S-101 DATA CLASSIFICATION AND ENCODING GUIDE
AUGUST 2012 DRAFT VERSION
DCEG SUB-WG DISCUSSION ITEMS

The following topics for discussion of the S-101 DCEG Sub-WG, and possible development of proposals, has been compiled by AU as a result of applying changes to the draft DCEG as identified at Sub-WG meeting 1 (Wollongong, January 2012) and Sub-WG meeting 2 (IHB, May 2012).

- Vertical and horizontal clearances: New complex attributes appear to be messy. Similar to the situation that was discussed regarding fixed and periodic dates, vertical clearances in particular result in illogical types of clearance (vertical open, vertical closed, vertical safe) being available for features. Suggest that reverting back to dedicated attributes (complex consisting of value and accuracy sub-attributes) be investigated.

- Addition of CONDTN and STATUS for CTNARE: This was an agreed change at Sub-WG1 to facilitate encoding of works in progress. Concerned over addition of attributes to a feature just for one specific purpose. Suggest that this is a better case for a new feature.

- Example of guidance for creation of a named aggregation has been included at 8.14.1.2 (Mooring trots). This wording will need to be reviewed for approval and use as a template for similar guidance in the document regarding named aggregations.

- Floating dock (8.16): I am not 100% sure what TG1 features should cover a floating dock. Remarks 1st bullet point requires review.

- Floating dock: Point has been included as allowable primitive. It is noted that point is not an allowable primitive in S-57. Needs to be confirmed that point is definitely required.

- Feature name: Is it intended that for features such as Dock Area, if a name is populated for an instance of complex attribute feature name having sub-attribute category of name = 5 (display name), the name will display in the ECDIS? If this is the case, encoding guidance for many features (such as Dock Area) regarding double encoding of Sea Area in order to display the name in ECDIS will need to be amended.

- Sub-WG1 rejected suggestion that the terms “seaweed” and “seagrass” be single words (S-57 uses 2 words). This is inconsistent with Hydrographic Dictionary and S-4. Suggest further discussion required.

- FAD: Have added new category of obstruction “Fish Aggregating Device (FAD)” and associated guidance for Obstruction, and added a reference to encoding floating FAD in the table for Buoy Special Purpose/General. However, the proposal and subsequent discussion has raised the issue of floating devices (such as FAD) that do not serve the purpose of an aid to navigation (the statement is these devices are obstructions). This has prompted me to have a look at the values for category of special purpose mark, and at first glance value 9 (ODAS) is also not an aid to navigation. For consistency, these features should all be treated the same way. Therefore I have taken the same approach with ODAS. **NOTE: If this is to be done, BOYSHP will need to be added to OBSTRN. Would freatures such as FAD and ODAS be better off being a new feature class, e.g. Buoy Non-navigational, which could have FAD and ODAS as categories, and also mooring buoy (moved from MORFAC?).**

- Fishing Facility: The addition of VALSOU has been proposed before on features such as Fishing Facility and Seabed Area, and rejected on the grounds that these features, from a navigational perspective, have their related depth information adequately described through the underlying DEPARE’s. Requires further discussion.

- Offshore wind turbine: After further consideration, and working through the actions from Sub-WG2, I have the following to propose:

- Add new enumerate to category of offshore platform of “wind motor” (offshore wind turbine falls nicely into the definition of Offshore Platform).
- Add new enumerate value to product of “electricity”.

There is still the possibility of adding a new feature for a generic offshore power generator to cater for wind, current and wave turbines, but for now the above has been applied in the DCEG. Further discussion is required, and awaiting IC-ENC paper.

- Flare stacks on offshore platforms: It was agreed at Sub-WG1 that encoding as Landmark was not good modelling. Suggestion was to add to category of offshore platform but do not think this is suitable as flare stack is a by-product and not the purpose of the platform. Suggest that a Boolean “flare stack” be added.

- There has not been any Sub-WG discussion on the wording required to describe the establishment of relationships in S-101 datasets.

- Discussion required regarding alternative portrayal procedure for portrayal of direction of navigation along a one-way track.

- Communication Channel: Sub-WG recommendation is to make a complex. Can the desired result be achieved by amending multiplicity (simpler result)? If this is the better solution, is there an upper limit (i.e. a maximum number of communication channels)? Is it required to combine communication channel with other attributes (e.g. call sign)? In this case the better solution would be a complex.

- Submarine Transit Lane (comment line 343): Nationality has been added, in line with previous comments. However, consider that addition of orientation and traffic needs to be discussed further. Is this information required for a navigation ENC? Justification for the proposal states that the information is shown only on special charts. Consider this indicates that such information is better suited to an S-10X overlay PS such as AML.

- Allowing Restricted Area to be encoded as point has been raised at TSMAD before, but has been rejected on the grounds that encoders would encode points in other cases rather than areas, which would degrade the quality of the ENC. Allowing point just to cover nature reserves, which are shown on many paper charts without boundaries, may be considered to be overkill. Suggest that this needs to be discussed in tandem with discussion on rationalisation of Restricted Area.

- Colour/colour pattern: Do not think it is necessary to combine colour and colour pattern into a complex attribute. More often than not where there are multiple values populated for colour there is only one value for colour pattern, so the only reason for binding the attributes in a complex would be for associative reasons. The guidance that would need to be then written around this (e.g. no requirement to populate colour pattern if only one value for colour) would be just as complex as the existing modelling and guidance. Suggest leave as discrete attributes. In addition, for features that may have multiple colours populated for which population of colour pattern makes no sense (e.g. Conveyor), we could simply exclude colour pattern from the allowable attribute list for that feature. The general guidance would then be that colour pattern is mandatory where it is a valid attribute and more than one value has been populated for colour.

- Radar wave length: Have had a go at creating a complex for review (row 569 – see Radar Transponder beacon in DCEG):

Radar wave length	(RADWAL)		C	0,2
Radar band			(S) TE	1,1
Wave length value			(S) RE	1,1

Is cardinality (0,2) OK, or should this be a “one to many” (0,*)?

Noticed while doing this that there is guidance for Radar Transponder Beacon that the sweep period may be encoded using information. Should there be an attribute "sweep period" (RE, (0,1) to eliminate having to encode information?

- Communication Channel: Have added to Rescue Station, Harbour Facility and Coastguard Station as decided at Sub-WG2. Need further discussion in terms of whether call sign is also applicable to some/all of these features; how the FR proposal for a communication information complex may affect some of these; and whether the Remarks guidance included for other features having communication channel should also be included for these features.

- Feature name: There have been various structures for the complex attribute feature name proposed and/or discussed. This version of the DCEG contains the last iteration as discussed at Sub-WG2 and TSMAD24/DIPWG4. One thought in terms of this structure, which may resolve many issues of having to double encode a Sea Area/Named Water Area coincident the named feature in order to have the name display in ECDIS, is to provide guidance that, in all cases, if a name is populated in the sub-attribute "display name", it will be displayed in the ECDIS.

- Anchorage area: Have not included new S-57 UOC guidance regarding encoding of SEAARE in order to display the name of an anchorage area in ECDIS. Will need to ensure this is rectified in S-101 portrayal.

- Directional lights: Need to discuss the problem caused by having directional lights that are single sectored v multi-sectored lights with a white light having a directional function. Perhaps have multiplicity for **light sector** on **Light Multi-sectored** set to [1,*] and add additional guidance that single-sectored directional lights (or perhaps all single sectored lights) must be encoded using this feature? Could then get rid of **Light Directional**.

- Navigable part of a leading line: Discussion with DDHPS: DDHPS has concern over the navigable part of all leading lines being encoded using a **Recommended Track** feature, as there are parameters in terms of level to which the track has been surveyed to be satisfied for a track to be declared a recommended track. Many of the tracks along leading lines may not have been surveyed to this level, therefore should these be encoded as **Recommended Track**? Should this be a separate feature? If so, will impact on modelling of **category of navigation line** = *3* (leading line bearing a recommended track). May also be an issue of interpretation in INT1 (CSPCWG).

- Fog signal: The re-modelled complex attribute **signal sequence** does not fit in with the binding of the attribute to **Fog Signal**. Does this need to be re-modelled, or a new attribute to apply to **Fog Signal** to define the pattern of the fog signal?