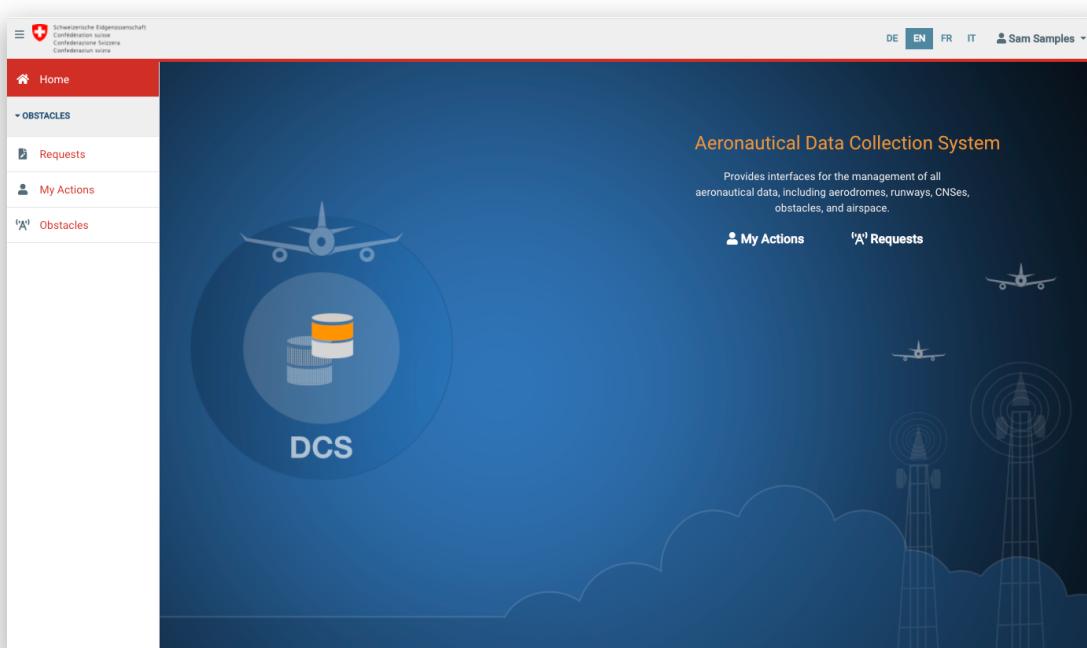


# Aeronautical Data Collection Service Specification



## KML File Structure and Format

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Section		Example
Document	Document structure and header information	<pre data-bbox="822 309 1399 1036"> &lt;?xml version="1.0" encoding="UTF-8" ?&gt; &lt;!--Created by Data Collection System--&gt; &lt;!--Filename: DCS_Obstacles_2022-01-26-010243--&gt; &lt;!--Date: Wed Jan 26 01:02:43 CET 2022--&gt; &lt;kml   xmlns="http://www.opengis.net/kml/2.2"   xmlns:gx="http://www.google.com/kml/ext/2.2"   xmlns:kml="http://www.opengis.net/kml/2.2"   xmlns:atom="http://www.opengis.net/kml/2.2"&gt;   &lt;Document&gt;     &lt;name&gt;DCS_Obstacles_2022-02-22-010243&lt;/name&gt;     &lt;description&gt;Modifications flagged since AIRAC 2021-11-30&lt;/description&gt;     &lt;!-- insert style and schema here --&gt;     &lt;!-- insert placemarks here --&gt;   &lt;/Document&gt; &lt;/kml&gt;</pre>

Style	<p>Style map and a normal and highlighted style for each style used in Google Earth.</p> <p>This is static information</p> <p>The example shows map styles for:</p> <ul style="list-style-type: none"> <li>• ms_pole (POLE, not lighted)</li> <li>• ms_pole_lighted (POLE, lighted)</li> <li>• ms_line (TRANSMISSION LINE, not marked)</li> <li>• ms_polygon (polygon obstacle, not marked)</li> </ul>	<pre> &lt;!-- Point Style --&gt; &lt;StyleMap id="ms_pole"&gt;   &lt;Pair&gt;     &lt;key&gt;normal&lt;/key&gt;     &lt;styleUrl&gt;#sn_pole&lt;/styleUrl&gt;   &lt;/Pair&gt;   &lt;Pair&gt;     &lt;key&gt;highlight&lt;/key&gt;     &lt;styleUrl&gt;#sh_pole&lt;/styleUrl&gt;   &lt;/Pair&gt; &lt;/StyleMap&gt; &lt;Style id="sn_pole"&gt;   &lt;IconStyle&gt;     &lt;color&gt;ff0000ff&lt;/color&gt;     &lt;scale&gt;0.5&lt;/scale&gt;     &lt;Icon&gt;        &lt;href&gt;signature/pole.png&lt;/href&gt;       &lt;/Icon&gt;     &lt;/IconStyle&gt;     &lt;LabelStyle&gt;       &lt;color&gt;ff0000ff&lt;/color&gt;     &lt;/LabelStyle&gt;     &lt;LineStyle&gt;       &lt;color&gt;ff0000ff&lt;/color&gt;       &lt;width&gt;5&lt;/width&gt;     &lt;/LineStyle&gt;   &lt;/Style&gt; &lt;Style id="sh_pole"&gt;   &lt;IconStyle&gt;     &lt;color&gt;ff0000ff&lt;/color&gt;     &lt;scale&gt;1.0&lt;/scale&gt;     &lt;Icon&gt;        &lt;href&gt;signature/pole.png&lt;/href&gt;       &lt;/Icon&gt;     &lt;/IconStyle&gt;     &lt;LabelStyle&gt;       &lt;color&gt;ff0000ff&lt;/color&gt;     &lt;/LabelStyle&gt;     &lt;LineStyle&gt;       &lt;color&gt;ff0000ff&lt;/color&gt;       &lt;width&gt;5&lt;/width&gt;     &lt;/LineStyle&gt;   &lt;/Style&gt; &lt;StyleMap id="ms_pole_lighted"&gt;   &lt;Pair&gt;     &lt;key&gt;normal&lt;/key&gt;      &lt;styleUrl&gt;#sn_pole_lighted&lt;/styleUrl&gt;   &lt;/Pair&gt;   &lt;Pair&gt;     &lt;key&gt;highlight&lt;/key&gt;      &lt;styleUrl&gt;#sh_pole_lighted&lt;/styleUrl&gt;   &lt;/Pair&gt; &lt;/StyleMap&gt; &lt;Style id="sn_pole_lighted"&gt;   &lt;IconStyle&gt;     &lt;color&gt;ff0000ff&lt;/color&gt;     &lt;scale&gt;0.5&lt;/scale&gt;     &lt;Icon&gt;        &lt;href&gt;signature/pole_lighted.png&lt;/href&gt;     &lt;/Icon&gt;   &lt;/IconStyle&gt; </pre>
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Section		Example
		<pre>         &lt;/Icon&gt; &lt;/IconStyle&gt; &lt;LabelStyle&gt;     &lt;color&gt;ff0000ff&lt;/color&gt; &lt;/LabelStyle&gt; &lt;LineStyle&gt;     &lt;color&gt;ff0000ff&lt;/color&gt;     &lt;width&gt;5&lt;/width&gt; &lt;/LineStyle&gt; &lt;/Style&gt; &lt;Style id="sh_pole_lighted"&gt;     &lt;IconStyle&gt;         &lt;color&gt;ff0000ff&lt;/color&gt;         &lt;scale&gt;1.0&lt;/scale&gt;         &lt;Icon&gt;          &lt;href&gt;signature/pole_lighted.png&lt;/href&gt;         &lt;/Icon&gt;     &lt;/IconStyle&gt;     &lt;LabelStyle&gt;         &lt;color&gt;ff0000ff&lt;/color&gt;     &lt;/LabelStyle&gt;     &lt;LineStyle&gt;         &lt;color&gt;ff0000ff&lt;/color&gt;         &lt;width&gt;5&lt;/width&gt;     &lt;/LineStyle&gt; &lt;/Style&gt; &lt;Style id="ms_line"&gt;     &lt;IconStyle&gt;         &lt;Icon&gt;         &lt;/Icon&gt;     &lt;/IconStyle&gt;     &lt;LabelStyle&gt;         &lt;color&gt;ffff5500&lt;/color&gt;     &lt;/LabelStyle&gt;     &lt;LineStyle&gt;         &lt;color&gt;ffff5500&lt;/color&gt;         &lt;width&gt;3.5&lt;/width&gt;     &lt;/LineStyle&gt;     &lt;PolyStyle&gt;         &lt;color&gt;7f705c5c&lt;/color&gt;     &lt;/PolyStyle&gt; &lt;/Style&gt; &lt;Style id="ms_polygon"&gt;     &lt;IconStyle&gt;         &lt;Icon&gt;         &lt;/Icon&gt;     &lt;/IconStyle&gt;     &lt;LabelStyle&gt;         &lt;color&gt;ff0000cc&lt;/color&gt;     &lt;/LabelStyle&gt;     &lt;LineStyle&gt;         &lt;color&gt;ff0000cc&lt;/color&gt;         &lt;width&gt;1.5&lt;/width&gt;     &lt;/LineStyle&gt;     &lt;PolyStyle&gt;         &lt;color&gt;7f0000cc&lt;/color&gt;     &lt;/PolyStyle&gt; &lt;/Style&gt; </pre>

Schema	<p>Schema of the extended data:</p> <ul style="list-style-type: none"> <li>• UUID</li> <li>• Airport (comma separated list of Location Indicators of airport if inside obstacle limitation perimeter)</li> <li>• Obstacle Type (AIXM Type)</li> <li>• State (A= active, I= inactive)</li> <li>• maxHeight AGL</li> <li>• Max Elevation ASL</li> <li>• Radius</li> <li>• Effektive date</li> <li>• Marking (NONE / RED_WHITE_RED / ORANGE_SPHERES / ORANGE_CANVAS / CABLE_WARNER)</li> <li>• Lighting (NONE / LOW / MEDIUM / HIGH)</li> <li>• Group (YES / NO)</li> <li>• Small (YES / NO)</li> </ul>	<pre> &lt;Schema name="dcsData" id="dcsDataId"&gt;     &lt;SimpleField type="string" name="uuid"&gt;      &lt;displayName&gt;&lt;! [CDATA[uuid] ]&gt;&lt;/displayName&gt;         &lt;/SimpleField&gt;         &lt;SimpleField type="string" name="airport"&gt;      &lt;displayName&gt;&lt;! [CDATA[airport] ]&gt;&lt;/displayName&gt;         &lt;/SimpleField&gt;         &lt;SimpleField type="string" name="obstacleType"&gt;      &lt;displayName&gt;&lt;! [CDATA[obstacleType] ]&gt;&lt;/displayName&gt;         &lt;/SimpleField&gt;         &lt;SimpleField type="string" name="state"&gt;      &lt;displayName&gt;&lt;! [CDATA[state] ]&gt;&lt;/displayName&gt;         &lt;/SimpleField&gt;         &lt;SimpleField type="float" name="maxHeightAGL"&gt;      &lt;displayName&gt;&lt;! [CDATA[maxHeightAGL] ]&gt;&lt;/displayName&gt;         &lt;/SimpleField&gt;         &lt;SimpleField type="float" name="topElevationAMSL"&gt;      &lt;displayName&gt;&lt;! [CDATA[topElevationAMSL] ]&gt;&lt;/displayName&gt;         &lt;/SimpleField&gt;         &lt;SimpleField type="float" name="radius"&gt;      &lt;displayName&gt;&lt;! [CDATA[radius] ]&gt;&lt;/displayName&gt;         &lt;/SimpleField&gt;         &lt;SimpleField type="string" name="effectiveDate"&gt;      &lt;displayName&gt;&lt;! [CDATA[effectiveDate] ]&gt;&lt;/displayName&gt;         &lt;/SimpleField&gt;         &lt;SimpleField type="string" name="marking"&gt;      &lt;displayName&gt;&lt;! [CDATA[marking] ]&gt;&lt;/displayName&gt;         &lt;/SimpleField&gt;         &lt;SimpleField type="string" name="lighting"&gt;      &lt;displayName&gt;&lt;! [CDATA[lighting] ]&gt;&lt;/displayName&gt;         &lt;/SimpleField&gt;         &lt;SimpleField type="string" name="group"&gt; </pre>
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Section		Example
		<pre data-bbox="822 331 1406 578"> &lt;displayName&gt;&lt;! [CDATA[group]]&gt;&lt;/displayName&gt; &lt;/SimpleField&gt; &lt;SimpleField type="string" name="small"&gt;  &lt;displayName&gt;&lt;! [CDATA[small]]&gt;&lt;/displayName&gt; &lt;/SimpleField&gt;&lt;/Schema&gt;</pre>
Obstacles	Placemark for each obstacle	

Section		Example
	Point Obstacle	<pre> &lt;Placemark&gt;   &lt;name&gt;SH21001234&lt;/name&gt;   &lt;visibility&gt;1&lt;/visibility&gt;    &lt;styleUrl&gt;#ms_crane_lighted&lt;/styleUrl&gt;   &lt;ExtendedData&gt;     &lt;SchemaData       schemaUrl="#dcsDataId"&gt;       &lt;SimpleData         name="uuid"&gt;7e1ae8fb-ebd4-4728-83f8- 319c58edb170&lt;/SimpleData&gt;       &lt;SimpleData         name="airport"&gt;LSZH&lt;/SimpleData&gt;       &lt;SimpleData         name="obstacleType"&gt;CRANE&lt;/SimpleData&gt;       &lt;SimpleData         name="state"&gt;A&lt;/SimpleData&gt;       &lt;SimpleData         name="maxHeightAGL"&gt;99.0&lt;/SimpleData&gt;       &lt;SimpleData         name="topElevationAMSL"&gt;534.2&lt;/SimpleDa ta&gt;       &lt;SimpleData         name="radius"&gt;35.4&lt;/SimpleData&gt;       &lt;SimpleData         name="effectiveDate"&gt;2022-02- 09&lt;/SimpleData&gt;       &lt;SimpleData         name="marking"&gt;ORANGE_CANVAS&lt;/SimpleDat a&gt;       &lt;SimpleData         name="lighting"&gt;LOW&lt;/SimpleData&gt;       &lt;SimpleData         name="group"&gt;NO&lt;/SimpleData&gt;       &lt;SimpleData         name="small"&gt;NO&lt;/SimpleData&gt;     &lt;/SchemaData&gt;   &lt;/ExtendedData&gt;   &lt;Point&gt;     &lt;extrude&gt;1&lt;/extrude&gt;      &lt;altitudeMode&gt;absolute&lt;/altitudeMode&gt;     &lt;coordinates&gt;       8.612961873682625, 47.682293804034046, 53       4.2     &lt;/coordinates&gt;   &lt;/Point&gt; &lt;/Placemark&gt;</pre>

<p><b>Line Obstacle</b></p> <p>Multi part geometry with first point of the line as a &lt;Point&gt; and all points as &lt;LineString&gt;</p>	<pre> &lt;Placemark&gt;   &lt;name&gt;HL21000123&lt;/name&gt;   &lt;visibility&gt;1&lt;/visibility&gt;   &lt;styleUrl&gt;#ms_line&lt;/styleUrl&gt;   &lt;ExtendedData&gt;     &lt;SchemaData       schemaUrl="#dcsDataId"&gt;       &lt;SimpleData         name="uuid"&gt;c58f13d2-021b-45ae-9e51-         34e6a21472d0&lt;/SimpleData&gt;       &lt;SimpleData         name="obstacleType"&gt;TRANSMISSION_LINE&lt;/       SimpleData&gt;       &lt;SimpleData         name="state"&gt;A&lt;/SimpleData&gt;       &lt;SimpleData         name="maxHeightAGL"&gt;60.0&lt;/SimpleData&gt;       &lt;SimpleData         name="topElevationAMSL"&gt;582.5&lt;/SimpleDa       ta&gt;       &lt;SimpleData         name="effectiveDate"&gt;2020-01-         23&lt;/SimpleData&gt;       &lt;SimpleData         name="marking"&gt;NONE&lt;/SimpleData&gt;       &lt;SimpleData         name="lighting"&gt;NONE&lt;/SimpleData&gt;       &lt;SimpleData         name="group"&gt;NO&lt;/SimpleData&gt;       &lt;SimpleData         name="small"&gt;NO&lt;/SimpleData&gt;     &lt;/SchemaData&gt;   &lt;/ExtendedData&gt;   &lt;MultiGeometry&gt;     &lt;Point&gt;       &lt;extrude&gt;1&lt;/extrude&gt;        &lt;altitudeMode&gt;absolute&lt;/altitudeMode&gt;       &lt;coordinates&gt;         8.986703888888888,47.64232916666667,582         .501       &lt;/coordinates&gt;     &lt;/Point&gt;     &lt;LineString&gt;       &lt;extrude&gt;1&lt;/extrude&gt;        &lt;altitudeMode&gt;absolute&lt;/altitudeMode&gt;       &lt;coordinates&gt;         8.986703888888888,47.64232916666667,582         .501         8.987806944444444,47.6459125,573.599         8.986268333333333,47.65020583333333,556         .499         8.986073333333334,47.65493083333333,507         .3         8.988448055555557,47.65647333333333,490         .602       &lt;/coordinates&gt;     &lt;/LineString&gt;   &lt;/MultiGeometry&gt; &lt;/Placemark&gt; </pre>
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Section	Example
	<pre>8.99014454134434,47.65757500013223,493. 499     &lt;/coordinates&gt;     &lt;/LineString&gt;     &lt;/MultiGeometry&gt; &lt;/Placemark&gt;</pre>

<p>Polygon obstacle</p> <p>Multi part geometry with fist point of the polygon as a &lt;Point&gt; and all points as &lt;LinearRing&gt;</p>	<pre> &lt;Placemark&gt;   &lt;name&gt;216ZH40090&lt;/name&gt;   &lt;visibility&gt;1&lt;/visibility&gt;   &lt;styleUrl&gt;#ms_polygon&lt;/styleUrl&gt;   &lt;ExtendedData&gt;     &lt;SchemaData       schemaUrl="#dcsDataId"&gt;       &lt;SimpleData         name="uuid"&gt;640844cb-9736-4f23-9acf-31eb094fd625&lt;/SimpleData&gt;       &lt;SimpleData         name="obstacleType"&gt;CATENARY&lt;/SimpleData&gt;       &lt;SimpleData         name="state"&gt;A&lt;/SimpleData&gt;       &lt;SimpleData         name="maxHeightAGL"&gt;62.0&lt;/SimpleData&gt;       &lt;SimpleData         name="topElevationAMSL"&gt;772&lt;/SimpleData&gt;     &gt;       &lt;SimpleData         name="effectiveDate"&gt;2021-10-11&lt;/SimpleData&gt;       &lt;SimpleData         name="marking"&gt;CABLE_WARNER&lt;/SimpleData&gt;     &gt;       &lt;SimpleData         name="lighting"&gt;NONE&lt;/SimpleData&gt;       &lt;SimpleData         name="group"&gt;NO&lt;/SimpleData&gt;       &lt;SimpleData         name="small"&gt;NO&lt;/SimpleData&gt;     &lt;/SchemaData&gt;   &lt;/ExtendedData&gt;   &lt;MultiGeometry&gt;     &lt;Polygon&gt;       &lt;extrude&gt;1&lt;/extrude&gt;       &lt;tessellate&gt;1&lt;/tessellate&gt;        &lt;altitudeMode&gt;absolute&lt;/altitudeMode&gt;       &lt;outerBoundaryIs&gt;         &lt;LinearRing&gt;           &lt;coordinates&gt;             8.885462359096055, 47.43891211148467, 636.0             8.881928388968733, 47.44158298980589, 750.0             8.883152973387514, 47.441756605440574, 772.0             8.886363026465656, 47.44034013346709, 700.0             8.885462359096055, 47.43891211148467, 636.0           &lt;/coordinates&gt;         &lt;/LinearRing&gt;       &lt;/outerBoundaryIs&gt;     &lt;/Polygon&gt;     &lt;Point&gt;       &lt;extrude&gt;1&lt;/extrude&gt;     </pre>
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Section	Example
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