<table>
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<tr>
<th>Change Request #:</th>
<th>284</th>
</tr>
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<td>Assigned OGC Document #:</td>
<td>13-037</td>
</tr>
<tr>
<td>Name:</td>
<td>*Jason Mathews</td>
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<td>Organization:</td>
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<td>Email:</td>
<td>*<a href="mailto:mathews@mitre.org">mathews@mitre.org</a></td>
</tr>
<tr>
<td>Document Name/Version:</td>
<td>*KML / 2.2.0</td>
</tr>
<tr>
<td>OGC Project Document:</td>
<td>*07-147r2</td>
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If this is a revision of a previous submission and you have a Change Request Number, then check here:

Enter the CR number here: 

Enter the Revision Number that you are revising here: 

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**Title:** [KML SWG] Discrepency between kml:north/south element description and associated type/default value such that the default value is not in the valid range and violates the valid range for latitude values.

**Source:** Mass Market Geo Working Group (MMWG)

**Work item code:**

**Category:** *F (Critical correction)*

**Reason for change:**

OGC specification has a discrepancy between kml:north/south element description and associated type/default value such that the default value is not in the valid range and violates the valid range for latitude values.

**Summary of change:**

Issue is that north and south fields are optional in the Region/LatLonAtBox and GroundOverlay/LatLonBox and north and south types are of the "kml:angle180Type" type whose default values are +180, -180 respectively, but the spec states that north and south valid values are in the range 0 to ±90 (Latitude) not ±180 so the default values are out of the valid range.
9.14 kml:AbstractLatLonAltBox

9.14.3.1 kml:north

9.14.3.1.1 Description
Specifies the latitude of the north edge of the bounding box, in decimal degrees from 0 to ±90.

9.14.3.1.2 Content
Type: kml:angle180Type *** this should be changed to kml:angle90Type ***
Default Value: 180.0 *** this should be changed to 90.0 ***

9.14.3.2 kml:south

9.14.3.2.1 Description
Specifies the latitude of the south edge of the bounding box, in decimal degrees from 0 to ±90.

9.14.3.2.2 Content
Type: kml:angle180Type *** this should be changed to kml:angle90Type
Default Value: -180.0 *** this should be changed to -90.0 ***

Annex A (ogckml22.xsd)

```xml
<element name="latitude" type="kml:angle90Type" default="0.0"/>
<element name="north" type="kml:angle180Type" default="180.0"/>
<element name="south" type="kml:angle180Type" default="-180.0"/>
<complexType name="AbstractLatLonBoxType" abstract="true">
  <complexContent>
    <extension base="kml:AbstractObjectType">
      <sequence>
        <element ref="kml:north" minOccurs="0"/>
        <element ref="kml:south" minOccurs="0"/>
        ...
      </sequence>
    </extension>
  </complexContent>
</complexType>
```

Reference: http://schemas.opengis.net/kml/2.2.0/ogckml22.xsd

Suggested changes:

- north and south should be of type kml:angle90Type not kml:angle180Type
- and defaults as 90 and -90 respectively.

Suggested fixes to the schema:
```xml
<element name="north" type="kml:angle90Type" default="90.0"/>
<element name="south" type="kml:angle90Type" default="-90.0"/>
```

**Consequences if not approved:**

This is an interoperability issue.

Software implementation based on KML XML Schema will use invalid out-of-range default values for north or south if those elements are not explicitly defined in the KML. Behavior will be indeterminate.
Also, KML validation using KML constraint \((\text{kml:north} > \text{kml:south})\) ATC 8: Region - LatLonAltBox could fail if missing either north or south and invalid default values are used.

http://service.kmlvalidator.com/ets/ogc-kml/2.2/#Region-LatLonAltBox

| Clauses affected: | *  
| --- | ---  
| 9.14.3.1.2  
9.14.3.2.2  
Annex A |  
| Additional Documents affected: | http://schemas.opengis.net/kml/2.2.0/ogckml22.xsd  
| Supporting Documentation: |  
| Comments: |  
| Status: | Assigned  
Assigned To: KML SWG  
Disposition: Referred and Posted |