

## Paper for Consideration by TSMAD

## Text Placement in S-101

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| <b>Submitted by:</b>      | UK  |
| <b>Executive Summary:</b> | This paper presents a revised structure for text placement information in S-101 following discussions at TSMAD 22 and TSMAD 23. |
| <b>Related Documents:</b> | 1. TSMAD23 4.5.10 – Text Placement in S-101   |
| <b>Related Projects:</b>  | 1. S-101  |

## Introduction / Background

1. The ability to control the display of text within S-101 ENCs was identified as a benefit of S—101. Papers were submitted to TSMAD 22 and TSMAD 23 presenting approaches for how this information could be included within ENC. The current work to develop the data model for S-101 ENC through the Data Classification and Encoding Guide (DCEG) requires the structure for text placement information in S-101 to be clearly defined. This will then support development of the S-101 Portrayal Catalogue which will need to use the text placement information as part of its display rules.

## Analysis/Discussion

2. At TSMAD 22 the options of using a complex attribute or feature type for text placement were presented. A number of specific attributes that may be required were also presented and discussions noted the need to allow for the rotation of the ECDIS display. At TSMAD 23 an approach using a complex attribute to carry text placement information was presented, a small group met to discuss this in more detail. The group considered that, as the complex attribute effectively provided a vector to a position at which the text would be placed, a more elegant approach would be to use a feature type which carries that position as its geometry. A development of the structure agreed is presented in Figure 1.

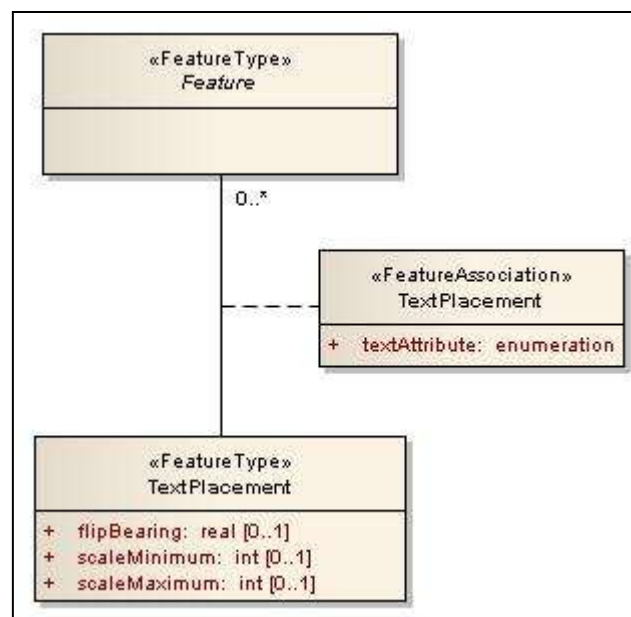


Figure 1 – Proposed structure of Text Placement information in S-101

3. The group reviewed the attributes required and decided that scale minimum and scale maximum should be included to allow text to be de-cluttered as is currently done for features using SCAMIN (e.g. Soundings). Other attributes were discussed but it was considered that the formatting of the text should remain within the Portrayal Catalogue and that there is no requirement for producers to be able to vary the font for specific text. The group outlined that the point geometry of the text placement feature would provide a position about which the text would rotate as the ECDIS display is rotated. Where it is required to constrain the circle further a flip bearing value can be included which splits the circle into a semi circle. The text will then move to stay within the semi circle this supports situations where text needs to be moved to avoid clashing a channel or recommended track. Figure 2 illustrates the flip bearing.

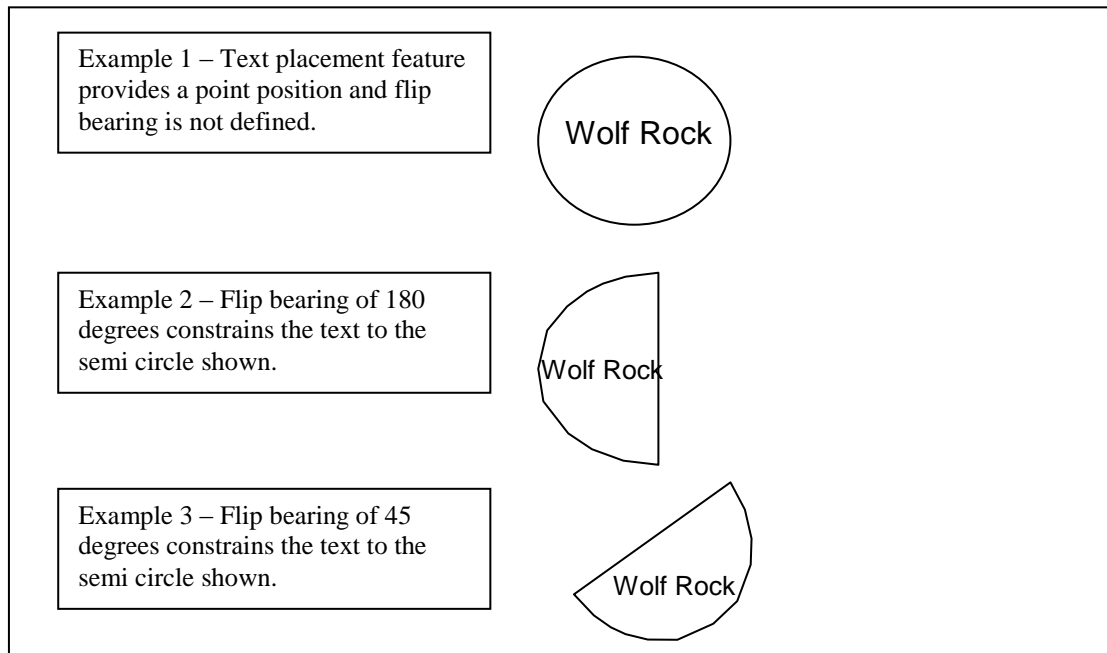


Figure 2 – The use of flip bearing

4. In the proposed structure a feature association has been included which relates the text placement feature to the feature affected. This association carries the attribute text attribute which indicates which text attribute which the text placement feature applies to. This attribute could carry values for specific cases e.g. light character which is a concatenation of multiple attributes. This attribute requires further discussion and its attribute values need to be agreed.

## Conclusion

5. The structure for text placement information needs to be agreed to progress the development of the DCEG and the S-101 Feature Catalogue. This paper presents the results of discussion to date and requires TSMAD to discuss and determine the final structure.

## Action Required of TSMAD

- To consider the proposed structure and agree the structure for S-101