

Paper for Consideration by S-100WG TSM

Revision of Part 9 Portrayal

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Executive Summary:	Add offset by bearing and distance to portrayal of Symbols and Text
Related Documents:	S-100 Edition 4.0.0 Part 9.
Related Projects:	Text Placement in S-101

Introduction / Background

The intention of the Text Placement feature in S-101 is to identify to the ECDIS a recommended placement of text in order to support management of clutter and to keep text out of navigational channels etc.

The current configuration of Text Placement would require many Text Placement locations for point features in order to support a dynamic zooming experience. This proposal is part of a recommendation to change the Text Placement model to provide a more consistent portrayal.

This proposal is to amend S-100 Part 9 to add a new offset option for TextPoint and Symbol such that the position can be defined as a geographic bearing and a distance on the display.

The intent is to allow Text or Symbol positioning relative to a point feature which will remain consistent on zoom in/out and when the map is rotated.

Analysis/Discussion

In the current implementation the Text Placement is a point feature which indicates where to place the text. This works well for area and line features. For point features it produces an effect where the text appears to move further away or closer to the associated point feature when zooming in/out. It would be more consistent to use an offset which keeps the text a specified distance on the display relative to the feature it is describing.

In S-100 portrayal there is an offset defined for Symbol and TextPoint where the offset is an x,y vector delta from the feature position. This works well in North up display but in route monitoring mode when the map is rotated course up it does not work well.

A separate proposal to S-101 working group will propose replacing the 'flipbearing' attribute on text placement with bearing and distance attributes. Using a geographic bearing and a distance defined in mm on the display. When a TextPlacement feature is used with a Point feature they would share the same location and the bearing/distance offset would be used to control the placement of the text relative to the point feature.

This proposal is to add a second offset type to the portrayal of Symbol and TextPoint in Part 9 such that there is a choice of no offset, Vector offset or bearing offset. The new bearing offset would place the reference point of the Symbol or TextPoint at the location indicated by the bearing and distance. This would allow the text to be shown in a position relative to the main feature while zooming and rotating the map. For example if there is an East-West Channel then text for a buoy on the north side of the channel could be placed in a Northern bearing a given distance from the buoy. As the chart is rotated the text would stay on the northern side of the channel in a consistent way.

Conclusions

Part 9 of S-100 would be enhanced to allow a second type of offset which uses a bearing and distance instead of a cartesian x,y vector. This would allow for a simpler and more consistent Text placement.

Recommendations

Accept this in concept at TSM8 so that a redline markup of Part 9 with the new offset type can be prepared for inclusion in S-100 Edition 5.

Justification and Impacts

This will facilitate the implementation of TextPlacement in S-101 and would also allow more portrayal options for placement of Text and Symbols in a way that works consistently on North up or rotated map displays.

Action Required of S100TSM

The S-100WG TSM is asked to

1. Consider the aims and content of the proposal for S-100 Part 9 Portrayal
2. Support the creation of an extension to Part 9 of S-100 in the forthcoming edition 5.0.0
3. Contribute any additional items that may be necessary with the aim of optimising implementations by the stakeholder community.