

11 Portrayal

This clause defines the rules for layers and styles to be used for portrayal of the spatial object types defined for this theme. Portrayal is regulated in Article 14 of the IRs.

IR Requirement

Article 14

Portrayal

1. For the portrayal of spatial data sets using a view network service as specified in Commission Regulation No 976/2009 ⁽¹⁾, the following shall be available:
 - (a) the layers specified in Annex II for the theme or themes the data set is related to;
 - (b) for each layer at least a default portrayal style, with as a minimum an associated title and a unique identifier.
2. For each layer, Annex II defines the following:
 - (a) a human readable title of the layer to be used for display in user interface;
 - (b) the spatial object type(s), or sub-set thereof, that constitute(s) the content of the layer.

In section 11.1, the *types* of layers are defined that are to be used for the portrayal of the spatial object types defined in this specification. A view service may offer several layers of the same type, one for each dataset that it offers data on a specific topic.

NOTE The layer specification in the IRs only contains the name, a human readable title and the (subset(s) of) spatial object type(s), that constitute(s) the content of the layer. In addition, these Technical Guidelines suggest keywords for describing the layer.

Recommendation 1 It is recommended to use the keywords specified in section 10.2 in the *Layers Metadata parameters* of the INSPIRE View service (see Annex III, Part A, section 2.2.4 in Commission Regulation (EC) No 976/2009).

Section 10.2 specifies one style for each of these layers. It is proposed that INSPIRE view services support this style as the default style required by Article 14(1b).

TG Requirement 1 For each layer specified in this section, the styles defined in section 10.2 shall be available.

NOTE The default style should be used for portrayal by the view network service if no user-defined style is specified in a portrayal request for a specific layer.

In section 10.3, further styles can be specified that represent examples of styles typically used in a thematic domain. It is recommended that also these styles should be supported by INSPIRE view services, where applicable.

Recommendation 2 In addition, it is recommended that, where applicable, INSPIRE view services also support the styles defined in section 10.3.

Where XML fragments are used in the following sections, the following namespace prefixes apply:

- sld="http://www.opengis.net/sld" (WMS/SLD 1.1)
- se="http://www.opengis.net/se" (SE 1.1)
- ogc="http://www.opengis.net/ogc" (FE 1.1)

¹ OJ L 274, 20.10.2009, p. 9.

11.1 Layers to be provided by INSPIRE view services

Layer Name	Layer Title	Spatial object type(s)	Keywords
BU.Building	Building	Building	
BU.BuildingPart	BuildingPart	BuildingPart	

NOTE: Due to the lack of SLD for 3D data, the portrayal clause applies only for 2D core profile.

11.1.1 Layers organisation

None.

11.2 Styles required to be supported by INSPIRE view services

11.2.1 Styles for the layer BU.Building

Style Name	BU.Building.default
Default Style	yes
Style Title	Building Default Style
Style Abstract	<p>The building reference geometry is represented by following styles:</p> <ul style="list-style-type: none"> - Style for surface geometries: grey with black outline <ul style="list-style-type: none"> o Fill colour: SOLID GREY RGB 128,128,128 o Outline colour: SOLID BLACK o Outline width: 0,4pt - Style for point geometries: dark grey circle <ul style="list-style-type: none"> o Style: CIRCLE o Fill colour: SOLID DARK GREY (RGB 82,82,82) o Width: 10pt
Symbology	<pre> <sld:NamedLayer> <se:Name>BU.Building</se:Name> <sld:UserStyle> <se:Name>BU.Building.Default</se:Name> <sld:IsDefault>1</sld:IsDefault> <se:FeatureTypeStyle version="1.1.0"> <se:Description> <se:Title>Building default style</se:Title> <se:Abstract/> </se:Description> <se:FeatureTypeName>BU/Buildings2D/Building</se:FeatureTypeName> <Rule> <se:MinScaleDenominator>50</se:MinScaleDenominator> <se:MaxScaleDenominator>25000</se:MaxScaleDenominator> <se:Filter> <se:And> <se:PropertyIsEqualTo> <se:Function name="in2"> <se:Function name="geometryType"> </pre>

	<pre> <se:PropertyName>geometry2D/geometry</se:PropertyName> </se:Function> <se:Literal>Polygon</se:Literal> <se:Literal>MultiPolygon</se:Literal> </se:Function> <se:Literal>true</se:Literal> </se:PropertyIsEqualTo> <se:PropertyIsEqualTo> <se:PropertyName>geometry2D/referenceGeometry</se:PropertyName> <se:Literal>true</se:Literal> </se:PropertyIsEqualTo> </se:And> </se:Filter> <se:PolygonSymbolizer> <se:Geometry> <se:PropertyName>geometry2D/geometry</se:PropertyName> </se:Geometry> <se:Fill> <se:SvgParameter name="fill">#808080</se:SvgParameter> </se:Fill> <se:Stroke> <se:SvgParameter name="stroke">#000000</se:SvgParameter> <se:SvgParameter name="strokeWidth"> 0.4</se:SvgParameter> </se:Stroke> </se:PolygonSymbolizer> </Rule> <Rule> <se:MinScaleDenominator>50</se:MinScaleDenominator> <se:MaxScaleDenominator>25000</se:MaxScaleDenominator> <se:Filter> <se:And> <se:PropertyIsEqualTo> <se:Function name="in2"> <se:Function name="geometryType"> <se:PropertyName>geometry2D/geometry</se:PropertyName> </se:Function> <se:Literal>Point</se:Literal> <se:Literal>MultiPoint</se:Literal> </se:Function> <se:Literal>true</se:Literal> </se:PropertyIsEqualTo> <se:PropertyIsEqualTo> <se:PropertyName>geometry2D/referenceGeometry</se:PropertyName> <se:Literal>true</se:Literal> </se:PropertyIsEqualTo> </se:And> </se:Filter> <se:PointSymbolizer> <se:Geometry> <se:PropertyName>geometry2D/geometry</se:PropertyName> </se:Geometry> <se:Graphic> <se:Mark> <se:WellKnownName>circle</se:WellKnownName> <se:Fill> <se:SvgParameter name="fill">#525252</se:SvgParameter> </pre>
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	<pre> </se:Fill> </se:Mark> <se:Size> <se:SvgParameter> name="size">10</se:SvgParameter> </se:Size> </se:Graphic> </se:PointSymbolizer> </Rule> </se:FeatureTypeStyle> </sld:UserStyle> </sld:NamedLayer> </pre>
Minimum & maximum scales	<1/50> - <1/25 000>

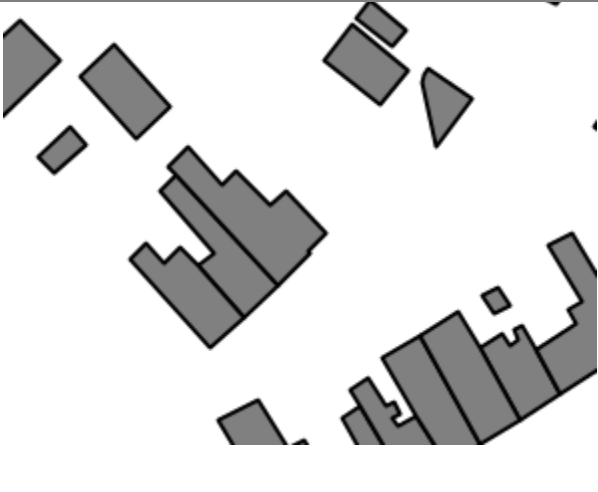

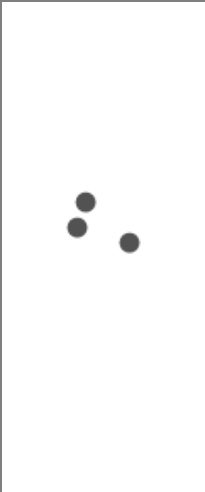
		
Scale 1/1000	Scale 1/ 10 000	Point representation

Figure 76: Examples of Building portrayal

NOTE 1: The scale range enables the user to discover buildings from scale 1/ 25 000 but good rendering of buildings is generally obtained only at larger scales ($\geq 1/10\ 000$), especially in urban areas.

11.2.2 Styles for the layer BU.BuildingPart

Style Name	BU.Building.default
Default Style	yes
Style Title	BuildingPart Default Style
Style Abstract	<p>The building reference geometry is represented by following styles:</p> <ul style="list-style-type: none"> - Style for surface geometries: hollow with black outline <ul style="list-style-type: none"> o Fill colour: TRANSPARENT o Outline colour: SOLID BLACK o Outline width: 0,2pt - Style for point geometries: grey circles <ul style="list-style-type: none"> o Style: CIRCLE o Fill colour: SOLID GREY (RGB 128,128,128) o Width: 5pt

Symbology	<pre> <sld:NamedLayer> <se:Name>BU.BuildingPart</se:Name> <sld:UserStyle> <se:Name>BU.BuildingPart.Default</se:Name> <sld:IsDefault>1</sld:IsDefault> <se:FeatureTypeStyle version="1.1.0"> <se:Description> <se:Title>Building part default style</se:Title> <se:Abstract/> </se:Description> <se:FeatureTypeName>BU/Buildings/BuildingPart</se:FeatureTypeName> <Rule> <se:MinScaleDenominator>50</se:MinScaleDenominator> <se:MaxScaleDenominator>10000</se:MaxScaleDenominator> <se:Filter> <se:And> <se:PropertyIsEqualTo> <se:Function name="in2"> <se:Function name="geometryType"> <se:PropertyName>geometry2D/geometry</se:PropertyName> </se:Function> <se:Literal>Polygon</se:Literal> <se:Literal>MultiPolygon</se:Literal> </se:Function> <se:Literal>true</se:Literal> </se:PropertyIsEqualTo> <se:PropertyIsEqualTo> <se:PropertyName>geometry2D/referenceGeometry</se:PropertyName> <se:Literal>true</se:Literal> </se:PropertyIsEqualTo> </se:And> </se:Filter> <se:PolygonSymbolizer> <se:Geometry> <ogc:PropertyName>geometry2D/geometry</ogc:PropertyName> </se:Geometry> <se:Stroke> <se:SvgParameter name="stroke">#000000</se:SvgParameter> <se:SvgParameter name="strokeWidth">0.2</se:SvgParameter> </se:Stroke> </se:PolygonSymbolizer> </Rule> <Rule> <se:MinScaleDenominator>50</se:MinScaleDenominator> <se:MaxScaleDenominator>10000</se:MaxScaleDenominator> <se:Filter> <se:And> <se:PropertyIsEqualTo> <se:Function name="in2"> <se:Function name="geometryType"> <se:PropertyName>geometry2D/geometry</se:PropertyName> </se:Function> <se:Literal>Point</se:Literal> <se:Literal>MultiPoint</se:Literal> </se:Function> <se:Literal>true</se:Literal> </se:PropertyIsEqualTo> <se:PropertyIsEqualTo> <se:PropertyName>geometry2D/referenceGeometry</se:PropertyName> <se:Literal>true</se:Literal> </se:PropertyIsEqualTo> </se:And> </se:Filter> <se:PointSymbolizer> <se:Geometry> <ogc:PropertyName>geometry2D/geometry</ogc:PropertyName> </se:Geometry> <se:Stroke> <se:SvgParameter name="stroke">#000000</se:SvgParameter> <se:SvgParameter name="strokeWidth">0.2</se:SvgParameter> </se:Stroke> </se:PointSymbolizer> </Rule> </se:FeatureTypeStyle> </sld:UserStyle> </sld:NamedLayer> </pre>
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	<pre> </se:PropertyIsEqualTo> <se:PropertyIsEqualTo> <se:PropertyName>geometry2D/referenceGeometry</se:PropertyName> <se:Literal>true</se:Literal> </se:PropertyIsEqualTo> </se:And> </se:Filter> <se:PointSymbolizer> <se:Geometry> <ogc:PropertyName>geometry2D/geometry</ogc:PropertyName> </se:Geometry> <se:Graphic> <se:Mark> <se:WellKnownName>circle</se:WellKnownName> <se:Fill> <se:SvgParameter name="fill">#808080</se:SvgParameter> </se:Fill> </se:Mark> <se:Size> <se:SvgParameter name="size">5</se:SvgParameter> </se:Size> </se:Graphic> </se:PointSymbolizer> </Rule> </se:FeatureTypeStyle> </sld:UserStyle> </sld:NamedLayer> </pre>
Minimum & maximum scales	<1/50> - <1/10 000>

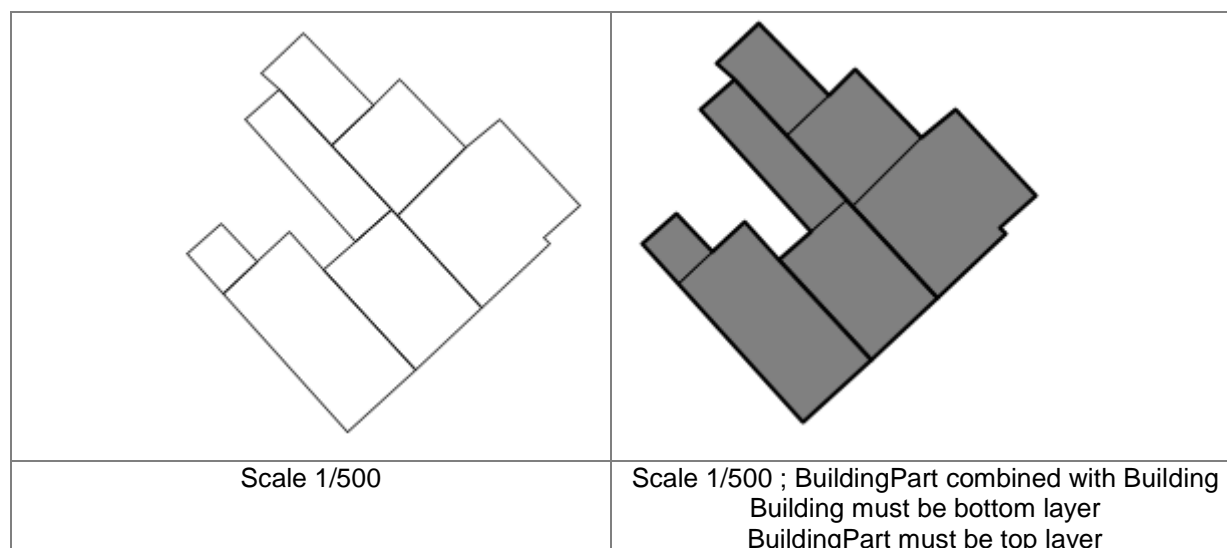


Figure 77: Examples of BuildingPart portrayal

NOTE 2: the legend proposed by INSPIRE aims to represent Building and BuildingPart as reference data, with neutral colours. This legend is especially suitable when buildings are represented together with other more coloured layers, such as Land Use, Land Cover, Natural Risk Zones More attractive legends to represent theme *Buildings* alone may/should be proposed by the data providers and are up to them.

11.3 Styles recommended to be supported by INSPIRE view services

None.