Title: Alert catalog must support graphical highlighting style

S-100 Maintenance - Change Proposal Form

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Change Proposal Type *(Select only one option)*

1.Clarification	2.Correction	3.Extension
	X	

Location *(Identify all change proposal locations)*

S-100 Version No.	Part No.	Section No.	Proposal Summary
5	2b	Figure 2b-2	Update UML diagram
	2b	4.2.34	Add *style* to S100_PR_AlertHighlight
	2b	4.2.41	new enumeration S100_PR_HighlightStyle
	9	Figure 9-21	Update UML diagram
	9	13.4.6	Add *style* to GraphicalHighlighting
	9	13.4.14	new enumeration HighlightStyle
	schemas	-	Add *style* attribute to alert catalog schema

Change Proposal

Update the alert catalog model so the style of the chart highlight can be indicated independent of the alert priority.

Redlines are attached.

Change Proposal Justification

ECDIS requirements specify that a route planned across the safety contour must generate an alert which has a priority of *indication.* This indication must be highlighted on the chart as if it were an alarm (using the red alarm highlight rather than the yellow caution highlight). The current alert catalog model does not support this requirement.

The current alert catalog model does not directly specify a highlight style; the style must be inferred from the alert priority.

Alert Priority	62288:2014 highlight style	62288:2014 highlight name
Alarm	3.5 b	Alarm highlight
Warning / Caution / Indication	3.5 c	Caution highlight

What parts of the S-100 Infrastructure will this proposal affect?

☐ S-100 Feature Concept Dictionary Interface or Database
☒ S-100 Portrayal Register
☐ S-100 Feature Catalogue Builder

☒   S-100 Portrayal Catalogue Builder
☒   S-100 UML Models
☒   S-100 GitHub Schemas   -2-

Please send completed forms and supporting documentation to the secretary S-100WG.

Redlines start next page

Update figure 2b-2:

- add <<enumeration>>S100_PR_HighlightStyle
- add *style* attribute to S100_PR_AlertHighlight (+style: S100_PR_HighlightStyle [0..1])

Figure 2b-2 – Portrayal Register information model

2b-4.2.34 S100_PR_AlertHighlight

Role Name	Name	Description	Mult.	Data Type	Remarks
Class	S100_PR_AlertHighlight	Associates ~~viewing groups with alerts to support user toggling of highlights~~display parameters with alerts	-	S100_PR_RegisterItem	
Attribute	style	Overrides the style of graphical highlight shown in the chart area	0..1	S100_PR_HighlightStyle	When empty, style is inferred from the alert priority • Alarm: AlarmHighlight • Others: CautionHighlight
Attribute	optional	Indicates whether allowing the highlight to be turned off is optional	0..1	Boolean	
Association	viewingGroup	The viewing group(s) associated with an alert highlight (Portrayal Catalogue rules generate the drawing instructions which implement the highlight)	1..*	S100_PR_ViewingGroup	Multiple viewing groups are present to allow highlighting of alerts triggered by specific feature types to be disabled independently. For example, ProhibitedAreaHighlight supports disabling highlighting of Seaplane Landing Areas while other prohibited areas continue to be highlighted. When multiple viewing groups are provided, consideration should be given to providing a viewing group layer to toggle all the viewing groups at once.
Association	msg	A message to display while any of the viewing groups are disabled	0..1	S100_PR_AlertMessage	

2b-4.2.41 S100_PR_HighlightStyle

Role Name	Name	Description	Code	Remarks

Enumeration	S100_PR_HighlightStyle	Defines the possible graphical highlight styles for an alert.	-	
Value	AlarmHighlight	red highlight	-	IEC 62288:2014 Table A.3 Navigation symbols, entry 3.5 b
Value	CautionHighlight	yellow highlight	-	IEC 62288:2014 Table A.3 Navigation symbols, entry 3.5 c

Update figure 9-21:
- add <<enumeration>>HighlightStyle
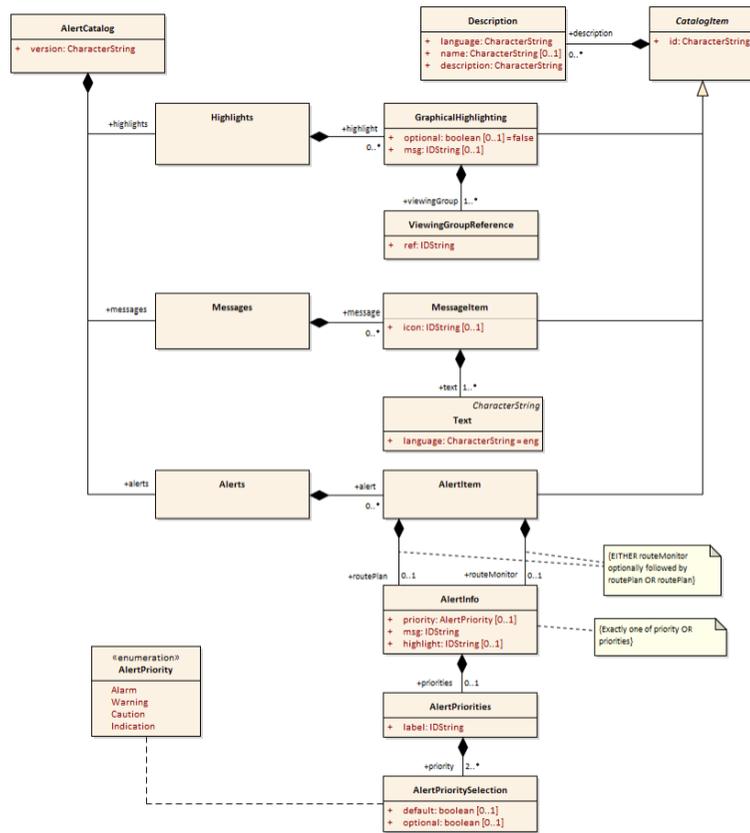- add *style* attribute to GraphicalHighlighting

Figure 9-21 — Alert Catalogue

9-13.4.6 GraphicalHighlighting

Role Name	Name	Description	Mult.	Type
Class	GraphicalHighlighting	Associates ~~viewing groups~~display parameters with alert information	-	-
Subtype of	CatalogItem	See CatalogItem	-	-
Attribute	style	Overrides the style of	0..1	HighlightStyle

		graphical highlight shown in the chart area. When missing, the style is inferred from the alert priority. • Alarm: AlarmHighlight • Others: CautionHighlight		
Attribute	optional	Allowing the highlight to be turned off is not required. Default is false	0..1	boolean
Attribute	msg	A reference to a message to be displayed while any of the viewing groups are disabled	0..1	string
Role	viewingGroup	References viewing groups used to control graphical highlighting	1..*	ViewingGroupReference

9-13.4.14 HighlightStyle

Role Name	Name	Description
Type	HighlightStyle	The style of the graphical highlight to be shown in the chart area
Enumeration	AlarmHighlight	IEC 62288:2014 Table A.3 Navigation symbols, entry 3.5 b
Enumeration	CautionHighlight	IEC 62288:2014 Table A.3 Navigation symbols, entry 3.5 c

S100PC/S100AlertCatalog.xsd

```xml
<!-- HIGHLIGHT CONTROL -->

<xs:simpleType name="HighlightStyle">
    <xs:restriction base="xs:string">
        <!-- IEC 62288:2014 Table A.3 Navigation symbols, entry 3.5 b -->
        <xs:enumeration value="AlarmHighlight"/>
        <!-- IEC 62288:2014 Table A.3 Navigation symbols, entry 3.5 c -->
        <xs:enumeration value="CautionHighlight"/>
    </xs:restriction>
</xs:simpleType>

<!-- Associates display parameters with alert information -->
<xs:complexType name="GraphicalHighlighting">
    <xs:complexContent>
        <xs:extension base="CatalogItem">
            <xs:sequence>
                <!-- References one or more viewing groups (used to enable / disable graphical highlights) -
                <xs:element name="viewingGroup" maxOccurs="unbounded">
                    <xs:complexType><xs:annotation><xs:documentation>ViewingGroupReference
                    </xs:documentation></xs:annotation>
                        <xs:attribute name="ref" type="s100Symbol:IdString" use="required"/>
                    </xs:complexType>
                </xs:element>
            </xs:sequence>
            <!-- The style of the graphical indication shown in the chart area. Note that
                 the AlertPriority will not necessarily match the graphical highlighting style.
                 For instance, the S-101 Safety contour highlight when triggered by a route plan
                 will have a priority of Indication, but a style of AlarmHighlight. -->
            <xs:attribute name="style" type="HighlightStyle"/>
            <!-- Indicates whether allowing the highlight to be turned off is required -->
            <xs:attribute name="optional" type="xs:boolean" default="false"/>
            <!-- A reference to a message to be displayed while any of the viewing groups are disabled -->
            <xs:attribute name="msg" type="s100Symbol:IdString"/>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
```