

S-101 DATA CLASSIFICATION AND ENCODING GUIDE**ISSUES TO RAISE WITH TSMAD AND OTHER FORA****GENERAL:**

- The current name of the document is “Data Classification and Encoding Guide”. Is TSMAD happy with this name? What other alternatives are there (if any)?

OEMs will more likely not use the document, but will use “Use Rules” based on the DCEG (possibly as an Annex to the S-101 product Specification). The NOAA document title “Data Coding and Classification Guide” had been taken from S-100. Agreed to call it the “Data Classification and Encoding Guide”. Will be Annex B to the S-101 PS. Annex A will be the ISO8211 Encoding, and Annex C will be the Use Rules mentioned above (TSMAD21).

- Is TSMAD happy to retain the “strength of wording” as used in S-57 Appendix B.1 – Annex A (i.e. “must”, “should” and “may”)?

Yes. Some discussion on the amount of “musts”. The general feeling of the meeting was that the language needed to be strengthened up in order to provide the mariner with more consistent data. TSMAD attendees were asked to take particular note of the strength of wording and provide feedback to AU as required (TSMAD21).

- How would TSMAD like the document to be ordered? It is currently in INT1 (US Chart 1) order, which is similar to the order used for S-57 Appendix B.1 – Annex A, which is S-4 order. Are there other preferences? IEHG is different again – it may be worth looking at that order.
 - NOTE: The further into the drafting of the document, the more it was considered that attribute descriptions needed to be in their own section of the document, rather than incorporated in the Feature Classes. The main thought behind this is the problem that users would have finding the attribute description if it was not attached to the feature being researched. There is also the situation of duplication throughout the document, and in some cases (as was found with STATUS for instance), the full attribute description is not shown as no feature uses the full list. Hopefully, it will be possible to hyperlink the attributes (using the list of attributes in the body of the feature description) to their corresponding descriptions in the attribute description.

Leave as it is at the moment. There were no alternatives offered (TSMAD21).

- Maintenance: S-101 (draft version from TSMAD18) did not include a section for maintenance of the PS (according to Clause 1.2 it will be an Annex to the PS). Is Appendix A going to be maintained as a separate document or as part of the maintenance of S-101 as a whole?

Maintain as a separate document. But links need to be established between all associated documents and standards (TSMAD21).

- Based on the answer to the question above, a statement similar to S-57 UOC 1.1 Para 3 may need to be included in the document?

Yes. Issue of consistent numbering was raised by IEHG reported that the IENC Encoding Guide has aligned their version numbering between their Feature Catalogue, the Product Specification and the Encoding Guide. AU comment was that this would not be possible given the IHO document numbering system (all X.X.X – the IENC Specification uses X.X for the Feature Catalogue and Product Specification and X.X.X for the Encoding Guide). It was suggested that if we wanted to harmonise our Specification in a similar manner we could approach HSSC and amend the policy. No action in this regard at this stage (TSMAD21).

- Is it required to include the camelCase in the feature descriptions?

No. UK comment was that camelCase would be required if other encodings (e.g. GML) were included, but this will also result in another Product Specification and therefore another Encoding Guide. camelCase would therefore not be required in the DCEG (TSMAD21).

- References to IHO Dictionary in definitions have been amended to “IHO Dictionary – S-32” to conform to IHO standard wording. “Edition 5 ...” (including reference number) has not been included. S-57 definitions taken/derived from S-32 have

included the “reference number” as shown in the printable IHO Edition 5 of the document. It may be recommended that these reference numbers be removed (current HDWG discussion as referred to HSSC).

AU reported the discussions at HDWG and HSSC regarding S-32 Edition 5 reference numbers, and further reported the reference numbers have been removed from the document. No further comment (TSMAD21).

- Definitions: Where a definition is attributed to a Hydrographic Office or other government institution, should we be looking for a more authoritative definition (if one exists) e.g. from DGIWG FDD? Where such definitions cannot be found (or are not suitable), should the S-57 definition be adopted and attributed?

AU explained the procedure used in researching more authoritative definitions and the rationale used in adopting these. IHB suggested that if any definition is adopted from DGIWG FDD and it is considered that this definition is hydrographically relevant, it should be proposed to HDWG. Similarly, if it is not considered to be hydrographically relevant, the DGIWG definition should be adopted. After a suggestion from IHB, the meeting agreed that AU could propose definitions directly to HDWG on behalf of TSMAD (TSMAD21).

- Definitions: Definitions previously attributed to S-4 have been re-attributed to their S-57 Appendix A Chapter 1 or 2 entry. Is TSMAD happy with this?

The meeting agreed that S-57 could be considered to be an authoritative reference, but first consideration should be to including in S-32 where thought to be appropriate (TSMAD21).

- Language: What English language version is to be used for the document? The draft uses English (Australian). This will impact on some spelling e.g. metre/meter.

DGIWG uses the Shorter Oxford English Dictionary. FR enquired as to what is used in S-32. AU took an action to find out from HDWG Secretary (TSMAD21). HDWG feedback is that the Oxford English Dictionary is the standard reference for the English language.

- There are many instances throughout this document where attribute enumerate values additional to those listed in S-58 test 2000 are recommended to be included, or values currently included in the test removed. The entire document will need to be reviewed in regard to allowable attribute enumerate values.

AU explained that there were some Australian suggestions in the document for addition/removal of enumerates for specific features. TSMAD was asked to review the allowable enumerate lists (best done by reviewing S-58 check 2000) and submitting any suggestions to AU. UK suggested that as this is closely aligned to the binding that would be done in the Feature Catalogue, that AU and UK would need to consult regularly and work fairly closely together on this (TSMAD21).

- Attributes such as CONVIS have a “default state” where if the attribute is not present, it is assumed that the feature has no relevance to the mariner in terms of that attribute. That being so, suggest that the “default state”, such as “not visually conspicuous”, not be allowable in ENC unless the attribute is mandatory or TSMAD consider that in certain cases the enumerate may be required.

There was surprisingly strong support for this suggestion from the meeting. There was some discussion on this, but in regard to specific encoding for S-101 ENCs, it was considered valid to remove the “default state” from the allowable attribute list of enumerates. AU took and action to compile a paper on this for the next meeting (specific mention was made of CONVIS, CONRAD and EXPSON) (TSMAD21).

- “display scale” has been replaced with “optimum display scale [for the/of the] ENC data” throughout the document. Is this OK, or are there other suggestions?

Discussion earlier in the meeting agreed on just “scale”. This may be raised again at a later date, particularly in reference to maximum, minimum and hyper display scales (TSMAD21). Final determination was “maximum display scale for the ENC/dataset”

- INT1 references: Hans has suggested that the INT1 references could be included with the graphic for the paper chart symbol in the Table. Will need further investigation/discussion.

No INT1 images have been included in the document yet. This issue will be investigated when this process is commenced (TSMAD21).

- Hans has suggested that examples of attribute encoding should not be included in the “Allowable Encoding Value” column of the Tables. Requires explanation and discussion.

SE will put examples together (TSMAD21).

- There is no guidance in S-57 (main doc, PS, UOC) regarding the chaining of linear geo objects. Should there be guidance in the Encoding Guide (refer S-58 test 40)?

Yes (TSMAD21).

- Inconsistency: In some cases “seabed” has been used, while in others “sea bed” has been used. Is this OK or should these be consistent (suggest “seabed”, but note that DGIWG FDD uses “sea bed”). Also, in many instances, particularly in definitions, the word “bottom” has been used, and not sea bed (seabed). Suggest that this needs to be standardised. There is also inconsistency in some cases in S-4 (seabed/sea bed/sea-bed). (CSPCWG, HDWG, Register).

AU action to raise with HDWG (TSMAD21).

Draft for TSMAD27: Document amended throughout where possible to “seabed”. Note: For IHO Dictionary definitions that are not adaptations, the wording has not been amended, however for adapted definitions, and all definitions having S-57 as source, the wording has been amended.

- Check whether it is possible for conditionality to be applied to instances where the requirement to populate an attribute for a feature is dependant on the value populated for another attribute for the feature. For instance, population of BOYSHP for **MORFAC** is only relevant where the attribute CATMOR is populated with the value 7 (mooring buoy). Also, WATLEV would not be populated if CATMOR is populated as 7. (TSMAD).

NL: This could be a data quality check. UK: It would be a good idea to put it in for checking. It was agreed that this is more an issue for production systems than the data or the ECDIS. **AU action to prepare a discussion paper for TSMAD on this (TSMAD21).**

- Traffic separation scheme is defined in S-32, but the elements comprising a traffic separation scheme are not, but are defined in IMO Ships’ Routeing. Suggest that the S-32 entry for traffic separation scheme have text similar to “For definitions of elements comprising a traffic separation scheme, see IMO Ships’ Routeing”, or these elements be defined in S-32.

AU action to check whether these definitions have been included in S-32 as a result of 2010 HDWG activities, and if not to discuss with HDWG (TSMAD21).

Action from DCEG Sub-WG4: Where possible, all definitions relating to routeing measures have been amended to, or adapted from, IMO Ships Routeing (2010). Note that DCEG Sub-WG 4 decision was to quote IMO Ships Routeing as the authority for definitions for components of routeing measures in preference to IHO Hydrographic Dictionary. **This decision needs to be reported to the HDWG.**

- (TSMAD21): Insert guidance on encoding data for ENC datasets crossing the 180 degree meridian. **Done.**
- Need to find a place for guidance on the encoding of AIS information in ENC (currently at the start of Section 20 – Radar, Radio). **Done.**
- (TSMAD22): New guidance is required in the DCEG on masking lines. Refer document TSMAD22/DIPWG3-11.3A S-101 Consolidated Comments Phase 1.

TSMAD27: New guidance added as inserted in UOC Edition 4.0.0.

- Guidance on the encoding of the coordinate multiplication factor has been included in the DCEG. Similar guidance is included in the Product Specification main document. Should this guidance be included in both documents (i.e. should it be removed from DCEG)?
- Guidance on the encoding of FOIDs has been included in the DCEG. Similar guidance is included in the Product Specification main document. Should this guidance be included in both documents (i.e. should it be removed from DCEG)?
- There is currently no guidance in the DCEG on how to encode the Producing Authority (UOC clause 2.2.1). In the S-101 PS, it indicates that this is done by populating the producingAgency element of the dataset metadata. Should there be guidance on this in the DCEG?
- Same issue as above for up-to-datedness information (UOC clause 2.2.2).
- Check entire document for INT1 references that have been retired from INT1 (refer S-4 Edition 4.2.0, clause 151.2) and replace with new reference where required. (TSMAD, Register).

- Discussion required as to how the attributes NTXTDS and TXTDSC will work in S-101 (enquiry from Eivind). (TSMAD).

Done. New complex attribute **textual description**.

- Enumerated attributes: Should the full list as included in S-57 (including values prohibited for ENC) be included in the enumerate list in the Attributes section of the DCEG, or should just the list of values allowable for any instance of the attribute in the Features sections be included? (TSMAD). May need to check what has been included in the Registers.

Done: Only those enumerate values required for any instance of the attribute in the DCEG have been listed in the Attributes Section.

- Tables: Should all tables in the document have a table number. If so, what should be the numbering convention? Suggest major clause heading with ordered sub-numbers (e.g. 3.1, 3.2, 3.3 , 4.1, 4.2, etc). (TSMAD).
- Dates and times: DCEG has been amended to agree with proposals to TSMAD27 (Jeppesen). Full review of this is required, particularly as to how to reflect the S-100 extension to ISO 8601:2004 in the document.
- Discovery metadata: Words need to be inserted in DCEG clause 2.5.2.

FEATURES:

ACHARE:

- The S-57 definition for anchorage area has been amended by maintenance Clarification and Correction (MD8 – 7.Cl.3 and 7.Co.15). Suggest S-32 definition be similarly amended (although isn't a seaplane legally considered to be a "vessel" once it lands?). (HDWG). **AU to raise with HDWG (TSMAD21)**. 01/09/11: **DGIWG is currently considering a proposal for a revised definition for "anchorage" – it may be worth considering this revision, if approved, in terms of the S-32 and S-100 definitions. (HDWG, TSMAD, Register)**.
- Suggest add INT1 – N10 (Reported anchorage (no defined limits)), N14 (Anchorage for seaplanes) and Q44 (Numerous moorings) to list of INT1 references for **ACHARE**. (Register). **Agreed**.
- Suggest add S-4 – B-431.7 (Numerous moorings) to list of S-4 references for **ACHARE**. (Register). **Agreed (TSMAD21)**.
- **UK: Name for ACHARE needs to be displayed (inconsistency as name is displayed for ACHBRT). (DIPWG) (TSMAD21)**.

ACHBRT:

- The S-57 definition for anchor berth has been adopted by DGIWG FDD. If anchor berth is considered to be a hydrographic term, suggest the S-57 definition be included in S-32. (HDWG). **AU to raise with HDWG (TSMAD21)**. 07/07/11: **Has been raised as part of HDWG discussion on S-57 definitions, with S-57 definition being proposed for inclusion in S-32**.
- If the S-57 definition for **ACHBRT** is retained, amend "sea plane" to "seaplane" (refer CATACH below). (Register). **Agreed (TSMAD21)**.
- Suggest that, if it is specified that the swinging circle for an anchor berth is defined using the attribute RADIUS, then the circle should be depicted in the ECDIS based on the value populated. (DIPWG). **Agreed that the swinging circle should be displayed. AU action to raise with DIPWG (TSMAD21)**.

While it has been agreed in principle that the area should be displayed, it has also been proposed that Surface be included as an allowable primitive for ACHBRT. This has resulted in more than one way of encoding the same thing. Needs to be resolved (TSMAD, DIPWG).

ADMARE:

- Suggest INT1 – N40 (International boundary on land) and N41 (International maritime boundary) be included as INT1 references for **ADMARE**. (Register). **Agreed (TSMAD21)**.
- Suggest include S-4 B-440.1 and B-440.3 as S-4 references for **ADMARE**. **Agreed (TSMAD21)**.
- Suggest sub-heading be re-named "International and national territories" to recognise that international maritime boundaries are also encoded as **ADMARE**. (TSMAD). **Agreed (TSMAD21)**.
- UOC Edition 3.0.0 guidance suggests encoding VTS areas using **ADMARE**. Suggest that alternative modelling is required in S-101 to encode this more appropriately. (TSMAD, Feature Catalogue). **New feature Vessel Traffic Service Area added to DCEG. (Registry, Feature Catalogue)**.

AIRARE:

- Suggest amended definition for **AIRARE**, as adapted from DGIWG FDD. (Register). **Agreed (TSMAD21)**.
- Aeroplanes or airplanes? **AU Action: Check Shorter Oxford English Dictionary (TSMAD21)**.

ARCSLN:

- There is an S-32 definition for Archipelagic Sea Area. Suggest this definition be used, and the definition as used in S-57 Supplement No. 1 be moved to the body of the text. (Register). **AU Action: Check what IMO has defined (TSMAD21)**.

ASLXIS:

- Suggest only the first part of the definition as used in S-57 Supplement No. 1 be used as the definition for **ASLXIS** and the remainder moved to the body of the text. (Register). **AU Action: Check what IMO has defined (TSMAD21).**

BCNCAR:

- The fact that a cardinal buoy but no cardinal beacon is defined in S-32 needs to be addressed – see comment for **BOYCAR**. (HDWG). **AU to raise with HDWG (TSMAD21). Amended definitions for generic “marks” included in S-32 (see below).**
- Suggest S-4 – B-461.3 (The IALA Maritime Buoyage System) and B-467 (Summary table of IALA marks) be included as S-4 reference for **BCNCAR**. (Register). **Agreed (TSMAD21).**
- **07/07/11: The term “beacon” is in the process of being re-defined by HDWG. HDWG is also defining a new term “cardinal mark” which should be used as part of the definition for BCNCAR.**

BCNISD:

- There is an S-32 definition for isolated danger mark which has not been utilised in S-57. Suggest these definitions need to be reconciled in regard to general content. (HDWG, Register). **AU to raise with HDWG (TSMAD21). 07/07/11: The term “beacon” is in the process of being re-defined by HDWG. HDWG is also revising the term “isolated danger mark”, which should be used as part of the definition for BCNISD.**
- Suggest S-4 – B-461.3 (The IALA Maritime Buoyage System) and B-467 (Summary table of IALA marks) be included as S-4 reference for **BCNISD**. (Register). **Agreed (TSMAD21).**

BCNLAT:

- The fact that a lateral buoy but no lateral beacon is defined in S-32 needs to be addressed (inconsistency) – see comment for **BOYLAT**. See also definition for lateral system. (HDWG). **AU to raise with HDWG (TSMAD21). 07/07/11: The term “beacon” is in the process of being re-defined by HDWG. HDWG is also defining a new term “lateral mark” which should be used as part of the definition for BCNLAT.**
- Suggest S-4 – B-461.3 (The IALA Maritime Buoyage System) and B-467 (Summary table of IALA marks) be included as S-4 reference for **BCNLAT**. (Register). **Agreed (TSMAD21).**

BCNSAW:

- There is an S-32 definition for safe water mark which has not been used in S-57. Suggest these definitions need to be reconciled. (HDWG, Register). **AU to raise with HDWG (TSMAD21). 07/07/11: The term “beacon” is in the process of being re-defined by HDWG. HDWG is also revising the term “safe water mark”, which should be used as part of the definition for BCNSAW.**
- Suggest S-4 – B-461.3 (The IALA Maritime Buoyage System) and B-467 (Summary table of IALA marks) be included as S-4 reference for **BCNSAW**. (Register). **Agreed (TSMAD21).**

BCNSPP:

- There is an S-32 definition for special mark which has not been utilised in S-57. Suggest these definitions need to be reconciled in regard to general content. Note also that there is an S-32 definition for buoy: special (inconsistency?). (HDWG, Register). **AU to raise with HDWG (TSMAD21). 07/07/11: The term “beacon” is in the process of being re-defined by HDWG. HDWG is also revising the term “special mark”, which should be used as part of the definition for BCNSPP.**
- Suggest S-4 – B-461.3 (The IALA Maritime Buoyage System) and B-467 (Summary table of IALA marks) be included as S-4 reference for **BCNSPP**. (Register). **Agreed (TSMAD21).**

- There needs to be a discussion as to whether it is still required to have a separate feature beacon general in S-101 (refer S-57 Extension 06/01). (TSMAD, Register, Feature Catalogue). **UK: Agreed that more discussion was required. AU action to prepare discussion paper for TSMAD. See also BOYSPP below (TSMAD21).**

BERTHS:

- There are minor differences in the wording in the current S-57 definition and the S-32 definition for berth. This needs to be reconciled. (HDWG, Register). **AU to raise with HDWG (TSMAD21). Hydrographic Dictionary definition has been used.**
- Suggest add INT1 – F12 to list of INT1 references for **BERTHS**. INT1 – F12 is a mole, with a berthing facility. (Register). **Agreed (TSMAD21).**
- Suggest S-4 – B-423 (Berths) be listed as the S-4 reference for **BERTHS**. (Register). **Agreed (TSMAD21). 13/01/16. This is incorrect – a review of S-4 (Edition 4.5.0) found that B-423 is not related to berths. Further, the full review of S-4 by the CSPCWG resulted in clause B-321.9 being removed. References have been amended accordingly.**
- Maximum draft at berth is currently encoded in INFORM. Suggest that maximum draft be an attribute combined as a sub-attribute with DRVAL1 to form a complex attribute? Or perhaps a new attribute? (Register). **Agreed that new attribute is required (no decision as to whether this should be in a complex attribute). AU to develop discussion paper for TSMAD (TSMAD21). Attribute maximum permitted draught has been added to Berths.**

BOYCAR:

- There is an S-32 definition for buoy: cardinal which has not been used in S-57. Suggest these definitions need to be reconciled. (HDWG, Register). **AU to raise with HDWG (TSMAD21). 07/07/11: HDWG is defining a new term “cardinal mark” which should be used as part of the definition for BOYCAR. AU has recommended that the existing S-32 definition for cardinal buoy be removed from S-32.**
- Suggest S-4 – B-461.3 (The IALA Maritime Buoyage System) and B-467 (Summary table of IALA marks) be included as S-4 reference for **BOYCAR**. (Register). **Agreed (TSMAD21).**
- Suggest buoy, installation be added to list of distinctions for **BOYCAR**. (Register). **Agreed (TSMAD21).**

BOYINB:

- **07/07/11: There is currently no definition for installation buoy in S-32 (but SPM and SBM are defined). HDWG is currently reviewing this and currently does not intend including a definition for installation buoy in S-32.**
- There is no purpose behind having MARSYS as an allowable attribute for **BOYINB**, as there is no description or type of installation buoy in IALA. Suggest remove from allowable attribute list. (Feature Catalogue). **MARSYS has been removed for Baseline DCEG.**
- As installation buoys tend to be mooring buoys, not sure whether there is a requirement to have **topmark** as an allowable complex attribute. Suggest it not be included in the allowable attribute list. (Feature Catalogue). **Attribute topmark has been removed as an allowable attribute for Buoy Installation in the Baseline DCEG.**

BOYISD:

- There is an S-32 definition for isolated danger mark which has not been utilised in S-57. Suggest these definitions need to be reconciled in regard to general content. (HDWG, Register). **AU to raise with HDWG (TSMAD21). 07/07/11: HDWG is revising the term “isolated danger mark”, which should be used as part of the definition for BOYISD.**
- Suggest S-4 – B-461.3 (The IALA Maritime Buoyage System) and B-467 (Summary table of IALA marks) be included as S-4 reference for **BOYISD**. (Register). **Agreed (TSMAD21).**
- Suggest buoy, installation be added to list of distinctions for **BOYISD**. (Register). **Agreed (TSMAD21).**

BOYLAT:

- There is an S-32 definition for buoy: lateral which has not been used in S-57. Suggest these definitions need to be reconciled. (HDWG, Register). **AU to raise with HDWG (TSMAD21).** 07/07/11: HDWG is defining a new term "lateral mark" which should be used as part of the definition for **BOYLAT**. AU has recommended that the existing S-32 definition for lateral buoy be removed from S-32.
- Lateral marks can also be beacons, but the definition in S-32 is for buoy: lateral. Isolated danger marks can also be buoys or beacons, and this is accounted for in S-32 as the definition is for isolated danger mark (not buoy or beacon). There is an inconsistency here that needs to be corrected. (HDWG). **AU to raise with HDWG (TSMAD21).** See comment for bullet point above.
- Suggest S-4 – B-461.3 (The IALA Maritime Buoyage System) and B-467 (Summary table of IALA marks) be included as S-4 reference for **BOYLAT**. (Register). **Agreed (TSMAD21).**
- Need IALA Region A examples (photo's) of lateral marks. **TSMAD asked to provide any examples (whole document) (TSMAD21).**
- Suggest buoy, installation be added to list of distinctions for **BOYLAT**. (Register). **Agreed (TSMAD21).**

BOYSAW:

- There is an S-32 definition for safe water mark which has not been used in S-57. Suggest these definitions need to be reconciled. (HDWG, Register). **AU to raise with HDWG (TSMAD21).** HDWG is revising the term "safe water mark", which should be used as part of the definition for **BOYSAW**.
- Suggest S-4 – B-461.3 (The IALA Maritime Buoyage System) and B-467 (Summary table of IALA marks) be included as S-4 reference for **BOYSAW**. (Register). **Agreed (TSMAD21).**
- Suggest buoy, installation be added to list of distinctions for **BOYSAW**. (Register). **Agreed (TSMAD21).**

BOYSPP:

- There is an S-32 definition for buoy: special which has not been used in S-57. Suggest these definitions need to be reconciled. (HDWG, Register). **AU to raise with HDWG (TSMAD21).** HDWG is revising the term "special mark", which should be used as part of the definition for **BOYSPP**.
- Suggest that CATSPM = 16 (leading mark), 41 (clearing mark), 42 (control mark) and 44 (refuge beacon) be removed from the allowable enumerate list for CATSPM in **BOYSPP**. (Feature Catalogue). **Agreed to all but control mark (comment from FR) (TSMAD21).** Proposal for S-101PT1 (March 2016).
- Suggest S-4 – B-461.3 (The IALA Maritime Buoyage System) and B-467 (Summary table of IALA marks) be included as S-4 reference for **BOYSPP**. (Register). **Agreed (TSMAD21).**
- Suggest a new feature be created for Emergency Wreck Marking Buoy (**BOYEWB?**). Alternative is a new enumerate for CATSPP, but would prefer a separate feature. (TSMAD, Register, Feature catalogue). **TSMAD21 - Agreed to new feature, with amendment to acronym as above (TSMAD21).** Done 10/02/11 – needs to be discussed by TSMAD, amended as required, approved and included in the Register and Feature Catalogue.
- There needs to be a discussion as to whether it is still required to have a separate feature buoy general in S-101 (refer S-57 Extension 06/01). (TSMAD, Register, Feature Catalogue). **Should go in the Register but does not necessarily need to go in the Feature Catalogue. See also BCNSPP comments above (TSMAD21).**

BRIDGE:

- Definition for **BRIDGE** has been changed slightly to agree with current definition in S-32 (544(2)). Or is the "to carry utility services" part important? If so need to suggest a change to the S-32 definition. (HDWG, Register). **AU to raise with HDWG (TSMAD21).**

- Suggest pipe, overhead be added to list of Distinctions. (Register). **Agreed (TSMAD21).**
- INT1 references have been abbreviated to “D 20-24” as the existing list is all inclusive. (Register). **Agreed that this is the preferred format. If references are D20 and D24, then separate with comma (TSMAD21).**
- NL: Mentioned object name, but this goes to the way bridges are encoded (multiple features). UK: Possibly modify the modelling to have information feature to encode the name. Further investigation and guidance required. (Feature Catalogue, Register) (TSMAD21). **Resolved with remodelling of bridges for the Baseline DCEG.**
- Suggest that the clearance attributes (horizontal and vertical) be combined into complex attributes (horizontal and vertical) comprising the value attribute(s) and accuracy attributes. **Done and incorporated into revised modelling for bridges (Span Fixed and Span Opening) for Baseline DCEG.**

BUAARE:

- Suggest amended definition for **BUAARE**, as taken from DGIWG FDD. (Register). **Agreed (TSMAD21).**
- Suggest landmark and railway be added to list of Distinctions. (Register). **Agreed to all but railway (TSMAD21). NOTE: Suggestion is to add railway as distinction, however it is already a distinction in S-57 so by default has been included in S-101.**
- Suggest square be removed from the list of distinctions – it is prohibited in S-57 and it is assumed that it will be prohibited in S-101. **Agreed. Important to note that this is only relevant to the Encoding Guide. The feature can still be in the Register (although why is square required in a Hydrographic Register?) (TSMAD21).**

BUISGL:

- Definition for **BUISGL** has been changed to agree with current definition in DGIWG FDD. (Register). **Agreed (TSMAD21).**
- Suggest list of allowable values for FUNCTN on **BUISGL** be reviewed for possible removal of some values (suggestions included in original working document). (Feature Catalogue). **Fair amount of discussion on this issue. TSMAD encouraged to review in slower time (TSMAD21). Sub-WG Meeting Jan 2012: Decision made to include full list for FUNCTN as allowable attribute list for BUISGL.**
- TSMAD Review 2: STATUS = 1 (permanent) has been removed from **BUISGL**. Confirm that this is OK.
- Suggest INT1 – D8 (Ruins) be added to list of INT1 references. (Register). **Agreed (TSMAD21).**
- Suggest INT1 – D28-30.1 be removed from list of INT1 references. (Register). **Agreed (TSMAD21).**
- Suggest B-375.1,2 and B-487.3 be removed from list of S-4 references. (Register). **Agreed (TSMAD21).**
- Suggest silo and tank be added to list of Distinctions. (Register). **Agreed (TSMAD21).**
- Why can't a **BUISGL** area or point sit on a **SLCONS** area (WATLEV = 2) which is covered by **UNSARE** or **DEPARE**? (S-58 Check 54). **AU to put together a proposal.**
- UK: Proposed VERCLR as an attribute for BUISGL, in order to cater for boathouses (and buildings on cranes – IEHG). **Agreed (TSMAD21). Included in Baseline DCEG.**
- Guidance for encoding a building that is in the water needs to be revised to reflect the introduction of the “system” Boolean attribute **in the water.**

CANALS:

- S-57 definition does not agree with S-32 definition for canal. Suggest S-57 definition be adopted as the first part of the S-32 definition. (HDWG, Register). **Refer to IEHG? CANALS is not required in inland as it is classed as non-navigable (TSMAD21). 07/07/11: HDWG decision is to re-define the S-32 definition for canal as it is in S-57. To be approved by HSSC and IHO MS.**
- Suggest canal bank be removed from list of distinctions for **CANALS** (is prohibited for ENC). (Register). **IC-ENC: Why is canal bank prohibited? Discussion on more than**

one way to encode the same thing, which could possibly be the reason. Agreed not required for ENC (TSMAD21).

- Suggest remove CONDTN = 2 (ruined) from S-58 list of allowable values for **CANALS**. (Feature Catalogue). **Rejected (TSMAD21)**.
- Suggest amend S-4 references for **CANALS** to include all B-361. (Register). **Agreed (TSMAD21)**.

CAUSWY:

- Suggest add STATUS = 7 (temporary) to S-58 list of allowable values for CAUSWY. (Feature Catalogue). **Agreed (TSMAD21)**.
- Suggest remove WATLEV = 3 (always under water/submerged) from S-58 list of allowable values for **CAUSWY**. (Feature Catalogue). **Examples given of always submerged causeways. Rejected (TSMAD21)**.

CBLARE:

- Definition of **CBLARE** has been amended to the S-32 definition (?????). (Register). **AU to further investigate (why the (?????)?) (TSMAD21)**. There is no definition for submarine cable area in the Hydrographic Dictionary. DFDD definition is the same as S-57, and is more than likely derived from S-57, therefore S-57 definition is retained with S-57 as the authority.
- Suggest numerous values for RESTRN be removed from list of allowable enumerate values for RESTRN on **CBLARE** (suggestions included in document). (Feature Catalogue). **TSMAD members to consider in slower time (TSMAD21)**. DCEG Baseline version has restricted values of **restriction for Cable Area** as suggested in final working version.
- Amend S-4 reference for **CBLARE** to add B-443.3 (Cable areas) and remove B-443.2 (Power transmission cables). (Register). **Agreed (TSMAD21)**.

CBLOHD:

- Suggest removing “An overhead cable is” from definition for **CBLOHD**. Also, is AHS a sufficient authority for this definition; there is a definition in DGIWG FDD for “cable overhead”? (Register). **AU to investigate DGIWG FDD definition for suitability (TSMAD21)**. 07/07/11: HDWG decision is that overhead cable is not required in S-32. 13/08/12: DFDD definition for “cable” used, and supplemented with information relating specifically to hydrography as contained in the AHS definition.
- The question in the AHO has been asked as to whether populating VERCLR when the safe vertical clearance (for power or transmission cables) is unknown, as the mariner may misinterpret VERCLR for VERCSEA. AU policy is to populate VERCSEA with an empty (null) value for power and transmission cables where safe vertical clearance is not known. **Paper required. AU to develop (TSMAD21)**.
- There is a discrepancy between the guidance in the UOC clause 11.5.2 and S-58 test 2000. UOC states that if a cable has radar reflectors, this should be indicated by encoding separate **RADRFL** objects. This would suggest that value CONRAD = 3 (radar conspicuous – has radar reflector) is redundant (double encoding). S-58 test 2000 suggests all values of CONRAD are acceptable. Suggest CONRAD = 3 be prohibited for **CBLOHD** (will need amendment to S-58 test 2000). (Register). **Guy: There are 2 conditions – where the positions of the reflectors are known or not known. This needs to be clarified in the Encoding Guide. AU to draft new guidance (TSMAD21)**. 13/08/12: **New Remarks bullet point added**.

CBLSUB:

- S-57 definition for cable: submarine is different to S-32 definition. Current S-32 definition may be out of date. Suggest something similar to S-57 definition be incorporated in S-32. (HDWG). **AU to raise with HDWG (TSMAD21)**. 07/07/11: **HDWG decision is to re-define the S-32 definition for submarine cable as it is in S-57. To be approved by HSSC and IHO MS. Approved (IHO CL 76/2012 refers). Authority for definition amended to Hydrographic Dictionary**.
- Suggest add Q42 (mooring cables on mooring trots) to list of INT1 references for **CBLSUB**. (Register). **Agreed (TSMAD21)**.

- Suggest add B-443 (Submarine cables), B-443.2 (Power transmission cables) and B-443.8 (Buried cables) to list of S-4 references for **CBLSUB**, and remove B-443.3 (Cable areas). (Register). **Agreed (TSMAD21)**.

CGUSTA:

- There is an entry for “coast guard station” in S-32 which refers to “life saving station” which is not the same as the current S-57 definition for **CGUSTA** (in fact it is closer to the S-57 definition for rescue station). These definitions need to be reconciled, or the reference to life saving station removed and a new definition for coast guard station included in S-32. (HDWG, Register). **AU to raise with HDWG (TSMAD21)**. **11/07/11: HDWG has reviewed the definition and has recommended a slight adaptation of the S-57 definition be used as the revised definition for coastguard station. HDWG has also recommended the reference to coastguard station be removed from the definition for life saving station. To be approved by HSSC and IHO MS. Definition amended to revised Hydrographic Dictionary definition.**
- The term used in S-57 is “coastguard”, while in S-32 it is “coast guard”. S-4 and INT1 uses “coastguard”. Suggest S-32 term be amended to “coastguard”. (HDWG). **Agreed. AU to raise with HDWG (TSMAD21)**. **Left as single word (consistent with other nautical charting publications (S-4 and INT1))**.
- Suggest INT1 – T11 (coastguard station with rescue station) be added to list of INT1 references for **CGUSTA**. (Register). **Agreed (TSMAD21)**.
- Need to decide a method for encoding Marine Rescue and Coordination Centres (MRCC). See S-4 – B-492.3. (TSMAD). **Refer earlier TSMAD21 discussion in relation to CSPCWG Report (TSMAD21)**. **Proposal for S-101PT1 (March 2016)**.

CHKPNT:

- As there is only one enumerate for CATCHK, is there a requirement for CATCHK, or should consideration be given to re-defining the feature to be just a “customs checkpoint” (e.g. CUSCHK)? (Register). **Issues raised regarding AML, particularly in regard to changing the definition. Proposal is to leave it as it is, even though it may be clumsy. IENC has a value of 2 (border) (TSMAD21)**.
- Dependent on answer to the above, suggest amended definition for **CHKPNT**, as adapted from DGIWG FDD. (Register). **IEHC has a definition for reference.- (same as S-57). No further action (TSMAD21)**.

COALNE:

- Suggest add INT1 – C25 (glacier) to list of INT1 references for **COALNE**. (Register). **Agreed (TSMAD21)**.
- Suggest add S-4 – B-311 (coastline inadequately surveyed) to S-4 references for coastline, and B-353.8 (glacier) to S-4 references for natural coastline. (Register). **Agreed (TSMAD21)**.
- The method for encoding mangroves (and possibly marsh?) needs to be addressed to be consistent with S-4 B-312.4. (TSMAD). **AU to prepare paper for TSMAD similar to that submitted at TSMAD19 (TSMAD21)**.
- There are a number of values for the attribute COLOUR that should be considered for exclusion as allowable values. (Feature Catalogue). **TSMAD to further consider (TSMAD21)**. **Values excluded in Baseline as indicated in working version**.
- Distinctions: Are canal bank, lake shore and river bank still considered to be distinctions if they are prohibited for ENC? (TSMAD, Register). **Agreed to remove in Encoding Guide (but may still be included in Register) (TSMAD21)**. **NOTE: To be consistent with previous decisions, it is considered that these values should be removed. Proposal for S-101PT1 (March 2016)**.
- CATCOA and NATSUR (FR). Suggestion that the modelling for **COALNE** be amended to remove some values of CATCOA and add attribute NATSUR. Considered to be a good idea as long as there is no issue in portrayal. FR to prepare proposal (TSMAD21). **Proposal accepted and applied for Baseline DCEG**.
- Definition for coastline needs to be looked at. In light of discussions on canal bank and river bank. Also distinction between coastline and shoreline. Paul (UK) will provide some words (TSMAD21). **07/07/11: HDWG decision to leave current S-32**

definition as is, changing only the last couple of words. To be approved by HSSC and IHO MS.

CONVYR:

- The DGIWG FDD definition has been substituted for **CONVYR** in lieu of the current non-authorised S-57 definition. This definition appears to be a bit narrower than the S-57 definition, but seems to satisfy the two values for CATCON. Is TSMAD happy with this change? (Register). **UK comment was that conveyors carrying people may be an issue with revised definition. Further discussion required (TSMAD21). 07/07/11: HDWG decision is that conveyor is not required in S-32. 13/08/12: Amended DGIWG definition to use part of the current S-57 definition (“bulk material or people”).**
- Suggest that, due to the guidance to populate VERDAT for **CONVYR** with a height datum, that all values for VERCLR related to low water datums be excluded as allowable enumerate values for VERDAT in relation to **CONVYR**. (Feature Catalogue). **General issue related to all features having vertical clearances (and also depth related features). AU to develop proposal (TSMAD21). Applied for Baseline DCEG.**

CONZNE:

- What is the point of having STATUS as an allowable attribute for **CONZNE**, when the only allowable value is 1 (permanent)? (Feature Catalogue). **Agreed to consider removal (TSMAD21). STATUS removed from CONZNE for Baseline DCEG.**
- It looks like the word “shelf” is missing from the distinctions (continental shelf area). Register). **Agreed (TSMAD21). Applied for Baseline DCEG.**

CRANES:

- **07/07/11: HDWG decision is that crane is not required in S-32.**
- How does the ECDIS user know that the lifting capacity is in tonnes? Is this an issue? **UK: This is included in the units in the Feature catalogue. It is intended that in portrayal the units will be included as part of the pick report (TSMAD21).**
- Guidance for encoding a crane that is in the water needs to be revised to reflect the introduction of the “system” Boolean attribute **in the water**.

CTNARE:

- The S-57 definition for caution area has been adopted in DGIWG FDD. Note that the DGIWG FDD specifically relates this definition to marine navigation (through reference to “the mariner”). Should this definition go in S-32 (first impressions are no)? (HDWG). **AU to raise with HDWG (TSMAD21). 06/07/11: AU recommendation to HDWG is to not include a definition for “caution area” in S-32, as in looking at the definition purely in the context of the dictionary, everywhere that a mariner goes is a “caution area”.**
- Suggest INT1 – M29.2 (Area to be avoided e.g. because of danger of stranding) be removed as INT1 reference for **CTNARE**, as area to be avoided is a category of restricted area. (Register). **Agreed (TSMAD21).**
- Suggest that perhaps S-4 – B-242 (Cautionary and explanatory notes) could be added as an S-4 reference for caution area. (Register). **Agreed (TSMAD21).**
- Should the attribute PICREP be an allowable attribute for **CTNARE**. Refer guidance in S-57 for promulgating advance notice of changes to TSS. (TSMAD, Feature Catalogue). **Overtaken by events – PICREP is now bound to the information type Supplementary Information, which can be bound to any geo feature.**

CTRPNT:

- **08/07/11: HDWG decision is to leave definition for control point as the S-32 definition for control station. Definition includes “Also referred to as control point.”, therefore no issue with on-line search.**
- Are all values for attribute CATCTR required for ENC? From a mariners’ perspective, most control points are not visible. Suggest values 3 (fixed point), 4 (bench-mark) and 7 (horizontal control, secondary station) be removed from the allowable

enumerate list for **CTRPNT**. (Feature Catalogue). Suggestion is to remove control point from ENC. Agreed that this would be the preferred option, as control point is probably a hold-over on older paper chart specifications. Will need to monitor discussions on CSPCWG B-300 review (TSMAD21). **NOTE:** CSPCWG Letter 03/2011 (Draft Revision of S-4 Section B-300 to B-330 – Round 1) suggests removing observation spot and benchmark from S-4.

- Distinctions have been added – these require review. (Register). Await result of above issue (TSMAD21).
- **TSMAD23: Decision made to remove CTRPNT from S-101, and move “triangulation mark” and “boundary mark” to category of landmark.**

CTSARE:

- The S-57 definition for cargo transshipment area is abbreviated from the S-32 definition for transshipment or lightening area. Suggest the full S-32 definition be adopted (or is the issue the use of the word “larger”?). (HDWG(?), Register). AU to raise with HDWG (TSMAD21).
06/07/11: Has been raised as part of HDWG discussion on S-57 definitions.
- The first sentence of S-4 – B-449.4 should be in bold text to be consistent with S-4 convention. (CSPCWG). AU to raise to CSPCWG (TSMAD21).
- Should the word used (as an alternative to cargo transshipment area) be “lightening” (S-57) or “lightening” (S-4)? Note that S-32 uses “lightening”. (CSPCWG, TSMAD). AU and UK to take up with CSPCWG and HDWG (consensus appeared to be “lightening”?). UK: Get feedback from users (TSMAD21). Discussed with CSPCWG and confirmed by TSMAD – the term has been amended to “lightening” to be consistent with S-4.

CURRENT:

- There is a definition for non-tidal current in S-32. Could this be used as the definition for current – non-gravitational, or should a definition for current – non-gravitational be included in S-32? (HDWG, Register). AU to raise with HDWG (TSMAD21).
07/07/11: HDWG decision is that non-tidal current adequately covers the definition for a non-tidal current. Suggest that the S-32 definition for non-tidal current be used as the definition for **CURRENT** (with the addition of “also called non-tidal current”). Agreed and done.
- Suggest area be added as an allowable primitive for **CURRENT**. (Register). Agreed. It was pointed out that area is an allowable primitive for IENCs (TSMAD21).
- Suggest include all of B-408 as S-4 reference for current – non-gravitational. (Register). Agreed (TSMAD21).
- Suggest adding Tidal Stream (flood/ebb) to list of distinctions for current – non-navigational. (Register). Agreed (TSMAD21).

DAMCON:

- Suggest that point primitive be prohibited for **DAMCON**, as it has been determined that it is not required to display point **DAMCON** in ECDIS. (Feature Catalogue). Agreed (TSMAD21).
- Suggest INT1 – F43 (flood barrage) be included in list of INT1 references for **DAMCON**. (Register). Agreed (TSMAD21).
- Suggest add S-4 – B-326.7 (flood barrage) to S-4 references for **DAMCON**. (Register). Agreed (TSMAD21).
- Suggest that NATCON = 4 (hard surfaced) be removed from the allowable enumerate list for NATCON in **DAMCON**. (Feature Catalogue). Await feedback from TSMAD (TSMAD21). Proposal for S-101PT1 (March 2016).
- Need to determine which values for STATUS are not required for **DAMCON**. (Feature Catalogue). Await feedback from TSMAD (TSMAD21). Discussed at Sub-WG1 – values as suggested in draft submitted to meeting for removal agreed.

DAYMAR:

- Why is there a reference to encoding **RADRFL** for **DAYMAR** (no attribute CONRAD for **DAYMAR**) but not for **TOPMAR**? (S-58 test 1762). (TSMAD). IC-ENC: It is

assumed that most (if not all) buoys have radar reflectors. Further investigation required (TSMAD21). Attribute **radar conspicuous** has been added to **Daymark** in the Baseline DCEG.

- While a new complex attribute **topmark** has been included for all other navigation aid structures, it has not been included for **DAYMAR** for S-101. Is there any point in having a topmark on a daymark? (TSMAD, Feature Catalogue). **Cannot see any point in this.**
- Suggest S-4 – B-455.9 (daymark) be substituted as S-4 reference for **DAYMAR**. (Register). **Agreed (TSMAD21).**

DEPARE:

- Suggest remove “A depth area is” from definition for **DEPARE**. (Register). **Agreed (TSMAD21).**
- Is line going to be an allowable primitive for **DEPARE** in S-101? Suggest it is no longer required. (TSMAD, Register). **Don't need them. Agreed to remove (TSMAD21).**
- There should be S-4 references for something as fundamental in ENC's as depth areas – needs to be discussed. (TSMAD, Register). **Suggestion is to include B-410. Further investigation required (TSMAD21). B-410 added.**
- Diagrams need to be re-done to remove all references to **DEPARE** of type line. **US (Rick) can do this (Julia). It was agreed the all diagrams taken from the S-57 UOC needed to be replaced (TSMAD21).**
- The sub-section “Bathymetry in areas of minimal depiction of detail on paper charts” needs to be revised to reflect discussions from TSMAD meetings. **Agreed. AU to include additional draft guidance (TSMAD21).**
- Is there a purpose for having QUASOU as an allowable attribute for **DEPARE**? (Feature Catalogue). **Agreed to remove (TSMAD21).**
- TSMAD27: Revised draft wording regarding areas of continual changes needs to be discussed. (DIPWG).

DEPCNT:

- Suggest remove the words “A depth curve is” from the S-32 definition for depth curve (1315). (HDWG). **Agreed (TSMAD21).**
- The definition for depth contour is almost exactly the same as the S-32 definition for depth curve (1315), except for substituting “contour” for “curve”. Is the modern term most used “contour” rather than “curve”? Suggest S-32 definitions be swapped with the actual definition be included for depth contour (1314) and wording and references amended accordingly. (HDWG, Register). **UK: There is a distinction between contour and curve. DGIWG call them depth curves as they are shoal biased. Needs to be considered. Further investigation required (TSMAD21). Sub-WG2: Decided to leave as is.**
- Suggest S-4 references for depth contour be amended to include B-411.1, B-411.3-5; and to remove B-413.2. (Register). **Agreed (TSMAD21).**
- Guidance for the encoding of depth contours suggests that QUAPOS = 4 (approximate) should be used for approximate contours. Discussions with cartographers and surveyors within the AHS has determined that a better value to use is QUAPOS = 3 (inadequately surveyed), as the accuracy of the contours are based on the adequacy of the surveys used to derive the contours. Additionally, it can be argued that all depth contours are “approximate” as they are an interpolation of survey data. Does this warrant further discussion? (TSMAD). **Leave as is. Don't change what isn't broken. Perhaps remove QUAPOS = 3 from allowable enumerate list for DEPCNT? Further discussion related to perhaps mandating QUAPOS = 4. Further discussion required (TSMAD21). Proposal for S-101PT1 (March 2016).**

DISMAR:

- Suggest that S-57 definition for distance mark (as a hydrographic feature) be included in S-32. Note that the S-57 definition has been adapted (as a combination of definition and description) for DGIWG FDD. (HDWG, Register). **AU to raise with HDWG (TSMAD21). 08/07/11: Current recommendation from HDWG is that a**

definition for distance mark not be included in S-32. AU has questioned this. Awaiting response.

- Amend INT1 references for DISMAR to B25.1 and B25.2. Suggest F40 be removed as it does not refer to distance mark. (Register). **Agreed (TSMAD21).**
- Suggest a new attribute (DSTNCE?) to encode the value of the distance. Perhaps a complex attribute also containing the unit of measurement? IEHG: IENC have introduced an attribute “waterway distance” (TSMAD21). 10/03/12: Draft DCEG – inserted proposed new complex attribute “waterway distance” (0,1), with sub-attributes “distance value” (0,1) and “unit of distance measurement” (0,1). For baseline DCEG complex has been renamed **measured distance value** with the IEHG attribute **waterway distance** being used as a sub-attribute to encode the distance. Note that this complex attribute is mandatory for **Distance Mark** in the Baseline DCEG.
- Issue of units needs to be discussed (metres, kilometres, nautical miles) (TSMAD21).
- **AU to look at tidying up category of distance mark (TSMAD21).**

DMPGRD:

- The S-57 definition for **DMPGRD** has been expanded from the S-32 definition for spoil ground to include dumping grounds where harmful materials are deposited. Should there be a separate definition for dumping ground in S-32 (given that spoil ground is only one category of dumping ground)? Note that the S-57 definition has been adopted by DGIWG FDD. (HDWG). **AU to raise with HDWG (TSMAD21).** 08/07/11. **New definition for dumping ground has been recommended by HDWG which is the same as the current S-57 definition. To be approved by HSSC and IHO MS.**
- S-4 provides a mechanism for indicating the date (year) when dumping activity ceased. This could be provided in INFORM, but suggest that a new attribute (DATDMP?) be added. (Register, Feature Catalogue). **Use DATEND and DATSTA (with additional guidance in regard to turning things on and off), noting that current use of DATEND and DATSTA is to turn features “on and off” in the ECDIS (TSMAD21). Proposal for S-101PT1 (March 2016).**
- Suggest all of S-4 – B-442 (dumping grounds: general; harmful materials); B-446 (spoil grounds; extraction (or dredging) areas) and B-446.1 (spoil grounds) be listed as the S-4 references for **DMPGRD**. (Register). **Agreed (TSMAD21).**

DOCARE:

- 06/07/11: Definition for “dock” under review by HDWG. Current S-57 definition will most likely be adopted in S-32. (Register). 14/08/12: HDWG decision not to revise definition for dock in line with S-57. S-57 definition retained.
- Suggest remove “A dock area is” from current definition for **DOCARE**. (Register). **Agreed (TSMAD21). Done**
- Remarks bullet point 5: If **DOCARE** must only be covered by **LNDARE** or **UNSARE**, and this bullet point says that **DOCARE** and **SEAARE** can overlap, then it should be stated that where this is the case, **DOCARE** must be covered by **UNSARE** (**SEAARE** and **LNDARE** cannot overlap). (TSMAD). **Agreed that additional guidance is required in the Encoding Guide. AU to draft (TSMAD21). Bullet amended. May need further discussion in regard to the intent of population of feature names as “display name”.**

DRGARE:

- Suggest a new attribute to encode the date of dredging (DRGDAT?). (Register, Feature Catalogue). **Agreed (TSMAD21).**
- Suggest that the value of DRVAL1 (where populated with a known value) display within the dredged area on the ECDIS. Is there a way that DRVAL2 can display if DRVAL1 is populated with an empty (null) value? (DIPWG). **Agreed. AU to develop proposal for DIPWG.** It was also determined that only the depth was required to be displayed; the year of dredging is not required to be displayed (TSMAD21). **Overtaken by events. However, a proposal still needs to be submitted to have the value populated for **depth range minimum value** display in the ECDIS.**

- Suggest list of allowable enumerate values for RESTRN be reviewed for possible exclusion of some values (suggest at least value 7 (entry prohibited) and 22 (removal of historical artefacts prohibited) be excluded). (Feature Catalogue). **TSMAD to review (TSMAD21)**. **DCEG Baseline version has restricted values of restriction for Dredged Area as suggested in final working version.**
- Suggest that TECSOU = 11 (satellite imagery) be removed from the allowable enumerate list for TECSOU in **DRGARE**. (Feature Catalogue). **Agreed (TSMAD21)**.
- Suggest all of S-4 – B-414 be listed as the S-4 references for **DRGARE**. (Register). **Agreed (TSMAD21)**.

DRYDOC:

- Maximum draft in the dock is currently encoded in INFORM. Suggest that maximum draft be an attribute combined as a sub-attribute with DRVAL1 to form a complex attribute? Or just a separate attribute (DRAMAX?)? (Register). **Agreed. Whether as a separate attribute or complex attribute is yet to be determined (TSMAD21)**. Generic attribute **maximum permitted draught** has been added for the Baseline DCEG.

DWRTCL:

- 07/07/11: HDWG decision is that deep water route centreline is not required in S-32.
- Suggest that QUASOU = 6 (least depth known) and 7 (least depth unknown, safe clearance at value shown) be added to list of allowable enumerate values for QUASOU on **DWRTCL**. (Feature Catalogue). **TSMAD to review (TSMAD21)**. **Done for Baseline DCEG**.
- Suggest TECSOU = 2 (found by side scan sonar) and 11 (satellite imagery) be removed from; and TECSOU = 5 (found by lead-line) be added to; the list of allowable enumerate values for TECSOU on **DWRTCL**. (Feature Catalogue). **TSMAD to review (TSMAD21)**. **Done for Baseline DCEG**.

DWRTPT:

- Additional text is required in the definition to define the route part – sample text based on that used for two-way route has been included. (Register). **TSMAD to review (TSMAD21)**. **Done for Baseline DCEG**. **DCEG Sub-WG4: amended definition in line with TR suggestion (refer TR e-mail 20130807)**.
- Suggest that QUASOU = 6 (least depth known) and 7 (least depth unknown, safe clearance at value shown) be added to list of allowable enumerate values for QUASOU on **DWRTPT**. (Feature Catalogue). **TSMAD to review (TSMAD21)**. **Done for Baseline DCEG**.
- Suggest RESTRN = 14 (area to be avoided) be removed from the list of allowable enumerate values for RESTRN on **DWRTPT**. (Feature Catalogue). **Agreed (TSMAD21)**.
- Suggest TECSOU = 2 (found by side scan sonar) and 11 (satellite imagery) be removed from; and TECSOU = 5 (found by lead-line) be added to; the list of allowable enumerate values for TECSOU on **DWRTPT**. (Feature Catalogue). **TSMAD to review (TSMAD21)**. **Done for Baseline DCEG**.

DYKCON:

- Why is CONVIS not an allowable attribute for this feature? **Further consideration required (TSMAD21)**. **DCEG Sub-WG Meeting Jan 12: Agreed to add CONVIS as an allowable attribute**.
- Suggest that CONRAD = 3 (radar conspicuous (has radar reflector)) and 4 (radar conspicuous (has Radar Target Enhancer)) be removed from the allowable enumerate list for CONRAD in **DYKCON**. (Feature Catalogue). **Agreed (TSMAD21)**.
- Suggest remove NATCON = 4 (hard surfaced) and 5 (unsurfaced) from S-58 list of allowable values for **DYKCON**. (Feature Catalogue). **TSMAD to review (TSMAD21)**. **DCEG Sub-WG Meeting Jan 12: Proposal rejected. Enumerate values retained**.

FAIRWY:

- The current S-57 definition is from the International Maritime Dictionary. There is a definition for fairway in S-32, but it is much broader than the S-57 definition. Should the S-32 definition be amended? (HDWG). **07/07/11: Definition for “fairway” under review by HDWG. Current S-57 definition (or similar) will most likely be adopted in S-32. (Register).**
- Suggest that QUASOU = 3 (doubtful sounding) and 4 (unreliable sounding) be removed from the allowable enumerate list for QUASOU, and QUASOU = 6 (least depth known) be added to the allowable enumerate list for QUASOU on **FAIRWY**. (Feature Catalogue). **Proposal for S-101PT1 (March 2016).**
- Should INT1 – M18 (fairway designated by regulatory authority) be included as the INT1 reference for **FAIRWY**? (Register). **Done for Baseline DCEG.**
- Suggest add S-4 – B-432.1 (a fairway) and B-434.5 (a fairway designated by a regulatory authority) to S-4 references for **FAIRWY**. **Done for Baseline DCEG.**

FERYRT:

- 07/07/11: HDWG decision is that ferry route is not required in S-32.
- Suggest that STATUS = 14 (public) be added to the allowable enumerate list for STATUS on **FERYRT**. (Feature Catalogue). **Done for Baseline DCEG.**
- Suggest all of S-4 – B-438 (ferries) be listed as the S-4 references for **FERYRT**. (Register). **Done for Baseline DCEG.**

FLODOC:

- Is **FLODOC** going to be a Group 1 feature in S-101? If so, then DATEND and DATSTA should be removed from the allowable attribute list. **Floating Dock will not be a Group 1 feature in S-101.**
- Suggest that CONDTN = 3 (under reclamation) be removed from the allowable enumerate list for CONDTN in **FLODOC**. (Feature Catalogue). **Done for Baseline DCEG.**
- The implementation of ENC Encoding Bulletin needs to be looked at. It doesn't look like it will work properly. **Not relevant due to Floating Dock not being a Group 1 feature.**
- Maximum draft in the dock is currently encoded in INFORM. Suggest that maximum draft be an attribute combined as a sub-attribute with DRVAL1 to form a complex attribute? Or just a separate attribute (DRAMAX?)? (Register). **Generic attribute maximum permitted draught has been added for the Baseline DCEG.**

FNCLNE:

- Existing S-57 definition includes the words “natural or man-made”. Current DGIWG definitions for both fence and wall only state man-made. Suggest the “natural or” be removed from the definition, or is there a situation where such a natural feature would be encoded as **FNCLNE**? (Register). **Done for Baseline DCEG.**
- Suggest that CONRAD = 3 (radar conspicuous (has radar reflector)) and 4 (radar conspicuous (has Radar Target Enhancer)) be removed from the allowable enumerate list for CONRAD in **FNCLNE**. (Feature Catalogue). **Overtaken by events.**
- Suggest that STATUS = 7 (temporary) and 13 (historic) be added to the allowable enumerate list for STATUS in **FNCLNE**. (Feature Catalogue). **Done for Baseline DCEG.**

FOGSIG:

- Suggest S-4 references for **FOGSIG** be amended to add B-451, B-453 and B-454. (Register). **References amended to B-451-454 for Baseline DCEG.**

FORSTC:

- Suggest amended definition for **FORSTC**, as adapted from DGIWG FDD. (Register). **DCEG Sub-WG Meeting Jan 12: Agreed to proposal. 13/08/12: Done.**
- Suggest list of allowable enumerate values for STATUS be reviewed for possible exclusion of some values. (Feature Catalogue). **DCEG Sub-WG Meeting Jan 12: Agreed to proposal and done.**

- TSMAD Review 2: STATUS = 1 (permanent) has been removed from **FORSTC**. Confirm that this is OK. [Done for Baseline DCEG](#).
- Suggest landmark be added to list of Distinctions. (Register). [Done for Baseline DCEG](#).
- Guidance for encoding a fortified structure that is in the water needs to be revised to reflect the introduction of the “system” Boolean attribute **in the water**.

FRPARE:

- What is the point of having STATUS as an allowable attribute for **FRPARE**? (Feature Catalogue). [Proposal for S-101PT1 \(March 2016\)](#).

FSHFAC:

- 07/07/11: HDWG decision is that fishing facility is not required in S-32. AU has questioned this, however. Awaiting response. [Definition not to be included in Hydrographic Dictionary](#). DFDD definition uses “shallow water” (as for original S-57 definition), therefore is unsuitable. [Retained S-57 definition \(as amended\)](#).
- Suggest delete “.1-2” from INT1 reference K44 for **FSHFAC** (consistency). Both K44.1 and 44.2 are references, but these constitute all K44. (Register). [Agreed and done](#).
- Suggest B-447 (aquaculture: fish traps, shellfish beds, fish havens, marine farms) be added to S-4 references for **FSHFAC**. (Register). [Agreed and done](#).
- Something needs to be sorted out in relation to having to double encode **FSHFAC** as **OBSTRN** in order for adequate portrayal in ECDIS, as per UOC Edition 3.0.0. (TSMAD, DIPWG). [Guidance for double encoding Fishing Facility and Obstruction removed from DCEG in accordance with proposed wording in the Working Baseline version](#).

FSHGRD:

- Suggest list of allowable enumerate values for RESTRN be reviewed for possible exclusion of some values (suggestions in document). (Feature Catalogue). [DCEG Baseline version has restricted values of restriction for Fishing Ground as suggested in final working Baseline version](#).
- Suggest marine farm/culture be added to list of distinctions for **FSHGRD**. (Register). [Done for Baseline DCEG](#).

FSHZNE:

- What is the point of having STATUS as an allowable attribute for **FSHZNE**? If STATUS is OK as an allowable attribute, shouldn't the attributes DATEND, DATSTA, PEREND and PERSTA be allowable in order to support STATUS values 5 (periodic/intermittent) and 7 (temporary)? (TSMAD, Register). [Proposal for S-101PT1 \(March 2016\)](#).
- If a fishery zone is encoded as an area, why does the distance of the associated limit have to be encoded in INFORM? (TSMAD). [Discussion at DCEG Sub-WG3: Agreed to population of the “distance” using the complex attribute feature name as these limits are referred to as “the 6 mile limit” or “the 12 mile limit”](#). [Revised bullet added for Baseline DCEG](#).
- Is there a display alternative that can be implemented in lieu of ENC EB **XX**? (DIPWG).

GATCON:

- There is a definition for gate: hydraulic in S-32. Should this definition be adopted for S-100? Should a separate definition just for “gate” be incorporated in S-32? (TSMAD, HDWG, Register). [DGIWG FDD definition has been used for Baseline DCEG](#).
- Suggest remove S-4 – B-326.3 (A wet dock or non-tidal basin) from the list of S-4 references for **GATCON**. (Register). [Done for Baseline DCEG](#).

GRIDRN:

- Suggest S-32 definition for careening grid be amended to agree with S-57 definition (removal of word “timber”). Suggest also that “Also called gridiron” be added to S-32 definition. (HDWG). **08/07/11: HDWG has reviewed the definition and has removed “timber” from the definition. There is an entry for gridiron in S-32 that links to careening grid. S-32 adopted as authority for definition.**
- Suggest removing point as an allowable primitive for **GRIDRN** for ENC – does not symbolise in ECDIS (ENC EB No. 29). (Register (or Feature Catalogue?)). **Agreed and done.**
- Inconsistency between S-32 and INT1. Term in INT1 is “gridiron or scrubbing grid” (F24). Suggest INT1 term be amended to “gridiron or careening grid” to be consistent. Same situation for S-4 – clause B-326.8. Note that the term “scrubbing grid” is not included in S-32. (CSPCWG). **AU to propose to CSPCWG. “Careening grid” has been added at INT1 F24. Similar for S-4 – B-326.8.**
- Suggest that STATUS = 16 (watched) and 17 (unwatched) be removed from list of allowable enumerate values for STATUS on **GRIDRN**. (Feature Catalogue). **Agreed and done.**
- WATLEV values 2 (always dry) and 3 (always underwater/submerged) should not be allowable values for **GRIDRN** as these values conflict with definition – “A structure in the intertidal zone”. (Feature Catalogue). **Agreed and done.**
- Suggest dry dock and floating dock be included as distinctions for **GRIDRN**. (Register). **Agreed and done.**

HRBARE:

- There is a very clear distinction between the S-57 definition for harbour area, and the S-32 definition for harbour, as the S-57 definition refers to a harbour authority having jurisdiction. The S-32 definition relates more to the geography (natural or man-made). Suggest these definitions be discussed and resolved (e.g. include definition for harbour area in S-32?). Note that DGIWG FDD has distinct definitions for both. (TSMAD, HDWG, Register).

HRBFAC:

- Need to amend INT1 reference U1.1 (boat harbour, marina) following removal of section U from INT1 (CSPCWG 2009). (Register). **Agreed and done.**
- Suggest list of allowable enumerate values for PRODCY and RESTRN be reviewed for possible exclusion of some values. (Feature Catalogue). **Agreed and done. DCEG Baseline version has restricted values of restriction for Harbour Facility as suggested in final working Baseline version. Decision was to retain all values for product.**
- Suggest remove S-4 – B-328.2 (A timber yard) from list of S-4 references for **HRBFAC**. Timber yard has been removed as an allowable enumerate for CATHAF. (Register). **Agreed and done.**

HULKES:

- S-57 definition for Hulk and S-32 definition do not agree. These definitions should be synchronised (note that there is a definition for “hulk” in DGIWG FDD, which is mostly consistent with S-32). There is also an association with the term “hulk” and various types of offshore platforms (**OFSPPLF**) in S-4 (B-445.5). Discuss with HDWG and CSPCWG. (HDWG, CSPCWG, Register). **08/07/11: Revised definition has been recommended by HDWG which is a combination of the 2 definitions. To be approved by HSSC and IHO MS. Revised definition has been adapted for the Baseline DCEG.**
- Suggest adding offshore platform and shoreline construction to list of distinctions for **HULKES**. (Register). **Done for Baseline DCEG.**
- CSPCWG Letter 03/2011 (S-4 – B-300 to B-330 Round 1) suggests adding a new Section B-330 (Moored and Fixed Vessels, Hulks). Suggest once approved, the encoding guidance for **HULKES** be reviewed and the reference B-330 be added. (TSMAD, Register). **Done for Baseline DCEG.**

ICEARE:

- 06/07/11: HDWG decision is to not include the definition for “ice area” in S-32. Awaiting approval of HSSC. If approved, consider suggesting using the definition for ice sheet. (Register). [Note that definition used for the Baseline DCEG is the unchanged S-57 version.](#)

ICNARE:

- The burning of chemical waste at sea has been prohibited since 1996 under amendments made to the 1972 IMO Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (S-4 – B-449.3). Suggest that **ICNARE** be retired from the Register, or at least not included in the S-101 Feature Catalogue. (Register, Feature Catalogue). [Proposal for S-101PT1 \(March 2016\).](#)

ISTZNE:

- Suggest that RESTRN = 16 (discharging prohibited) and 17 (discharging restricted) be added to list of allowable enumerate values for RESTRN on **ISTZNE**. (Feature Catalogue). [Done for Baseline DCEG.](#)
- Suggest adding INT1 – M25.2 (inshore traffic zone without defined end limits) to INT1 references for **ISTZNE**. (Register). [Done for Baseline DCEG.](#)

LAKARE:

- Suggest removing lake shore from Distinctions (not allowed for ENC) (Register). [Done for Baseline DCEG.](#)

LIGHTS:

- Complex Attribute: Suggest SECTR1 and SECTR2 can be sub-attributes of a complex attribute SECTOR. Would it be possible to have multiple instances of SECTOR for a single light, so that multiple lights do not need to be encoded? Needs discussion. [Done – complex attribute sector characteristics.](#)
- The modelling in S-57 has the “elevation” of lights populated using the attribute HEIGHT. HDWG is in the process of revising the S-32 definitions of “height” and “elevation” and the definition for the “elevation” of lights will more than likely be included in the term “elevation”, not “height”. The term used in UOC is “elevation of lights”. Suggest that ELEVAT be exchanged for HEIGHT in the attribute binding for **LIGHTS**. (TSMAD, Feature Catalogue). [After much discussion in HDWG and other fora, revised definitions for height and elevation have been approved \(IHO CL 76/2012 refers\). Definitions allow for term to still be “elevation of lights”, but given the revised definitions, the value for the elevation of a light will need to be populated in the height attribute.](#)
- Clause “Unwatched lights”. Isn’t this up to the HO? Suggest removing this clause, or removing the value STATUS = 17 (unwatched) from the allowable enumerate list for STATUS on **LIGHTS**. (TSMAD, Feature Catalogue). [Proposal for S-101PT1 \(March 2016\).](#)
- Suggest INT1 – P130.4 (direction light with narrow fairway sector flanked by light sectors of different character on multicoloured charts) and P31 (moire effect light (day and night)) be included in list of INT1 references for **LIGHTS**. (Register). [Done for Baseline DCEG with minor amendments made for draft 0.0.2 \(January 2016\).](#)
- Should other INT1 references for features having lights (e.g. Q7 (lighted marks on standard charts) and Q8 (lighted marks on multicoloured charts)) be included in list of INT1 references for **LIGHTS**? (Register). [Required further investigation.](#)
- The introductory section for lights will need to be re-written once the complex attribute process with lights is sorted out. (TSMAD). [Done for Baseline DCEG.](#)
- Suggest S-4 references for **LIGHTS** be amended to cover all of Section B-470. (Register). [Overtaken by events.](#)
- Suggest S-4 – B-473 be included as S-4 reference for clause “Times of exhibition and exhibition conditions”. (TSMAD). [Done for Baseline DCEG.](#)
- Allowable enumerate list for the attribute COLOUR in relation to **LIGHTS** will need to be discussed (in particular use of colours orange, amber and brown). Refer to paper

CSPCWG7-09.6A and resultant discussions between Andrew Coleman and IALA (see DRMS AA536214 and CSPCWG Letter 07/2011). [Done for Baseline DCEG.](#)

LITFLT:

- Suggest removing INT1 – Q31 (light float not part of IALA system) from list of INT1 references for LITFLT. Will need to check next Edition of INT1. (Register). [Done for Baseline DCEG.](#) Note that in INT1 Edition 8 (BSH 2015) Q31 is marked as superseded.

LNDARE:

- Suggest moving this to section 6.2 (Natural Features) (currently in Section 13 – Rocks, Wrecks, Obstructions). [Agreed and done.](#)
- Suggest that CONDTN = 1 (under construction) and 5 (planned construction) be removed from list of allowable enumerate values for CONDTN on LNDARE. (Feature Catalogue). [Rejected.](#)
- Suggest that STATUS = 16 (watched) and 17 (unwatched) be removed from list of allowable enumerate values for STATUS on LNDARE. (Feature Catalogue). [Done for Baseline DCEG.](#)
- Should B-421.1 be included as an S-4 reference for Rocks which do not cover (islets)? (Register). [Done for Baseline DCEG.](#)

LNDELV:

- **08/07/11: Amended definition for “elevation” in S-32 has been recommended by HDWG. To be approved by HSSC and IHO MS.**
- Suggest adding S-4 – B-352 (Relief: Spot Heights) to references.

LNDMRK:

- There is a disparity between the S-32 definition and the S-57 definition (adapted from S-32) for landmark. Suggest S-32 definition be amended as the S-57 definition is better suited to hydrography? (HDWG). **08/07/11: Amended definition for “landmark” in S-32 has been recommended by HDWG. To be approved by HSSC and IHO MS. Note that the phrase “on land” has been retained in the recommended definition. Need to find out why “on land” was removed from the S-57 definition. Will have implications on how to model offshore wind motors (OFSPLF or LNDMRK?).** [13/08/12: Amended IHO Dictionary definition \(as at 2012\) used. Further work required to ensure that offshore features are not included in Landmark, and are catered for in other feature classes.](#)
- Suggest list of allowable enumerate values for CATSPM on LNDMRK be reviewed for possible exclusion of most values (many suggestions have been made in document). (Feature Catalogue). [DCEG Baseline version has restricted values of category of special purpose mark for Landmark as suggested in final working Baseline version.](#)
- Suggest list of allowable values for FUNCTN on LNDMRK be reviewed for possible removal of some values (suggestions included in document). (Feature Catalogue). [Rejected. All values have been retained.](#)
- Suggest that STATUS = 16 (watched) and 17 (unwatched) be removed from list of allowable enumerate values for STATUS on LNDMRK. (Feature Catalogue). [Done for Baseline DCEG.](#)
- TSMAD Review 2: STATUS = 1 (permanent) has been removed from LNDMRK. Confirm that this is OK. [Done for Baseline DCEG.](#)
- Suggest removing INT1 D 5-6 and 13 and inserting D 8; removing E 10.1-22 and inserting E 10.2-10.4; 20; amending to E 22-31 (all inclusive) for INT1 references for LNDMRK. (Register). [Done for Baseline DCEG.](#)
- **13/08/12: All above included in draft submitted for approval of Sub-WG August 2012. Done for Baseline DCEG.**
- Suggest S-4 – B-373 (places of worship and associated features); B-374.3 (a tower in general); B-445.8 (wind turbines) and B-445.9 (wind farms) be added; and B-445.6 (safety zones) be removed; from list of S-4 references for LNDMRK. (Register).

13/08/12: B-445.8 and B-445.9 removed (new feature and encoding - see below). All other changes made as suggested.

- New encoding guidance for UOC Edition 3.0.0 suggests that offshore wind turbines be encoded as **LNDMRK**. Need to discuss if this is the best way to model this in S-101 (refer to new UOC guidance as part of discussions). See also **OFSPFLF** below. (TSMAD, Feature Catalogue). **DCEG Sub-WG2: Refer Proposal. New feature Offshore Wind Turbine included in Baseline DCEG.**
- In relation to above bullet point, if it is agreed to have offshore wind turbines encoded as **LNDMRK**, will need to determine whether **WATLEV** should be added as an allowable attribute, with allowable values of 2 (always dry) and 7 (floating) only, in order to enable encoding of floating wind turbines. (TSMAD, Feature Catalogue). **DCEG Sub-WG2: Refer Proposal. See above. Further modelling options regarding structures erected (in the water” are subject to an action on RF and JW.**

LNDRGN:

- Suggest that **NATQUA = 10 (hard)** be removed from list of allowable enumerate values for **NATQUA** on **LNDRGN**. (Feature Catalogue). **Attribute quality of nature of surface is not an allowable attribute for Land Region in S-101.**
- Suggest remove S-4 – B-312.1 (a steep coast), B-312.3 (sandhills or dunes) and B-312.4 (mangroves) be removed from list of INT1 references for **LNDRGN**. Suggest B-350 (natural features in general) be included in list of S-4 references in relation to introductory paragraphs. (Register). **Done for Baseline DCEG.**
- There has been a clause inserted in the DCEG for “Lava flow”, as for UOC clause 4.7.12. In the context of the DCEG (location of the clause), this guidance is fairly obvious. Should this clause be retained? Note that a similar clause relating to transit sheds and warehouses (**BUISGL**) has been omitted from the draft DCEG. (TSMAD). **On further consideration, suggest that this clause be retained as there is further guidance in this (and other clauses for land region) on encoding coastline along the seaward edge etc.**

LOCMAG:

- Minor change to definition of Local Magnetic Anomaly to agree with S-32. (Register). **Done for Baseline DCEG.**
- Complex Attribute: Suggest **VALLMA** can be a complex attribute with sub-attributes **VALPOS** and **VALNEG** to populate the range of magnetic anomaly. This would remove the requirement to populate **INFORM** (or an information object). (Register, Feature Catalogue). **Done for Baseline DCEG.**
- Heading in body of text changed to Local magnetic anomaly. **Done for Baseline DCEG.**

LOGPON:

- Note that an adaptation of the S-57 definition for log pond has been included in **DGIWG FDD** (booming ground). Is this a hydrographic feature, and therefore warranting a definition in S-32? (**HDWG**, Register). **08/07/11: Current recommendation from HDWG is that a definition for log pond not be included in S-32. AU has questioned this. Awaiting response. Note that definition used for the Baseline DCEG is the unchanged S-57 version.**

LOKBSN:

- Suggest words “A lock basin is” be removed from current S-57 definition for lock basin to agree with S-32 definition. Also suggest “Adapted from” be removed from definition as this definition matches the definition for lock in S-32. (Register). **Agreed and done.**
- Suggest include canal to list of distinctions for **LOKBSN**. (Register). **Agreed and done.**

MAGVAR:

- Suggest definition for Magnetic variation be amended to be derived from S-32. (Register). **Done for Baseline DCEG.**

- Complex Attribute: Suggest that VALACM and VALMAG can be combined as sub-attributes to a complex attribute to define the overall magnetic variation at a specific date (perhaps this can be combined with RYRMGV at some stage to internally calculate the actual magnetic variation for the displayed ECDIS date?). **Rejected**.
- Suggest INT1 references for magnetic variation be amended. (Register). Will need to be reviewed and confirmed. **Done for Baseline DCEG**.
- Suggest S-4 references for magnetic variation be amended. (Register). Will need to be reviewed and confirmed. **Done for Baseline DCEG**.

MARCUL:

- The S-57 definition for **MARCUL** also additionally includes “Also called fish farm.”. Should the S-32 definition for “fish farm” therefore include “Also called marine farm, marine culture.”? (HDWG). There is a **Hydrographic Dictionary** entry for “marine farm” that points to “fish farm”, which is the source for the S-57 definition. Therefore consider no further action required.
- Suggest delete “.1-2” from INT1 reference K48 for **MORFAC** (consistency). Both K48.1 and 48.2 are references, but these constitute all K48. (Register). **Done for Baseline DCEG**.
- Is it possible to have a **MARCUL** which has a value of sounding that is deeper than the range of depth of the surrounding depth area? Suggest that EXPSOU = 3 (deeper than the depth of the surrounding depth area) be removed from the allowable list of values for EXPSOU on **MARCUL**. (TSMAD, Feature Catalogue). **Agreed and done**.

MIPARE:

- The S-57 definition has been derived from the S-32 definition for exercise area. The difference between the two definitions is the inclusion of “shown on charts” in the S-32 definition. Suggest this is not required as it suggests that it is not an exercise area unless it is shown on a chart(?). (HDWG). **Done for Baseline DCEG with “adapted” S-32 definition as included in S-57**.

MORFAC:

- Suggest that STATUS = 5 (periodic/intermittent) be added to list of allowable enumerate values for STATUS on **MORFAC**. (Feature Catalogue). **Agreed (Sub-WG1). Done for Baseline DCEG**.
- Remove INT1 – G18.1 from list of INT1 references for **MORFAC**. Does not exist in INT1. (Register). **Done for Baseline DCEG**.
- Suggest there is a discussion as to why visitors moorings (**SMCFAC**) and Single Anchor Leg Mooring (SALM) and other such production moorings (**OFSPLF**) are not **MORFAC** (will effect all other issues listed here for **MORFAC**). (TSMAD, Register). **Current modelling to have function of visitor’s mooring encoded using Small Craft Facility makes sense when considering that visitor’s moorings can also be a post/pile, beacon, etc. Suggest no further action required**.
- Suggest S-4 references for **MORFAC** be amended to qualify B-327.1-4 (B-327.5 – Stumps of posts or piles – is **OBSTRN**) and to add B-431.5-6 (mooring buoys and mooring trots). (Register). **Agreed (Sub-WG1). Done for Baseline DCEG**.
- Suggest “pile” be added to list of distinctions for **MORFAC**. (Register). **Agreed (Sub-WG1). Also added “beacon, special purpose/general”. Done for Baseline DCEG**.

M_ACCY:

- Suggest that feature name **Accuracy of Data** be amended to **Accuracy of Non-bathymetric Data**. DCEG Sub-WG: Amended to **Quality of Non-bathymetric Data**. **Done for Baseline DCEG**.

M_CSCL:

- The whole issue of whether **M_CSCL** will be allowed for S-101 ENCs, and if so how it is to be applied in terms of optimum, maximum and minimum compilation scales, will need to be sorted out. (TSMAD, Feature Catalogue). **TSMAD23: Agreed to remove**

M_CSCL from S-101. Maximum/minimum display scales to be encoded on **Data Coverage** features. Done for Baseline DCEG.

M_HOPA:

- TSMAD21: Agreed to remove **M_HOPA** from the S-101 Feature Catalogue. (Data Classification and Encoding Guide). Done for Baseline DCEG.

M_NPUB:

- **M_NPUB** of type area do not currently display in ECDIS, necessitating additional encoding guidance where encoding such areas to reduce the number of **CTNAREs** on ENCs (see clause 3.5). Is there a possibility that these could be symbolised for S-101 ENCs? (DIPWG, Portrayal Catalogue). TSMAD25: Agreed to remove **M_NPUB** from S-101. There is a new feature **Information Area** for encoding information that is not navigationally critical. Done for Baseline DCEG.

M_QUAL:

- Suggest S-4 – B-297 (zone of confidence (ZOC) diagrams) be included as S-4 reference for **M_QUAL**. (Register). Done for Baseline DCEG.
- Suggest that feature name **Quality of Data** be amended to **Quality of Bathymetric Data**. DCEG Sub-WG: Agreed. Done for Baseline DCEG.

M_SREL:

- TSMAD27: DQWG to be consulted as to whether the curve primitive is required for the feature **Quality of Survey** (e.g. for line of passage soundings). Has been retained in the Baseline DCEG as DQWG have retained in their modelling.

NAVLNE:

- The S-57 definition for navigation line has been included in DGIWG DFDD. Should this be listed as the authority, or should this be considered to be a feature related to hydrography and therefore included in S-32? Suggest the term should be included in S-32. (HDWG). 08/07/11: HDWG recommendation is not to include a definition for navigation line in S-32. Apparently the original proposal for this derived from FR. Need to discuss with Guy and provide feedback to HDWG. S-57 definition (with minor amendment as below) retained in Baseline DCEG.
- Suggest definition for Navigation line be amended to remove the “A navigation line is” bit. (Register). Done for Baseline DCEG.
- What does “legend as shown on the source” mean for INFORM? There should be an example here. Should this be a new attribute indicating the length of the measured distance (perhaps HORLEN?). (TSMAD, Register, Feature Catalogue). Overtaken by events. Proposal for S-101PT1 (March 2016).
- Suggest INT1 – M3 (Recommended track based on a system of fixed marks) be removed from INT1 references for **NAVLNE**. (Register). Done for Baseline DCEG.
- Should INT1 – Q122 (Beacons marking measured distance with quoted bearings) be included in INT1 references for **NAVLNE**. (Register). Yes. Done for Baseline DCEG.

OBSTRN:

- 08/07/11: TSMAD has questioned the definition of **OBSTRN** in S-32 in regard to the examples included at the end of the S-32 definition. HDWG recommendation is to retain the existing S-32 definition. AU has no problem with this recommendation as the additions are only examples (the fact that the S-57 definition includes a “...” at the end of the definition implies that the full definition in S-32 as listed in the reference is pertinent). Suggest the full S-32 definition be included in the Register and S-101. Definition extended to the full Hydrographic Dictionary definition. Done for Baseline DCEG.
- Amend INT1 references K 46.1-2 to K 46 (consistency – fully inclusive). (Register). Agreed and done.
- There may be other INT1 references (new values for CATOBS) that need to be added to INT1 references. (Register). Reviewed and done for Baseline DCEG.

- There may be other S-4 references (new values for CATOBS) that need to be added to S-4 references. (Register). **Reviewed and done for Baseline DCEG.**
- Suggest that EXPSON = 3 (deeper than the range of depth of the surrounding depth area) be removed from list of allowable enumerate values for EXPSON on **OBSTRN**. (Feature Catalogue). **Rejected.**
- Suggest list of allowable values for NATSUR on **OBSTRN** be reviewed for possible removal of some values (suggestions included in document). (Feature Catalogue). **Rejected.**
- New encoding guidance has been included in UOC Edition 3.0.0 relating to the distinction between “foul area” and “foul ground”. This guidance has not been included in the DCEG, pending discussions on introducing a new feature in the Register for foul ground. (TSMAD, Register, Feature Catalogue). **New feature Foul Ground included in S-101. Amended paragraphs inserted, which require review. Done for Baseline DCEG.**
- New encoding guidance for UOC Edition 3.0.0 suggests that wave energy devices and underwater turbines be encoded as **OBSTRN**. Need to discuss if this is the best way to model this in S-101 (refer to new UOC guidance as part of discussions), and whether additional enumerate values should be added to CATOBS. (TSMAD, Register, Feature Catalogue). **New values added to attribute category of obstruction. Done for Baseline DCEG.**
- Decision made at TSMAD22 that for S-57 ENCs subsurface buoys (e.g. subsurface ODAS) are to be encoded as OBSTRN. Need to consider whether this is the best modelling for S-101. (Register, Feature Catalogue). **Done for Baseline DCEG. New value for category of obstruction of 13 (subsurface ocean data acquisition system (ODAS)) added.**

OFSPFL:

- S-32 definition for “platform: offshore” has been amended in S-57 through MD8 – 7.Cl.11 and 7.Co.6 to widen the meaning of the term. Suggest this amendment be considered for S-32. (HDWG). **08/12/11: This suggested amendment has not yet been proposed to HDWG. Requires proposal to HDWG.**
- If **OFSPFL** can be “fixed or floating”, then consideration should be made for adding WATLEV as an allowable attribute, with value 7 (floating) as the only allowable value (e.g. for floating wind motors). **WATLEV added with allowable values 2 or 7. Done for Baseline DCEG.**
- Add hulk to list of distinctions for **OFSPFL**. (Register). **Agreed. Done for Baseline DCEG.**
- Suggest adding B-445.4 and B-445.5 to S-4 references for **OFSPFL**. Articulated loading platform and single anchor leg mooring are at B-445.4 and floating production, storage and off-loading vessel is at B-445.5. (Register). **Agreed. Done for Baseline DCEG.**
- Should offshore wind turbines be considered as a type of offshore platform? Refer UOC Edition 3.0.0. (TSMAD, Register, Feature Catalogue). **New feature Offshore Wind Turbine proposed. New enumerate value proposed for product “electricity”. Done for Baseline DCEG.**
- Depending on outcome of above discussion, suggest add CONDTN = 4 (wingless) to list of allowable values for CONDTN on **OFSPFL**. (TSMAD, Feature Catalogue). **Wingless retained, however consider that this is no longer required. Proposal for S-101PT1 (March 2016).**
- In relation to offshore wind turbines, if it is agreed to have offshore wind turbines encoded as **OFSPFL**, will need to determine whether WATLEV should be added as an allowable attribute, with allowable values of 2 (always dry) and 7 (floating) only, in order to enable encoding of floating wind turbines. Refer also to **LNDMRK** above. (TSMAD, Feature Catalogue). **Agreed and done.**
- There may be further discussions regarding the modelling for artificial islands (CATOFP = 7). Refer discussion at CSPCWG7. (Feature Catalogue).

OILBAR:

- Suggest the DGIWG FDD definition for **OILBAR** be adopted and added to S-32 if this is considered to be a hydrographic feature. (HDWG). [DGIWG definition applied for DCEG Baseline.](#)
- Suggest S-4 – B-449.2 (floating barrier) be included as S-4 reference for **OILBAR**. Should also be included as S-4 reference in INT1 – F29.1). (CSPCWG (INT1 Sub-WG), Register). [Done for Baseline DCEG.](#)

OSPARE:

- Suggest that CONDTN = 3 (under reclamation) be removed from; and CONDTN = 4 (wingless) be added to, list of allowable enumerate values for CONDTN on **OSPARE**. Adding CONDTN = 4 dependant on decisions regarding wind farm. (Feature Catalogue). [Done for Baseline DCEG.](#)
- Suggest add L5.2 (wind farm) to list of INT1 references for **OSPARE**. (Register). [Done for Baseline DCEG.](#)
- The current INT reference for **OSPARE** is L4 (limit of development area). This does not appear to be a correct reference. How are development areas to be encoded in S-101 (there is no guidance in the UOC)? (TSMAD, Register). [Proposal for S-101PT1 \(March 2016\).](#)
- Should B-445.3 (development area) stay as an S-4 reference for **OSPARE**? (refer INT1 references above). (TSMAD, Register). [Recommendation is to retain \(included in proposal for S-101PT1 mentioned above\).](#)
- Suggest B-445.9 (wind farms) be added to S-4 references for **OSPARE**. May also need to include B-445.11 (underwater turbine/current farm) and B-445.12 (wave farm) to references, dependant on discussions related to above points. (Register). [Done for Baseline DCEG.](#)

PILBOP:

- TSMAD Review 2: STATUS = 3 (recommended) has been removed from **PILBOP**. Confirm that this is OK. [Done for Baseline DCEG.](#)
- Suggest a definition for pilot boarding place, or at least boarding place, be included in S-32. Note that pilot is defined in S-32. Note also that pilot boarding place is defined in DGIWG FDD, and their definition is a little more concise than the S-57 definition. Suggest this definition be adopted as the S-32 definition. (HDWG, Register). [08/07/11: HDWG has recommended that the S-57 definition not be included in S-32. AU has suggested that the DGIWG definition is more concise and should therefore be included in S-32 as hydrographically relevant. Awaiting response. 04/08/11: HDWG recommendation is not to include.](#)
- Suggest add S-4 – B-491.1 (the position of a pilot boarding place or pilot cruising vessel) to list of S-4 references for **PILBOP**. (Register). [Done for Baseline DCEG.](#)

PILPNT:

- Suggest the words “or seabed” be added to the IHO definition for pile. (HDWG, Register). [08/07/11: Amended definition recommended by HDWG, but words “or seabed” not included. AU has suggested that these words be included. Awaiting response. 04/08/11: Amended HDWG submission to HSSC includes “or sea floor” \(consistent with S-32 terminology\). To be approved by HSSC and IHO MS.](#)
- There seems to be very little difference between the definitions for pile, stake and post. Should there be more distinction between them? Are the values CATPLE = 1 and 3 necessary, or can they be combined? (TSMAD/HDWG, Register).
- Remove **PILPNT** from S-58 test 1762 (CONRAD has been added to this feature – S-57 Extension 6/01). (S-58).
- Piles are covered in S-4 – B-327.3. Should the reference therefore be added for **PILPNT**? Note that the guidance in S-4 is very minimal, which may explain why there is no reference included in UOC clause 4.6.7.2. (Register). [Done for Baseline DCEG.](#)

PINGOS:

- “Unexcluded” (see Extension 6/01). CATSLO = 5 (pingo) removed from **SLOGRD** and **SLOTOP**. Are there any additional words to add for this feature? (TSMAD).
- Suggest that CONRAD = 3 (radar conspicuous (has radar reflector)) and 4 (radar conspicuous (has Radar target Enhancer)) be removed from list of allowable enumerate values for CONRAD on **PINGOS**. (Feature Catalogue).
- Suggest that EXPSOU = 3 (deeper than the range of depth of the surrounding depth area) be removed from list of allowable enumerate values for EXPSOU on **PINGOS**. (Feature Catalogue).
- Suggest that NATSUR = 14 (coral), 17 (shells) and 18 (boulder) be removed from list of allowable enumerate values for NATSUR on **PINGOS**. (Feature Catalogue).
- Suggest that QUASOU = 10 (maintained depth) and 11 (not regularly maintained) be removed from list of allowable enumerate values for QUASOU on **PINGOS**. (Feature Catalogue).
- Suggest numerous values for VERDAT be removed from list of allowable enumerate values for VERDAT on **PINGOS** (suggestions included in document). (Feature Catalogue).
- Suggest that WATLEV = 7 (floating) be removed from list of allowable enumerate values for WATLEV on **PINGOS**. (Feature Catalogue).
- All other attributes for **PINGOS** need to be reviewed for possible exclusion of values from allowable list. (Feature Catalogue).
- The original deleted S-57 object contained the attribute QUAVEM, which has been deleted from S-57, and therefore is not currently in the S-100 Register. Is it required to have this attribute re-proposed?
- Why is VERDAT an allowable attribute for PINGOS? (Register).
- List of distinctions needs to be reviewed. (Register).

PINGO REMODELLED IN BASELINE DCEG TO AN ENUMERATE VALUE (17) FOR THE ATTRIBUTE category of obstruction.

PIPARE:

- Should a definition for submarine pipeline area be included in S-32? Note that there is a definition in DGIWG FDD. This also suggests that perhaps the term should be “submarine pipeline area” rather than just “pipeline area”? Does anyone encode pipeline areas on land in ENC? Suggest the word “submarine” be added to the definition for pipeline area. (TSMAD, HDWG, Register). **Agreed. Revised definition included in the document. Done for Baseline DCEG.**
- Suggest amend S-4 reference for **PIPARE** to B-444.3 (pipeline areas) in place of B-444.2 (outfalls and intakes). (Register). **Agreed and done for Baseline DCEG.**
- Note that S-4 references in Attribute Catalogue include B-439.3, which is not in the UOC. Suggest that B-439.3 be retained. (Register). **Done for Baseline DCEG.**

PIPOHD:

- Suggest S-57 definition of overhead pipeline be included in S-32. (HDWG).
- Suggest that CONRAD = 3 (radar conspicuous (has radar reflector)) and 4 (radar conspicuous (has Radar target Enhancer)) be removed from list of allowable enumerate values for CONRAD on **PIPOHD**. (Feature Catalogue). **Overtaken by events.**

PIPSOL:

- There is a broader definition for pipeline in DIGWG FDD (“A connected set of pipes for conveying liquids, slurries, or gases”). Should this definition be adopted in S-32 and therefore in S-100? (HDWG, Register). **DGIWG FDD provides a more generic definition which is more suited to the feature. This definition has been adopted. Done for Baseline DCEG.**
- Suggest point primitive should not be allowed for S-101 ENCs – does not display in ECDIS. Refer ENC EB 29. (TSMAD, Feature catalogue). **Agreed and done for Baseline DCEG..**

- Suggest that PRODC = 20 (wine) and 21 (grain) be removed from list of allowable enumerate values for PRODC on **PIPSOL**. (Feature Catalogue). **Done for Baseline DCEG**.
- Suggest S-4 – B-444 (submarine pipelines) and B-444.2 (outfalls and intakes) be added to list of S-4 references for **PIPSOL**. (Register). **Agreed and done for Baseline DCEG**.

PONTON:

- Suggest add “Adapted from” to definition of pontoon to cater for MD8 – 4.Co.7 and 4.Cl.5, or amending the S-32 definition accordingly. (HDWG, Register). **Done. To be referred to HDWG, along with explanation for adaptation as contained in MD8.**
- Is **PONTON** going to be a Group 1 feature in S-101? If so, then DATEND, DATSTA PEREND and PERSTA should be removed from the allowable attribute list. **Not TG1. Guidance amended accordingly. Done for Baseline DCEG.**
- Suggest most values for FUNCTN be removed from allowable enumerate list for FUNCTN on **PONTON** (suggestions in document). (Feature Catalogue). **MD8 – 7.Co.7 added FUNCTN as an allowable attribute for PONTON in S-57. However further discussion on this by the DCEG Sub-WG resulted in the recommendation that this decision be reversed. Therefore function has not been bound to the feature Pontoon in the DCEG. Done for Baseline DCEG.**
- The implementation of ENC Encoding Bulletin No. 11 needs to be looked at. It doesn't look like it will work properly. **Overtaken by events.**

PRDARE:

- The definition for **PRDARE** is not authorised. As there is a measure of hydrographic perspective in the current S-57 definition (use of the term “on land”), suggest that the S-57 definition be included in S-32. (HDWG). **Done for Baseline DCEG.**
- Add E26.2 (wind farm) to list of INT1 references for **PRDARE**. (Register). **Done for Baseline DCEG.**
- Suggest add B-328.2 (a timber yard) and B-374.6 (wind turbines) to list of S-4 references for **PRDARE**. (Register). **Done for Baseline DCEG.**
- Some **PRDARE** of type point do not symbolise in ECDIS (see ENC Encoding Bulletin No. 29). Should this be stated in the Encoding Guide? Is there a way that we can prohibit these geometric primitive/feature/attribute combinations from being encoded? (TSMAD, DIPWG). **TSMAD27: Decision that PRDARE point should display in ECDIS. To be referred to DIPWG.**
- Suggest that CONRAD = 3 (radar conspicuous (has radar reflector)) and 4 (radar conspicuous (has Radar target Enhancer)) be removed from list of allowable enumerate values for CONRAD on **PRDARE**. (Feature Catalogue).
- Suggest add STATUS = 12 (illuminated) to S-58 list of allowable values for **PRDARE**. (Feature Catalogue). **Done for Baseline DCEG.**
- TSMAD Review 2: STATUS = 8 (private) has been removed from **PRDARE**. Confirm that this is OK. **Done for Baseline DCEG.**
- TSMAD Review 2: STATUS = 1 (permanent) has been removed from **PRDARE**. Confirm that this is OK. **Done for Baseline DCEG.**

PYLONS:

- Suggest S-57 definition of pylon/bridge support be included in S-32. (HDWG).
- Suggest S-4 – B-381.5 (bridge supports) be added to list of S-4 references for **PYLONS**. (Register). **Done for Baseline DCEG.**
- Suggest adding landmark as a distinction for **PYLONS**. (Register). **Done for Baseline DCEG.**

RADLNE:

- The S-32 definition used for the S-57 definition of radar line is “radar guided tracks”, which is referred to in the S-57 definition. Suggest “Also called radar line” be included in the S-32 definition, or the term defined in S-32 amended to radar line. (HDWG). **08/07/11: HDWG recommendation is for a new entry for radar line to be**

included in S-32 with link to radar guided track. Problem with singular/plural for radar guided track which AU has raised for further consideration.

- Suggest that STATUS = 3 (recommended) be added to list of allowable enumerate values for STATUS on **RADLNE**. (Feature Catalogue). [Done for Baseline DCEG](#).

RADRFL:

- Suggest S-4 – B-455.8 (Radar reflectors) be added to the list of S-4 references for **RADRFL**. (Register). [Done for Baseline DCEG](#).

RADRNG:

- The S-57 definition for radar range has been adopted by DGIWG FDD (part as definition and part as description. If this is considered to be a hydrographic term, should it be included in S-32? (HDWG, Register).

RAILWY:

- Definition for **RAILWY** has been changed to agree with current definition in DGIWG FDD. (Register). [Done for Baseline DCEG](#).
- Suggest that CONDTN = 2 (ruined) be added to; and CONDTN = 3 (under reclamation) be removed from; list of allowable enumerate values for CONDTN on **RAILWY**. (Feature Catalogue). [Done for Baseline DCEG](#).
- Suggest that STATUS = 13 (historic) and 14 (public) be added to list of allowable enumerate values for STATUS on **RAILWY**. (Feature Catalogue). [Done for Baseline DCEG](#).

RAPIDS:

- Is **RAPIDS** required for S-101 ENC's? AU has tidal rapids on the north-west coast (check if these are encoded), but does anyone else use this feature? Note that S-4 specifies rapids being depicted "in otherwise navigable rivers" on paper charts. How then can it be encoded on a **RIVERS** feature if it should be in a navigable river? (Register).
- If the answer to the above is yes, consider excluding Point as a valid primitive for rapids in S-101 ENC's, as it does not symbolise in ECDIS (ENC EB 29 refers). [Sub-WG meeting Jan 2011. Decision was to retain as feature in S-101, and also to retain point primitive. TSMAD27: Will need to be addressed in portrayal.](#)

RCRTCL:

- Recommended route centreline has been included in the DGIWG FDD with the same definition as that used in S-57. Suggest as this is a hydrographic term the definition be included in S-32. (HDWG, Register). [Current reference is S-57 \(Baseline DCEG\)](#).
- Suggest that QUASOU = 6 (least depth known) be added to list of allowable enumerate values for QUASOU on **RCRTCL**. (Feature Catalogue). [Done for Baseline DCEG](#).
- Suggest that TECSOU = 2 (found by side scan sonar) and 11 (satellite imagery) be removed from list of allowable enumerate values for TECSOU on **RCRTCL**. (Feature Catalogue). [Done for Baseline DCEG](#).

RCTLPT:

- Suggest the revised S-32 definition for recommended direction of traffic flow (as derived from IMO Ships' Routing) be used as a definition for **RCTLPT**. Additional text is required to define the lane part – sample text based on that used for two-way route has been included. (Register).

RDOCAL:

- There is a definition for calling-in point in S-32 which has not been used in S-57. Suggest these definitions need to be reconciled, and the existing S-57 definition incorporated in the body of the text. (HDWG, Register). [11/07/11: HDWG review of definition for calling-in point resulted in decision to retain this definition, with no definition or reference to radio calling-in point or radio reporting point. Amended Hydrographic Dictionary definition, as approved \(IHO CL 76/2012 refers\) inserted.](#)

- Amend INT1 references for **RDOCAL** to reflect latest Edition – i.e. M40.1 and M40.2. (Register). **Done for Baseline DCEG.**
- Suggest amend S-4 references for **RDOCAL** to reflect revised S-4 (radio calling-in points are only covered B-488.1 and B-488.2 (not all of B-488)). (Register). **Done for Baseline DCEG.**
- Suggest “calling-in” and “reporting” in the sub-heading be transposed, as the feature name and acronym is “radio calling-in point” (**RDOCAL**). **Done for Baseline DCEG.**
- The current encoding for **RDOCAL** requires 2 coincident one-way features to be encoded if the point is actually 2-way but one bearing is not the reciprocal of the other. Is there a way that this can be done using only one feature? Suggest this may be done by having ORIENT as a complex attribute having 2 sub-attributes. (Register, Feature Catalogue). 20/03/12: Suggest multiplicity of **orientation** be (1,2) to allow for encoding two separate values if required. Amended to (0,2) to allow for FR proposal that orientation should not be mandatory (taking into consideration curve features). **Done for Baseline DCEG with multiplicity (0,2).**

RDOSTA:

- Note that many of the types (categories) of radio stations are no longer required to be depicted on paper charts, and their symbols in INT1 have been classed obsolete. Suggest evaluation of this be made for ENC and values retired accordingly. (Register, Feature Catalogue). **Evaluation made against S-4 (Edition 4.5.0) and values identified as redundant removed. Done for Baseline DCEG.**
- Suggest amend S-4 references for **RDOSTA** to include all B-480 to B-484. (Register). **Done for Baseline DCEG.**

RECTRC:

- The S-32 definition for “track: recommended” contains the words “shown on a chart by either a dashed or a continuous line”, which is not relevant to ENC encoding. Suggest this part of the definition be removed and made consistent with the existing S-57 definition. (HDWG). 11/07/11: **HDWG has reviewed the definition for recommended track in 2010 and a revised definition has been submitted for approval of MS. IMO Ships’ Routeing definition has been used for the revised definition (DCEG Sub-WG4 meeting). Done for Baseline DCEG.**
- Suggest that QUASOU = 3 (doubtful sounding) and 4 (unreliable sounding) be removed from list of allowable enumerate values for QUASOU on **RECTRC**. (Feature Catalogue). **Done for Baseline DCEG.**
- Suggest that TECSOU = 11 (satellite imagery) be removed from list of allowable enumerate values for TECSOU on **RECTRC**. (Feature Catalogue). **Done for Baseline DCEG.**
- INT1 references for recommended track are inclusive of M3 to M6. Suggest this be reflected in the references in the document by removing M5.1 and M5.2. (Register). **Done for Baseline DCEG.**
- Suggest adding S-4 – B-434.1-4 to list of S-4 references for **RECTRC**. (Register). **Done for Baseline DCEG.**
- Suggest a new attribute be used to encode the maximum authorised draft along a recommended track (e.g. MAXDFT). (Register, Feature catalogue). **Generic attribute maximum permitted draught has been added for the Baseline DCEG.**
- Suggest adding fairway to list of distinctions for **RECTRC**. **Done for Baseline DCEG.**

RESARE:

- The S-57 definition for restricted area, which was derived from S-32, has been amended by MD8 Clarification and Correction (2.Cl.2 and 2.Co.2). Suggest S-32 be amended to revised S-57 definition. (HDWG). 06/07/11. **Definition currently under review by HDWG. MD8 amendments have been brought to the attention of HDWG.**
- Suggest add INT1 – L5.2 (wind farm with restricted area); M29.1 (area to be avoided (ATBA) around navigational aid); and N63 (dredging area) be added to INT1 references for **RESARE**. (Register). **Done for Baseline DCEG.**
- Suggest add S-4 – B-437.1-7 (ESSA and other environmental areas); B-435.7 (area to be avoided); B-435.11 (no anchoring areas); B-445.9 (wind farm with restricted

area); B-446.4 (dredging area); and B-448 (degaussing range) to S-4 references for **RESARE** (and remove B-448.2). (Register). **Done for Baseline DCEG (except B-446.4, which was likely overlooked and has been added as an editorial correction for DCEG 0.0.2).**

- Where there is a speed restriction where the speed limit is known, the current guidance in S-57 is to populate this information in INFORM. Is there a way that this could be populated as a dedicated attribute and therefore displayed in the ECDIS? (TSMAD, DIPWG, Register). **New complex attribute vessel speed limit added. Done for Baseline DCEG.**

RETRFL:

- 11/07/11: HDWG decision to not define retroreflector in S-32.
- Complex Attribute: This feature should be a complex attribute of **BCN*****, **BOY***** and **DAYMAR(?)** (at least), with COLOUR etc. as sub-attributes. **DCEG Sub-WG discussion determined that for now this should continue to be a separate feature, mainly due to the fact that this feature is rarely used.**
- In S-4, the term used is “retroreflector”, while in S-57 it is “retro-reflector”. Suggest the term be as for S-4. (Register). **Done for Baseline DCEG.**
- INT1 – Q6 is “retroreflecting material”. Should this be included as an INT1 reference for retro-reflector even though there is no symbol? (Register). **Done for Baseline DCEG.**
- Suggest S-4 – B-460.7 (retroreflectors) be included as S-4 reference for **RETRFL**. (Register). **Done for Baseline DCEG.**

RIVERS:

- Suggest that STATUS = 2 (occasional) be removed from list of allowable enumerate values for STATUS on **RIVERS**. The better term in regard to a river is periodic/intermittent. (Feature Catalogue). **Done for Baseline DCEG.**

ROADWY:

- Suggest removing “A road is” from the start of the definition for road. (Register). **13/08/12: NOTE: The DFDD definition for “road” includes “A route with a specially prepared surface”, which precludes track/path (category of road = 4). Current S-57 definition, amended for the above suggested change, has therefore been retained. Done for Baseline DCEG.**
- There have been a number of values for the attributes CONDTN, NATCON and STATUS suggested in the document for removal as allowable values on **ROADWY** (**ROADWY** is not included for these attributes in S-58 test 2000). These will need to be reviewed. (Feature catalogue). **Done for Baseline DCEG.**
- Suggest remove point as a valid geometric primitive for **ROADWY**, as it does not symbolise in ECDIS (refer ENC EB No. 29). (Register, Feature Catalogue). **Done for Baseline DCEG.**
- Suggest add INT1 – D7 (street name, road name) be added to list of INT1 references for **ROADWY**. **Done for Baseline DCEG.**
- Is square a valid distinction for ENC, given that it is prohibited? (Register). **13/08/12: Removed. Done for Baseline DCEG.**

RSCSTA:

- The S-57 definition for rescue station has been adopted by DGIWG FDD (maritime station type code). Suggest a definition for rescue station (perhaps maritime rescue station?) be included in S-32. (HDWG, Register). **11/07/11: There is a S-32 definition for life saving station which is similar to rescue station. This definition had previously been referenced to coastguard station which has been addressed by HDWG. AU has recommended that a reference to rescue station be inserted in the definition for life saving station. Awaiting response. Definition for life saving station inserted (as amended 2009). Done for Baseline DCEG.**
- There is an INT1 reference for **RSCSTA** to Q124 (refuge beacon). Refuge beacon is a category of special purpose mark. Is a refuge beacon going to be considered as a rescue station or a beacon special purpose? According to S-57 (UOC clause 13.3) it

is beacon special purpose, therefore suggest that Q124 be removed from INT1 references for **RSCSTA**. (TSMAD, Register, Feature catalogue). [Agreed and done for Baseline DCEG](#).

- Suggest S-4 – B-490 (Marine services and signal stations) be added to S-4 references for **RSCSTA**. (Register). [Agreed and done for Baseline DCEG](#).

RTPBCN:

- Suggest S-4 reference for **RTPBCN** be amended to include all B-486, as all clauses within B-486 apply to radar transponder beacons. (Register). [Done for Baseline DCEG](#).

RUNWAY:

- Suggest that STATUS = 7 (temporary) be removed from list of allowable enumerate values for STATUS on **RUNWAY**. (Feature Catalogue). [DCEG Sub-WG Meeting Jan 12: Decision to retain STATUS = 7](#).
- Suggest amending “airport area” to “airport/airfield”, and adding seaplane landing area, in distinctions. [DCEG Sub-WG Meeting Jan 12: Agreed](#).

SBDARE:

- The S-57 definition for **SBDARE** is a derivation of the S-32 definition for “bottom: nature of”, therefore suggest “Adapted from” be added to S-32 reference. (Register). [06/07/11: Definition being considered by HDWG. Agreed to leave as derivation of “nature of bottom”. Suggest add nature of bottom to the definition as an alternative term. Hydrographic Dictionary definition for “nature of bottom” used, with reference to nature of bottom added. HDWG decision not to have a separate definition for seabed area.](#)
- Consider adding J12 (two layers and mixed natures) to list of INT1 references. (Register). [Agreed and done](#).
- S-4 – B-425.1 recommends that colours are no longer relevant to the mariner in regard to nature of the seabed. Suggest that attribute COLOUR be removed (retired?) as allowable attribute for **SBDARE**. (Feature Catalogue). [Sub-WG2: Agreed to remove colour](#).
- Complex attribute: Suggest NATSUR and NATQUA be combined as sub-attributes for a complex attribute (SURFCE?). (Register). [Agreed and done \(refer proposal\)](#).

SEAARE:

- Suggest S-4 – B-550 (toponymy – general rules) be included as S-4 reference for **SEAARE**. (Register). [Agreed and done](#).
- Suggest STATUS be added as an allowable attribute for **SEAARE** to allow for buoyed (STATUS = 19 (marked by buoys)) areas of navigable lakes and rivers, where the positions of the buoys are not known, to be encoded. [No. Information area \(sub-WG meeting Jan 12\)](#).
- Suggest administration area (named) be added to list of distinctions for **SEAARE**. (Register). [Agreed and done](#).

SILTNK:

- [11/07/11: HDWG has recommended a new definition for silo to be included in S-32. To be approved by HSSC and IHO MS.](#)
- Suggest that BUISHP = 5 (high rise building) be removed from list of allowable enumerate values for BUISHP on **SILTNK**. (Feature Catalogue). [DCEG Sub-WG Meeting Jan 12: Decision to retain \(examples cited by UK\)](#).
- Suggest that PRODC T = 21 (cement) be removed from list of allowable enumerate values for PRODC T on **SILTNK**. (Feature Catalogue). [DCEG Sub-WG Meeting Jan 12: Decision to retain \(examples cited by UK\)](#).
- TSMAD Review 2: PRODC T = 16 (sawdust/wood chips) has been added for **SILTNK**. Confirm that this is valid encoding. [Done for Baseline DCEG](#).
- Suggest that STATUS = 13 (historic) be added to list of allowable enumerate values for STATUS on **SILTNK**. (Feature Catalogue). [DCEG Sub-WG Meeting Jan 12: Agreed](#).

- TSMAD Review 2: STATUS = 1 (permanent) has been removed from **SILTNK**. Confirm that this is OK. [Done for Baseline DCEG](#).
- Suggest “building, single” and “control point” be added to list of Distinctions for **SILTNK**. (Register). [Done for Baseline DCEG](#), noting that control point has been removed from the DCEG so is not a valid distinction.

SISTAT:

- Suggest a more specific definition for signal station, traffic be included in S-32. The definition will need to be determined. (HDWG, TSMAD, Register). [Decision not to include in Hydrographic Dictionary](#). Authority left as S-57.
- Suggest S-4 references for **SISTAT** be amended to include all B-494 and B-495. (Register). [Agreed and done](#). [Done for Baseline DCEG](#).

SISTAW:

- The S-57 definition for **SISTAW**, which has been taken from S-32, is the generic definition for signal station. Suggest in addition a more specific definition for signal station, warning be included. The definition will need to be determined. (HDWG, TSMAD, Register). [Hydrographic Dictionary definition retained](#). [DFDD definition for signal station warning added](#).
- Suggest S-4 – B-490.3 (no longer exists) be removed from list of S-4 references for **SISTAW**. (Register). [Agreed and done](#).

SLCONS:

- Suggest S-57 definition be included in S-32? (HDWG). [DCEG Sub-WG Meeting Jan 12: Proposal supported](#).
- Suggest that NATCON = 8 (glass reinforced plastic (GRP)) be removed from list of allowable enumerate values for NATCON on **SLCONS**. (Feature Catalogue). [DCEG Sub-WG Meeting Jan 12: Proposal rejected](#).
- Suggest that STATUS = 9 (mandatory), 16 (watched) and 17 (unwatched) be removed from; and STATUS = 13 (historic) be added to; list of allowable enumerate values for STATUS on **SLCONS**. (Feature Catalogue). [DCEG Sub-WG Meeting Jan 12: Proposal supported](#). [Done for Baseline DCEG](#).
- Suggest F3 (causeway) be removed from list of INT1 references for **SLCONS** (is a separate feature). (Register). [DCEG Sub-WG Meeting Jan 12: Proposal supported](#). [Done for Baseline DCEG](#).
- Suggest F24 (gridiron), F25 (dry dock) and F26 (floating dock) be removed from list of INT1 references for **SLCONS**. (Register). [DCEG Sub-WG Meeting Jan 12: Proposal supported](#). [Done for Baseline DCEG](#).
- Suggest S-4 – B-320 (ports and harbours in general) and B-329 (works under construction and projected) be added to list of S-4 references for **SLCONS**. (Register). [DCEG Sub-WG Meeting Jan 12: Proposal supported](#). [Done for Baseline DCEG](#).
- Suggest causeway, dry dock, floating dock and gridiron be added to list of distinctions for **SLCONS**. [Done for Baseline DCEG](#).
- Should lake shore and river bank be listed as distinctions given that they are prohibited for ENC? (Register). [Removed for Baseline DCEG](#).

SLOGRD:

- Non-display of most **SLOGRD** areas unless CONRAD = 1 needs to be further discussed. What about a large visually conspicuous or prominent hill or sand dune? (DIPWG).
- Suggest all values of CONRAD except CONRAD = 1 and 2 be excluded from the allowable enumerate list for **SLOGRD**. (Feature Catalogue). [Overtaken by events](#).
- Suggest several values for NATSUR be removed from the allowable list of values for NATSUR on **SLOGRD** (suggestions in document). (Feature Catalogue). [Done for Baseline DCEG](#).
- Suggest INT1 – F1 be removed from list of references. This reference is more appropriate for **DYKCON**. (Register). [Proposal for S-101PT1 \(March 2016\)](#).

- Suggest S-4 – B-363.2 (a cutting) and B-364.1 (embankments) be added to; and B-313.1 and B-313.2 be removed from; the S-4 references for **SLOGRD**. (Register). **Done for Baseline DCEG**.

SLOTOP:

- Suggest that CATSLO = 3 (hill), 4 (dune) and 7 (scree) be removed from list of allowable enumerate values for CATSLO on **SLOTOP**. (Feature Catalogue). **Proposal for S-101PT1 (March 2016)**.
- Suggest several values for COLOUR be removed from the allowable list of values for COLOUR on **SLOTOP** (suggestions in document). (Feature Catalogue). **Done for Baseline DCEG**.
- Suggest all values of CONRAD except CONRAD = 1 and 2 be excluded from the allowable enumerate list for **SLOTOP**. (Feature Catalogue). **Overtaken by events**.
- Suggest several values for NATSUR be removed from the allowable list of values for NATSUR on **SLOTOP** (suggestions in document). (Feature Catalogue). **Done for Baseline DCEG**.
- Do we have to restrict the use of **SLOTOP** to on the land only? What if a HO considers it important to encode an ocean cliff (that cannot be represented in the depth contour range) on its ENCs? (TSMAD, DIPWG).

SMCFAC:

- The S-57 definition for small craft facility has been adopted by DGIWG FDD. Suggest this definition also be adopted in S-32, as small craft facility should be considered to be a hydrographic feature. (HDWG). **11/07/11: HDWG decision to not define small craft facility in S-32**.
- All INT1 references need to be reviewed in lieu of CSPCWG decision to remove Section U from INT1. As part of this review, consideration also needs to be given as to whether all the current S-57 enumerate values for CATSCF will be required for S-101 ENCs. (Register, Feature Catalogue). **Agreed and done. All values of category of small craft facility retained. Done for Baseline DCEG**.
- Suggest S-4 – B-320.1 (fishing harbours or ports) and B-320.2 (boat harbours and marinas) be included as S-4 references for **SMCFAC**. (Register). **Agreed and done for Baseline DCEG..**

SNDWAV:

- The S-57 definition for **SNDWAV** has been taken from S-32, therefore suggest the S-32 reference be added. (Register). **11/07/11: HDWG has reviewed the definition for sandwave and it has been recommended that the S-57 definition be adopted for S-32. To be approved by HSSC and IHO MS. Revised Hydrographic Dictionary definition is now in line with the S-57 definition (IHO CL 76/2012 refers). Done for Baseline DCEG**.
- In S-57, the term used is “sand wave” (2 words), while in S-32 it is a single word (“sandwave”). Which term is correct? Suggest “sandwave” (note that DGIWG FDD uses “sandwave”). (Register). **Agreed and done. Done for Baseline DCEG**.

SOUNDG:

- Definition in S-57 is a derivative from S-32 and has been adapted to suit nautical charting. Is this definition too narrow for other hydrographic applications? [Refer HDWG discussions February 2010 and CSPCWG discussions mentioned in this discussion]. (HDWG, Register). **11/07/11: HDWG has previously reviewed the definition for sounding but there have been new recommendations made without reference to these previous discussions. AU has raised this with HDWG and is awaiting response. No change made to existing definition for sounding in Hydrographic Dictionary**.
- The EXPSON = 2 issue for soundings needs to be sorted out in regards to the way it is implemented in the ECDIS. (TSMAD, Register). **EXPSON removed. Remarks 1st bullet amended accordingly. Done for Baseline DCEG**.
- A Note has been included in S-57 UOC Edition 3.0.0 relating to the population of EXPSON = 2 on soundings (this has not been included in the DCEG, but guidance

has been included in the Remarks). This Note should not be required for the DCEG – to be sorted out in line with discussions related to the above bullet point. (TSMAD). [See above. Done for Baseline DCEG.](#)

- Suggest that TECSOU = 10 (photogrammetry) and 11 (satellite imagery) be removed from list of allowable enumerate values for TECSOU on **SOUNDG**. (Feature Catalogue). [Decision made to retain.](#)
- Suggest INT1 – I11 be removed from INT1 references for **SOUNDG**, as sounding out of position is prohibited for ENC. Should I12 (least depth in narrow channel) also be removed?. (Register). [Agreed and done for Baseline DCEG.](#)
- Suggest S-4 – B-413.1 (drying heights) be added to S-4 references for **SOUNDG**. (Register). [Agreed and done for Baseline DCEG.](#)
- (TSMAD22): During discussions on the UOC Edition 3.0 draft review it was suggested that **SOUNDG** with QUASOU = 5 (no bottom found at value shown) could be a separate feature to **SOUNDG** in S-101. Requires discussion. (TSMAD, DIPWG, Register). [New feature **Depth – No Bottom Found** added to DCEG. Done for Baseline DCEG.](#)

Span:

- Suggest add new complex attribute “time range” (0,*) with sub-attributes “time range end” (1,1) and “time range start” (1,1) to encode the opening and closing time(s) for opening bridge spans. (Register, Feature Catalogue). [Done for Baseline DCEG.](#)

SPLARE:

- S-4 uses the term “seaplane”, while in S-57 **SPLARE** is “sea-plane”. Suggest this be amended to “seaplane” (there are no instances of “sea-plane” in S-4 and seaplane is not included in S-32 but is used in UOC. “Seaplane” is also used in DGIWG FDD). (Register). [04/08/11: Raised with HDWG. Term amended throughout DCEG to “seaplane”. Done for Baseline DCEG.](#)
- Should seaplane landing area be a term defined in S-32? (HDWG). [06/07/11: HDWG decision not to define in S-32.](#)
- Should runway be added to the list of distinctions for **SPLARE**? (Register). [Done for Baseline DCEG.](#)

SPRING:

- The S-32 reference number in the S-57 definition for **SPRING** is incorrect (but refer to general comment on use of S-32 reference numbers). (Register).

SUBTLN:

- Suggest the S-57 definition for submarine transit lane be included in S-32. Note that there are definitions for both submarine transit lane (submerged) and submarine transit lane (surface) in DGIWG FDD, which are more specific than the S-57 definition. (HDWG). [08/07/11: HDWG has recommended a new definition for submarine transit lane be included in S-32 which is a slight modification of the S-57 definition. Requires HSSC and IHO MS approval. Editorial correction made to DCEG baseline to align the definition with the approved S-32 definition.](#)

SWPARE:

- There are definitions for “sweep” and “sweeping” in S-32. Should there also be a definition for “swept area” included in S-32? Suggest S-57 definition can be adopted. (HDWG). [06/07/11: HDWG decision to adopt new term “swept area” with definition as shown in S-57. Requires HSSC and IHO MS approval. Definition approved \(IHO CL 76/2012 refers\). “Adapted from” removed.](#)
- Suggest a new attribute to encode the date of sweeping (SWPDAT?). (Register). [Agreed and done.](#)
- If the above suggestion does not get approved, there is an inconsistency between the guidance for **SWPARE** and **DRGARE** in that **DRGARE** suggests NINFOM can be used to encode the depth of dredging in the national language while similar guidance is not supplied for NINFOM for **SWPARE**. (Register). [No further consideration necessary as agreed to adopt new attributes \(see above\).](#)

- TSMAD27: Proposal to allow overlapping **SWPARE** (US comment for TSMAD Review 2). Needs to be discussed with DQWG. (DQWG).

TESARE:

- Suggest removing the words “The territorial sea is” from the definition of **TESARE** (it is not included in the S-32 definition). (Register). [Done for Baseline DCEG.](#)
- Suggest several values for RESTRN be removed from allowable enumerate list for RESTRN on **TESARE** (suggestions in document). (Feature Catalogue). [Done for Baseline DCEG.](#)

TIDEWY:

- There are two definitions for Tideway in S-57, one being the S-32 definition and the other being a slightly more specific definition with no stated authority. Does this need to be addressed with HDWG? (TSMAD/Register, HDWG). [Decision to retain first S-57 definition only. Done for Baseline DCEG.](#)
- Suggest adding S-4 – B-413.3 (a natural watercourse in intertidal areas) as an S-4 reference for **TIDEWY**. This is actually one of the few clauses in S-4 where S-57 is mentioned. (Register). [Done for Baseline DCEG.](#)

TNLENT:

- This feature was made obsolete for S-57. Perhaps there is a reason to re-activate this feature in S-100/101 given the new approved symbology for paper charts for tunnel entrances? (Register).

TOPMRK:

- Complex Attribute: This feature should be a complex attribute of **BCN*****, **BOY***** and **DAYMAR(?)** (at least), with COLOUR and TOPSHP as sub-attributes. [Done for Baseline DCEG.](#)
- Suggest S-4 – B-467 (Summary table of IALA marks) be added to the list of S-4 references for **TOPMAR**. (Register). [Reference added for all aids to navigation structure features \(buoys and beacons\). Done for Baseline DCEG.](#)

TS_FEB:

- The definition for tidal stream (tidal current) is only a derivation of the S-32 definition because of the word “alternating”. Is there a problem with this word? Needs to be discussed and reconciled with S-32. (TSMAD/HDWG, Register). [Hydrographic Dictionary definition has been adopted. Assume S-57 definition varies as the effects of other flows such as rivers are also taken into account? May need further discussion.](#)
- Add S-32 reference number 1169 to definition of tidal stream. (Register). [Overtaken by events.](#)
- Suggest add B-407 as S-4 reference for **TS_FEB**. (Register). [Agreed and done for Baseline DCEG.](#)
- Suggest adding Current – non-gravitational to list of distinctions for tidal stream (flood/ebb). (Register). [Agreed and done for Baseline DCEG.](#)

TS_PAD:

- Suggest amend INT1 references to H31 and H46. (Register). [Agreed and done for Baseline DCEG.](#)
- Suggest S-4 – B-407, B-407.2 and B-407.3 be added as S-4 references for **TS_PAD**. B-407.4 and B-408.2 should be removed. (Register). [Agreed and done for Baseline DCEG.](#)
- Suggest adding tidal stream (flood/ebb) to distinctions. (Register). [Agreed and done for Baseline DCEG.](#)

TS_PNH: [Removed from S-101.](#)

- In S-32 the word is “nonharmonic” (no hyphen). Which is correct (suggest non-harmonic)? (HDWG, TSMAD, Register).

- There is a definition for harmonic prediction in S-32. Should there similarly be a definition for nonharmonic (or non-harmonic) prediction? (HDWG, Register).
- INT1 references refer to flood and ebb tidal stream arrows (best related to **TS_FEB**). Is this an appropriate reference to use for **TS_PNH**? (Register).
- S-4 references refer to flood/ebb arrows and currents in restricted waters. Are these appropriate references for **TS_PRH**? (TSMAD, Register).
- Suggest adding tidal stream (flood/ebb) to distinctions. (Register).

TS_PRH: Removed from S-101.

- There is a definition for harmonic prediction in S-32. This definition is nothing like the second half of the S-57 definition. Should these definitions be rationalised into a single definition, or could the S-57 definition be changed slightly to be a derivation of the S-32 definition? Note that the S-32 definition (2201) looks a bit antiquated and may need to be revised anyway. (HDWG, TSMAD, Register).
- INT1 references refer to flood and ebb tidal stream arrows (best related to **TS_FEB**). Is this an appropriate reference to use for **TS_PRH**? (Register).
- S-4 references refer to flood/ebb arrows and currents in restricted waters. Are these appropriate references for **TS_PRH**? (TSMAD, Register).
- Suggest adding tidal stream (flood/ebb) to distinctions. (Register).

TS_TIS: Removed from S-101.

- INT1 references refer to flood and ebb tidal stream arrows (best related to **TS_FEB**). Is this an appropriate reference to use for **TS_TIS**? (Register).
- S-4 references refer to flood/ebb arrows and currents in restricted waters. Are these appropriate references for **TS_TIS**? (TSMAD, Register).
- Suggest adding tidal stream (flood/ebb) to distinctions. (Register).

T_HMON: Removed from S-101.

- S-57 and S-32 definition for tide are almost identical (“sea” in S-57; “oceans, bays etc” in S-32). Suggest these definitions be reconciled? (HDWG, Register).

T_NHMN: Removed from S-101.

- S-57 and S-32 definition for tide are almost identical (“sea” in S-57; “oceans, bays etc” in S-32). Suggest these definitions be reconciled? (HDWG, Register).

T_TIMS: Removed from S-101.

- S-57 and S-32 definition for tide are almost identical (“sea” in S-57; “oceans, bays etc” in S-32). Suggest these definitions be reconciled? (HDWG, Register).

TSELNE:

- 11/07/11: The definition for traffic separation line is included in S-32 under the term “separation zone”. There may be a term included in S-32 “traffic separation line” or “traffic separation zone (or line)” which refers to separation zone as suggested by AU. Awaiting response.
- Suggest add S-4 – B-436.3 to list of S-4 references for **TSELNE**. (Register). **Done for Baseline DCEG.**

TSEZNE:

- 11/07/11: The definition for traffic separation zone is included in S-32 under the term “separation zone”. There may be a term included in S-32 “traffic separation zone” or “traffic separation zone (or line)” which refers to separation zone as suggested by AU. Awaiting response.
- Suggest adding INT1 – M20.3 and M21 to list of INT1 references for **TSEZNE** (should M20.2 also be in the list?). (Register). **Done for Baseline DCEG.**
- Suggest add S-4 – B-436.3 to list of S-4 references for **TSEZNE**. (Register). **Done for Baseline DCEG.**

TSSBND:

- Suggest include INT1 – M15 (limit of routing measure) be included as S-4 reference for **TSSBND**. (Register). [Done for Baseline DCEG](#).

TSSLPT:

- There is a definition for traffic lane in S-32 which is the same as the current S-57 definition (as derived from IMO Ships' Routing) with some additional text. Suggest the S-32 definition be adopted. (Register).
- Suggest the definition for the lane part conclude with "generally along one bearing" as has been adopted for similar features. (Register). [Done for Baseline DCEG](#).
- Suggest including INT1 – M20.1-3 and M22 as list of INT1 references for **TSSLPT**. (Register). [Done for Baseline DCEG](#).
- Suggest S-4 – B-435.1 (traffic separation schemes and inshore traffic zones) be included as S-4 reference for **TSSLPT**. (Register). [Done for Baseline DCEG](#).

TSSRON:

- The S-32 definition for roundabout states that traffic moves in a counter-clockwise direction around a specified point or zone. **TSSRON** is presently (S-57) only of type area. Should point primitive be allowed for this feature? (TSMAD, Feature Catalogue).

TUNNEL:

- Suggest adding definition of tunnel to S-32 (assuming this feature is considered to be relevant to hydrography). Definition in DGIWG FDD is too restrictive. Alternatively, suggest amendment to DGIWG definition for purposes of interoperability. (HDWG/DGIWG/Register). [13/08/12: Retained S-57 definition with minor amendment to change "se bed" to "seabed". Note have not added "Adapted from" as this is considered to be syntactic change only. Done for Baseline DCEG.](#)
- Suggest point primitive should not be allowed for **TUNNEL** in S-101 ENCs – does not display in ECDIS. Refer ENC EB 29. (Register, Feature Catalogue). [Done for Baseline DCEG](#).
- Suggest that STATUS = 16 (watched) and 17 (unwatched) be removed from list of allowable enumerate values for STATUS on **TUNNEL**. (Feature Catalogue). [Done for Baseline DCEG](#).

TWRTPT:

- Suggest that QUASOU = 6 (least depth known) be added to list of allowable enumerate values for QUASOU on **TWRTPT**. (Feature Catalogue). [Done for Baseline DCEG](#).
- Suggest that TECSOU = 2 (found by side scan sonar), 10 (photogrammetry) and 11 (satellite imagery) be removed from; and TECSOU = 5 (found by lead-line) be added to; list of allowable enumerate values for TECSOU on **TWRTPT**. (Feature Catalogue). [Done for Baseline DCEG](#).
- UOC clause 10.2.6 indicates that DRVAL1 is used to populate the minimum depth. Is this the minimum depth along the whole route, or just the part? Suggest it should be the minimum depth along the whole route. (TSMAD). [Has been done to indicate the minimum depth in the part only. Done for Baseline DCEG](#).

UNSARE:

- There is a definition for unsurveyed area in S-32. This definition is nothing like the S-57 definition. Should these definitions be rationalised into a single definition? Note that the DGIWG FDD definition for "unsurveyed area" has been adopted from the S-57 definition, while the definition for "unsurveyed" appears to be adapted from the S-32 definition. (HDWG, TSMAD, Register). [Hydrographic Dictionary definition has been adopted. The revised Hydrographic Dictionary definition is more in line with the S-57 definition. Done for Baseline DCEG.](#)
- Suggest "inadequately" be used instead of "incompletely" to be consistent with S-4. [Agreed and done for Baseline DCEG](#).

- Suggest B-418 be listed as S-4 reference for unsurveyed area and B-417 be included as S-4 reference for inadequately surveyed area. (Register). [Agreed and done for Baseline DCEG.](#)
- TSMAD27: Revised guidance for encoding **Quality of Bathymetric Data** covering **Unsurveyed Area** needs to be reviewed. (DQWG). [Done for Baseline DCEG.](#)
- TSMAD27: Revised guidance for encoding **Quality of Bathymetric Data** covering areas derived from satellite imagery needs to be reviewed. (DQWG). [Done for Baseline DCEG.](#)
- TSMAD27: Revised guidance for encoding **Quality of Bathymetric Data** covering inadequately surveyed areas needs to be reviewed. (DQWG). [Done for Baseline DCEG.](#)

UWTROC:

- There are definitions for rock, rock which covers and uncovers, awash rock and sunken rock in S-32. Should these definitions be rationalised into a single definition for underwater rock? (TSMAD, HDWG, Register). [S-57 definition retained for now. Further discussion required by HDWG.](#)
- Suggest that EXPSON = 3 (deeper than the range of depth of the surrounding depth area) be removed from list of allowable enumerate values for EXPSON on **UWTROC**. (Feature Catalogue). [Agreed and done for Baseline DCEG.](#)
- Suggest that NATQUA = 6 (soft) and 7 (stiff) be added to list of allowable enumerate values for NATQUA on **UWTROC** (could apply to coral?). (Feature Catalogue). [DCEG Sub-WG decision to remove NATQUA from Underwater/Awash Rock. Done for Baseline DCEG.](#)
- Suggest adding INT1 – K11 (rock which covers and uncovers) to list of INT1 references for **UWTROC**. Is K16 (coral reef which is always covered) an appropriate INT1 reference (it is an area feature with individual submerged rock symbols inside)? (Register). [K11 added, but K16 not included as it is considered that this is more appropriate for Seabed Area. Done for Baseline DCEG.](#)
- Suggest S-4 references for **UWTROC** be restricted to B-421.2 to B-421.4. B-421.5 may be retained dependant on decision regarding relevance of INT1 – K16 (see above). (Register). [B-421.2 to B-421.4 added. See above regarding reference to B-421.5. Done for Baseline DCEG.](#)
- Suggest seabed area be added to list of distinctions for **UWTROC**. (Register). [Agreed and done for Baseline DCEG.](#)

VEGATN:

- Suggest amended definition for Vegetation, as adapted from DGIWG FDD (vegetation should not be considered to be a hydrographic term). (Register). [Done for Baseline DCEG.](#)
- Consider excluding CATVEG = 1, 10, 11, 12 as allowable values for **VEGATN** in S-101 ENCs, as they do not symbolise in ECDIS (ENC EB 29 refers). (Register, Feature Catalogue). [Done for Baseline DCEG.](#)
- Suggest add S-4 – B-352.4 (the height of top of trees) be added to list of S-4 references for **VEGATN**. B-354.4 needs to be removed as it is no longer a clause in S-4. (Register). [Done for Baseline DCEG.](#)
- The way that mangroves are encoded in intertidal areas (particularly the seaward edge) needs to be determined (refer revised S-4 guidance at B-312.4).

WATFAL:

- Suggest amended definition for waterfall, as taken from DGIWG FDD. (Register). [Done for Baseline DCEG.](#)
- Consider excluding Point as a valid primitive for waterfall in S-101 ENCs, as it does not symbolise in ECDIS (ENC EB 29 refers). (Register). [Decision to retain for now, however needs to be discussed in regard to ECDIS portrayal.](#)

WATTUR:

- Should there be a definition for “turbulence: water” (or “water turbulence”) in S-32? If so suggest the current S-57 definition be used as starting point for discussions. Note

that the S-57 definition has been adopted in the DGIWG FDD. (HDWG, Register).
11/07/11: There is a S-32 definition for “turbulence” which HDWG has recommended be removed from S-32, and a new definition for water turbulence added which is the same as the S-57 definition. To be approved by HSSC and IHO MS. New definition for water turbulence approved (IHO CL 76/2012 refers). Authority amended. Done for Baseline DCEG.

WEDKLP:

- There is an S-32 definition for seaweed which has not been used in S-57. Is there something wrong with this definition? Needs to be reconciled. (HDWG, Register). Hydrographic Dictionary definition is convoluted and also refers to seagrass. International Maritime Dictionary definition retained.
- In S-57, the term used is “sea weed” (2 words), while in S-32 it is a single word (“seaweed”). Which term is correct? Suggest “seaweed” (note that “seaweed” has been used in DGIWG FDD). (Register). **Sub-WG1: Rejected.** Suggest further discussion is required as the decision is in conflict with Hydrographic Dictionary and S-4. Word used in Baseline DCEG is “seaweed” (single word).
- In S-57, the term used is “sea grass” (2 words), while in S-32 it is a single word (“seagrass”). Which term is correct? Suggest “seagrass” (note that “sea grass” has been used in DGIWG FDD). (Register). **Sub-WG1: Rejected.** Suggest further discussion is required as the decision is in conflict with Hydrographic Dictionary and S-4. Word used in Baseline DCEG is “seagrass” (single word).
- The current S-57 definition for kelp contains “(laminariales)”, which is not included in the S-32 definition. Needs to be reconciled. See also comment below for CATWED = 1 (kelp). (HDWG, Register). DCEG definition amended to match Hydrographic Dictionary definition. Done for Baseline DCEG.
- This may be a little radical, but is there any reason while the enumerate values for CATWED are not included in CATVEG and **WEDKLP** removed from the Register? (TSMAD, Register). **DCEG Sub-WG recommendation – Keep separate.**

WRECKS:

- Suggest that EXP SOU = 3 (deeper than the range of depth of the surrounding depth area) be removed from list of allowable enumerate values for EXP SOU on **WRECKS**. (Feature Catalogue). Rejected.
- Suggest add INT1 – K31 (foul ground, e.g. remains of a wreck, no longer dangerous to surface navigation but to be avoided by vessels anchoring, trawling etc.) and N26 (historic wreck and restricted area) be added to the INT1 references for **WRECKS**. (Register). **K31 added. N26 removed from INT1 (refer BSH INT1 Edition 7 (2011)). Done for Baseline DCEG.**
- Suggest S-4 –B-449.5 (historic wrecks) be added to list of S-4 references for **WRECKS**. (Register). **Reference already included in clause on historic wrecks.**
- Is it possible to have a **WRECKS** which has a value of sounding that is deeper than the range of depth of the surrounding depth area? (TSMAD). **Yes.** This is the reason the suggestion to remove EXP SOU = 3 from Wreck was rejected.

ATTRIBUTES:

BCNSHP:

- There is a superseded DGIWG FDD definition for shape of marine beacon which has been included in the document. Needs to be reviewed for suitability, and possible inclusion in S-32(?). If accepted, the Remark can be removed. (HDWG, TSMAD, Register). [The DGIWG definition has been used for the Baseline DCEG.](#)
- Suggest definition for BCNSHP = 1 (stake, pole, perch, post) be amended slightly to improve syntax (as a result of MD8 – 7.Cl.12 and 7.Co.12). Also consider amending S-32 to agree. (HDWG, Register). [Done for Baseline DCEG.](#)
- Should a definition for BCNSHP = 2 (withy) be included in S-32? Note that the S-57 definition has been included in DGIWG FDD. (HDWG).
- Should a definition for BCNSHP = 3 (beacon tower) be included in S-32? Note that the S-57 definition has been included in DGIWG FDD. (HDWG).
- Should a definition for BCNSHP = 4 (lattice beacon) be included in S-32? Note that the S-57 definition has been included in DGIWG FDD. (HDWG).
- Should a definition for BCNSHP = 7 (buoyant beacon) be included in S-32? Note that the S-57 definition has been included in DGIWG FDD. (HDWG).

BOYSHP:

- There is a DGIWG FDD definition for shape of buoys which has been included in the document. Needs to be reviewed for suitability, and possible inclusion in S-32(?). (HDWG, TSMAD, Register). [Done for Baseline DCEG.](#)
- Note that there is a definition for BOYSHP = 7 (super-buoy) in S-32 which has not been used in S-57, although the term is “super buoy”. Note that the S-57 definition has been included in DGIWG FDD. Also, the S-57 term used is “super-buoy” as far as the enumerate is concerned, but “superbuoy” in the general text of the UOC. S-4 uses “superbuoy” in all cases but one in Part B, and uses “super-buoy” in all cases in part C. DGIWG FDD uses “super-buoy” (probably as a result of S-57). This all needs to be standardised. Suggest “superbuoy” and adopt S-32 definition. (HDWG, CSPCWG). [Done for Baseline DCEG.](#)
- Should a definition for BOYSHP = 8 (ice buoy) be included in S-32? Note that the S-57 definition has been included in DGIWG FDD. (HDWG).

CATACH:

- The definition for CATACH = 1 (unrestricted anchorage) has been taken from S-32. The definition for the feature **ACHARE**, which has been taken from the same definition, has been amended by Clarification and Correction, and it is suggested that the S-32 definition be amended similarly. If this is done, then suggest that “Adapted from” be added to definition source for CATACH = 1, as including seaplanes in this category negates CATACH = 6 (seaplane anchorage). (Register).
- S-4 uses the term “seaplane”, while in S-57 CATACH = 6 is “sea-plane anchorage”. Suggest this be amended to “seaplane anchorage” (there are no instances of “sea-plane” in S-4 and seaplane is not included in S-32). (Register). [Done for Baseline DCEG.](#)
- Suggest definition for CATACH = 7 (small craft anchorage) be included in S-32 (precedence set by explosives and quarantine anchorages). (HDWG).

CATBRG:

- Definition for CATBRG = 4 (lifting bridge) contains the words “(or span thereof)” which is not in the S-32 definition. This needs to be resolved with S-32. (HDWG/Register).
- Definition for CATBRG = 5 (bascule bridge) missing “bridge” at end of definition. (Register). [Done for Baseline DCEG.](#)
- Suggest amended definition for CATBRG = 8 (transporter bridge), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG.](#)

CATBUA:

- Suggest amended definition for CATBUA = 2 (settlement), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG.](#)

- Suggest amended definition for CATBUA = 3 (village), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG.](#)
- Suggest amended definition for CATBUA = 4 (town), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG.](#)
- S-57 definition for CATBUA = 5 (city) is the same as DGIWG FDD definition. Suggest add DGIWG FDD as authority. (Register). [Done for Baseline DCEG.](#)
- Suggest amended definition for CATBUA = 6 (holiday village), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG.](#)

CATCBL:

- Suggest amended definition for CATCBL = 1 (power line), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG.](#)
- Although the S-57 definition for CATCBL = 3 (transmission line) is not authorised, it is more appropriate (i.e. provides a better distinction from power line) than the DGIWG definition. Is TSMAD happy to retain this unauthorised definition (bearing in mind that the current S-57 definition may not be totally appropriate for **CBLSUB**)?
- Suggest amended definition for CATCBL = 4 (telephone), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG.](#)
- Suggest amended definition for CATCBL = 5 (telegraph), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG.](#)
- Although the S-57 definition for CATCBL = 6 (mooring cable/chain) is not authorised, it is more appropriate (i.e. is not restrictive to mooring of vessels) than the DGIWG definition. Is TSMAD happy to retain this unauthorised definition?

CATCHK:

- Suggest amended definition for CATCHK = 1 (custom), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG.](#)

CATCON:

- Suggest amended definition for CATCON = 1 (aerial cableway (telepheric)), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG.](#)

CATCOA:

- All definitions in CATCOA will need to be checked once CSPCWG have completed their review of S-4 section B-300.
- Mangrove: Does this enumerate for CATCOA belong here? Should it be re-named “mangrove seaward edge” or similar (and is this therefore really a type of “coastline”)? This needs to be considered in line with the revised S-4 guidelines for the depiction of mangroves on paper charts (B-312.4). Suggest that the seaward edge of a mangrove area can be encoded as a **VEGATN** line perhaps? Or the ECDIS symbology simply depicts the edge of a **VEGATN** area with the appropriate symbol?
- Marshy shore: As for mangrove above in regards to its relevance to coastline.
- There is a definition for marsh in S-32 but the definition in S-57 has been adapted from the definition for swamp. Options include changing the definition to be consistent with the S-32 definition of marsh or amending the enumerate value to “swampy shore” (S-4 and INT1 implications).
- Definition for ice coast has had abbreviation “m” expanded to “metres” for consistency. (Register). Also, there is no reference for this definition – where did it come from?
- S-57 definition for shelly shore does not include a reference for the definition. Have included reference to S-32 to be consistent with sandy, stony and shingly shore. [Overtaken by events.](#)
- INT1 Reference: There was no reference for glacier seaward edge or ice coast in S-57. Have added C-25 (glacier) to the reference. (Register). [Done for Baseline DCEG.](#)
- S-4 Reference: As for INT1 Reference above – have included B-353.8. [Done for Baseline DCEG.](#)

CATCRN:

- Suggest most, if not all, the current S-57 definitions for the various categories of crane should be included in S-32. Most of these types of cranes are found mainly on the waterfront. (HDWG, Register).

CATCTR:

- Minor change to definition for Triangulation Point to agree with S-32. (Register). **Done for Baseline DCEG. Note that this is now an enumerate for category of landmark.**
- S-57 definition for Observation Spot seems to mean something slightly different to the definition in S-32. Needs to be reconciled. (Register). **Overtaken by events.**
- Source for definition of Boundary Mark amended to DGIWG FDD, although there is a definition in S-32. Is a boundary mark a hydrographic feature? (TSMAD/HDWG, Register). **Done for Baseline DCEG. Note that this is now an enumerate for category of landmark.**

CATDAM:

- Suggest definition for CATDAM = 3 (flood barrage) be included in S-32 (note that there is a DGIWG FDD definition which is different to the current S-57 definition). (HDWG, Register).

CATDOC:

- There are definitions of different types of docks in S-32, including wet dock, but tidal dock is not included. Suggest the S-57 definition for tidal dock be included in S-32 (dock: tidal). (HDWG, Register).

CATDPG:

- S-57 definition for CATDPG = 5 (spoil ground) begins "An area at sea", while S-32 definition begins "A sea area". Suggest these be reconciled (may affect other definitions for CATDPG (consistency)). Also, this definition includes "Also called dumping ground", which is the feature class. How can the enumerate also be called the feature name? Suggest remove this sentence (see also point for **DMPGRD** above). (HDWG, Register).

CATFIF:

- The S-57 definition for CATFIF = 2 (fish trap) includes an indication that fish traps are usually portable, which is not in the S-32 definition. Suggest the S-32 definition be amended to agree with the S-57 definition. Alternatively, add "Adapted from" to the definition reference. (HDWG, Register). **"Adapted from" added to DCEG baseline.**
- The S-57 definition for CATFIF = 3 (fish weir) is not quite the same as the S-32 definition. Suggest the S-32 definition be amended to agree with the S-57 definition. Alternatively, add "Adapted from" to the definition reference. (HDWG, Register). **01/09/11: DGIWG is currently considering a revised definition for "fish weir" (AU has suggested adopting the current S-32 definition – the proposal has come from US) - it may be worth considering this revision, if approved, in terms of the S-32 and S-100 definitions. (HDWG, TSMAD, Register).**

CATFNC:

- Suggest amended definition for CATFNC = 1 (fence), as taken from current Version of DGIWG FDD (previous definition superseded). (Register). **Done for Baseline DCEG.**
- Suggest amended definition for CATFNC = 4 (wall), as taken from current Version of DGIWG FDD (previous definition superseded). (Register). **Done for Baseline DCEG.**

CATFOG

- There is an S-32 definition for CATFOG = 1 (explosive) that has not been used in S-57. Suggest that these definitions be reconciled. (HDWG).
- There is an S-32 definition for CATFOG = 2 (diaphone) that has not been used in S-57. Suggest that these definitions be reconciled. (HDWG).

- There is an S-32 definition for CATFOG = 3 (siren) that has not been used in S-57. Suggest that these definitions be reconciled. (HDWG).
- There is an S-32 definition for CATFOG = 5 (reed) (is Reed horn in S-32) that has not been used in S-57. Suggest that these definitions be reconciled. (HDWG).
- According to S-32, CATFOG = 5 (reed) and CATFOG = 6 (tyfon) mean the same thing. Are both values required? (TSMAD).

CATFOR

- Suggest amended definition for CATFOR = 5 (fortified tower), as adapted from DGIWG FDD. (Register). [Done for Baseline DCEG.](#)
- Definition required for CATFOR = 8 (fortified submarine shelter) – no definition in DGIWG FDD. (Register).
- Is there any reason why fortified submarine structure has not been allocated value 7, which is currently not used? (TSMAD, Register).

CATGAT:

- S-57 definition for CATGAT = 1 (flood barrage gate) has been adopted in DGIWG FDD. Suggest DGIWG FDD be added as authority, or should a definition be included in S-32 (is this a hydrographic feature?)? (HDWG, Register). [Done for Baseline DCEG.](#)
- Suggest remove the “lock gates are” text at the start of the definition for CATGAT = 4 (lock gate). Also, the S-57 definition for CATGAT = 4 (lock gate) is an adaptation of the S-32 definition. Do these definitions need to be reconciled? (HDWG, Register). [Done for Baseline DCEG.](#)
- S-57 definition for CATGAT = 5 (dyke gate) has been adopted in DGIWG FDD. Suggest DGIWG FDD be added as authority, or should a definition be included in S-32 (is this a hydrographic feature?)? (HDWG, Register). [Done for Baseline DCEG.](#)

CATHAF:

- The S-57 definition for CATHAF = 5 (yacht harbour/marina) is not the full definition as shown in S-32. Suggest the full S-32 definition be used. (Register). [Done for Baseline DCEG.](#)

CATHLK:

- Suggest amended definition for CATHLK = 1 (floating restaurant), as taken from DGIWG FDD. Note that this definition is very similar to the existing S-57 definition (perhaps derived from?), and as it is relevant to hydrographic charting, may be considered for inclusion in S-32. (HDWG, Register). [Done for Baseline DCEG.](#)
- Current S-57 definition for CATHLK = 2 (historic ship) has been adopted by DGIWG FDD. Suggest as this is directly relevant to hydrographic charting, that this definition may be included in S-32. (HDWG, Register). [Done for Baseline DCEG.](#)
- Suggest that CATHLK = 3 (museum) be amended to “floating museum”, as the definition is specific, and to be consistent with CATHLK = 1. Suggest amended definition as taken from DGIWG FDD. Note that this definition is very similar to the existing S-57 definition (perhaps derived from?), and as it is relevant to hydrographic charting, may be considered for inclusion in S-32. (HDWG, Register). [Done for Baseline DCEG.](#)
- Suggest that CATHLK = 4 (accommodation) be amended to “floating accommodation”, as the definition is specific, and to be consistent with CATHLK = 1. Suggest amended definition as taken from DGIWG FDD. Note that this definition is very similar to the existing S-57 definition (perhaps derived from?), and as it is relevant to hydrographic charting, may be considered for inclusion in S-32. (HDWG, Register). [Done for Baseline DCEG.](#)
- The S-57 definition for **HULKES** is “A permanently moored ship”. How does CATHLK = 5 (floating breakwater) fit with this definition. NOTE: The S-57 and S-32 definitions do not agree; see entry for **HULKES** above. This can also be encoded as **SLCONS** with CATSLC = 1 (breakwater) and WATLEV = 7 (floating). Suggest that this enumerate be removed. (Register).

CATINB:

- Should there be a definition for CATINB = 1 (catenary anchor leg mooring (CALM)) included in S-32? (HDWG).

CATLIT:

- S-57 definition for CATLIT = 4 (leading light) is adapted from S-32. The S-57 definition appears to be an improvement in wording (without changing the meaning) of the S-32 definition. Suggest the S-32 definition be amended to agree with the S-57 definition. (HDWG).
- The S-57 definition for CATLIT = 16 (moire effect) is derived from S-4. There is a S-32 definition for moire effect (and inogen light) in S-32. Suggest that all these definitions be reconciled. (HDWG, Register). [Overtaken by events](#).
- Suggest the S-57 definition for CATLIT = 17 (emergency light) be included in S-32. (HDWG).

CATLMK:

- Suggest amended definition for CATLMK = 2 (cemetery), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG](#).
- Suggest amended definition for CATLMK = 3 (chimney), as taken from current Version of DGIWG FDD (current S-57 definition superseded). (Register). [Done for Baseline DCEG](#).
- Suggest amended definition for CATLMK = 5 (flagstaff (flagpole)), as taken from current Version of DGIWG FDD (current S-57 definition superseded). (Register). [Done for Baseline DCEG](#).
- Should S-32 definition for flare stack be expanded to include the additional S-4 wording? (HDWG).
- There is no definition for mast (as in on land or on a vessel) in S-32. Is one required? (HDWG).
- Suggest amended definition for CATLMK = 9 (monument), as taken from current Version of DGIWG FDD. Note that this definition is based on the DFDD definition for memorial monument – the DFDD definition for monument is much broader, and may be too broad for hydrographic applications? May need further discussion. (Register). [Done for Baseline DCEG](#).
- Suggest amended definition for CATLMK = 13 (statue), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG](#).
- Suggest amended definition for CATLMK = 17 (tower), as taken from current Version of DGIWG FDD (current S-57 definition superseded). (Register). [Done for Baseline DCEG](#).
- Suggest amended definition for CATLMK = 18 (windmill), as taken from current Version of DGIWG FDD (current S-57 definition superseded). (Register). [Done for Baseline DCEG](#).
- Suggest amended definition for CATLMK = 19 (windmotor), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG](#).
- Definition for CATLMK = 21 (large rock or boulder on land) amended to include S-32 number (4415), and “Adapted from” to indicate that the definition is not a direct translation from S-32. [Done for Baseline DCEG](#).

CATLND:

- Suggest amended definition for CATLND = 9 (agricultural land), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG](#).
- Suggest amended definition for CATLND = 10 (savanna/grassland), as taken from DGIWG FDD. Note that this is a combination of the individual definitions for savanna and grassland. (Register). [Done for Baseline DCEG](#).
- S-57 definition for CATLND = 18 (cave) is no longer valid in the DGIWG FDD. Slightly amended version taken from Merriam-Webster On-line Dictionary. (Register). [Done for Baseline DCEG](#).
- Suggest expansion of UKHO be added to definition for CATLND = 20 (cay) (consistency). (Register). [Done for Baseline DCEG](#).
- Suggest a new value for CATLND (blowhole) be proposed for the Hydro Register.

CATMFA:

- Suggest definition for CATMFA = 1 (crustaceans) be included in S-32 (or is this not a hydrographic feature?). (HDWG).
- Suggest a definition for “bivalve molluscs” be included in S-32 (or is this not a hydrographic feature?). (HDWG).
- Suggest a definition for “fish” be included in S-32 (or is this not a hydrographic feature?). (HDWG).
- Apply any change to definition for CATMFA = 4 (seaweed) that is implemented as a result in any change made to CATWED = 2 (sea weed).
- Should a definition for “pearl culture” be included in S-32? (HDWG).

CATMOR:

- The current S-57 definition for CATMOR = 1 (dolphin) is not the same as the S-32 definition (is a partial derivation from S-32). Suggest “Adapted from” be added to definition source. (Register). [Done for Baseline DCEG.](#)
- Suggest S-57 definition for CATMOR = 2 (deviation dolphin) be added to S-32. Note that S-57 definition has been adopted in DGIWG FDD. (HDWG).
- Current S-57 definition for CATMOR = 3 (bollard) is identical to S-32 definition. Suggest add S-32 reference as definition source. (Register). [Done for Baseline DCEG.](#)
- Suggest removing text “A tie-up wall” from definition for CATMOR = 4 (tie-up wall). Also, suggest this definition for CATMOR = 4 (tie-up wall) be added to S-32. Note that S-57 definition has been adopted in DGIWG FDD (combined in definition and description). (HDWG). (Register).
- The current S-57 definition for CATMOR = 5 (post or pile) is not the same as the S-32 definition (is a partial derivation from S-32). Suggest “Adapted from” be added to definition source, and/or the S-32 definition be amended. Note the use of the word “seabed” in the S-57 definition as distinct from “earth” in the S-32 definition. (HDWG, Register). [Done for Baseline DCEG.](#)
- Suggest definition for CATMOR = 6 (chain/wire/cable) be amended to an adaptation of the S-32 definition for chain. (Register). [Done for Baseline DCEG.](#)

CATNAV:

- There is a definition for CATNAV = 2 (transit line) in S-32 (5596). Suggest that this definition (although it does not quite fit), a new definition, or an adaptation of this definition, be adopted for S-101. (Register).

CATOBS:

- [AU Proposal:](#) Insert new value for CATOBS = Artificial Reef. [Done for Baseline DCEG.](#)
- There are minor differences between the S-57 definition for CATOBS = 1 (snag/stump) and the S-32 definition. Suggest S-32 definition be amended to agree with S-57 definition. If not, add “Adapted from” to definition source. (HDWG, Register). [“Adapted from” added to DCEG. Done for Baseline DCEG.](#)
- Suggest S-57 definition for CATOBS = 3 (diffuser) be included in S-32. (HDWG, Register).
- S-57 definition for CATOBS = 4 (crib) is different to the S-32 definition. These definitions need to be reconciled. (HDWG, Register).
- Suggest S-57 definition for CATOBS = 5 (fish haven) be included in S-32. (HDWG, Register).
- Check definition for CATOBS = 6 (foul area) in terms of amended definition approved by HDWG. Also discuss this value in terms of discussions currently underway in CSPCWG, DIPWG, HDWG. (TSMAD, HDWG, Register).
- Incorrect S-32 reference number for CATOBS = 7 (foul ground). Amend to 1918 (if required). Amend this enumerate (including definition) in terms of discussions currently underway in CSPCWG, DIPWG, HDWG. (TSMAD, HDWG, Feature Catalogue, Register). [S-32 definition used for new feature **Foul Ground**. Done for Baseline DCEG.](#)

- Suggest S-57 definition for CATOBS = 8 (ice boom) be included in S-32. (HDWG, Register).
- Suggest S-57 definition for CATOBS = 9 (ground tackle) be included in S-32. (HDWG, Register).
- Should there be a new value for CATOBS (underwater turbine) be included? Should it be a value of CATPRA? (TSMAD, Register). [Done for Baseline DCEG.](#)

CATOFFP:

- The S-57 definition for CATOFFP = 2 (production platform) has been amended from the S-32 definition. Suggest add "Adapted from" to the definition reference. (Register). [Done for Baseline DCEG.](#)
- Suggest definition for CATOFFP = 4 (articulated loading platform) be included in S-32. (HDWG).
- Suggest definition for CATOFFP = 5 (single anchor leg mooring) be included in S-32. (HDWG).
- Suggest definition for CATOFFP = 6 (mooring tower) be included in S-32. (HDWG).
- S-32 reference number for definition for CATOFFP = 7 (artificial island). Amend to 2461 (if required). There is very little difference between the S-32 and S-57 definitions. Suggest these be reconciled. Refer to **OFSPLF** above for possible re-modelling for artificial islands (any results to be reported to CSPCWG). (HDWG, Register, Feature Catalogue).
- Suggest definition for CATOFFP = 8 (floating production, storage and off-loading vessel) be included in S-32. (HDWG).
- Suggest a definition for CATOFFP = 9 (accommodation platform) be included in S-32. (HDWG).
- Suggest a definition for CATOFFP = 10 (navigation, communication and control buoy) be included in S-32. (HDWG).
- Should a new CATOFFP for offshore wind turbines be added (refer **OFSPLF** above). (TSMAD, Register).
- Should a new CATOFFP for offshore wave energy devices and underwater turbines be added (refer **OFSPLF** above). (TSMAD, Register). [Included in Baseline DCEG as new values for category of obstruction.](#)

CATOLB:

- Suggest S-57 definition for CATOLB = 1 (oil retention (high pressure pipe)) be included in S-32. (HDWG).
- Suggest S-57 definition for CATOLB = 2 (floating oil barrier) be included in S-32. (HDWG).

CATPIP:

- Current S-57 definition for CATPIP = 2 (outfall pipe) agrees with DGIWG definition. Add DGIWG FDD as authority for the definition or add to S-32? (Register/HDWG). [DGIWG added as authority. Done for Baseline DCEG.](#)
- Definition for CATPIP = 3 (intake pipe) is not the same as the S-32 definition (intake – 2468). Suggest adding "Adapted from" to definition. (Register). [Done for Baseline DCEG.](#)
- Current S-57 definition for CATPIP = 4 (sewer) agrees with DGIWG definition. Add DGIWG FDD as authority for the definition or add to S-32? (Register/HDWG). [DGIWG added as authority. Done for Baseline DCEG.](#)
- Suggest amended definition for CATPIP = 6 (supply pipe), as taken from DGIWG FDD. Note this is only a minor variation from the current S-57 definition. (Register). [Done for Baseline DCEG.](#)

CATPLE:

- Definition for CATPLE = 1 (stake) is an adaptation of the S-32 definition, which is narrow in that it restricts stakes used only as supports to fishing nets. Suggest that the S-32 definition be amended to agree with the S-57 definition. (HDWG).
- Definition for CATPLE = 3 (post) does not agree with the definition in S-32, which is specific to posts serving the purpose of navigational aids (the S-57 definition is not

even derived from the S-32 definition). Suggest that the S-32 definition be expanded to include the current S-57 definition. Either way, the definitions need to be reconciled. Note that the S-57 and DGIWG FDD definitions are the same. (HDWG, Register).

- Suggest that the current S-57 definition for CATPLE = 4 (tripodal) be adopted as a new S-32 definition for “tripodal” (doesn’t currently exist in S-32). (HDWG).
- Suggest that the new S-57 definition for CATPLE = 5 (piling) be adopted as the S-32 definition. The current S-32 definition supplies no distinction between “piling” and “row of piles” (CATPLE = 6). (HDWG, Register).

CATPRA:

- Suggest definition for CATPRA = 1 (quarry) be amended to the current DGIWG FDD definition. (Register). [Done for Baseline DCEG.](#)
- Suggest definition for CATPRA = 2 (mine) be amended to the current DGIWG FDD definition. (Register). [Done for Baseline DCEG.](#)
- There is a DGIWG FDD definition for stockpile(s) (CATPRA = 3), but it is narrower than the current S-57 definition as it is restricted to “mined materials” only. Can this definition be adopted? A derivation of the DGIWG FDD definition? (TSMAD, Register).
- Suggest definition for CATPRA = 4 (power station area) be amended to the current DGIWG FDD definition. (Register). [Done for Baseline DCEG.](#)
- Suggest definition for CATPRA = 5 (refinery area) be amended to the current DGIWG FDD definition. (Register). [Done for Baseline DCEG.](#)
- Suggest definition for CATPRA = 6 (timber yard) be amended to the current DGIWG FDD definition. (Register). [Done for Baseline DCEG.](#)
- Suggest definition for CATPRA = 8 (tank farm) be amended to the current DGIWG FDD definition. (Register). [Done for Baseline DCEG.](#)
- Suggest definition for CATPRA = 9 (wind farm) be amended to the current DGIWG FDD definition. Note that in FDD the term used is “windmotors” (one word), while in S-57 it is “wind motors” (two words), and S-4 it is one word. (TSMAD/CSPCWG, Register). [Done for Baseline DCEG.](#) Amended to “windmotors” (single word) as in FDD as this is the syntax that has been used throughout the DCEG and S-4.
- Should there be a new value for CATPRA (underwater turbine) be included? Should it be a value of CATOBS? (TSMAD, Register). [Has been added as **category of obstruction.** Done for Baseline DCEG.](#)
- Suggest there be a new value for CATPRA (wave farm/current farm). (TSMAD, Register). [Has been added as new values for **category of offshore production area.** Done for Baseline DCEG.](#)

CATPYL:

- Suggest definition for CATPYL = 1 (power transmission pylon/pole) be amended to the current DGIWG FDD definition. (Register). [Done for Baseline DCEG.](#)
- Definition for CATPYL = 2 (telephone/telegraph pylon/pole) amended to the current DGIWG FDD definition (previous definition for telephone-telegraph pylon/pole superseded). (Register). [Done for Baseline DCEG.](#)
- Could not find definition for CATPYL = 3 (aerial cableway/sky pylon) in DGIWG FDD 2.1 that looks like it has been adapted to the S-57 definition. Closest was “A pylon supporting an aerial cable” for Aerial Cable Pylon. Have left it at the FDD 1.2 definition. Is TSMAD happy with this? [Done for Baseline DCEG.](#)
- Definition for CATPYL = 4 (bridge tower/pylon) amended to the current DGIWG FDD definition. (Register). [Done for Baseline DCEG.](#)
- Definition for CATPYL = 5 (bridge pier) amended to the current DGIWG FDD definition. (Register). [Done for Baseline DCEG.](#)

CATREA:

- The S-32 definition for CATREA = 1 (offshore safety zone) is taken from “safety zone”. Should the S-32 definition be changed to “offshore safety zone” to agree with S-57 (the S-32 definition specifies the zone is around offshore installations). Additionally, the S-32 definition is divided into 2 sentences, while the S-57 definition is

divided by “;”. Suggest these be reconciled, with preference given to the S-32 definition. (HDWG, Register). [Done for Baseline DCEG.](#)

- Suggest S-57 definition for CATREA = 8 (degaussing range) be included in S-32 (note that “degaussing” and “degaussing cable” are defined in S-32. (HDWG).
- Should a definition for CAREA = 10 (historic wreck area), and perhaps also historic wreck, be included in S-32? (TSMAD, HDWG).
- Should a definition for CAREA = 18 (swimming area) be included in S-32? (TSMAD, HDWG).
- Should a definition for CAREA = 19 (waiting area) be included in S-32? (TSMAD, HDWG).
- Should a definition for CAREA = 21 (dredging area) be included in S-32 (note that there is a definition for dredging buoy)? (TSMAD, HDWG).
- While checking for definitions for CATREA in S-32, it was noticed that there is a definition for both fishing ground and fishing zone. Fishing ground states “also called fishing zone”. The definition for fishing zone is different to the definition for fishing ground, and does not reference fishing ground. Suggest these 2 S-32 definitions be reconciled, and the definition for fishing zone be amended to “see FISHING GROUND”. (HDWG).
- Should a definition for CAREA = 22 (fish sanctuary) be included in S-32? (TSMAD, HDWG).
- Should a definition for CAREA = 24 (no wake area) be included in S-32? (TSMAD, HDWG).
- Should a definition for CAREA = 25 (swinging area) be included in S-32? (TSMAD, HDWG).
- Should a definition for CAREA = 29 (disengagement area) be included in S-32? (TSMAD, HDWG).
- S-4 – B-439.2 makes mention of depicting port security limits as restricted area. Suggest add new enumerate “port security area”. (Register). [Done for Baseline DCEG.](#)

CATROD:

- Suggest amended definition for CATROD = 1 (motorway), as adapted from DGIWG FDD. (Register). [Done for Baseline DCEG.](#)
- Consider separating CATROD = 4 (track/path) into separate enumerates. Note that DGIWG FDD has an attribute “Thoroughfare Use Code” which has a code “TrackOrPath” which is identical (including definition) to CATROD = 4. (Register). [13/08/12: Propose that CATROD = 4 be amended to “vehicular track” and a new value CATROD = 8 “footpath/track” \(definitions to be determined\).](#)
- Suggest attributing definitions for track and path in CATROD = 4 (track/path) to DGIWG FDD (see above bullet). (Register). [13/08/12: See above. Done for Baseline DCEG.](#)
- Suggest CATROD = 7 (crossing) be deleted. (Feature Catalogue). [Done for Baseline DCEG.](#)
- Suggest adding D7 (street name) to INT1 references. (Register). [No INT1 references included in the Attributes Section of the Baseline DCEG.](#)

CATROS:

- Suggest remove “Loran-C is” from definition for CATROS = 9 (Loran C). (Register). [Done for Baseline DCEG.](#)
- Suggest remove “Toran is” from definition for CATROS = 11 (Toran). (Register). [Done for Baseline DCEG.](#)
- Suggest remove “Omega is” from definition for CATROS = 12 (Omega). (Register). [Done for Baseline DCEG.](#)
- Suggest remove “Syledis is” from definition for CATROS = 13 (Syledis). (Register). [Done for Baseline DCEG.](#)
- Suggest remove “Chaika is” from definition for CATROS = 14 (Chaika). (Register). [Done for Baseline DCEG.](#)
- Note that many of the types (categories) of radio stations are no longer required to be depicted on paper charts, and their symbols in INT1 have been classed obsolete.

Suggest evaluation of this be made for ENC and values removed (retired) accordingly. (Register, Feature Catalogue). [Done for Baseline DCEG.](#)

CATRUN:

- Suggest amending definition for CATRUN = 1 (aeroplane runway), as taken from S-32. (Register). [Done for Baseline DCEG.](#)

CATSCF:

- CSPCWG decision is to remove section U from INT1, with only a few references being re-distributed to different parts of INT1. Need to decide whether to remove most enumerate values from CATSCF in line with this decision. (TSMAD, Register). [Decision to retain all values for now. Done for Baseline DCEG.](#)
- CSPCWG Letter 03/2011 (Draft Revision of S-4 Section B-3—to B-330 – Round 1) introduces a new draft specification at B-320.2 for yacht berths without facilities (see also INT1 – F11.2). Should this be added as a new enumerate value for CATSCF? (TSMAD, Register).

CATSEA:

- Note that there is work currently being done (June 2010) to harmonise some of the S-32 oceanographic terms with the corresponding B-6 definition. These definitions may need to be re-assessed to determine whether the modified S-32 definition should be quoted. (Register).
- Suggest the first part of the S-32 definition for bay replace the existing S-32 definition for CATSEA = 5 (bay). (Register). [Done for Baseline DCEG.](#)
- Definition for CATSEA = 8 (mud flats) is identical to S-32 definition for flat. Suggest S-32 reference be added as authority for definition. Is TSMAD happy that this enumerate is restricted only to mud flats? Or should this be amended to “flats”. (Register, TSMAD). [Done for Baseline DCEG.](#)
- Add S-32 index number for ledge (2707) to definition for CATSEA = 10 (ledge). (Register). [Overtaken by events.](#)
- Add S-32 index number for narrows (3359) to definition for CATSEA = 12 (narrows). (Register). [Overtaken by events.](#)
- Add S-32 index number for pinnacle (3852) to definition for CATSEA = 17 (pinnacle). (Register). [Overtaken by events.](#)
- Add S-32 index number for seamount (5275) to definition for CATSEA = 34 (guyot). [Overtaken by events.](#) Also, can this value and CATSEA = 16 (seamount) be combined into a single value (seamount/guyot) as they are virtually the same thing? (Register, TSMAD).
- Suggest that definition for CATSEA = 51 (canal) be amended to first part of S-32 definition for canal. Do we want to restrict canals only to navigable canals? (TSMAD, Register). [Done for Baseline DCEG.](#)
- Definition for CATSEA = 53 (river) is identical to S-32 definition for river. Suggest S-32 reference be added as authority for definition. (Register). [Done for Baseline DCEG.](#)

CATSIL:

- Suggest amended definition for CATSIL = 1 (silo), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG.](#)
- Suggest amended definition for CATSIL = 4 (water tower), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG.](#)

CATSIT:

- Suggest S-4 – B-494 (Signal stations: general) be added to the list of S-4 references for **SISTAT**. (Register). [No S-4 references included in the Attributes Section of the Baseline DCEG.](#)

CATSIW:

- For CATSIW = 9 (time), the S-32 (and therefore S-57) definition states that the signal can be sent by telegraph. Suggest this is no longer done, and therefore this statement should be removed. (HDWG, Register). [Done for Baseline DCEG](#).
- Suggest S-4 – B-490.3 be removed from the list of S-4 references for **SISTAW** (this clause no longer exists in S-4). (Register). [No S-4 references included in the Attributes Section of the Baseline DCEG](#).

CATSLC:

- Amend S-32 reference number for CATSLC = 2 (groyne (groin)) from 2525 to 2121. Also see issue in regard to rip rap below. (Register). [Overtaken by events](#).
- Definition for CATSLC = 3 (mole) does not agree with the first part of the S-32 definition. As the S-57 definition has been derived from S-4, these definitions need to be reconciled in the relevant Working Groups. Note that the DGIWG FDD definition is derived from S-4. (CSPCWG, HDWG).
- Suggest S-57 definition for CATSLC = 5 (promenade pier), as derived from S-4, be added to S-32. (HDWG, Register).
- Definition for CATSLC = 7 (training wall) is adapted from S-32, but the part of the S-32 definition that has been removed from the S-57 definition is the word “jetty” (CATSLC = 4 (pier (jetty))), and the part added to the S-57 definition (“or to promote scour action”) is part of the S-32 definition for groyne (CATSLC = 2). These definitions need to be sorted out so that they are consistent and not ambiguous. (TSMAD/CSPCWG, HDWG).
- According to S-32, rip rap (CATSLC = 8) is another term for groyne (CATSLC = 2). Another one that needs to be sorted out. (TSMAD/CSPCWG, HDWG).
- Suggest S-57 definition for CATSLC = 11 (landing steps) be added to S-32. Note that the S-57 definition has been adopted in the DGIWG FDD. (HDWG, Register).
- Suggest add S-4 – B-324.4 as S-4 reference for CATSLC = 11 (landing steps) (refer CSPCWG Letter 03/2011). (Register). [Overtaken by events](#).
- Suggest S-32 definition for ramp (CATSLC = 12) be amended to agree with S-57 definition. (HDWG).
- S-57 and S-32 definitions for CATSLC = 14 (fender) are different. Need to be reconciled. Suggest S-57 definition be adopted, which seems a better (broader) fit. Note that DGIWG FDD has adopted the S-57 definition. (TSMAD, HDWG).
- Suggest S-57 definition for CATSLC = 15 (solid face wharf) be added to S-32. Note that the DGIWG FDD definition is an adaptation of the S-57 definition. (HDWG, Register).
- Suggest S-57 definition for CATSLC = 16 (open face wharf) be added to S-32. Note that the DGIWG FDD definition has been adopted from the S-57 definition. (HDWG, Register).
- Suggest S-57 definition for CATSLC = 17 (log ramp) be added to S-32. Note that the S-57 definition has been adopted in the DGIWG FDD. (HDWG, Register).

CATSLO:

- Suggest amended definition for CATSLO = 2 (embankment), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG](#).
- Suggest amended definition for CATSLO = 7 (scree), as taken from S-32. (Register). [Done for Baseline DCEG](#).

CATSPM:

- S-57 definition for CATSPM = 2 (target mark) does not very well fit a special purpose mark intended as a target mark (particularly the second part of the definition, which relates to aerial photographs). Suggest that at least the definition be amended to only be the first part of the current definition. (Register).
- There is a definition for buoy: cable, which is very similar to the S-57 definition for CATSPM = 6 (cable mark). Suggest these definitions be reconciled (except in respect to “buoy” and “mark”), and an “Adapted from” reference be included, similar to “spoil ground mark”. (HDWG, Register).

- Suggest expanded term for LANBY (CATSPM = 15) be added to either the enumerate value or its definition, as has been done in S-32. (Register). [Done for Baseline DCEG.](#)
- S-57 MD8 – 2.Co.4 states “Remove the M-4 reference” from CATSPM, but does not state which S-4 reference should be removed. There is no reference to a paper on which this decision is based. Need to chase this up. (TSMAD). [Overtaken by events.](#)

CATTRK:

- S-57 MD8 – 2.Co.5 and 2.Cl.6 amends the definition for CATTRK = 1 (based on a system of fixed marks). This has not been followed through to CATTRK = 2 (not based on a system of fixed marks), in that structures and features are quoted as plural. Suggest definition be amended accordingly. (TSMAD, Register). [Done for Baseline DCEG.](#)

CATVEG:

- Reference for CATVEG = 11 (reed) has been included in INT1 at B33 (reed beds). Suggest INT1 reference be added for **VEGATN**. (Register). [Done for Baseline DCEG.](#)
- With reed beds added at INT1 – B33 (see above), and added guidance at S-4 – B-312.2, should there be encoding guidance that reed beds will generally be encoded coincident with **LNDRGN** having CATLND = 2 (marsh)? (TSMAD).
- Suggest amended definition for CATVEG = 13 (tree in general), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG.](#)
- Suggest amended definition for CATVEG = 14 (evergreen tree), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG.](#)
- Suggest amended definition for CATVEG = 20 (deciduous tree), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG.](#)
- Suggest amended definition for CATVEG = 21 (filao tree), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG.](#)

CATWAT:

- S-32 definition for CATWAT = 2 (eddies) is in the singular, while S-57 is plural. Suggest that these need to be reconciled (suggest S-32 to be amended to the plural, noting that overfalls and tide rips are also plural), or S-57 definition be “Adapted from” S-32. (HDWG, Register).
- Considering that CATWAT = 5 (bombora) is a hydrographic term, suggest that the S-57 definition be adopted in S-32. (HDWG).

CATWED:

- Minor editorial changes to definitions of kelp and seagrass. (Register). [Done for Baseline DCEG.](#)
- The definition for CATWED = 1 (kelp) is different to the general definition included for **WEDKLP**. These definitions need to be reconciled. (HDWG, Register). [Definition amended for feature **Weed/Kelp**. Done for Baseline DCEG.](#)
- The definition for CATWED = 2 (sea weed) is slightly different to the general definition included for **WEDKLP**. These definitions need to be reconciled. Note also that in S-57 it is “sea weed” (2 words), while in S-32 it is “seaweed” (1 word). (HDWG, Register). [Definition amended for feature **Weed/Kelp**. Note also that “seaweed” has been amended to one word throughout the DCEG. Done for Baseline DCEG.](#)
- Value for CATWED = 3 is “sea grass” (2 words). In S-32, the term used is “seagrass” (one word). Needs to be sorted out for consistency. Note that (May 2011) discussions are taking place in the DGIWG FAD Maintenance Team regarding whether the term should be 1 word or 2 in the DFDD. Need to keep track of the discussions and decision. (HDWG, Register). [“Seagrass” has been amended to one word throughout the DCEG. Done for Baseline DCEG.](#)

CATWRK:

- Suggest amended definition for CATWRK = 2 (dangerous wreck), as taken from S-32. (Register). [Done for Baseline DCEG.](#)

CAT_TS:

- Add S-32 reference number 1857 to definition for CAT_TS = 1 (flood stream). The only difference between the S-57 and S-32 definitions for flood stream is “toward” (S-32) and “towards” (S-57) – these should be reconciled (suggest “toward”). (TSMAD/HDWG, Register).
- Add S-32 reference number 1857 to definition for CAT_TS = 2 (ebb stream). The S-57 and S-32 definitions for ebb stream are identical, therefore suggest remove “Adapted from” from definition. (Register). [Done for Baseline DCEG.](#)

COLOUR:

- Complex Attribute: Can COLOUR and COLPAT be combined into a complex attribute? [Rejected.](#) The majority of instances of requiring to encode the colour of a feature are where only a single value for **colour** is required.

COLPAT:

- Complex Attribute: Can COLOUR and COLPAT be combined into a complex attribute? [Rejected.](#) The majority of instances of requiring to encode the colour of a feature are where only a single value for **colour** is required.
- With COLPAT being mandatory where COLOUR has more than 1 value, COLPAT has been made allowable for many features where the enumerate values just don't make sense (e.g. **BRIDGE, CONVYR**). Can the entire enumerate list be prohibited, and instruction inserted in the guide to populate the attribute with an empty (null) value? Another alternative would be to make COLPAT non-mandatory where colour has more than one value in certain circumstances. **Suggest that colour pattern be removed as an allowable attribute for those features for which it is illogical. Can then amend the guidance to state that where colour has more than one value and colour pattern is an allowable attribute, then colour pattern is mandatory.**

CONDTN:

- Suggest amended definition for CONDTN = 1 (under construction), as adapted from DGIWG FDD. (Register). [Done for Baseline DCEG.](#)
- Should the definition for CONDTN = 3 (under reclamation) be included in S-32? (HDWG).
- No comparable definition for CONDTN = 4 (wingless). Suggest add “vanes or” to current S-57 definition if it is to be retained to be consistent with windmill definition. Should this definition be proposed for DGIWG FDD? (DGIWG FDD).
- Suggest amended definition for CONDTN = 5 (planned construction), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG.](#)

CONVIS:

- TSAD27: New portrayal required for additional enumerate value (prominent). (DIPWG).

CURVEL:

- Complex Attribute: In order to cater for situations where the maximum rate of current velocity is stated as a range on the source (e.g. *1 – 2 kn*), suggest CURVEL be a complex attribute with sub attributes e.g. VELRA1 (mandatory) and VELRA2. [Done for Baseline DCEG.](#)
- Complex Attribute: Should CURVEL and ORIENT be combined into a complex attribute? (Register). [Rejected.](#) No reason to bind this within a complex attribute as it is bound at the feature level.
- There is no authority listed for the definition for CURVEL. [Authority for definition listed as S-57 in Baseline DCEG.](#)

DRVAL1 and DRVAL2:

- There is a DGIWG FDD definition for “depth range”. Suggest this definition be considered for S-32, and used as part of the definitions for DRVAL1 and DRVAL2. (HDWG, Register). [Done for Baseline DCEG](#).
- For DRVAL2, it is stated that if the area dries the value of DRVAL2 is negative or 0. Does this imply that no depth area can be encoded have a negative value for DRVAL1 and a “positive” value for DRVAL2? (TSMAD, Register). [Proposal for S-101PT1 \(March 2016\)](#).

ELEVAT:

- The S-32 and S-57 definitions for elevation, as applied in hydrography, need to be reviewed and aligned. (HDWH/Register). [23/08/11: HDWG discussions on the definitions for elevation and height are in progress. Awaiting resolution.](#)

FUNCTN:

- Suggest amended definition for FUNCTN = 3 (custom office), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG](#).
- Suggest amended definition for FUNCTN = 9 (police station), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG](#).
- S-57 definition for FUNCTN = 10 (water-police station) is the same as DGIWG FDD definition. Suggest add DGIWG FDD as authority. (Register). [Done for Baseline DCEG](#).
- Suggest amended definition for FUNCTN = 19 (educational facility), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG](#).
- Suggest amended definition for FUNCTN = 30 (television), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG](#).
- Suggest amended definition for FUNCTN = 31 (radio), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG](#).
- Incorrect S-32 reference for FUNCTN = 32 (radar). Amend reference to 4133. (Register). [Overtaken by events](#).
- Suggest amended definition for FUNCTN = 33 (light support), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG](#).
- Suggest amended definition for FUNCTN = 35 (cooling), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG](#).
- Incorrect S-32 reference for FUNCTN = 36 (observation). Amend reference to 3500. (Register). [Overtaken by events](#).
- Amend “timeball” to “time ball” for consistency with S-32. (Register). [To be approved at S-101PT1 meeting](#).
- Current S-57 definition for FUNCTN = 38 (clock) is adapted from S-32 5536 (time ball), but clock is a defined word in the Dictionary. Suggest use S-32 833 (clock) definition. (Register). [Done for Baseline DCEG](#).
- Suggest amended definition for FUNCTN = 39 (control), as taken from current Version of DGIWG FDD (current S-57 definition superseded). (Register). [Done for Baseline DCEG](#).
- Suggest amended definition for FUNCTN = 40 (airship mooring), as taken from current Version of DGIWG FDD (current S-57 definition superseded). (Register). [Done for Baseline DCEG](#).
- Suggest amended definition for FUNCTN = 41 (stadium), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG](#).
- Suggest amended definition for FUNCTN = 42 (bus station), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG](#).
- Suggest definition for FUNCTN = 43 (passenger terminal building), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG](#). [Note also proposal to S-101PT1 meeting \(April 2016\)](#).
- Suggest definition for FUNCTN = 44 (sea rescue control), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG](#).
- Suggest definition for FUNCTN = 45 (observatory), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG](#).

HEIGHT:

- The S-32 and S-57 definitions for height, as applied in hydrography, need to be reviewed and aligned. (HDWH/Register). **23/08/11: HDWG discussions on the definitions for elevation and height are in progress. Awaiting resolution.**

HORACC:

- Complex attribute: See HORCLR below. (Register, Feature Catalogue).
- Suggest foot (ft) be removed as allowable units of measure for HORACC. (Register). **Done for Baseline DCEG.**

HORCLR:

- Should there be a definition for horizontal clearance in S-32? (HDWG).
- Complex attribute: Could HORCLR be a complex attribute comprising the value (HCLEAR?) and HORACC as sub-attributes? Will need to check whether HORACC is always associated only with HORCLR. (Register). **Modelling for Baseline DCEG, including the modelling of horizontal and vertical distance uncertainty, as submitted by the DQWG.**
- Suggest foot (ft) be removed as allowable units of measure for HORCLR. (Register). **Done for Baseline DCEG.**

HORLEN:

- Suggest foot (ft) be removed as allowable units of measure for HORLEN. (Register). **Done for Baseline DCEG.**

HORWID:

- Suggest foot (ft) be removed as allowable units of measure for HORWID. (Register). **Done for Baseline DCEG.**

LITCHR:

- Should definitions for LITCHR = 5 (very quick-flashing) and 6 (ultra quick-flashing) be included in S-32? Mariners using ECDIS and not carrying a copy of INT1 may not have any documentation to define the difference in flash rates between quick, very quick and ultra quick-flashing lights, and the period is not defined in the ENC for these lights. (HDWG).
- Suggest S-32 definition for LITCHR = 7 (isophased) be amended from “light: equal interval” to “light: isophase”. Isophase is the most common term now used in the international community. (HDWG).
- Should there be definitions added for LITCHR values 14-27 and 29 (no definitions included in S-57 or S-32)? (TSMAD, Register).

MARSYS:

- Should MARSYS be considered to be a meta attribute (order in the document)? (Register). **Consider that MARSYS is not the only attribute that may be considered to be a “meta” attribute. Needs further discussion.**

NATCON:

- Suggest amended definition for NATCON = 1 (masonry), as adapted from DGIWG FDD. (Register). **Done for Baseline DCEG.**

NATQUA:

- The authority quoted for the definition of NATQUA = 1 (fine) is S-4 – B-425.6. The contents of this clause have been removed from S-4; therefore this reference is no longer relevant as it is shown. Alternatives include citing S-57 as the reference (used in the draft document); adding the S-4 Edition number (date) that this definition was derived from (1988); citing DGIWG FDD, where the definition of “fine” has been adopted from the S-57 definition; or adding a definition in S-32. Decision will depend on general discussions relating to quoted definition of source references in the Register. (TSMAD, Register). **For Baseline DCEG S-57 has been adopted as the authority for this definition.**

- The authority quoted for the definition of NATQUA = 2 (medium) is S-4 – B-425.6. The contents of this clause have been removed from S-4; therefore this reference is no longer relevant as it is shown. Alternatives include citing S-57 as the reference (used in the draft document); adding the S-4 Edition number (date) that this definition was derived from (1988); citing DGIWG FDD, where the definition of “medium” has been adopted from the S-57 definition; or adding a definition in S-32. Decision will depend on general discussions relating to quoted definition of source references in the Register. (TSMAD, Register). [For Baseline DCEG S-57 has been adopted as the authority for this definition.](#)
- The authority quoted for the definition of NATQUA = 3 (coarse) is S-4 – B-425.6. The contents of this clause have been removed from S-4; therefore this reference is no longer relevant as it is shown. Alternatives include citing S-57 as the reference (used in the draft document); adding the S-4 Edition number (date) that this definition was derived from (1988); citing DGIWG FDD, where the definition of “coarse” has been adopted from the S-57 definition; or adding a definition in S-32. Decision will depend on general discussions relating to quoted definition of source references in the Register. (TSMAD, Register). [For Baseline DCEG S-57 has been adopted as the authority for this definition.](#)

NATSUR:

- Note that there are some differences in the particle sizes quoted between S-57 and S-32. In discussions on amending and reconciling definitions, these need to be taken into account. (TSMAD, HDWG). [Note that for these definitions S-57 has been quoted as the authority \(no authority quoted in S-57, perhaps acknowledging that there is a difference between these definitions and the sizes quoted in the definitions in S-32\).](#)
- There is an S-32 definition for mud (NATSUR = 1) in S-32, which has not been used in S-57. Suggest that these definitions be reconciled. Note that the S-32 definition is fairly convoluted, and DGIWG FDD definition is different again. (HDWG, Register).
- There is an S-32 definition for clay (NATSUR = 2) in S-32, which has not been used in S-57. Suggest that these definitions be reconciled. Note that the S-32 definition is fairly convoluted, and DGIWG FDD definition is different again. (HDWG, Register).
- Suggest definition for NATSUR = 3 (silt) be amended to agree with S-32 definition. (Register). [Done for Baseline DCEG.](#)
- Suggest definition for NATSUR = 4 (sand) be amended to agree with S-32 definition. (Register). [Done for Baseline DCEG.](#)
- Suggest definition for NATSUR = 5 (stone) be amended slightly to agree fully with S-32 definition. (Register). [Done for Baseline DCEG.](#)
- There is an S-32 definition for gravel (NATSUR = 6) in S-32, which has not been used in S-57. Suggest that these definitions be reconciled. Note that the S-32 definition covers particles up to 256mm, which also covers the sizes for pebbles and cobbles. (HDWG, Register).
- Suggest definition for NATSUR = 7 (pebbles) be amended to agree with S-32 definition. (Register). [Done for Baseline DCEG.](#)
- Suggest definition for NATSUR = 8 (cobbles) be amended slightly to agree fully with S-32 definition. (Register). [Done for Baseline DCEG.](#)
- The definition for NATSUR = 17 (shells) claims to be an adaptation of the S-32 definition for shell. The definitions are not similar, and need to be reconciled. (HDWG, Register).

NOBJNM:

- Should NOBJNM be re-named NFEANM (feature name in national language)? (TSMAD, Register). [Overtaken by events.](#)

OBJNAM:

- Should OBJNAM be re-named FEANAM (feature name)? (TSMAD, Register). [Overtaken by events.](#)

ORIENT:

- Complex Attribute: Can CURVEL and ORIENT be combined as sub-attributes in a complex attribute for tidal features? Would also be required to be a top level attribute for other features. (Register). **Rejected. No reason to bind this within a complex attribute as it is bound at the feature level.**

Orientation uncertainty:

- Given the limited accuracy to which mariners can read and plot bearings at sea, is this attribute required for ENC? (TSMAD). **Done for Baseline DCEG.**
- If answer to above is yes (or if this attribute is to be included in the Registry), what resolution should this attribute have? (TSMAD). **Resolution determined for Baseline DCEG as 0.001°.**

PICREP:

- There is no statement anywhere in S-57 that PICREP can only be used to reference one file (not two or more) – although it is implied. Wording is required to clearly state that PICREP can only be used to reference a single file. Should attribute type be changed from S to A? Or is PICREP going to be replaced by Information Objects? (Register). **Overtaken by events.**

PRODCT:

- Current spelling for PRODCT = 18 and 19 is “liquified”. All other sources investigated indicate spelling should be “liquefied”. Suggest amend spelling accordingly. (Register). **Done for Baseline DCEG.**
- Suggest amended definition for FUNCTN = 18 (liquefied natural gas (LNG)), as taken from DGIWG FDD. (Register). **Done for Baseline DCEG.**
- Current spelling for PRODCT = 20 is “fermantad”. All other sources investigated indicate spelling should be “fermented”. Suggest amend spelling accordingly. (Register). **Done for Baseline DCEG.**

QUASOU:

- There is a DGIWG FDD definition for QUASOU = 1 (depth known), which includes a reference to known depths of drying features. Suggest an adaptation of this definition be adopted, or a definition be included in S-32. (HDWG, Register). **Done for Baseline DCEG.**
- There is a DGIWG FDD definition for QUASOU = 2 (depth unknown). Suggest therefore that such a definition is required in S-32 (is a hydrographic term). (HDWG, Register).
- What is the difference between QUASOU = 3 (doubtful sounding) and 4 (unreliable sounding)? Is there a purpose behind defining a sounding as unreliable when an indication of the reliability is given in **M_QUAL**? (TSMAD, DQWG, Register).
- The definition for QUASOU = 5 (no bottom found at value shown) is attributed to be adapted from S-32 code 4848, but the definition is nothing like the S-32 definition. Should these be reconciled? (TSMAD, HDWG, Register). **Note for Baseline DCEG that this has now been modelled as a new feature **Depth – No Bottom Found**. Definition still needs to be rationalised.**
- Suggest that a definition for safe clearance (from which the definition of QUASOU = 7 (least depth unknown, safe clearance at value shown) can be derived), be included in S-32 – perhaps as “depth: safe clearance”. Note that there is a definition for “safe clearance known” in DGIWG FDD that has been adapted from the S-57 definition. (HDWG, Register).
- There is a DGIWG FDD definition for “unmaintained depth” which has been adopted from the S-57 definition for QUASOU = 11 (not regularly maintained). Should a definition be included in S-32? (HDWG, Register).
- Within the definitions for the values of QUASOU, there appears to be an interchanging of the terms “least depth” and “shoalest depth”. Suggest that these should be standardised (may have implications on S-32). (HDWG, Register).

RECDAT: **Removed from S-101.**

- Should RECDAT be considered to be a meta attribute (order in document)? (TSMAD).

RECIND: **Removed from S-101.**

- Should RECIND be considered to be a meta attribute (order in document)? (TSMAD).

RESTRN:

- Suggest the S-32 definition (prohibited area) for RESTRN = 7 (entry prohibited) be amended to agree with the S-57 definition. The inclusion of the word “charts” is too restrictive. (HDWG).
- The S-57 definition for RESTRN = 8 (entry restricted) is the same as the S-57 definition for **RESARE**. Is it allowable to have an enumerate have the same definition as a feature? It has been suggested that the definition for **RESARE** be amended. If this is done, and the definition for entry restricted is not amended, is this OK? Additionally, is it OK for entry restricted to be designated by an appropriate authority but there is no such designation mentioned for entry prohibited? Suggest that this requirement be added to S-32 and S-57 definition for entry prohibited. (HDWG, TSMAD, Register).
- There is an S-32 definition for RESTRN = 14 (area to be avoided). Suggest this definition be adopted. (Register). [Done for Baseline DCEG.](#)
- Value for RESTRN = 22 includes the word “artifacts”. Suggest this is incorrect spelling and the word should be “artefacts”. (Register). [Done for Baseline DCEG.](#)
- In the second Remarks point, there are errors in attribute descriptions, and a reference to “anchoring prohibition area”, which has been deleted from S-57. Suggest this bullet point be amended accordingly. [Done for Baseline DCEG.](#)

SCAMAX:

- There have been arguments to re-introduce SCAMIN for S-101 ENCs. This needs to be discussed with use cases. (TSMAD).
- Should SCAMAX be considered to be a meta attribute (order in document)? (TSMAD).

SCAMIN:

- Should SCAMAX be considered to be a meta attribute (order in document)? (TSMAD).

SDISMN:

- Suggest foot (ft) be removed as allowable units of measure for SOUACC. (Register). [Done for Baseline DCEG.](#)

SDISMX:

- Suggest foot (ft) be removed as allowable units of measure for SOUACC. (Register). [Done for Baseline DCEG.](#)

SIGGEN:

- Suggest use text in Remarks for a definition of SIGGEN. (Register). [Done for Baseline DCEG.](#)

Size of features detected:

- This needs to be described better. Is it defining the volume of the features, or the minimum depth of the feature? Assumption in draft is volume. (DQWG). [Done for Baseline DCEG.](#)

SOUACC: **Removed from S-101.**

- Suggest definition for SOUACC which is similar to that used for POSACC. (Register).
- Suggest fathom (fm) and foot (ft) be removed as allowable units of measure for SOUACC. (Register).

STATUS:

- Suggest amended definition for STATUS = 4 (not in use), as adapted from DGIWG FDD. (Register). [Done for Baseline DCEG.](#)
- Suggest amended definition for STATUS = 8 (private), as taken from DGIWG FDD. (Register). [Done for Baseline DCEG.](#)
- Request a definition be included in S-32 for STATUS = 12 (illuminated). (HDWG).
- Suggest amended definition for STATUS = 18 (existence doubtful), as taken from DGIWG FDD. (Register).
- Request a definition be included in S-32 for STATUS = 28 (buoyed). (HDWG).

SURTYP:

- The DQWG re-modelling of this attribute, particularly the new enumerate values and relationships between this and other attributes such as QUASOU, need to be fully reviewed. (TSMAD, DQWG, Register).

TECSOU:

- Suggest amend start of definition for TECSOU = 1 (found by echo sounder) from “The depth was determined ...” to “The depth was measured ...” – more consistent with attribute name “technique of sounding measurement”. (Register). [Done for Baseline DCEG.](#)
- Suggest amend start of definition for TECSOU = 3 (found by multi-beam) from “The depth was determined ...” to “The depth was measured ...” – more consistent with attribute name “technique of sounding measurement”. (Register). [Done for Baseline DCEG.](#)
- Suggest amend start of definition for TECSOU = 4 (found by diver) from “The depth was determined ...” to “The depth was measured ...” – more consistent with attribute name “technique of sounding measurement”. (Register). [Done for Baseline DCEG.](#)
- Suggest amend start of definition for TECSOU = 5 (found by lead line) from “The depth was determined ...” to “The depth was measured ...” – more consistent with attribute name “technique of sounding measurement”. (Register). [Done for Baseline DCEG.](#)
- Suggest amend start of definition for TECSOU = 7 (found by laser) from “The depth was determined ...” to “The depth was measured ...” – more consistent with attribute name “technique of sounding measurement”. (Register). [Done for Baseline DCEG.](#)
- Should there be a definition for “vertical acoustic system” in S-32? Note that there is a definition for “area swept by vertical acoustic system” in DGIWG FDD that has been adapted from the S-57 definition. (HDWG).
- Suggest amend start of definition for TECSOU = 9 (found by electromagnetic sensor) from “The depth was determined ...” to “The depth was measured ...” – more consistent with attribute name “technique of sounding measurement”. (Register). [Done for Baseline DCEG.](#)
- Suggest amend start of definition for TECSOU = 12 (found by levelling) from “The depth was determined ...” to “The depth was measured ...” – more consistent with attribute name “technique of sounding measurement”. (Register). [Done for Baseline DCEG.](#)
- There is an S-4 reference included at the end of the S-57 definition for TECSOU = 13 (swept by side-scan sonar). Suggest this be removed. (Register). [Overtaken by events.](#)
- Should there be a definition for “depth: computer generated” or similar in S-32? Note that there is a definition for “computer generated” in DGIWG FDD (enumerate for Bathymetric Measurement Technique Code) that has been adopted from the S-57 definition. (HDWG). [Overtaken by events.](#)
- Should TECSOU be considered to be a meta attribute (order in document)? (TSMAD).
- Suggestion by DQWG to amend attribute name to “technique of vertical measurement”. Needs justification and possible discussion. (DQWG, TSMAD, Registry). [Done for Baseline DCEG.](#)

TOPSHP:

- Suggest amended definition for TOPSHP = 4 (2 spheres). Current definition is not a definition as it is. Also may need to have an authorised definition (S-32?). (Register). [Done for Baseline DCEG.](#)
- Suggest amended definition for TOPSHP = 9 (cube, point up) to combine the definition of cube with cube, point up. (Register). [Done for Baseline DCEG.](#)
- Suggest adding definition for TOPSHP = 13 (2 cones, points up) and 14 (2 cones, points down). (Register). [Done for Baseline DCEG.](#)
- Suggest amended definition for TOPSHP = 15 (besom, point up) and 16 (besom, point down) to include description of what “point up” and “point down” means. (Register). [Done for Baseline DCEG.](#)

T_VAHC: **Removed from S-101.**

- Definition appears to be derived from S-32 (2200 – harmonic constituent). Suggest “Adapted from IHO Dictionary – S-32, Edition 5; 2200” be added to definition. (Register).

TXTDSC:

- There is no statement anywhere in S-57 that TXTDSC can only be used to reference one file (not two or more) – although it is implied. Wording is required to clearly state that TXTDSC can only be used to reference a single file. Should attribute type be changed from S to A? Or is TXTDSC going to be replaced by Information Objects? (Register). [Overtaken by events.](#)

Unit of distance measurement:

- New draft attribute for complex attribute “waterway measurement” (used for **DISMAR**), which needs to be fully evaluated and approved. (Register, Feature Catalogue). [Done for Baseline DCEG.](#)

VERACC:

- Suggest foot (ft) be removed as allowable units of measure for VERACC. (Register). [Done for Baseline DCEG.](#)

VERCCL:

- Suggest adding “horizontal” in relation to the plane of reference from which VERCCL is measured. [Overtaken by events.](#)
- DGIWG FDD has used the S-57 definition for this attribute to define vertical clearance, closed. Suggest this definition be included in S-32. (HDWG).
- Complex attribute: Could VERCCL be a complex attribute comprising the value (VCLEAR), VERACC and VERDAT as sub-attributes? Need to check whether VERACC and VERDAT are associated with VERCCL in all cases. (Register). [Done for Baseline DCEG.](#)
- Suggest foot (ft) be removed as allowable units of measure for VERCCL. (Register). [Done for Baseline DCEG.](#)

VERCLR:

- Suggest adding “horizontal” in relation to the plane of reference from which VERCLR is measured. [Done for Baseline DCEG.](#)
- Suggest S-57 definition be included in S-32. (HDWG).
- Complex attribute: Could VERCLR be a complex attribute comprising the value with VERACC and VERDAT as sub-attributes? Need to check whether VERACC and VERDAT are associated with VERCLR in all cases. (TSMAD, Register). [Done for Baseline DCEG.](#)
- The Remarks for the S-57 entry for VERCLR are more specifically related to VERCSEA. Consider there should be no instruction in the Specification for populating VERCLR in regard to safe clearance when there is no way to distinguish that a safe clearance has been populated and there is a different attribute for this anyway. Suggest if there are going to be Remarks these should reference VERCSEA, and it be mandated that VERCSEA be used to populate authorised safe vertical clearances.

The S-57 attribute VERCLR would need to be mapped to the sub-attribute e.g. **vertical clearance fixed**. (Register). [Done for Baseline DCEG](#).

- Suggest foot (ft) be removed as allowable units of measure for VERCLR. (Register). [Done for Baseline DCEG](#).

VERCOP:

- Suggest adding “horizontal” in relation to the plane of reference from which VERCOP is measured. [Done for Baseline DCEG](#).
- DGIWG FDD has used the S-57 definition for this attribute to define vertical clearance, open. Suggest this definition be included in S-32. (HDWG).
- Complex attribute: Could VERCOP be a complex attribute comprising the value (VCLEAR), VERACC and VERDAT as sub-attributes? Need to check whether VERACC and VERDAT are associated with VERCOP in all cases. (Register). [Done for Baseline DCEG](#).
- Suggest foot (ft) be removed as allowable units of measure for VERCOP. (Register).

VERCSA:

- Suggest adding “horizontal” in relation to the plane of reference from which VERCSA is measured. [Done for Baseline DCEG](#).
- DGIWG FDD has used the S-57 definition for this attribute to define vertical clearance, safe. Suggest this definition be included in S-32. (HDWG).
- Complex attribute: Could VERCSA be a complex attribute comprising the value (VCLEAR), VERACC and VERDAT as sub-attributes? Need to check whether VERACC and VERDAT are associated with VERCSA in all cases. (Register). [Done for Baseline DCEG](#).
- Suggest amend the Remarks to better specify the population of VERCSA when required (see comments for VERCLR). (Register). [Done for Baseline DCEG](#).
- Suggest foot (ft) be removed as allowable units of measure for VERCSA. (Register). [Done for Baseline DCEG](#).

VERDAT:

- For VERDAT = 30 (Highest astronomical tide (HAT)), the abbreviation is included in the enumerate value. This is inconsistent with other values. Suggest (HAT) be removed. (Register). [Done for Baseline DCEG](#).

VERLEN:

- Suggest foot (ft) be removed as allowable units of measure for VERLEN. (Register). [Done for Baseline DCEG](#).

WATLEV:

- There is an S-32 definition for submerged, which has not been used in the S-57 definition for WATLEV = 3 (always underwater/submerged). Suggest that these definitions be reconciled, with S-57 definition being given preference. Note that the S-57 definition has been adopted in DGIWG FDD. (HDWG, Register).
- The S-57 definition for WATLEV = 5 (awash) is adapted from the S-32 definition, in that it is a slightly expanded definition. Suggest that the S-57 definition be adopted in S-32. (HDWG).
- Should a definition of “floating” be included in S-32? (HDWG, Register).