|  |  |  |
| --- | --- | --- |
| F | LIGHTS | Translates to different categories of light depending on Attribution within the LIGHTS object. Also, light attribution has maps to complex attribution |
| F | BRIDGE | Maps to multiple (grouped) feature objects including spans and other elements. May need to be manually compiled from contextual objects or need pre-existing relationships to establish correct supports/pylons. |
| F/A | RESARE | Maps to two different features depending on CATRES attribute value(s). |
| F/A | LNDMRK | Some values map to new Features for wind motors |
| F | INFORM | Creation of Information Types with INFORM information in them. This applies to all features with INFORM attribution |
| A | NOBJNM | National Language attributes are converted into complex feature name attributes alongside OBJNAM (note: Language not specified so would need to be set). |
| F/A | ADMARE | Pilotage Areas (with an attribute)…. (+pilotage district association) |
| F | RADRFL | these are now Boolean attributes? |
| A | MAGVAR | Ranges from complex attribute to be mapped to string in INFORM. If only Max is given then it gets mapped to VALLMA |
| F | ADMARE | ADMARE can map to different features. Vessel Traffic Service Area, Pilotage District. Note, can't determine which is which (VTS can be inferred from C\_AGGR with RDOCAL though for instance) |
| A | CATCBL | New values. Ferry and Fibre Optic (possibly INFORM attributes) |
| A | CATHLK | Map CATHLK=5 to INFORM="Floating Breakwater" |
| F/A | Discoloured Water | Maps to CTNARE,INFORM="Discoloured Water" |
| F | Collision Regulations Limits | Narrow (buffered) CTNARE with INFORM populated |
| A | inTheWater | Can map to point objects to ensure display (which one?) |
| A | US only - VERCLR | VERCLR is in INFORM. |
| G | CATPIL | Curve Piling features - lines of piles need to map to individual (inferred piles). Similarly for Areas of piles |
| F | HRBARE | Harbour Areas with no jurisdictional authority should be named Sea Areas but it's not attributed so would have to be triggered from INFORM (or extra information) |
| C | C\_AGGR | Mooring Trots are a good example where an S-57 C\_AGGR is a named aggregation in the S-101. some are obvious, some aren't S-101->S-57 is easier. |
|  | difference between CBLSUB and CBLARE? | |
| A | intheWater | inThewater needs to be ascertained for attribution. I believe this is a dropin replacement for extraneous point features - needs checking. Should be possible to automatically populate though?... |
| A | fishery zone value/units | s-57 INFORM = "6 mile", S-101 maps to featureName same values. Units/values in UOC (INFORM) |
| A | date disused | dumping grounds. New Attributes. Doesn't exist in S-57 |
| F/A | Pilotage districts | Is it possible to translate an ADMARE to a pilotage district if a C\_ASSO or C\_AGGR is in place? An enclosed HRBARE ? |
| A | Recommended Track | Maximum permitted draft is an attribute, used to be in INFORM (UOC). Also mapping to range systems. |
| F/A | Submerged Weirs | s-57 = OBSTRN, s-101 = Dam, Water Level = 3 |
| A | VHF channels | used to be CSV, can be multiple attributes now. Communications channel |
| A | MRCC | transform INFORM=MRCC to isMRCC=true (CGUSTA) |
| F/A | LNDARE | constraints on point/curve LNDARE encoding (might already be in S-58). Also check if INFORM is traslated for LNDARE too. Possible multilingual names. |
| F | platforms / foul ground | Cut off platforms can be either obstructions or foul ground. Need identifying to get the feature correct, possible INFORM example? |
| A | OBSTRN | Height and reported dates are tighter on obstructions |
|  | NATSUR/COALNE | ????? |
| F/A | RESARE | Splits into two features depending on attribute value. No-wake has gone as an attribute. Vessel speed limits from INFORM? |
|  | BRIDGES | times on bridge spans. Doesn't exist in S-57 |

**Other edge cases:**

* Group 1 features – these have changed so need to be replaced during conversion. The biggest issue will be when the replacement can’t be determined during the conversion. Ideally S-57 features which are no longer SOE can be swopped out for, e.g UNSARE but this is by no means guaranteed or desirable from the producer’s point of view so probably needs configuration.
* There are numerous extraneous point features in S-57 which are inserted (according to UOC) when display has to be guaranteed. I’m assured these are fixed now in the portrayal of the features so it does leave a question of whether the original point features should be deleted or not…
* The allowable primitives for geometry for various objects have changed. These are all in Jeff’s spreadsheet and need consideration. Some could possibly be automated but it seems more likely they would need to be deleted and possibly notified or given an option to be inserted in another form.
* Feature/Attribute bindings have been restricted in the latest S-101 FC. There are a considerable number of features which such bindings in the current ENC portfolio. These should largely be acceptable to the data producer given the consultative nature of the mapping process carried out by IHO during the S-101 development phases. However, this can’t be guaranteed so a data producer would probably want a summary (possibly with location) of the changes. The method of mapping them should be to delete the attribute from the feature – if they’re non navigationally significant it does beg the question of whether they should be in the source s-57 as well?
* M\_CSCL needs to be considered. Where producers have M\_CSCL at scales smaller than the scale of the cell then this can cause an issue with the converter. Paper (<https://iho.int/mtg_docs/com_wg/ENCWG/ENCWG3/ENCWG_Use%20of%20CSCL%20and%20M_CSCL%20by%20the%20AHO.pdf>) refers. ***“ If a country has an M\_CSCL with a CSCALE value smaller than CSCL (e.g. NOAA) the maxDS of this features is set to a value which is smaller than minDS”***

Conversion Maps….

Predicated on “To”, so destination feature is defined from…

Or, source …

So,

Match/Filter - > transform -> Output

Match/Filter is a match to a group of features with specific attributes.

So, IslandGroup[Att]->Elements[Att]->Foreach()……

So, Cell is composed of coproduct of aggregations and other features (with relationships)

Match is on any feature

Attributes defined from

1. The feature
2. Any feature linking to it
3. Any feature linking from it

Geometry

1. It’s own.

Relationships

1. C\_AGGR
2. C\_ASSO

Take place of original parent

Match is feature/attribute matching with wildcards and regexp

Functions for capturing from attribute values (need list and regexp) output into variables.