



# SLD Reference Sheet

## <Rule>

### <Abstract>

Description of the rule

### <ElseFilter>

Apply this rule to features that no other rule selects.

### <Filter>

Apply this rule only to features that this filter selects.

### <LegendGraphic>

Contains a <Graphic> used to render the legend.

### <LineSymbolizer>

#### <MaxScaleDenominator>

#### <MinScaleDenominator>

#### <Name>

Used to identify the rule.

#### <PointSymbolizer>

#### <PolygonSymbolizer>

#### <RasterSymbolizer>

#### <TextSymbolizer>

#### <Title>

May be used in the legend.

## <LineSymbolizer>

### <Geometry>

### <Stroke>

## <PointSymbolizer>

### <Geometry>

### <Graphic>

## <PolygonSymbolizer>

### <Fill>

### <Geometry>

### <Stroke>

## <RasterSymbolizer>

### <ColorMap>

### <ChannelSelection>

### <ContrastEnhancement>

### <ImageOutline>

### <Opacity>

0 = completely transparent

1 = completely opaque

```
<Opacity>0.5</Opacity>
```

### <OverlapBehavior>

### <ShadedRelief>

## <TextSymbolizer>

### <Fill>

### lox <Font>

### lox <Halo>

### lox <Label>

lox Name of the data attribute to use for the label text.

```
<Label>title</Label>
```

### <LabelPlacement>

## <ChannelSelection>

Links colour channels of the data to red, green, blue channels or gray channel for rendering.

```
<ChannelSelection>
```

```
<GrayChannel>
```

```
<SourceChannelName>
```

```
10
```

```
</SourceChannelName>
```

```
</GrayChannel>
```

```
<ContrastEnhancement>
```

```
...
```

```
</ContrastEnhancement>
```

```
</ChannelSelection>
```

## <ColorMap>

Attributes are:

*extended* – If true then 16bit colours can be used. If false, only 8bit (256) colours.

*type* – type of color map entries. Options:

*type="values"* – interpolate between colours.

Generates gradients.

*type="intervals"* – colorbands, no gradients.

## <ColorMapEntry>

Each entry assigns a quantity to a colour.

```
<ColorMapEntry
```

```
color="#000000" quantity="#000000"
```

```
label="label" opacity="1" />
```

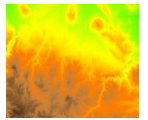
Attributes are:

*color* – colour as #RRGGBB

*label* – used for legends

*opacity* – from 0 to 1

*quantity* – a value in range of the raster data



## <ContrastEnhancement>

Adjust relative brightness of the data in a colour channel. Can be used in <RasterSymbolizer> or <ChannelSelection> elements.

### <GammaValue>

Multiply brightness by the gamma value.

```
<GammaValue>10</GammaValue>
```

### <Histogram>

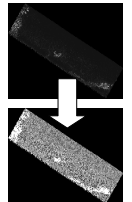
Applies histogram algorithm.

```
<Histogram />
```

### <Normalize>

Applies normalize algorithm.

```
<Normalize />
```



## <ExternalGraphic>

### <OnlineResource>

URL or local path relative to the SLD

### <Format>

MIME type of the image format.

```
<OnlineResource
```

```
xlink:type="simple"
```

```
xlink:href="http://..." />
```

```
<Format>image/png</Format>
```



## <Fill>

### <GraphicFill>

Contains a <Graphic> to pattern the polygon.

### <CssParameter>

Assigns a styling parameter a value. The parameter set is based on the name attribute.

```
<CssParameter name="fill">
```

```
#FF0000
```

```
</CssParameter>
```

CSS Parameters for <Fill> are:

*name="fill"* – fill colour as #RRGGBB

*name="fill-opacity"* – from 0 to 1



## <Font>

### <CssParameter>

Assigns a styling parameter a value. The parameter set is based on the name attribute.

```
<CssParameter name="font-family">
```

```
Arial
```

```
</CssParameter>
```

CSS Parameters for <Font> are:

*name="font-family"* – family name of the font to use.

*name="font-size"* – size of font in pixels.

*name="font-style"* – Font styling. normal, Italic, oblique.

*name="font-weight"* – normal or bold.



# SLD Reference Sheet

## <Geometry>

Set which data attribute to use for geometry. Use this Only if there is more than one geometry column.

```
<Geometry>
  <PropertyName>the_geom</PropertyName>
</Geometry>
```

## <Graphic>

### <ExternalGraphic>

#### ■ <Mark>

##### <Opacity>

- 0 = completely transparent
- 1 = completely opaque

```
<Opacity>0.5</Opacity>
```

##### <Size>

- Height in pixels. Width is scaled to height

```
<Size>12</Size>
```


##### <Rotation>

Clockwise degrees of rotation

- ◆ Negative values are anti-clockwise

```
<Rotation>45</Rotation>
```

## <Halo>

- lox  Adds a lining to the edges of text. Differentiate the text from a busy background, adding contrast.

### <Fill>

#### <Radius>

Width in pixels of the halo.

```
<Radius>2</Radius>
```

## <ImageOutline>

Render an outline for each image in a multiple image dataset.

### <LineSymbolizer>

## <LabelPlacement>

Controls placement of a label for a geometry.

### <LinePlacement>

### <PointPlacement>

## <LinePlacement>

Label placement based on linestring.

- lox  <PerpendicularOffset>

Distance in pixels from the line. Positive values are left of the line. Negative values are right of the line.

## <Mark>

- <Fill>

- + <Stroke>

- <WellKnownName>

Common name of a symbol to use for the mark.

- ★ One of circle, cross, square, star, triangle or x

```
<WellKnownName>circle</WellKnownName>
```

## <OverlapBehavior>

Controls what happens when multiple images in the same data set overlap.

### <AVERAGE>

Take an average of the overlapping point values.

```
<AVERAGE />
```

### <EARLIEST\_ON\_TOP>

Render image with earliest timestamp on top.

```
<EARLIEST_ON_TOP />
```

### <LATEST\_ON\_TOP>

Render image with latest timestamp on top.

```
<LATEST_ON_TOP />
```

### <RANDOM>

Choose which image is rendered on top randomly.

```
<RANDOM />
```

## <PointPlacement>

Label placement based on point.

### <AnchorPoint>

Sets a point in the text label to use to anchor to the spatial element labelled. Ratio from 0.0 (left, bottom) to 1.0 (right, top).

#### <AnchorPoint>

```
<AnchorPointX>0.5</AnchorPointX>
```

```
<AnchorPointY>0.5</AnchorPointY>
```

#### </AnchorPoint>

### <Displacement>

Displacement in pixels from the spatial element.

#### <Displacement>

```
<DisplacementX>0</DisplacementX>
```

```
<DisplacementY>15</DisplacementY>
```

#### </Displacement>

### <Rotation>

Clockwise degrees of rotation

Negative values are anti-clockwise

```
<Rotation>45</Rotation>
```

## <Stroke>

### <GraphicFill>

Contains a <Graphic> used to pattern the line.

### <GraphicStroke>

Contains a <Graphic> used to draw repeatedly on top of the line.

### <CssParameter>

Assigns a styling parameter a value. The parameter set is based on the name attribute.

```
<CssParameter name="stroke">
  #FF0000
```

```
</CssParameter>
```

CSS Parameters for <Stroke> are:

*name="stroke"* – stroke colour as #RRGGBB

*name="stroke-dasharray"* – series of dash length and gap length pairs in pixels to repeat. For example "8 2 4 2 2 2 4 2"

*name="stroke-dashoffset"* – number of pixels into the dasharray to start drawing

*name="stroke-linecap"* – how to render the end of a line. butt, round and square

*name="stroke-linejoin"* – how to render line segment joins. bevel, mitre or round.

*name="stroke-opacity"* – from 0 to 1

*name="stroke-width"* – in pixels

## <ShadedRelief>

### <BrightnessOnly>

If present, apply shaded relief only by adjusting Brightness levels.

```
<BrightnessOnly />
```

### <ReliefFactor>

Controls exaggeration of shading.

```
<ReliefFactor>55</ReliefFactor>
```

## Spatial Filters

BBOX

Beyond

Contains

Crosses

Disjoint

Distance

Equals

Intersects

Overlaps

Touches

Within

DWithin

## Attribute Filters

PropertyIsEqualTo

PropertyIsNotEqualTo

PropertyIsLessThan

PropertyIsLessThanOrEqualTo

PropertyIsGreaterThan

PropertyIsGreaterThanOrEqualTo

PropertyIsBetween.

PropertyIsLike

PropertyIsNull

