Paper for Consideration by S-101Project Team

[Follow up on the paper about Portrayal of Light sectors]

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Executive Summary:	This is a follow up paper to the paper already posted adding some discussion points emerging from feedback and some further discussions
Related Documents:	S-101PT5-15 Light Sector Portrayal
Related Projects:	

Introduction / Background

After posting the paper referenced above, we received some feedback, and had a brief discussion not reaching a conclusion on all issues. This follow up paper tries to summarize some discussion points for further discussion at the meeting.

Analysis/Discussion

We received a recommendation to add a truth table to the proposal to make it clearer for the implementers what to display with the different combinations of populated attributes and ECDIS settings. This seems very useful.

It could be that not all the attribute combinations listed below are allowed, and should require some encoding guidance and a validation check instead of being fixed in portrayal.

Row #	valueOfNominalRange	sectorLineLength	Full sectors	Result
1	-	-	off	25mm
2	-	-	on	?
3	-	sll	off	sll
4	-	sll	on	sll ?
5	Vnr	-	off	25mm
6	Vnr	-	on	vnr
7	Vnr	sll	off	sll
8	Vnr	sll	on	vnr?

- Row2: ValueOfNominalRange is currently not a mandatory attribute, and this situation might occur, (similar as S-57/S-52). Should the result be 25mm or prolonged ie to screen border? Or should we add encoding guidance making this attribute mandatory in general for sector lights to make portrayal easier?
- Row4: This seems like bad encoding, should we add some encoding guidance (and validation check) saying that when sll is encoded vnr must also be encoded with a value equal to sll or higher? Then the result should read vnr.
- Row 8: normal situation, assuming vnr>=sll, (validation check?) having the result as vnr makes this more similar to current situation in S-57/S-52, probably less confusing for the mariner in the transition phase between S-57 and S-101.

Another issue brought up is what happens when adjacent sector legs are having different sll values.

When there are multiple sector characteristics (as shown below) two overlapping sector lines will be drawn at each sectorBearing. Only the longest line will be visible because it will obscure the shorter line. In the pic below the lines appear 17 nm long due to the white sector, despite the red sector having valueOfNominalRange = 15 nm.

>	[0]	colour=[red (3)]
>	[1]	sectorLimit sectorBearing=[154] sectorBearing=[233]
>	[2]	valueOfNominalRange=[15]

>	[0]	colour=[white (1)]
>	[1]	sectorLimit sectorBearing=[233] sectorBearing=[154]
>	[2]	valueOfNominalRange=[17]
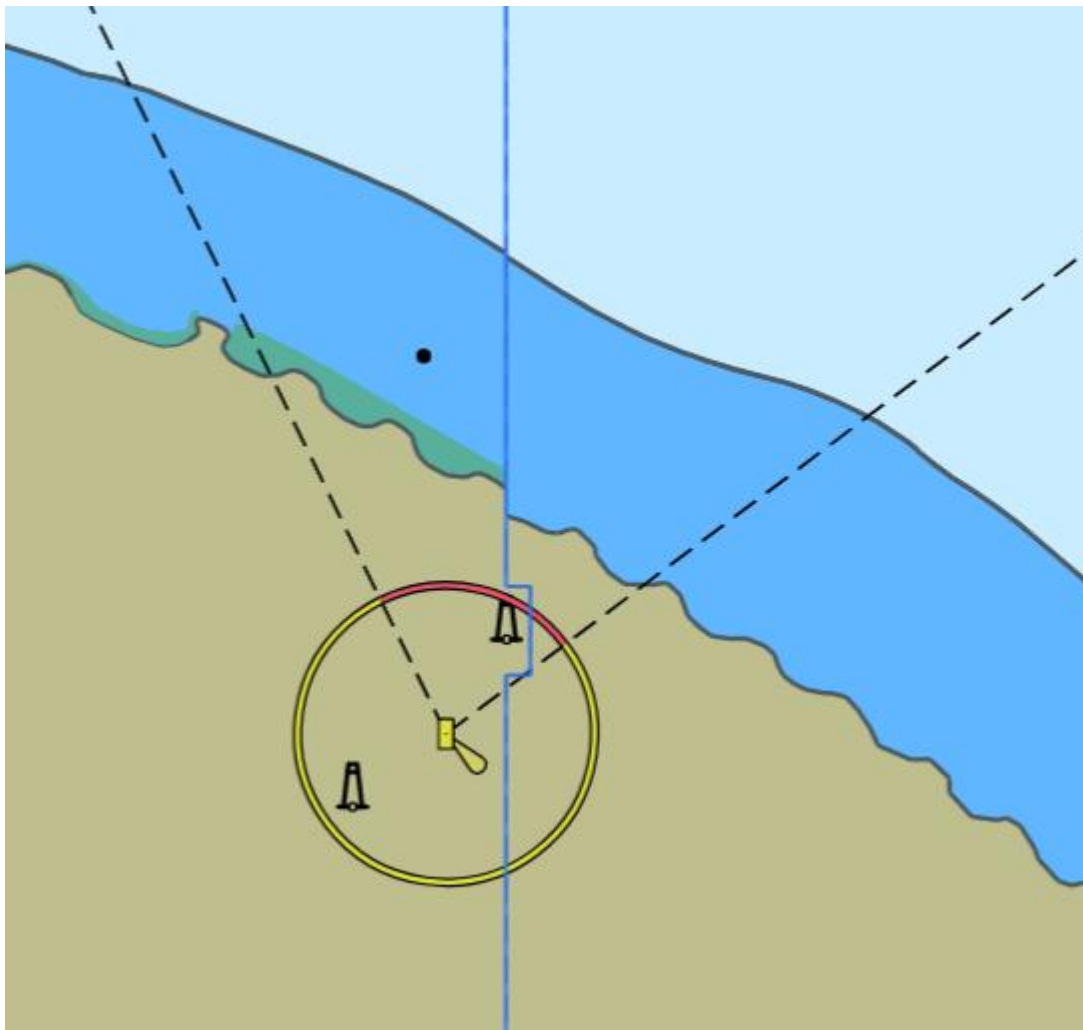
This will be a normal situation, as we expect the sll values to be intentionally encoded different for all(or some) sectors of a light when sll is utilized. Then it should be ok that only the longest one is visible at each bearing, In order to catch any encoding mistakes we should consider adding a validation check (warning only) to make the encoder aware of it since it is not possible to discover visually. Downside of this would be false warnings reported on correctly encoded data.

Conclusions

These are further discussion points and will be incorporated into the original proposal when the group has reached agreement.

Action Required of S-101PT

The S-101PT is invited to:

       a.   Note this paper together with the original paper

       b.   Discuss the issues above

       c.   Make a recommendation on the way forward