Title: Clarify Portrayal of Cross-Feature Dependencies

S-100 Maintenance - Change Proposal Form

Organisation	NIWC	**Date**	2/19/2021
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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
5.0 draft	9 9a	9-11.2.2 9a-11.2.2.1	Clarify usage of *parentId* attribute Clarify usage of Parent visibility command

Change Proposal

Attached

Change Proposal Justification

Clarifies how drawing instructions express cross-feature visibility dependencies that occur when features are associated with one another, such as through a *StructureEquipment* relationship. E.g. A light on a buoy should not be visible when the buoy is not visible. Cross-feature visibility dependencies can already be expressed using either Part 9 or Part 9a. The proposed change clarifies the drawing instruction model for implementers.

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

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

9-11.2.2 DrawingInstruction

Role Name	Name	Description	Mult.	Type
Class	DrawingInstruction	Abstract base class for all drawing instructions	-	-
Attribute	id	An identifier for the drawing instruction	0..1	string
Attribute	parentId	Instruction is dependent on a parent drawing instruction(s). If no referenced instructions are executed during rendering then this instruction should not be executed. Execution of referenced (parent) instructions can be affected by many aspects of the visualization process including: viewing group settings, display plane visibility, line suppression, scale minimum/maximum, date dependency, hover status, and dependencies of the parent instruction.	0..1	string
Attribute	hover	Specifies whether the instruction is shown only on hover-over. OEM support for this feature is optional	0..1	boolean
Attribute	viewingGroup	The viewing group the instruction is assigned to	1	string
Attribute	displayPlane	The display plane the instruction is assigned to	1	string
Attribute	drawingPriority	The priority that defines the order of drawing	1	integer
Attribute	scaleMinimum	Scale denominator to define the minimum scale for which the instruction will be shown. If not given there is no minimum scale	0..1	integer
Attribute	scaleMaximum	Scale denominator to define the maximum scale for which the instruction will be shown. If not given there is no maximum scale	0..1	integer
Role	featureReference	The reference to the feature type that will be depicted by the instruction	1	FeatureReference
Role	spatialReference	The reference(s) to the spatial type components of the feature that defines the geometry used for the depiction. Not used when the entire geometry of the feature should be depicted	0..*	SpatialReference
Role	timeValid	The drawing instruction is valid during the specified time interval(s)	0..*	TimeInterval

9a-11.2.2.1 Visibility Commands

[…]

Parent*[:id]*

Visibility of drawing commands which follow is dependent on the visibility ofreferenced drawing command(s) with the specified identifier. If no referenced drawing command is executed during rendering then the dependent drawing commands should not be executed.

In order to express cross-feature dependencies, the referenced drawing command(s) may be associated with a feature instance other than the current feature instance; examine all drawing commands for all feature instances when determining the parent drawing command(s).

Execution of referenced (parent) drawing commands can be affected by many aspects of the visualization process including: viewing group settings, display plane visibility, line suppression, scale minimum/maximum, date dependency, hover status, and dependencies of the parent drawing command.

When no parameters are present, resets to the default state of no parent dependency.

id   The identifier of the parent <u>drawing</u> command(s)

Applicability: All drawing commands except *NullInstruction*