DISPLAY CATEGORIES

V.0.1

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1 DISPLAY CATEGORIES

1.1 Introduction

The objective of this paper is to underline some specificities/inconsistencies of «S52 display categories/ Viewing Groups» and if possible to clarify them.

The points are:

- Display Categories and No Symbol Objects.
- Display Categories and Geometric type

2 Display Categories and No Symbol Objects

2.1 Introduction

Portrayal rules could lead to "no symbol objects". (see CSMWG17-03.7A - Konstantin)

Example of this kind of portrayal rule :

```
"CHKPNT","","","","","","",
  "CRANES","","SY(CRANES01)","4","O","OTHER","32440".
```

During TSMAD-15 these "no symbol objects" have been confirmed by reviewing each case (see TSMAD15-6.1_ObjClasses.pdf Australia-Jeff)

Note : Take care that case of "bridge" of type point has not been study in these documents.

The point now is that I don't find any requirement in PL 3.4 that specifies **clearly** if ECDIS must (or must not) supply information of "no symbol objects" during the cursor-pick operation.

I suggest to study separately

- No symbol Meta-objects   (example M_SREL)
- No Symbol Geo-objects (example BRIDGE point)

The reason is that it appears obvious that Mariners must get information about "No symbol Meta-objects" and perhaps not so obvious to get information about "No symbol No-Meta-objects".

2.2 Cursor-pick and No Symbol Meta-Objects

In Presentation Library , in "Cursor Pick" chapter 8.1 , there is a paragraph in relation to these "No symbol Meta-objects" :

8.8.1.4   Spatial and meta-objects, collection objects

Cursor enquiry should extend to the spatial object, which carries accuracy attributes QUAPOS and POSACC. It should include collection objects which carry the OBJNAM of traffic separation systems, navigation lines (NAVLNE, RECTRC, DWRTCL, etc.). It s**hould include meta-objects, for example, attribute HORDAT,** which identifies the local datum to be used to enter IHB S-60 for the datum shift

parameters needed to convert chart information in the local horizontal datum, to the WGS 84 used in the ENC, for example to enter local chart corrections.

In relation to this point, the definition of the viewing group 31010 that concerns some "No Symbol meta-objects"

31010	accuracy of data (MPCCY), survey reliability (M_SREL), survey source (M_SSOR) quality of data (M_QUAL)

It seems logical that the cursor-pick service get information of these objects only when the viewing group 31010 is visible (set to on)

The inconsistency is now on the portrayal rule (look up table record) that doesn't specify any display category/viewing group in this case.

Example The portrayal rule associated to M_SREL object-class doesn't specify a viewing group

M_SREL","","","","","",""

2.2.1 Proposals

- add a requirement that specifies **clearly** that ECDIS must supply information about these objects during the cursor-pick.

- add a viewing group to these "no symbol meta-objects" rules

  o "M_ACCY","","","","","OTHER","31010"
  o "M_HOPA","","","","","OTHER","31010"
  o "M_NPUB","","","","","OTHER","31010"
  o "M_SDAT","","","","","OTHER","31010"
  o "M_SREL","","","","","OTHER","31010"
  o "M_VDAT","","","","","OTHER","31010"

2.3 Cursor-pick and No Symbol No-Meta-Objects

2.3.1 Question

Do we want to supply information about this kind of "No Symbol Geo-Objects" during the cursor pick operation ?

2.3.2 Proposals

1. If the answer is no => I suggest to add this specificity in the "no symbol objects" chapter or in the "cursor pick" chapter . Something like "**No symbol objects except meta-objects are not concerned by cursor-pick operation**".

2. If the answer is yes =>

   1. add a requirement that specifies **clearly** that ECDIS must supply information about these objects during the cursor-pick operation.

   2. I suggest to add a default display categories/viewing group in order to limit the cursor-pick operation when the associated display category/viewing group is visible (set on).

- Areas (plain or symbolized boundaries)
  - **SLOGRD=>**
    - "SLOGRD","","","","","OTHER","32010"
  - **VEGATN=>**
    - "VEGATN","","","","","OTHER","32030"
- Point (paper chart or simplified)
  - **BRIDGE**
    - "BRIDGE","","","","","OTHER","32010"
  - **CHKPNT**
    - "CHKPNT","","","","","OTHER","32410"
  - **CURENT**
    - "CURENT","","","","","OTHER","33060"
  - **DAMCON**
    - "DAMCON","","","","","STANDARD","22010"
  - **GRIDRN**
    - "GRIDRN","","","","","OTHER","32460"
  - **PIPSOL**
    - "PIPSOL","","","","","OTHER","34070"
  - **PRDARE**
    - "PRDARE","","","","","OTHER","32270"
  - **RAPIDS**
    - "RAPIDS","","","","","OTHER","32050"
  - **ROADWY**
    - "ROADWY","","","","","OTHER","32250"
  - **RUNWAY**
    - "RUNWAY","","","","","OTHER","32240"
  - **SMCFAC**
    - "SMCFAC","","","","","OTHER","38210"
  - **TUNNEL**
    - "TUNNEL","","","","","OTHER","32250"
  - **VEGATN**
    - "VEGATN","","","","","OTHER","32030"
  - **WATFAL**
    - "WATFAL","","","","","OTHER","32050"

32010 => dunes , hills (SLOGRD), ridge, clifftop (SLOTOP), contours and elevation (LNDELV)
32030 => trees , vegetation, mangrove (VEGATN), marsh (LNDRGN)
32050 => river (RIVERS) or lake (LAKARE); also rapids (RAPIDS), waterfall (WATFAL)
32250 => railway (RAILWY), road (ROADWY), tunnel (TUNNEL), control point (CTRPNT)
32410 => harbour type (HRBFAC), customs check point (CHKPNT)
33060 => current and tidal stream information (CURENT, TS_FEB, TS_PAD, TS_PNH, TS_PRH, TS_TIS)
34070 => submarine cable (CBLSUB), submarine pipeline (PIPSOL)
38210 => small craft facilities (SMCFAC)

3   Display Category and Geometric type

3.1   Introduction

The objective of this point is to remind that portrayal rule affects display category/viewing-group to the same object (same feature type and same combination of attributes) differently taking in account its geometry delineation.
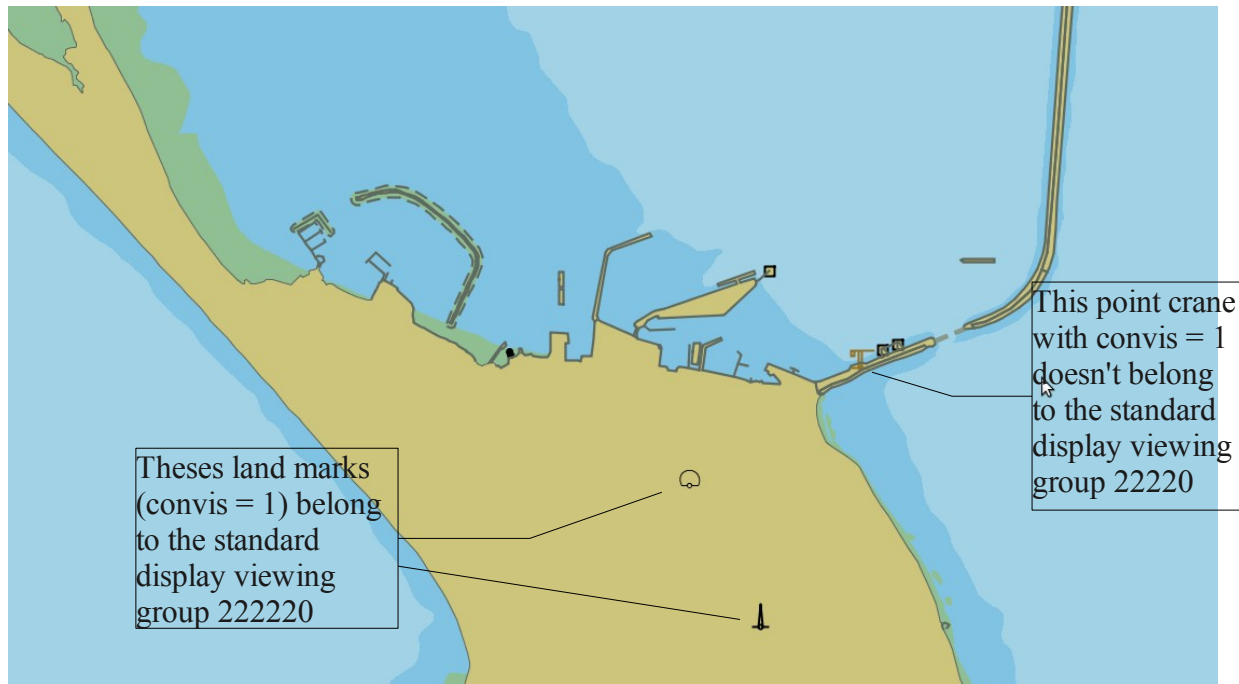
The fact that look up table record of PL mixes the setting of symbolization and the setting of display category/ viewing-group, facilities some inconsistencies between the definition display category / viewing group and the setting of display category / viewing group. Over the years we have lost the logical of this setting.

I give some examples of setting of display category/viewing-group that appears to me not logical or at least need a confirmation (perhaps already discussed). **These examples are not exhaustive.**

3.2 CRANES / VISUALLY CONSPICIOUS

Confirmation is needed for cranes with "visually conspicious" (convis=1) object instances which doesn't belong to the viewing-group "22220 => VISUALLY_CONSPICUOUS_FEATURES" when they are encoded as point objects and which belongs it when they are encoded as area objects.

Example on GB40224B

Notes that the same difference happens with airport and runway.

3.3 DAM / FLOOD BARAGE

Confirmation is needed for dam "flood barrage" (catdam=3) object instances which belongs to the display base viewing-group "14210" when they are encoded as area objects and which doesn't belong it when they are encoded as point objects.

3.4 SLOTOP (RADAR CONSPISCIOUS)

Confirmation is needed for slopping top "Radar = 1 RADAR CONSPISCIOUS/" object instances which belongs to the standard viewing-group "22210 RADAR_CONSPICUOUS_FEATURES when they are encoded as line objects and which doesn't belong it when they are encoded as point objects.

3.5 OBSTRUCTION (Ground tackle, ice boom, boom)

Confirmation is needed for obstructions with CATOBS includes "ground tackle, ice boom, boom" which belongs to the display base viewing-group "12410" (SHORELINE) when they are encoded as area objects and which doesn't belong to it when they are encoded as area objects. (dispatch between OTHERS viewing groups)

Already discusses in the past and has been confirmed that point obstructions (ground tackle) are not dangerous for navigation

3.6   DYKE (radar conspicious)

Confirmation needed for dyke ("conrad = 1) object instances belongs to the standard viewing-group "22210 RADAR_CONSPICUOUS_FEATURES" when they are encoded as line objects and doesn't belong it when they are encoded as area objects (belongs to 22010 MAJOR_COASTAL_FEATURES)

3.7   MORFAC (line)

Confirmation needed for that Mooring/Warping facility (MORFAC CATMOR="chain") object instances doesn't belong to the display base viewing-group" l DANGERS_UNDER_WATER_DEEPER_THAN_THE_SAFETY_CONTOUR => I guess that this one is a copy/paste error and propose

Proposal :

"MORFAC","","LS(SOLD,2,CSTLN)","6","O","DISPLAYBASE","12410"
"MORFAC","CATMOR4","LS(SOLD,2,CSTLN)","6","O","DISPLAYBASE","12410"
"MORFAC","CATMOR6","LS(DASH,1,CHMGF)","6","O","DISPLAYBASE","**14010**"   **CHANGE TO 12410**