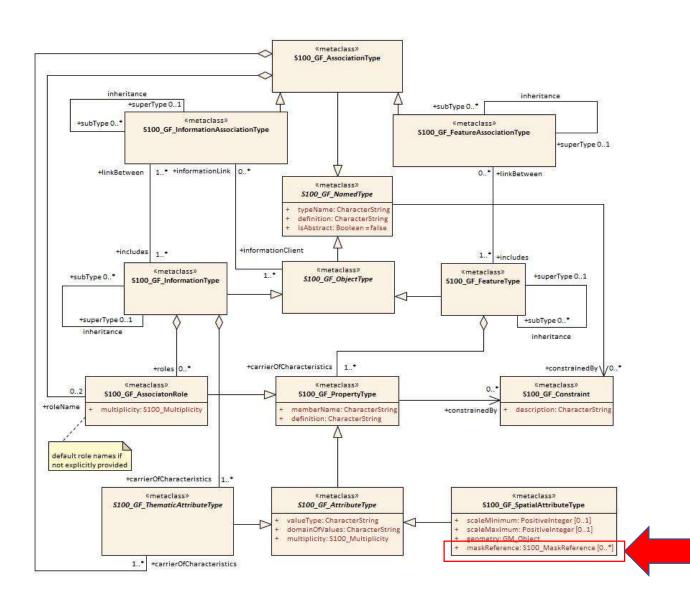
Proposal to add masking function to GFM

Adding a masking reference attribute on the spatial attribute type.



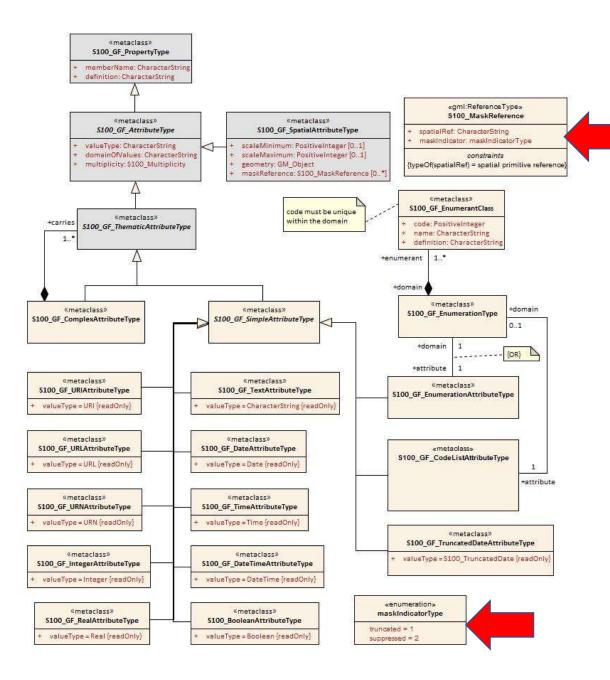
Details of the masking attribute addition.

Table 3-13 - S100_GF_SpatialAttributeType

Role	Name	Description	Mult.	Туре
Name				
Attribute	scaleMinimum	no change	01	PositiveInteger
Attribute	scaleMaximum	no change	01	PositiveInteger
Attribute	geometry	no change	1	GM_Object
Attribute	maskReference	Reference indicating masked or truncated spatial primitives or objects.	0*	S100_MaskReference

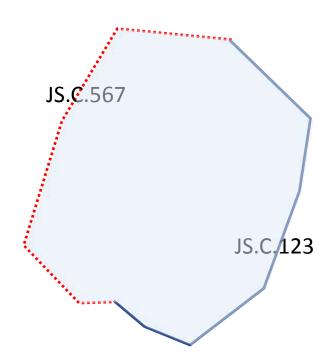
Table 3-14 - S100_MaskReference

Role Name	Name	Description	Mult.	Туре
Class	S100_MaskRefer ence	Reference to a masked or truncated spatial primitive. Model is based on gml:Reference but limits the allowed attributes and makes the identifier and role mandatory.		
Attribute	spatialRef (alias xlink:href)	Identifier of a spatial primitive.	1	CharacterString (reference to spatial primitive)
Attribute	maskIndicator (alias xlink:role)	Indicates whether a spatial primitive is masked or truncated.	1	Enumeration maskIndicatorType 1: truncated 2: suppressed



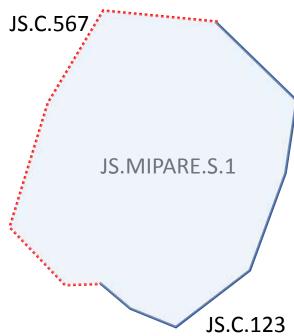
Example 1

```
<$100:Curve gml:id="JS.C.567"
                              srsDimension="2" srsName="urn:ogc:def:crs:EPSG::4326">
   <gml:segments>
       <$100:5100 GM Curve>
           <qml:posList>-33.5032709 60.8896517 -33.5912323 60.7716521 -33.6539623 60.
       </S100:S100 GM Curve>
   </gml:segments>
</5100:Curve>
<S127:MilitaryPracticeArea gml:id="JS.MIPARE.676">
    <featureName><name>Jussland Naval Firing Area</name></featureName>
    <textContent><information><text>Example of masked spatial type</text></inform
    <theServiceHours xlink:href="#JS.SRVHRS.685"/>
    <geometry>
        <S100:surfaceProperty scaleMinimum "1000000" s aleMaximum="10000">
            <S100:maskReference xlink:href*"#JS.C.567" xlink:role="suppressed"/>
            <S100:Surface gml:id="JS.MIPARE.676.S.1" srsDimension="2" srsName="u
                <gml:patches><gml:PolygonPatch><gml:exterior>
                    <gml:Ring>
                        <gml:curveMember; xlink:href="#JS_C_123"/>
                        <gml:curveMember xlink:href="#JS.C.567</pre>
                    </gml:Ring>
                </gml:exterior></gml:PolygonPatch></gml:patches>
            </5100:Surface>
        </S100:surfaceProperty>
    </geometry>
    <geometry>
```



Example 1A

```
<$100:Curve gml:id="JS.C.567"
                                   srsDimension="2" srsName="urn:ogc:def:crs:EPSG::4326">
        <gml:segments>
            <$100:5100 GM Curve>
                <qml:posList>-33.5032709 60.8896517 -33.5912323 60.7716521 -33.6539623 60.
            </S100:S100 GM Curve>
        </gml:segments>
     </5100:Curve>
<$100:Surface gml:id="JS.MIPARE.S.1" srsDimension="2" srsName="urn:ogc:def:crs:EPSG::4326">
     <gml:patches><gml:PolygonPatch><gml:exterior>
         <qml:Ring>
             <gml:curveMember xlink:href="#.TS C 123"/>
             <gml:curveMember xlink:href='#JS.C.567"</pre>
         </gml:Ring>
     </gml:exterior></gml:PolygonPatch></gml:patches>
</S100:Surface>
<S127:MilitaryPracticeArea gml:id="JS.MIPARE.676">
    <featureName><name>Jussland Naval Firing Area</name></featureName>
    <textContent><information><text>Example of masked spatial type</text></information></textContent>
    <theServiceHours xlink:href="#JS.SRVHRS.685"/>
    <geometry>
        <S100:surfaceProperty xlink:href="#JS.MIPARE.S.1" scaleMinimum="1000000" scaleMaximum="10000">
            <S100:maskReference xlink:href="#JS.C.567" |link:role="suppressed"/>
        </S100:surfaceProperty>
   </geometry>
</S127:MilitaryPracticeArea>
```



Part 10a - ISO 8211 format:

10a-5.11.6 Masked Spatial Type field structure

Field Tag: MASK	Field Name: Masked Spatial Type

Subfield name	Label	Format	Subfield content and specification	
Referenced Record name	*RRNM	b11	Record name of the referenced record	
Referenced Record identifier	RRID	b14	Record identifier of the referenced record	
Mask Indicator	MIND	b11	{1} – Truncated by the dataset limit {2} – Suppress portrayal	
Mask Update Instruction	MUIN	b11	{1} - Insert {2} - Delete	

Data Descriptive Field

2100; &□□Masked□Spatial□Record▲*RRNM!RRID!MIND!MUIN▲(b11,b14,2b11)▼

The *Referenced Record identifier* field corresponds to the *spatialRef* attribute of S100_MaskReference (Part 3, Table 3-14). The *Mask Indicator* field corresponds to the *maskIndicator* attribute of S100_MaskReference.

Part 10b - GML format:

10b-8.5.6 Masking, truncation, and scale ranges

Beginning with Edition 4.1, the S-100 GML format defines a generic complex type S100_SpatialAttributeType for spatial attributes with *scaleMinimum* and *scaleMaximum* attributes and a *maskReference* tag. These correspond to the attributes of the S100_SpatialAttribute metaclass in the S-100 General Feature Model (Part 3, Figures 3-1 and 3-2 and clause 3-5.3.5). *scaleMinimum* and *scaleMaximum* are implemented as integer attributes. The *maskReference* attribute is implemented using the GML Reference Type with the following constraints:

The value of the xlink:href attribute must be the gml:id of the masked/truncated object.

The value of the xlink:role attribute must be either 'truncated' or 'suppressed'.

The meaning of other attributes is undefined in S-100. Product specifications may specify their use depending on the needs of the data product.

Questions?