

S-100 WG8 Text Placement

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Text Placement Feature

Associated with a Feature to place Text

Set up to place Feature Name or Light Characteristics

Provides a geographic bearing to place the Text

Provides an offset in display units

Examples of Text Placed around a Feature

Placement offset is the same, just different bearings

Bearing of 0



Bearing of 40



Bearing of 90



Bearing of 135



Bearing of 180



Bearing of 230



Bearing 330



Note the Text vertical and horizontal alignment is different for each placement.

Works well for North Up Display

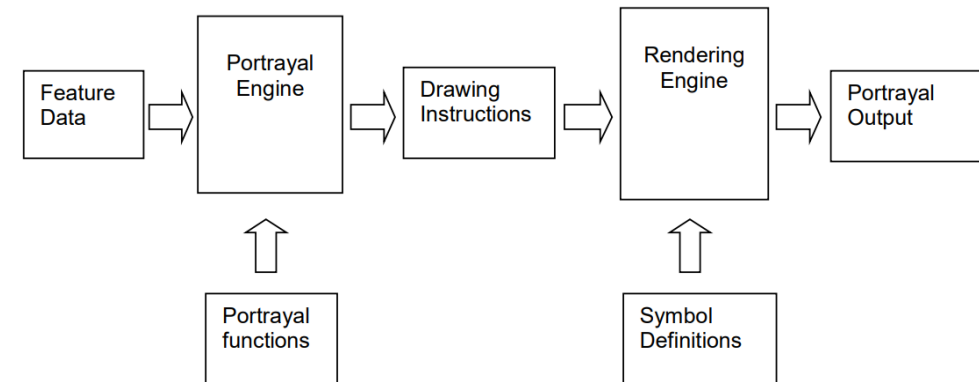
- S-100 Portrayal rules can be used to set the Text alignment parameters based on the bearing from the associated TextPlacement feature.
- Horizontal alignment of text on end of augmented ray
 - Default alignment = 'Start'
 - When bearing > 355 or bearing < 5 or (bearing >175 and bearing < 185) alignment = 'Center'
 - When bearing >= 185 and bearing <= 355 alignment = 'End'
- Vertical alignment of text on end of augmented ray
 - Default = Vertical alignment = 'Bottom'
 - When bearing >= 95 and bearing <=265 vertical alignment = 'Top'
 - When bearing >=85 and bearing <=95 vertical alignment = 'Center'
 - When bearing > 265 and bearing < 275 vertical alignment = 'Center'

Not so good for course up display

- Portrayal rules are executed and remembered. They are not executed every time the screen is refreshed
- Portrayal does not know if the screen will be North up or Course up
- Need a way to tell the drawing engine to automatically adjust the Text Alignment based on the combination of geographic bearing and screen rotation

9-5 General portrayal model

The general portrayal model is illustrated in figure 9.1.



Add New Automatic option on Text Alignment



9-12.6.3.13 VerticalAlignment

Role Name	Name	Description
Type	VerticalAlignment	Describes the text placement relative to the anchor point in vertical direction
Enumeration	top	The anchor point is at the top of the text
Enumeration	bottom	The anchor point is at the bottom of the text
Enumeration	center	The anchor point is at the (vertical) centre of the text

9-12.6.3.14 HorizontalAlignment

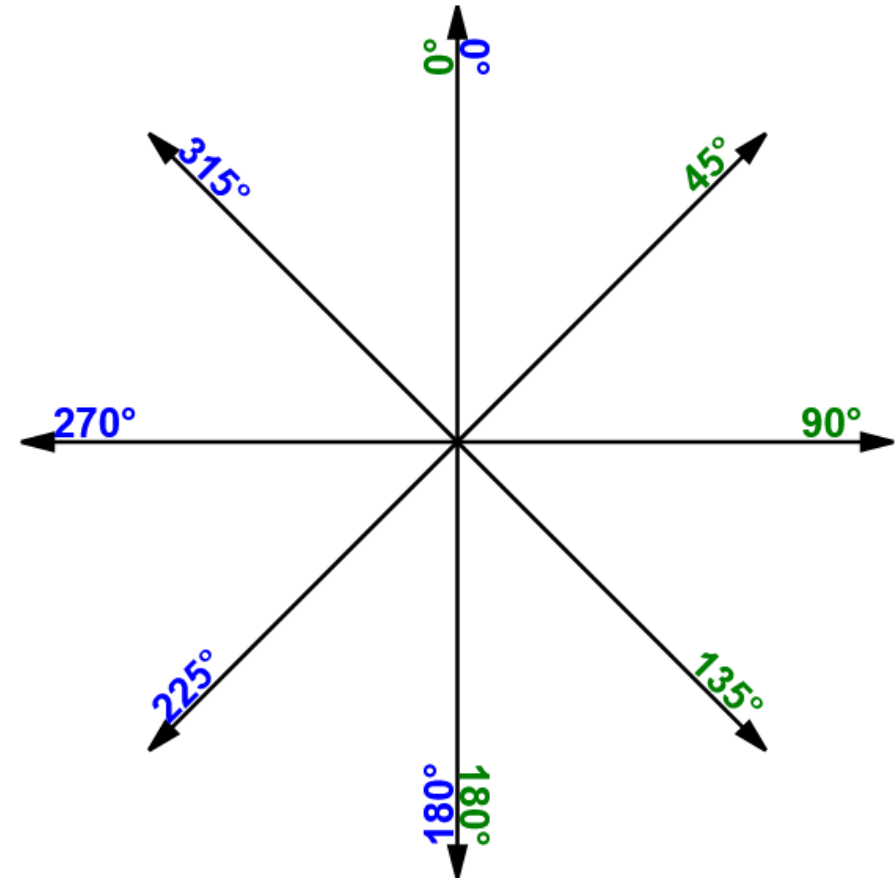
Role Name	Name	Description
Type	HorizontalAlignment	Describes the text placement relative to the anchor point in horizontal direction
Enumeration	start	The anchor point is at the start of the text
Enumeration	end	The anchor point is at the end of the text
Enumeration	center	The anchor point is at the (horizontal) centre of the text

Explain how auto works in Rendering engine

- In Part 9 provide description of how Auto alignment will work.
- If Point Text is same as Feature position use default alignment
- If Point Text is offset from feature
 - calculate bearing from feature position to text reference position
 - X,Y offset in text instruction
 - Augmented Ray used with TextPlacement
 - Add screen rotation
 - Use combined bearing to set the Vertical and Horizontal alignments to push the text away from the feature using the distance to the closest side.
 - Alignment calculation such as on slide 4

Text CRS

- Text should be readable
- Part 9 does not include enough information about how to do this
- Text rotation CRS is defaulted to portrayalCRS
- Text on a line could be enhanced to be more explicit about CRS
 - Confusing if CRS is local or portrayal when on a line
 - Need CRS option
 - Need logic defined to flip text on lines



S-100 WG to Consider

- Consider adding an 'Automatic' option to Part 9 Horizontal and Vertical text alignment
- Consider improving Text CRS definitions in S-100 Part 9
- Contribute to GitHub discussion
 - <https://github.com/S-101-Portrayal-subWG/Working-Documents/issues/156>

Thank You!

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