.1.b Mariners Information? | Replace with “Additional mariners information” as per 80/1107/CD IEC 61174 ED5 | 1. **Done.** |
|  | SM | C-6.1.2 |  |  | These product specifications are not yet mandatory. | Clarify that these product specifications are not yet mandatory. | 1. **Loading and portrayal is mandatory once they are operational. See intro. Needs discussion.** |
|  | SM | C-6.1.3 |  |  | These product specifications are not yet mandatory. | Combine with 6.1.2? | 1. **See above. Agree needs clarification.** |
|  | SM | C-6.2 |  |  | In terms of managing presentation of navigation information, MSC.191(79) is a better reference than MSC.530(106) | Replace MSC.530(106) with MSC.191(79) | 1. **Done. Is it in the references?** |
|  | SM | C-7.3 |  |  | Nowadays it’s MSC 302(87) where IMO describes alerts, MSC.191(79) where important indications are described, and IEC 62288 where indications are described. | Update accordingly, clarifying that indications are not alerts (and in particular are not part of IMO’s Bridge Alert Management concept) | 1. **So, are these all references for this section?** |
|  | SM | C-8 |  |  | I confess not to understand this section.  The mariner will surely expect:   * IHO product specifications to be interoperable with each other * The IHO to have defined interoperability rules that meet the navigational needs   The corollary of this is that that the mariner will select **Interoperability = On** and **Level = 2** (or higher if available) and leave the settings unchanged.  Interoperability is a new concept for the mariner, who currently relies on the IHO Conditional Symbology Procedures to “just work”. On an S-100 ECDIS it seems that the mariner has been assigned a new responsibility of deciding how to select an appropriate interoperability level to meet their current operational needs.  The mariner is unlikely to need to understand the details of the different operability levels, and is unlikely to want an additional workload of selecting different operability levels according to the operational need.  The new, apparently mandatory, interoperability controls add complexity to the user interface and will require additional screen real estate – which is scarce. | The preference is for interoperability to be permanently on at the highest level supported by the equipment. But should this solution not be acceptable, then the following applies:   1. The ECDIS should default to Interoperability = On and Level = the highest interoperability level supported by the ECDIS 2. There should be a permanent indication when default interoperability is not selected. 3. The existing single operator action to select the ECDIS Standard Display should select the default interoperability settings. 4. Access to the interoperability selections should be consistent with access to the existing S-57 viewing groups selections – i.e. no need for single or simple operator actions. Consequentially, there should no new requirements for single or simple operator actions for interoperability.   Equally, if it is not agreed that interoperability is permanently on at the highest level supported by the equipment, then the following comments on interoperability apply. | 1. **Needs discussion.** |
|  | SM | C-8.1 | 1st para |  | Four interoperability levels are defined in S-98 | S-98 is designed with ~~two~~ four levels of interoperability, of increasing power and complexity. | 1. **Only two are required. Clarified** |
|  | SM | C-8.1 | 2nd para |  | The requirements that selectors are required are unclear, partly due to the use of the terms “and” and “or” | Reword to either:  “Since Level 2 interoperability functionality is a superset of Level 1 functionality, it shall be possible for the mariner to select between Level 2, Level 1 and Level 0 Interoperability levels.“ | 1. **Done**. |
|  | SM | C-8.1 | 3rd para |  | Given that S-98 is specifically a specification for ECDIS (& INS) the sentence “S-98 is a restriction of the common interoperability model intended for implementations on ECDIS.” is unclear. | Delete or clarify intent. | 1. **Deleted**. |
|  | SM | C-8.2 |  |  | What is meant by the term icon? Icons are usually hotkeys (i.e. user controls, ref Circ.1603 and following paragraphs of S-98) and are not referred to in the three bullets in this section. | Delete reference to “icon”, or clarify. | 1. **Not sure we can define.** |
|  | SM | C-8.3.2 |  |  | The phrase “added to the user interface” is unclear, given that the tables in MSC.1/Circ.1609 do not provide a list of mandatory functions, but merely standardise the presentation of functions that are provided.  There should clarity as to which standard takes precedence should the functions be added to MSC.1/Circ.1609 in the future. | Reword to “The mariner shall be provided with the functions for control of chart display listed in the table below. If the case of conflict, the terms, abbreviations and icons given in MSC.1/Circ.1609 shall take precedence over those in this document.”  Make equivalent changes to following paragraphs. | 1. **Done. Needs more discussion.** |
|  | SM | C-8.3.2 |  |  | The reference to “multiple entries” is presumably now obsolete. | Delete | 1. **Deleted.** |
|  | SM | C-8.3.2 |  |  | Since the proposal is to extend Table 2 of MSC.1/Circ.1609 the column headers should be the same as Table 2. | Replace “Level information” with “Term” | 1. **Done**. |
|  | SM | C-8.3.3 |  |  | This is appears to be a second way of selecting “No visual interoperability”. | If not duplication, a clarification would be valuable.  Possibly the “term” needs revising to ensure the mariner also has clarity. | 1. **Discuss. Is L0 = Off.** |
|  | SM | C-8.3.4 |  |  | There’s a concern that mariners won’t be aware of that an interoperability catalogue is and the use case for selecting such catalogues. | Does this implementation detail need to be exposed to the mariner? | 1. **Propose delete.** |
|  | SM | C-8.3.6 |  |  | Screen real estate is in short supply, which is why the number of single operator actions was kept to an absolute minimum in MSC.1/Circ.1609.  Access to the interoperability selections should be consistent with access to the existing S-57 viewing groups selections – i.e. no need for single or simple operator actions. Consequentially, there should no new requirements for single or simple operator actions for interoperability. N.B. This would be a minimum requirement with nothing preventing individual manufacturers from providing additional “hot keys”.  The terminology in this table is different to that used for the same functions in the preceding sections.  The functions apply equally to INS and ECDIS.  The 4th and 5th rows do not have an operator action and so do not belong to a table of functions should be added to the list in MSC.1609 of functions accessible by single or simple operator action | Delete entire section.  If the section is retained:   * Align terminology use for functions with that used for the same functions in the preceding sections * Add “”/ INS” to second column   Delete rows 4 and 5. | 1. **Needs discussion.** |
|  | SM | C-8.3.7 |  |  | IEC 62288, which is the authority for testing presentation of navigation information, contains many references to functions that are enabled or disabled without standardising a user interface. This section attempts to standardise unavailable/disabled functions, but at the same time recognises that may result in user interface inconsistencies. The strikeout suggestion may result in legibility issues. | Delete section.  If it is felt that IEC 62288 needs to be revised, make such a proposal to IEC TC80. | 1. **Done.** |
|  | SM | C-8.3.8 |  |  | The requirement for the indication to be “, located outside the chart graphic” is unnecessarily constraining and does not follow established precedent for other selectors | Delete “located outside the chart graphic” | 1. **Done.** |
|  | SM | C-8.3.9 |  |  | Isn’t the mariner going to want the interoperability to default to on? | Either delete the default setting altogether, or default to On and Level 2. | 1. **Discuss. Agree in principle.** |
|  | SM | C-9.1.1 |  |  | MSC.530(106) deliberately deleted the words “currently performed on paper charts” | Delete “at present performed on the paper chart”. | 1. **Done. Also proposed by DK.** |
|  | SM | C-9.1.1 |  |  | Reference “IMO Guidelines (SN.243/Rev.2 and MSC.1609) describe "Mariner's Navigational Features"”.  This term, and terms like it, isn’t used in either circular. | Clarify what is being referred to. | 1. **Discuss. I don’t know.** |
|  | SM | C-9.1.1 |  |  | Reference “Mariners may alter the IMO categories for Mariner's Features (but not for ENC features).”  Again, it’s unclear what “features” means, and additionmally what “alter the IMO categories” is getting at.  The concepts of “manufacturer’s features” and “manufacturer's information” are also unclear.  As an ECDIS OEM, its tricky to know what to do with these requirements. | Clarify what is being referred to. | 1. **See above** |
|  | SM | C-9.1.2 |  |  | Reference “the mariner should be provided with the capability of adding … • Any of the chart symbols from the Portrayal Catalogue”. This is a complex requirement for ECDIS OEMs to implement.  Can we delete this requirement now that hydrographic offices are encouraged to publish chart updates in a timely manner? | Delete “Any of the chart symbols from the Portrayal Catalogue” | 1. **Needs clarity. Also needs harmonising with manual updates.** |
|  | SM | C-9.1.2 |  |  | Reference “Information added by the mariner should be in normal chart colours as specified in the Portrayal Catalogue.  Other information added by the mariner should be distinguished by the colour orange”  Given that the first sentence covers all information, there is no “other information” to be covered by the second sentence. | Clarify or delete. | 1. **Agree needs clarity** |
|  | SM | C-9.1.2 |  |  | The use case to add mariner’s information applies to route planning as well as route monitoring | Change the title: “C-9.1.2 Mariner’s information on the chart ~~route monitoring~~ display” | 1. **Done**. |
|  | SM | C-9.1.3 |  |  | What is the use case being covered here?  It seems an identical use case to C-9.1.2, the only difference being that this information purportedly doesn’t relate to charts – but is there really a difference, given simple lines and areas appears in both cases? Why are text notes in one list but not the other?  Nomenclature: Mariners add this information. Manufacturers do not come on board and add information to the System Database, and they do not add information to the System Database before the equipment is shipped.  This is typically an area which causes OEMs some confusion wrt the requirements and the associated use case. There is now an opportunity to align with the revised IMO Performance Standard which states “ECDIS should also be capable of accepting updates to the ENDS data entered manually with simple means for verification prior to the final acceptance of the data. They should be distinguishable on the display from ENDS information and its official updates and not affect display legibility.” | Merge C-9.1.2 and C-9.1.3, removing duplication, being aware of potential consequential impact on C-9.2.1  Align the requirement better with the IMO Performance Standard | 1. **Agree. Needs rationalising.** |
|  | SM | C-9.1.3 |  |  | The “special identifiers” are undefined. | Add clarification |  |
|  | SM | C-9.1.3 |  |  | Reference the section starting “If the manufacturer should add non-official information to the System Database,”  This is a different capability to that in the earlier part of C-9.1.3 and so should be allocated its own secition.  The words “If the manufacturer should add non-official information to the System Database,” do not reflect the capability being described. It’s the mariner that adds the information. | Create new section.  Reword to ““If the ECDIS allows ~~manufacturer should add~~ non-official information to be added to the System Database,” |  |
|  | SM | C-9.1.4 |  |  | MSI information is covered in detail in 80/1107/CD IEC 61174 ED5 para 4.12.6 as well as in IEC 61924-2 para 7.2.3.2. Given it is not hydrographic information, it would be preferable not to duplicate requirements which are already adequately covered in IEC specifications in S-98, due to risk of conflicts and difficulties of maintenance. | Replace the whole of the last bullet and its sub-bullets with “Maritime Safety Information” | 1. **Will become section on NW S-124 (post TSM 2024)** |
|  | SM | C-9.1.4 |  |  | Legend contents are undefined | Cross reference C-9.1.6 in the Legend bullet. | 1. **Done**. |
|  | SM | C-9.1.6 |  |  | The words “manufacturers may suppress information from data products other than ENCs” clearly imply the requirement for a legend for  data products other than ENCs (as does the sentence in parenthesis). But do all data products provide the 12 items of data mandated as a minimum for display in the legend?  Also to be noted is that items 7 and 8 are entered by the mariner and are not metadata from the data products. Is it appropriate to list them in the legend? | Clarify requirement. | 1. **Will Check,.I think the inference is ENC is always on screen.** |
|  | SM | C-9.2.1 | Bullet 1 |  | What is meant by “alarms” here? Is this an alert as per IMO MSC.302(87) or a different concept? Alerts are not really a “layer”, and are certainly distinct from “indications”. | Clarify | 1. **Agree, needs clarification.** |
|  | SM | C-9.2.1 |  |  | The concept of a “radar off switch” is new. MSC.530(106) requires that “It should be possible to remove the radar information, AIS information and other navigational information by single operator action”. It’s not clear whether this list covers “other navigational information”. | Preferably delete “Category (7) should have a radar off switch to facilitate its removal” (as the requirement is already covered in IEC 61174)  If retained, replace with “It shall be possible to remove the radar information, AIS information and other navigational information by single operator action” | 1. **Needs discussion.** |
|  | SM | C-9.2.2 |  |  | Reference “Operation of this feature should be clearly indicated”:  It sounds as if “this feature” relates to the changed radar image priority, whereas it relates to the manual adjustment. In any case the requirement is more fully documented and tested for in IEC 61174 and so is superfluous here. | Preferably delete “Operation of this feature should be clearly indicated”  If retained, use the IMO words “This manual adjustment shall be noted alpha-numerically on the screen” | 1. **Done. Deleted.** |
|  | SM | C-9.2.2 |  |  | Reference “A warning should be recorded by the system in this case.” From the terminology, it’s unclear whether this implies a BAM compliant alert should be raised. It’s unclear under what conditions the displayPlane field in the drawing instruction might be empty, but if an alert is intended, a Caution might be more appropriate. Otherwise an indication. | Clarify requirement | 1. **Agree. Needs clarification** |
|  | SM | C-9.3.1 |  |  | Reference “therefore it should not be a display option to "Show Display Base" without any additions”  Not sure this was intended. | Delete “therefore it should not be a display option to "Show Display Base" without any additions”. | 1. **I think it is. I’ve changed to “possible” although this could be discussed.** |
|  | SM | Annex C-4 C-2.7 |  |  | The reference to “the limit of check area around the route” is imprecise/ambiguous because the referenced MSC.530(106) para 11.3.5 specifies two user-specified distances (i.e. Special condition & prohibited areas, and navigational hazards).   Given IMO does mandate these two user-specified distances to be identical it is unclear which distance is being referred to. (It’s recognised that Special condition & prohibited areas have no depth attribute, but equally only a subset of “navigational hazards” have a depth attribute so the potential for confusion remains.) To further complicate matters, MSC.530(106) 11.3.4 introduces a third user-specified distance for the safety contour which is permitted to be different to the two user-specified distances in 11.3.5, so there are potentially three different safety checking corridors when planning, one for each user-specified distance. There is no requirement to display the corridors graphically and no harmonised way of doing so.  Also to be noted is that the current draft does not address route monitoring because 11.3.5 relates to route planning only and additional distances, which may be different, are referenced in the route monitoring section.   IEC TC80 MT7 recognised this limitation when drafting 80/1107/CD IEC 61174 ED5 which has added the following clarification when route planning “The same user-specified distance shall be used for the check of safety contour, prohibited areas, geographic areas for which special conditions exist and navigational hazards” and equivalent requirements when route monitoring. | Reword the first paragraph to “When WLA is based on a route then the limit of check area around the route is set by the user as specified by IMO MSC 530(106) ~~11.3.5~~. The check area shall be the same for all objects (i.e safety contour, prohibited areas, areas where special conditions exist and point objects).”  And reword the second reference of 11.3.5 to:  “The diagram also shows the “limit of check area” as specified by IMO MSC 530(106) ~~11.3.5~~” | 1. **Clarify.** |
|  | SM | Annex C-4 C-2.7 |  |  | Para C-4-2.7 states that for a Monitored route the datetime period applied for the WLA process is user selectable either:  1. Based on the planned schedule of the monitored route itself; or  2. Based on the monitored route adjusted for the current own ship position.  Option 1 allows WLA to be applied to the monitored route using a time from a planned schedule that does not pertain to the actual schedule. This could lead to an unsafe condition when route monitoring where the water level being applied may not be the water level experienced by the vessel and the mariner may be totally unaware of the situation. | Add after the first two bullets “When WLA is based on the planned schedule and own ship is not keeping to schedule a Caution shall be raised to indicate the water level being experienced may be different to that being applied by the ECDIS.” | 1. **Added.** |