U.S. Department of Transportation
Federal Aviation Administration

Aviation Environmental Design Tool (AEDT)

Supplemental Manual

AEDT Standard Input File (ASIF)

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1 Introduction

The AEDT Standard Input File (ASIF) provides a standard file format to allow for the import of data into AEDT. The ASIF format allows users to create a new study by importing a complete study including airports, scenarios, cases, operations, tracks, and other study definitions. Users can also use the partial ASIF import to import data into an existing AEDT study.

This Manual provides a description of the ASIF format for the ASIF schema version 1.2.16. It also provides an overview of ASIF usage and annotated sample studies. The Manual is intended for analysts and programmers who wish to create ASIF.

It is recommended to use the ASIF schema documentation, **AsifMerge.html**, in conjunction with the Manual. It provides diagrams that illustrate the structure and contents of each XML element as well as rules and properties of each element, see Section 1.2.

1.1 Overview of the ASIF Format

ASIF is based on the XML file format. XML is a text-based file format that is readable by both humans and computers. Data values are tagged with elements and organized in a hierarchical manner such that the elements can contain other elements or data. XML elements can also have attributes which provide metadata that affect how the ASIF importer processes the data in the XML file. This document assumes users have basic familiarity with the XML file format. For additional information about XML, see http://xmlfiles.com/xml/.

An ASIF can be created and edited in a standard XML editor. The *XML Notepad* and *Notepad++* are XML editors that can be downloaded for free online.

1.2 ASIF Schema Documentation

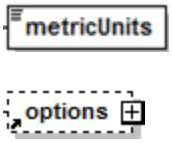
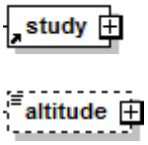
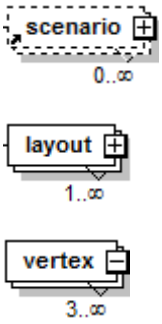
The ASIF schema (.xsd) files are located under *C:\Program Files\FAA\AEDT\Examples* directory.

- ASIF.xsd
- ASIF_Airport.xsd
- ASIF_Common.xsd
- ASIF_Fleet.xsd
- ASIF_Receptors.xsd

The ASIF schema documentation, **AsifMerge.html**, is located under the *C:\Program Files\FAA\AEDT\Examples\ASIF Schema Reference* directory. This is a HTML file which contains schema diagrams that illustrate the structure and contents of each XML element. The links in the HTML file facilitates understanding the schema hierarchy and the rules and properties of each element.

The following table describes the notations used in the ASIF schema diagram.

Notation for Schema Diagram

Notation	Icon	Description
Choice indicator		Only one of the elements contained in the selected group can be present
Sequence indicator		Child elements must appear in the specified sequence
Element		Represented by a rectangle with solid or dotted border Solid rectangle – required element Dotted rectangle – optional element
Element with (+) sign		Indicates that the element has child element(s) and/or attribute(s)
Element with min and max bound		Specifies the min/max number of times an element can occur in the parent element

1.3 Importing External Studies

AEDT also supports import of INM and EDMS studies by converting these legacy tools into ASIF format and importing into AEDT. See the AEDT User Manual and the AEDT Supplemental Manual for more information on importing legacy studies.

2 ASIF Import Types

There are two types of ASIF import files: a full-study import and a partial-study import. The following sections describe each type of import file.

2.1 Full Study Import

AEDT supports the creation of new studies via ASIF. For a full-study import, the ***content*** attribute of the ***AsifXML*** element must be set to "study".

Please see Section 3 for two sample studies.

2.2 Partial ASIF Import

Partial ASIF is used to import specific pieces of data into an existing AEDT study. A partial ASIF is organized similarly to a full ASIF, except that it contains a single type of data – the ***content*** attribute of the ***AsifXML*** element must specify the data type. The data types that can be imported via partial ASIF are listed below:

- airportLayoutSet
- annualization
- case
- fleet
- receptorSets
- scenario
- boundary
- trackOpSet
- runup
- userGroundSupportEquipmentSet
- stationarySourceSet
- operationalProfileSet

The format for a partial ASIF is outlined below. The header is the same as a full ASIF, except that the ***content*** attribute is not "study". Instead, the ***content*** attribute should specify the data element that appears in the file.

```
<AsifXml xmlns:AsifXml="http://www.faa.gov/ASIF"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" version="1.2.15"
content="ENTER_CONTENT_TYPE_HERE">

<!-- The content block follows here: -->

      <*content type here*>

        ...

      </*end content type*>

</AsifXml>
```

Note that some of these elements rely on information provided in other data blocks. If this information is not provided by the base study when loading the partial ASIF, an error will be generated. For example, attempting to load a partial ASIF containing scenario data that references an airport that does not exist in the base study will cause an error.

2.3 Sample ASIFs

Sample ASIFs, including full study files and partial ASIFs, are located in *C:\Program Files\FAA\AEDT\Examples* directory.

Full study ASIF

- asif_emissions_study.xml
- asif_sensor_path_study.xml
- asif_small.xml

Partial ASIF

- PartialASIF_airportLayoutSet.xml
- PartialASIF_annualization.xml
- PartialASIF_boundary.xml
- PartialASIF_operationalProfileSet.xml
- PartialASIF_receptorSets.xml
- PartialASIF_runup.xml
- PartialASIF_scenario.xml
- PartialASIF_stationarySourceSet.xml
- PartialASIF_userGroundSupportEquipmentSet.xml

3 ASIF Examples

This section provides simple steps to assist in the creation of ASIFs for possible studies. See Section 3.1 on developing an ASIF for a simple study and Section 3.2 for an emissions dispersion study.

3.1 Create a Simple Study

Follow the steps below to create an ASIF for a simple study:

1. Create an empty study file.
2. Populate the airport layout section.
3. Define receptor set.
4. Define scenario and case hierarchy.
5. Populate the case with tracks and air operations.
6. Create annualization.

The following sections provide examples of each of the above steps. This example should be used as an aid for understanding the ASIF format, and not as a data reference.

Step 1: Create empty study file

At a minimum, an ASIF consists of the standard XML declaration, a study section, and study metadata.

Study name must be at least five characters long and must not contain periods (.) or spaces.

```
<AsifXml version="1.2.15" content="study"
xmlns:AsifXml="http://www.faa.gov/ASIF"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">

 <study xmlns:asif="http://www.faa.gov/ASIF">
  <!-- User-defined study name -->
  <name>ASIF_example</name>

  <!-- Study type - Emissions, Dispersion, Noise and Emissions, or Noise and
Dispersion -->
  <studyType>Noise and Emissions</studyType>

  <!-- Indicate the units used in the study -->
  <emissionsUnits>Kilograms</emissionsUnits>

  <!-- User-defined study description -->
  <description>A sample study</description>

  <!-- Add airport layouts here -->

  <!-- Add receptors here -->

  <!-- Add scenarios here -->

 </study>
</AsifXml>
```

Step 2: Populate airport layouts section

AEDT requires all airports in the study area to be declared. The airport runway definitions are specified using the ***runwaySet*** element. If runways are not specified in ASIF, then the runway data from the Airport database will be used during the ASIF import.

In the example below, KMDW airport is defined using user-specified runways.

```
<airportLayoutSet>
 <airportLayout>
  <!-- User can specify an airport with user-defined runway -->
  <airportCode type="ICAO">KMDW</airportCode>

  <!-- Airports can have one or more runways defined -->
  <runwaySet>
   <runway>
    <!-- Runway length (in feet) -->
    <length>5932</length>

    <!-- Runway width (in feet) -->
    <width>150</width>

    <!-- One or more runway ends -->
    <runwayEnd>
     <!-- user-defined name for runway end -->
     <name>04R</name>

     <!-- latitude and longitude of runway end -->
     <latitude>41.779496</latitude>
     <longitude>-87.75876</longitude>

     <!-- elevation in feet -->
     <elevation>0.0</elevation>

     <!-- threshold crossing height (in feet) -->
     <threshCrossHeight>50.0</threshCrossHeight>

     <!-- glide slope for an approach to this runway end -->
     <glideSlope>3.0</glideSlope>

     <!-- displaced threshold for departure-->
     <depDispThresh>0.0</depDispThresh>

     <!-- displaced threshold for approach -->
     <appDispThresh>0.0</appDispThresh>

     <!-- Percent change in airport average headwind -->
     <percentWind>0.0</percentWind>
    </runwayEnd>
    <runwayEnd>
     <name>22L</name>
     <latitude>41.791167</latitude>
     <longitude>-87.743554</longitude>
     <elevation>0.0</elevation>
     <threshCrossHeight>50.0</threshCrossHeight>
     <glideSlope>3.0</glideSlope>
```

```
      <depDispThresh>0.0</depDispThresh>
      <appDispThresh>0.0</appDispThresh>
      <percentWind>0.0</percentWind>
     </runwayEnd>
    </runway>
   </runwaySet>
  </airportLayout>
 </airportLayoutSet>
```

Step 3: Create receptor set

If the study includes noise or dispersion analysis, then one or more receptor sets are required. Receptor sets define locations (grid or point) where noise/dispersion measurements are taken. The example below defines a grid type receptor set.

```
<receptorSet>
 <!-- user-defined name -->
 <name>gridfile_100x100</name>
 <grid>
  <!-- Latitude and longitude of southwest corner of grid -->
  <latitude>41.97872</latitude>
  <longitude>-87.90439</longitude>

  <!-- Width and height of grid (in nautical miles) -->
  <width>100.0</width>
  <height>100.0</height>

  <!-- Number of points across height and width of grid -->
  <numWidth>100</numWidth>
  <numHeight>100</numHeight>
 </grid>
</receptorSet>
```

Step 4: Create scenario and case hierarchy

Scenarios contain a set of cases (i.e. operation group) that are used to group aircraft tracks and operations.

The following example demonstrates a simple scenario and case structure. A case can contain one or more child cases.

```
<scenario>
 <!-- user-defined scenario name and description -->
 <name>Baseline_Scenario</name>

 <!-- user-defined start time for scenario -->
 <startTime>2009-11-10T15:02:00</startTime>

 <!-- Duration of scenario (in hours) -->
 <duration>24</duration>

 <!-- Taxi model for scenario -->
 <taxiModel>UserSpecified</taxiModel>

 <!-- Aircraft performance model -->
 <acftPerfModel>SAE1845</acftPerfModel>
```

```
   <!-- Enable/disable bank angle calculations for aircraft performance
modeling -->
   <bankAngle>true</bankAngle>

   <!-- Sulfur related settings -->
   <sulfurConversionRate>0.05</sulfurConversionRate>
   <fuelSulfurContent>6.8E-4</fuelSulfurContent>

   <!-- A description of the scenario -->
   <description>Simple scenario</description>

   <!-- List of airports to use for the scenario -->
   <scenarioAirportLayoutSet>
    <scenarioAirportLayout>
     <airportLayoutName>KMDW</airportLayoutName>
    </scenarioAirportLayout>
   </scenarioAirportLayoutSet>

   <caseSet>
    <!-- One or more case elements -->
    <case>
     <!-- sequential case number unique in this scenario -->
     <caseId>0</caseId>

     <!-- user-defined case name -->
     <name>CaseA</name>

     <!-- Noise emissions source -->
     <source>Aircraft</source>

     <!-- Case start time and duration -->
     <startTime>2009-11-10T15:02:00</startTime>
     <duration>24</duration>

     <!-- Add trackOpSet elements here -->

    </case>
   </caseSet>
  </scenario>
```

Step 5: Populate cases with tracks and air operations

The ***trackOpSet*** element defines a single track and any number of aircraft operations to be flown on that track. A track can be composed of one or more subtracks with dispersion values. An un-dispersed track has one subtrack with dispersion weight of 1. A dispersed track consists of multiple subtracks. The sum of the dispersion weights for all subtracks within a given track must equal 1. Operations defined for the track will be dispersed based on the dispersion weight amongst any subtracks that make up the track.

```
     <trackOpSet>
      <!-- Single track element -->
      <track>
       <!-- user-defined track name -->
       <name>04R_Dep</name>
```

```
        <!-- Track operation type: A = Arrival, D = Departure, O = Overflight
-->
        <optype>D</optype>

        <!-- Airport and runway for this track -->
        <airport type="ICAO">KMDW</airport>
        <runway>04R</runway>

        <!-- tracks can be composed of multiple dispersed subtracks -->
        <subtrack>

         <!-- the user-defined ID for the subtrack -->
         <id>0</id>

         <!-- The sum of the dispersionWeights for all subtracks within a
given track must equal 1 -->
         <dispersionWeight>1.0</dispersionWeight>

         <!-- Set of trackNode or trackVector elements, all must be the same
for each subtrack -->
         <trackNodes>
          <trackNode>
           <latitude>40.65640</latitude>
           <longitude>-73.71322</longitude>
          </trackNode>
          <trackNode>
           <latitude>40.65640</latitude>
           <longitude>-53.71322</longitude>
          </trackNode>
         </trackNodes>

        </subtrack>
       </track>

       <operations>
        <!--operation element represents one or more flights on a track-->
        <operation>
         <!-- user-defined operation id -->
         <id>T9.1</id>

         <!-- AEDT aircraftType for this operation -->
         <aircraftType>
          <airframeModel>Raytheon Beech 1900-C</airframeModel>
          <engineCode>PT67B</engineCode>
          <engineModCode>NONE </engineModCode>
         </aircraftType>

         <!-- number of times to fly this operation -->
         <numOperations>1.0</numOperations>

         <!-- user-defined flight number, optional -->
         <flightNumber>CKE545</flightNumber>

         <!-- user-defined operation type, optional  -->
         <userType>MU3001</userType>
```

```
        <!-- user-defined parameter data, optional -->
        <userParam>J</userParam>

        <!-- arrival or departure airport and runway -->
        <departureAirport type="ICAO">KMDW</departureAirport>
        <departureRunway>04R</departureRunway>
        <arrivalAirport type="FAA">LIT</arrivalAirport>

        <!-- offTime for departures or onTime for arrivals -->
        <offTime>2009-11-10T15:02:00</offTime>

        <!-- aircraft profile  for this operation -->
        <saeProfile>STANDARD</saeProfile>
      </operation>
    </operations>
  </trackOpSet>
```

Step 6: Create annualization

Annualization is the process of performing a weighted summation[1] over the noise and emission results from some or all of the cases within a scenario in order to create results that represent noise and emissions exposures over a time period of interest. Each scenario element may contain an annualization element describing the weighted annualization tree.

```
<annualization>
 <!-- user-defined annulalization name -->
 <name>Baseline_Annualization</name>

 <!-- Define one or more groups of cases and groups -->
 <annualizationGroup>

   <!-- Define rolloup weight for this group -->
   <weight>1.0</weight>
   <!-- Associate scenario case with this annualization group -->
   <annualizationCase>
      <!-- Specify case name -->
      <name>CaseA</name>
      <!-- Define rollup weight for this case -->
      <weight>1.0</weight>
   </annualizationCase>

 </annualizationGroup>
</annualization>
```

Step 7: Full ASIF

The full study ASIF is as follows:

[1] The word 'summation' is used figuratively and the actual process of correctly summing or adding together noise or emissions results depends upon the metric being used. For example: energy metric results would not be directly added together for a result since they are logarithmic values, but would rather be log-added.

```
<AsifXml version="1.2.15" content="study"
xmlns:AsifXml="http://www.faa.gov/ASIF"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">

 <study xmlns:asif="http://www.faa.gov/ASIF">

  <!-- User-defined study name -->
  <name>ASIF_example</name>

  <!-- Study type - Emissions, Dispersion, Noise and Emissions, or Noise and
Dispersion -->
  <studyType>Noise and Emissions</studyType>

  <!-- Indicate the units used in the study -->
  <emissionsUnits>Kilograms</emissionsUnits>

  <!-- User-defined study description -->
  <description>A sample study</description>

  <airportLayoutSet>
   <airportLayout>
    <!-- User can specify an airport with user-defined runway -->
    <airportCode type="ICAO">KMDW</airportCode>

    <!-- Airports can have one or more runways defined -->
    <runwaySet>
     <runway>
      <!-- Runway length (in feet) -->
      <length>5932</length>

      <!-- Runway width (in feet) -->
      <width>150</width>

      <!-- One or more runway ends -->
      <runwayEnd>
       <!-- user-defined name for runway end -->
       <name>04R</name>

       <!-- latitude and longitude of runway end -->
       <latitude>41.779496</latitude>
       <longitude>-87.75876</longitude>

       <!-- elevation in feet -->
       <elevation>0.0</elevation>

       <!-- threshold crossing height (in feet) -->
       <threshCrossHeight>50.0</threshCrossHeight>

       <!-- glide slope for an approach to this runway end -->
       <glideSlope>3.0</glideSlope>

       <!-- displaced threshold for departure-->
       <depDispThresh>0.0</depDispThresh>

       <!-- displaced threshold for approach -->
       <appDispThresh>0.0</appDispThresh>
```

```
        <!-- Percent change in airport average headwind -->
        <percentWind>0.0</percentWind>
       </runwayEnd>
       <runwayEnd>
        <name>22L</name>
        <latitude>41.791167</latitude>
        <longitude>-87.743554</longitude>
        <elevation>0.0</elevation>
        <threshCrossHeight>50.0</threshCrossHeight>
        <glideSlope>3.0</glideSlope>
        <depDispThresh>0.0</depDispThresh>
        <appDispThresh>0.0</appDispThresh>
        <percentWind>0.0</percentWind>
       </runwayEnd>
      </runway>
     </runwaySet>
    </airportLayout>
   </airportLayoutSet>

   <receptorSet>
    <!-- user-defined name -->
    <name>gridfile_100x100</name>
    <grid>
     <!-- Latitude and longitude of southwest corner of grid -->
     <latitude>41.97872</latitude>
     <longitude>-87.90439</longitude>

     <!-- Width and height of grid (in nautical miles) -->
     <width>100.0</width>
     <height>100.0</height>

     <!-- Number of points across height and width of grid -->
     <numWidth>100</numWidth>
     <numHeight>100</numHeight>
    </grid>
   </receptorSet>

   <scenario>
    <!-- user-defined scenario name and description -->
    <name>Baseline_Scenario</name>

    <!-- user-defined start time for scenario -->
    <startTime>2009-11-10T15:02:00</startTime>

    <!-- Duration of scenario (in hours) -->
    <duration>24</duration>

    <!-- Taxi model for scenario -->
    <taxiModel>UserSpecified</taxiModel>

    <!-- Aircraft performance model -->
    <acftPerfModel>SAE1845</acftPerfModel>

    <!-- Enable/disable bank angle calculations for aircraft performance
modeling -->
```

```
   <bankAngle>true</bankAngle>

   <!-- Sulfur related settings -->
   <sulfurConversionRate>0.05</sulfurConversionRate>
   <fuelSulfurContent>6.8E-4</fuelSulfurContent>

   <!-- A description of the scenario -->
   <description>A sample scenario</description>

   <!-- List of airports to use for the scenario -->
   <scenarioAirportLayoutSet>
    <scenarioAirportLayout>
     <airportLayoutName>KMDW</airportLayoutName>
    </scenarioAirportLayout>
   </scenarioAirportLayoutSet>

   <caseSet>
    <!-- One or more case elements -->
    <case>
     <!-- sequential case number unique in this scenario -->
     <caseId>0</caseId>

     <!-- user-defined case name -->
     <name>CaseA</name>

     <!-- Noise emissions source -->
     <source>Aircraft</source>

     <!-- Case start time and duration -->
     <startTime>2009-11-10T15:02:00</startTime>
     <duration>24</duration>

     <trackOpSet>
      <!-- Single track element -->
      <track>
       <!-- user-defined track name -->
       <name>04R_Dep</name>
       <!-- Track operation type: A = Arrival, D = Departure, O = Overflight
-->
       <optype>D</optype>

       <!-- Airport and runway for this track -->
       <airport type="ICAO">KMDW</airport>
       <runway>04R</runway>

       <!-- tracks can be composed of multiple dispersed subtracks -->
       <subtrack>

        <!-- the user-defined ID for the subtrack -->
        <id>0</id>

        <!-- The sum of the dispersionWeights for all subtracks within a
given track must equal 1 -->
        <dispersionWeight>1.0</dispersionWeight>
```

```
        <!-- Set of trackNode or trackVector elements, all must be the same
for each subtrack -->
        <trackNodes>
         <trackNode>
          <latitude>40.65640</latitude>
          <longitude>-73.71322</longitude>
         </trackNode>
         <trackNode>
          <latitude>40.65640</latitude>
          <longitude>-53.71322</longitude>
         </trackNode>
        </trackNodes>

       </subtrack>
      </track>

      <operations>
       <!--operation element represents one or more flights on a track-->
       <operation>
        <!-- user-defined operation id -->
        <id>T9.1</id>

        <!-- AEDT aircraftType for this operation -->
        <aircraftType>
         <airframeModel>Raytheon Beech 1900-C</airframeModel>
         <engineCode>PT67B</engineCode>
         <engineModCode>NONE </engineModCode>
        </aircraftType>

        <!-- number of times to fly this operation -->
        <numOperations>1.0</numOperations>

        <!-- user-defined flight number, optional -->
        <flightNumber>CKE545</flightNumber>

        <!-- user-defined operation type, optional -->
        <userType>MU3001</userType>

        <!-- user-defined parameter data, optional -->
        <userParam>J</userParam>

        <!-- arrival or departure airport and runway -->
        <departureAirport type="ICAO">KMDW</departureAirport>
        <departureRunway>04R</departureRunway>
        <arrivalAirport type="FAA">LIT</arrivalAirport>

        <!-- offTime for departures or onTime for arrivals -->
        <offTime>2009-11-10T15:02:00</offTime>

        <!-- aircraft profile  for this operation -->
        <saeProfile>STANDARD</saeProfile>
       </operation>
      </operations>
     </trackOpSet>

    </case>
```

```
   </caseSet>

   <annualization>
    <!-- user-defined annulalization name -->
    <name>Baseline_Annualization</name>

    <!-- Define one or more groups of cases and groups -->
    <annualizationGroup>

      <!-- Define rolloup weight for this group -->
      <weight>1.0</weight>
      <!-- Associate scenario case with this annualization group -->
      <annualizationCase>
         <!-- Specify case name -->
         <name>CaseA</name>
         <!-- Define rollup weight for this case -->
         <weight>1.0</weight>
      </annualizationCase>

    </annualizationGroup>
   </annualization>

  </scenario>
 </study>
</AsifXml>
```

3.2 Create an Emissions Dispersion Study

An emissions dispersion study contains the same core elements as a simple study (Section 3.1). In addition, a typical dispersion study includes additional airport features (gates, taxiways, taxipaths), operational profiles, airport configuration, and stationary sources.

1. Create an empty study file.
2. Populate the airport layout section.
    a. Basic airport information (airport code and location)
    b. Stationary sources
    c. Airport gates/terminals
    d. Taxiways
    e. Runways
    f. Taxipaths
    g. Tracks
    h. Airport configurations
3. Create receptor set.
4. Create scenario and case hierarchy.
    a. Airport scenario properties
    b. Non-aircraft operations case
    c. Aircraft operations case

The following sections provide examples of the steps. This ASIF example should be used as an aid for understanding the ASIF format, and not as a data reference. This example is based on the STUDY_PVD

study included with AEDT installation; but it has been much simplified for illustrative purposes. Please note that both the aircraft operations and the non-aircraft operations in this study are defined using operational profiles. When running profile-based aircraft operations, the "Apply Delay & Sequencing Model on Taxi" modeling option must be selected, and operating configuration and taxi network must exist in the airport layout.

Step 1: Create empty study file

At a minimum, an ASIF consists of the standard XML declaration, a study section, and study metadata.

Study name must be at least five characters long and must not contain periods (.) or spaces.

```
<?xml version="1.0" encoding="utf-8"?>
<AsifXml xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" version="1.2.15" content="study">
  <study>
    <name>PVD2004_small</name>
    <studyType>Dispersion</studyType>
    <emissionsUnits>Kilograms</emissionsUnits>
    <description>A sample emissions study</description>

  <!-- Add airport layouts here -->
  <!-- Add receptors here -->
  <!-- Add scenarios here -->

  </study>
</AsifXml>
```

Step 2: Populate airport layouts section

AEDT requires all airports in the study area to be declared. In addition to runways and tracks, the airport layout section can contain buildings, stationary sources of emissions (such as generators, training fires, or boilers), gates, terminals, taxiways, taxipaths, airport configurations, and operational profiles.

Step 2a: Define airport layout

Define the basic airport layout properties including layout name, airport code, and location.

```
    <airportLayoutSet>
      <airportLayout>
        <name>Baseline_PVD2004_layout</name>
        <airportCode type="ICAO">KPVD</airportCode>
        <startDate>2004-01-01</startDate>
        <elevation>55</elevation>     <!-- in feet -->
        <taxiInTime>7</taxiInTime>    <!-- in minutes -->
        <taxiOutTime>19</taxiOutTime> <!-- in minutes -->
        <latitude>41.723999</latitude>
        <longitude>-71.428221</longitude>
```

Step 2b: Define stationary sources

Define each stationary source with an individual location definition, as well as other properties that describe the nature or amount of emissions. Each stationary source may have different elements associated with it. The example below defines an emergency generator.

```
<stationarySourceSet>
  <stationarySource>
    <name>600kw Emergency Gen-Baseline-KPVD-2004</name>
    <pointStationarySource>
      <pointCoord>
        <latitude>41.743248909695488</latitude>
        <longitude>-71.412168090784959</longitude>
      </pointCoord>
      <baseElevation>16.764</baseElevation>   <!-- in meters -->
      <releaseHeight>12.192</releaseHeight>   <!-- in meters -->
      <gasVelocity>15</gasVelocity>           <!-- in meters/sec -->
      <stackDiameter>0.100584</stackDiameter> <!-- in meters -->
      <temperature>400</temperature>          <!-- in Fahrenheit -->
    </pointStationarySource>
    <categoryGenerator>
      <typeCode>2</typeCode>
      <powerRatingHorsepower>1340</powerRatingHorsepower>
      <CO_EF>3.03</CO_EF>
      <TOC_EF>1.14</TOC_EF>
      <NOx_EF>14</NOx_EF>
      <SOx_EF>0.93</SOx_EF>
      <PM10_EF>0.998</PM10_EF>
      <pollutionControlFactorTOC>0</pollutionControlFactorTOC>
      <pollutionControlFactorCO>0</pollutionControlFactorCO>
      <pollutionControlFactorNOx>0</pollutionControlFactorNOx>
      <pollutionControlFactorSOx>0</pollutionControlFactorSOx>
      <pollutionControlFactorPM10>0</pollutionControlFactorPM10>
      <pm25ToPm10Ratio>1</pm25ToPm10Ratio>
    </categoryGenerator>
  </stationarySource>
</stationarySourceSet>
```

Step 2c: Define airport gates/terminals

Airport gates can be defined as a point or a polygon. In AEDT, a polygon gate is referred as a terminal. For dispersion modeling, gates are modeled in AERMOD as either volume or area sources. A single-point gate (a pair of X/Y coordinates) is modeled as a volume source; while a polygon gate is modeled as an area source.

This example declares a terminal (polygon with eight points) which is defined by a set of latitude and longitude coordinates.

```
<gateSet>
  <gate>
    <name>AC</name>
    <elevation>16.76</elevation>            <!-- in meters -->
    <releaseHeight>1.499616</releaseHeight> <!-- in meters -->
    <sigmaY>0.1</sigmaY>
    <sigmaZ>0.1</sigmaZ>
    <polygonCoords>
      <vertex>
        <latitude>41.745139410943032</latitude>
        <longitude>-71.410155909148983</longitude>
      </vertex>
      <vertex>
        <latitude>41.74454094786433</latitude>
```

```
            <longitude>-71.4088479272253</longitude>
          </vertex>
          <vertex>
            <latitude>41.739914698711225</latitude>
            <longitude>-71.412700204036113</longitude>
          </vertex>
          <vertex>
            <latitude>41.740535077085347</latitude>
            <longitude>-71.414048427664284</longitude>
          </vertex>
          <vertex>
            <latitude>41.742143089180551</latitude>
            <longitude>-71.4130440975597</longitude>
          </vertex>
          <vertex>
            <latitude>41.741863092089559</latitude>
            <longitude>-71.412435917483549</longitude>
          </vertex>
          <vertex>
            <latitude>41.743155491944563</latitude>
            <longitude>-71.411380309779929</longitude>
          </vertex>
          <vertex>
            <latitude>41.74350128931475</latitude>
            <longitude>-71.411515795803126</longitude>
          </vertex>
        </polygonCoords>
      </gate>
    </gateSet>
```

Step 2d: Define taxiways

Taxiways are line segments that link gates, runways, and other taxiways. They are composed of sequences of latitude and longitude coordinates, and specify the speed of aircraft that use them at each node.

Only the first two taxiways out of 24 are shown here for brevity. The entire taxiways are included in the example file.

```
    <taxiwaySet>
      <taxiway>
        <name>A2 to 3</name>
        <dispersionWidth>22.86</dispersionWidth> <!-- in meters -->
        <taxiNodeSet>
          <taxiNode>
            <latitude>41.747442309926434</latitude>
            <longitude>-71.399033659570691</longitude>
            <elevation>16.76</elevation> <!-- in meters -->
            <speed>17</speed>            <!-- in mph -->
          </taxiNode>
          <taxiNode>
            <latitude>41.746840990624833</latitude>
            <longitude>-71.397780701750833</longitude>
            <elevation>16.76</elevation>
            <speed>17</speed>
          </taxiNode>
```

```
      </taxiNodeSet>
    </taxiway>

    <taxiway>
      <name>AC inout 1 to 2</name>
      <dispersionWidth>22.86</dispersionWidth>
      <taxiNodeSet>
        <taxiNode>
          <latitude>41.742510604805076</latitude>
          <longitude>-71.411486739128023</longitude>
          <elevation>16.76</elevation>
          <speed>17</speed>
        </taxiNode>
        <taxiNode>
          <latitude>41.742008226242724</latitude>
          <longitude>-71.410307016216962</longitude>
          <elevation>16.76</elevation>
          <speed>17</speed>
        </taxiNode>
      </taxiNodeSet>
    </taxiway>

    ............

  </taxiwaySet>
```

Step 2e: Define runways

A runway in AEDT is defined by two runway ends. Runways are used by departing and arriving aircraft, and are linked to gates by taxipaths. The example below defines two runways: 05-23 and 16-34.

```
  <runwaySet>
    <runway>
      <length>7069</length> <!-- in feet -->
      <width>150</width>    <!-- in feet -->
      <runwayEnd>
        <name>05</name>
        <latitude>41.73040290796537</latitude>
        <longitude>-71.411541169743472</longitude>
        <elevation>54.986876640419943</elevation> <!-- in feet -->
        <glideSlope>3</glideSlope>
      </runwayEnd>
      <runwayEnd>
        <name>23</name>
        <latitude>41.746840990624833</latitude>
        <longitude>-71.397780701750833</longitude>
        <elevation>54.986876640419943</elevation>
        <glideSlope>3</glideSlope>
      </runwayEnd>
    </runway>

    <runway>
      <length>5961</length>
      <width>150</width>
      <runwayEnd>
        <name>16</name>
```

```
        <latitude>41.748017908874452</latitude>
        <longitude>-71.4087003031238</longitude>
        <elevation>54.986876640419943</elevation>
        <glideSlope>3</glideSlope>
      </runwayEnd>
      <runwayEnd>
        <name>34</name>
        <latitude>41.735182619491127</latitude>
        <longitude>-71.395155630736014</longitude>
        <elevation>54.986876640419943</elevation>
        <glideSlope>3</glideSlope>
      </runwayEnd>
    </runway>
  </runwaySet>
```

Step 2f: Assemble taxipaths

Taxipaths are a series of taxiways that aircraft takes from a gate to a runway end (outbound) or from a runway end to a gate (inbound). Taxipaths can be composed of multiple taxiway line segments; and separate taxipaths may share taxiways in common as paths across the airport.

Only the first two taxipaths out of eight are shown here for brevity. The entire taxipaths are included in the example file.

```
<taxipathSet>
  <taxipath>
    <gateName>AC</gateName>
    <runwayName>05</runwayName>
    <direction>Outbound</direction>
    <taxiwayName>AC inout 1 to 2</taxiwayName>
    <taxiwayName>T3 to 4</taxiwayName>
    <taxiwayName>T4 to 5</taxiwayName>
    <taxiwayName>T5 to 6</taxiwayName>
    <taxiwayName>E1 to 2</taxiwayName>
    <taxiwayName>S2 to 3</taxiwayName>
    <taxiwayName>S3 to 4</taxiwayName>
  </taxipath>

  <taxipath>
    <gateName>AC</gateName>
    <runwayName>05</runwayName>
    <direction>Inbound</direction>
    <taxiwayName>N5 to 6</taxiwayName>
    <taxiwayName>N4 to 5</taxiwayName>
    <taxiwayName>N3 to 4</taxiwayName>
    <taxiwayName>N2 to 3</taxiwayName>
    <taxiwayName>T1 to 2</taxiwayName>
    <taxiwayName>T2 to 3</taxiwayName>
    <taxiwayName>AC inout 1 to 2</taxiwayName>
  </taxipath>

   ............

</taxipathSet>
```

Step 2g: Define tracks

Tracks are paths flown by aircraft, and are defined for an aircraft type (fixed-wing or rotary-wing) and an operation type (arrival, departure, or touch & go). This sample ASIF contains a total of 12 tracks consisting of arrival, departure, and touch & go tracks for each of the four runway ends. Only the first three tracks are shown here for brevity.

```
<trackSet>
  <track>
    <name>05_D_FixedWing</name>
    <optype>D</optype>
    <wingtype>F</wingtype>
    <airport type="ICAO">KPVD</airport>
    <runway>05</runway>
    <subtrack>
      <id>0</id>
      <dispersionWeight>1</dispersionWeight>
      <trackNodes>
        <trackNode>
          <latitude>41.73040290796537</latitude>
          <longitude>-71.411541169743472</longitude>
        </trackNode>
        <trackNode>
          <latitude>41.746840990624833</latitude>
          <longitude>-71.397780701750833</longitude>
        </trackNode>
        <trackNode>
          <latitude>43.137117876102565</latitude>
          <longitude>-70.202867639935235</longitude>
        </trackNode>
      </trackNodes>
    </subtrack>
  </track>

  <track>
    <name>23_D_FixedWing</name>
    <optype>D</optype>
    <wingtype>F</wingtype>
    <airport type="ICAO">KPVD</airport>
    <runway>23</runway>
    <subtrack>
      <id>0</id>
      <dispersionWeight>1</dispersionWeight>
      <trackNodes>
        <trackNode>
          <latitude>41.746840990624833</latitude>
          <longitude>-71.397780701750833</longitude>
        </trackNode>
        <trackNode>
          <latitude>41.73040290796537</latitude>
          <longitude>-71.411541169743472</longitude>
        </trackNode>
        <trackNode>
          <latitude>40.32809642691705</latitude>
          <longitude>-72.555207007763542</longitude>
        </trackNode>
```

```
        </trackNodes>
      </subtrack>
    </track>

    <track>
      <name>05_A_FixedWing</name>
      <optype>A</optype>
      <wingtype>F</wingtype>
      <airport type="ICAO">KPVD</airport>
      <runway>05</runway>
      <subtrack>
        <id>0</id>
        <dispersionWeight>1</dispersionWeight>
        <trackNodes>
          <trackNode>
            <latitude>40.32809642691705</latitude>
            <longitude>-72.555207007763542</longitude>
          </trackNode>
          <trackNode>
            <latitude>41.73040290796537</latitude>
            <longitude>-71.411541169743472</longitude>
          </trackNode>
        </trackNodes>
      </subtrack>
    </track>
```

Step 2h: Define airport operating configurations

Airport operating configurations specify the weather conditions and times under which particular runway assignments are made for aircraft based on the aircraft weight category (Small, Large, or Heavy). Operating configurations are only used if the Delay and Sequencing Modeling is selected.

A single configuration is defined in this example, but multiple configurations could be defined in an airport layout. Please note that the following <airportConfig> section does not contain any activation parameters (such as wind direction, wind speed, hour of day, ceiling, visibility, and temperature). This means that all the activation parameters are set to no bound.

```
  <airportConfigSet>
    <airportConfig>
      <configurationName>Configuration</configurationName>
      <useDistribution>false</useDistribution>
      <airportCapacity>
        <capacityPoint>
          <arrivalsPerHour>27</arrivalsPerHour>
          <departuresPerHour>52</departuresPerHour>
        </capacityPoint>
        <capacityPoint>
          <arrivalsPerHour>52</arrivalsPerHour>
          <departuresPerHour>27</departuresPerHour>
        </capacityPoint>
      </airportCapacity>

      <runwayAssignmentSet>
        <runwayAssignment>
          <aircraftSize>S</aircraftSize>
          <runway>16</runway>
```

```
    <arrivalPercentage>0.8</arrivalPercentage>
    <departurePercentage>1.32</departurePercentage>
    <tgoPercentage>0</tgoPercentage>
  </runwayAssignment>
  <runwayAssignment>
    <aircraftSize>S</aircraftSize>
    <runway>23</runway>
    <arrivalPercentage>50.74</arrivalPercentage>
    <departurePercentage>52.33</departurePercentage>
    <tgoPercentage>50</tgoPercentage>
  </runwayAssignment>
  <runwayAssignment>
    <aircraftSize>S</aircraftSize>
    <runway>34</runway>
    <arrivalPercentage>13.04</arrivalPercentage>
    <departurePercentage>8.06</departurePercentage>
    <tgoPercentage>15</tgoPercentage>
  </runwayAssignment>
  <runwayAssignment>
    <aircraftSize>S</aircraftSize>
    <runway>05</runway>
    <arrivalPercentage>35.42</arrivalPercentage>
    <departurePercentage>38.29</departurePercentage>
    <tgoPercentage>35</tgoPercentage>
  </runwayAssignment>
  <runwayAssignment>
    <aircraftSize>L</aircraftSize>
    <runway>16</runway>
    <arrivalPercentage>0.8</arrivalPercentage>
    <departurePercentage>1.32</departurePercentage>
    <tgoPercentage>0</tgoPercentage>
  </runwayAssignment>
  <runwayAssignment>
    <aircraftSize>L</aircraftSize>
    <runway>23</runway>
    <arrivalPercentage>50.74</arrivalPercentage>
    <departurePercentage>52.33</departurePercentage>
    <tgoPercentage>50</tgoPercentage>
  </runwayAssignment>
  <runwayAssignment>
    <aircraftSize>L</aircraftSize>
    <runway>34</runway>
    <arrivalPercentage>13.04</arrivalPercentage>
    <departurePercentage>8.06</departurePercentage>
    <tgoPercentage>15</tgoPercentage>
  </runwayAssignment>
  <runwayAssignment>
    <aircraftSize>L</aircraftSize>
    <runway>05</runway>
    <arrivalPercentage>35.42</arrivalPercentage>
    <departurePercentage>38.29</departurePercentage>
    <tgoPercentage>35</tgoPercentage>
  </runwayAssignment>
  <runwayAssignment>
    <aircraftSize>H</aircraftSize>
    <runway>16</runway>
    <arrivalPercentage>0.8</arrivalPercentage>
```

```
            <departurePercentage>1.32</departurePercentage>
            <tgoPercentage>0</tgoPercentage>
          </runwayAssignment>
          <runwayAssignment>
            <aircraftSize>H</aircraftSize>
            <runway>23</runway>
            <arrivalPercentage>50.74</arrivalPercentage>
            <departurePercentage>52.33</departurePercentage>
            <tgoPercentage>50</tgoPercentage>
          </runwayAssignment>
          <runwayAssignment>
            <aircraftSize>H</aircraftSize>
            <runway>34</runway>
            <arrivalPercentage>13.04</arrivalPercentage>
            <departurePercentage>8.06</departurePercentage>
            <tgoPercentage>15</tgoPercentage>
          </runwayAssignment>
          <runwayAssignment>
            <aircraftSize>H</aircraftSize>
            <runway>05</runway>
            <arrivalPercentage>35.42</arrivalPercentage>
            <departurePercentage>38.29</departurePercentage>
            <tgoPercentage>35</tgoPercentage>
          </runwayAssignment>
        </runwayAssignmentSet>
      </airportConfig>
    </airportConfigSet>
```

Step 2i: Define operational profiles

Operational profiles allows the user to define variations in activity throughout a day, week, or year. The three types of operational profiles are Quarter-Hourly, Daily, and Monthly. When using operational profiles in a study, at least one profile for each profile type (Quarter Hourly, Daily, and Monthly) must defined.

These profiles provide a weighting factor that determines how often activity occurs during the time period. Aircraft and non-aircraft sources can all be assigned operational profiles. For this example, the same profiles are used for all both aircraft and non-aircraft sources; but in practice different profiles will be defined for aircraft, GSEs, or stationary sources.

Only the first part of the quarterly-hour profile is shown here for brevity. The entire profile is given in the example file.

```
    <quarterHourlyProfileSet>
      <quarterHourlyProfile>
        <profileName>Aircraft-Baseline-KPVD</profileName>
        <temporalFactor startHour="0" startMinutes="0">0.1092</temporalFactor>
        <temporalFactor startHour="0" startMinutes="15">0.0712</temporalFactor>
        <temporalFactor startHour="0" startMinutes="30">0.0452</temporalFactor>
        <temporalFactor startHour="0" startMinutes="45">0.0274</temporalFactor>
        <temporalFactor startHour="1" startMinutes="0">0.0226</temporalFactor>
        <temporalFactor startHour="1" startMinutes="15">0.0144</temporalFactor>
        <temporalFactor startHour="1" startMinutes="30">0.0135</temporalFactor>
        <temporalFactor startHour="1" startMinutes="45">0.0087</temporalFactor>
```

```
        ............

    </quarterHourlyProfile>
  </quarterHourlyProfileSet>

  <dailyProfileSet>
    <dailyProfile>
      <profileName>Aircraft-Baseline-KPVD</profileName>
      <temporalFactorSunday>0.8889</temporalFactorSunday>
      <temporalFactorMonday>0.9354</temporalFactorMonday>
      <temporalFactorTuesday>0.9565</temporalFactorTuesday>
      <temporalFactorWednesday>0.9494</temporalFactorWednesday>
      <temporalFactorThursday>1</temporalFactorThursday>
      <temporalFactorFriday>0.9494</temporalFactorFriday>
      <temporalFactorSaturday>0.8103</temporalFactorSaturday>
    </dailyProfile>
  </dailyProfileSet>

  <monthlyProfileSet>
    <monthlyProfile>
      <profileName>Aircraft-Baseline-KPVD</profileName>
      <temporalFactorJanuary>0.6097</temporalFactorJanuary>
      <temporalFactorFebruary>0.768</temporalFactorFebruary>
      <temporalFactorMarch>0.7468</temporalFactorMarch>
      <temporalFactorApril>0.6508</temporalFactorApril>
      <temporalFactorMay>0.7803</temporalFactorMay>
      <temporalFactorJune>0.9452</temporalFactorJune>
      <temporalFactorJuly>0.9967</temporalFactorJuly>
      <temporalFactorAugust>1</temporalFactorAugust>
      <temporalFactorSeptember>0.963</temporalFactorSeptember>
      <temporalFactorOctober>0.9657</temporalFactorOctober>
      <temporalFactorNovember>0.8889</temporalFactorNovember>
      <temporalFactorDecember>0.8374</temporalFactorDecember>
    </monthlyProfile>
  </monthlyProfileSet>

  <activityProfileSet>
    <activityProfile name="ActivityProfile-Baseline-KPVD-0-0-0">
      <quarterHourlyProfile>Aircraft-Baseline-KPVD</quarterHourlyProfile>
      <dailyProfile>Aircraft-Baseline-KPVD</dailyProfile>
      <monthlyProfile>Aircraft-Baseline-KPVD</monthlyProfile>
    </activityProfile>
  </activityProfileSet>
```

Step 3: Define receptor set

The receptor set defines a set of points or a grid in which noise or emission concentrations will be modeled. A receptor set is required for dispersion modeling.

```
<receptorSet>
  <name>CartesianReceptors-Baseline-KPVD</name>
  <pointReceptor>
    <name>01</name>
    <latitude>41.755692229957511</latitude>
    <longitude>-71.401734634031868</longitude>
    <elevation>54.986876640419943</elevation>              <!-- in feet -->
    <receptorHeight>5.9099999999999993</receptorHeight>   <!-- in feet -->
  </pointReceptor>

  <pointReceptor>
    <name>05</name>
    <latitude>41.757757081502177</latitude>
    <longitude>-71.387029661597552</longitude>
    <elevation>54.986876640419943</elevation>
    <receptorHeight>5.9099999999999993</receptorHeight>
  </pointReceptor>

  <pointReceptor>
    <name>11</name>
    <latitude>41.729547105591479</latitude>
    <longitude>-71.399671869272</longitude>
    <elevation>54.986876640419943</elevation>
    <receptorHeight>5.9099999999999993</receptorHeight>
  </pointReceptor>

  <pointReceptor>
    <name>17</name>
    <latitude>41.727308139168834</latitude>
    <longitude>-71.418091960358765</longitude>
    <elevation>54.986876640419943</elevation>
    <receptorHeight>5.9099999999999993</receptorHeight>
  </pointReceptor>
</receptorSet>
```

Step 4: Define scenario and case hierarchy

A scenario contains a set of cases, which contain groups of aircraft operations, non-aircraft operations, and runup operations.

Step 4a: Define scenario properties

Define the basic scenario properties including airport information, weather data, and study time.

```
<scenario>
  <name>2004-Baseline</name>
  <startTime>2004-01-01T00:00:00</startTime>
  <duration>8784</duration> <!-- in hours -->
  <taxiModel>Sequencing</taxiModel>
  <timeInModeBasis>Performance</timeInModeBasis>
  <acftPerfModel>SAE1845</acftPerfModel>
  <bankAngle>false</bankAngle>
```

```
<sulfurConversionRate>0.005</sulfurConversionRate>
<description> for year 2004</description>
<scenarioAirportLayoutSet>
  <scenarioAirportLayout>
    <airportLayoutName>Baseline_PVD2004_layout</airportLayoutName>
    <mixingHeight>2226</mixingHeight> <!-- in feet -->
    <useHourlyMetData>true</useHourlyMetData>
    <averageTemperature>50.4</averageTemperature>       <!-- in Fahrenheit -->
    <dailyHighTemperature>69.35</dailyHighTemperature>  <!-- in Fahrenheit -->
    <dailyLowTemperature>48.65</dailyLowTemperature>    <!-- in Fahrenheit -->
    <pressure>29.92</pressure>       <!-- in inches of Hg -->
    <pressureMSL>29.92</pressureMSL> <!-- in inches of Hg -->
    <humidty>60</humidty>            <!-- in percentage -->
    <windSpeed>8</windSpeed>         <!-- in knots -->
    <windDirection>0</windDirection> <!-- in degrees -->
    <ceiling>99999.99</ceiling> <!-- in feet -->
    <visibility>50</visibility> <!-- in miles -->
  </scenarioAirportLayout>
</scenarioAirportLayoutSet>
```

Step 4b: Define the case for non-aircraft operations

This study contains two cases. The first case contains non-aircraft operations (i.e., stationary source operations). The second case contains aircraft operations and GSEs assigned to those aircraft.

The example below declares the first case (non-aircraft operations). The second case (aircraft operations) is described in the next Step 4c.

```
<caseSet>
  <case>
    <caseId>-1623425151</caseId>
    <name>2004_Baseline_NonAircraft</name>
    <startTime>2004-01-01T00:00:00</startTime>
    <duration>8784</duration>
    <stationarySourceOperationSet>
      <stationarySourceOperation>
        <refName>600kw Emergency Gen-Baseline-KPVD-2004</refName>
        <emissionsUsage>
          <yearlyValue>500</yearlyValue>
          <activityProfile>ActivityProfile-Baseline-KPVD-0-0-0</activityProfile>
        </emissionsUsage>
      </stationarySourceOperation>
    </stationarySourceOperationSet>
  </case>
```

Step 4c:Define the case for aircraft operations

This section defines aircraft operations, as well as GSEs assigned to those aircraft. In this example, a single aircraft type is used with a simplified set of assigned GSEs. In practice, a variety of aircraft types and GSEs would appear in a single study.

```
  <case>
    <caseId>466140608</caseId>
    <name>2004_Baseline_Operations</name>
    <startTime>2004-01-01T00:00:00</startTime>
    <duration>8784</duration>
    <operation>
```

```
<id>D_1</id>
<aircraftType>
  <airframeModel>Airbus A319-100 Series</airframeModel>
  <engineCode>3CM028</engineCode>
  <apuName>APU GTCP 36-300 (80HP)</apuName>
  <groundSupportEquipmentLTOOperationSet>
    <groundSupportEquipmentLTOOperation>
      <gseID>8</gseID>
      <fuelType>Diesel</fuelType>
      <horsepower>88</horsepower>
      <loadFactor>0.8</loadFactor>
      <departureOpTime>3.9</departureOpTime> <!-- in minutes -->
    </groundSupportEquipmentLTOOperation>
    <groundSupportEquipmentLTOOperation>
      <gseID>13</gseID>
      <fuelType>Gasoline</fuelType>
      <horsepower>107</horsepower>
      <loadFactor>0.55</loadFactor>
      <departureOpTime>8</departureOpTime>
      <arrivalOpTime>8</arrivalOpTime>
    </groundSupportEquipmentLTOOperation>
    <groundSupportEquipmentLTOOperation>
      <gseID>14</gseID>
      <fuelType>Gasoline</fuelType>
      <horsepower>107</horsepower>
      <loadFactor>0.5</loadFactor>
      <departureOpTime>11</departureOpTime>
      <arrivalOpTime>12</arrivalOpTime>
    </groundSupportEquipmentLTOOperation>
    <groundSupportEquipmentLTOOperation>
      <gseID>17</gseID>
      <fuelType>Diesel</fuelType>
      <horsepower>210</horsepower>
      <loadFactor>0.53</loadFactor>
      <departureOpTime>9.7</departureOpTime>
    </groundSupportEquipmentLTOOperation>
    <groundSupportEquipmentLTOOperation>
      <gseID>29</gseID>
      <fuelType>Diesel</fuelType>
      <horsepower>175</horsepower>
      <loadFactor>0.25</loadFactor>
      <departureOpTime>14</departureOpTime>
    </groundSupportEquipmentLTOOperation>
    <groundSupportEquipmentLTOOperation>
      <gseID>36</gseID>
      <fuelType>Diesel</fuelType>
      <horsepower>56</horsepower>
      <loadFactor>0.25</loadFactor>
      <arrivalOpTime>2.1</arrivalOpTime>
    </groundSupportEquipmentLTOOperation>
    <groundSupportEquipmentLTOOperation>
      <gseID>41</gseID>
      <fuelType>Diesel</fuelType>
      <horsepower>235</horsepower>
      <loadFactor>0.2</loadFactor>
      <departureOpTime>8</departureOpTime>
      <arrivalOpTime>7</arrivalOpTime>
```

```
        </groundSupportEquipmentLTOOperation>
      </groundSupportEquipmentLTOOperationSet>
    </aircraftType>
    <numOperations>366</numOperations>
    <opType>D</opType>
    <departureAirport type="ICAO">KPVD</departureAirport>
    <departureGate>AC</departureGate>
    <departureApuTime>3.5</departureApuTime> <!-- in minutes -->
    <taxiOutDuration>10.72</taxiOutDuration> <!-- in minutes -->
    <taxiInDuration>6.24</taxiInDuration>    <!-- in minutes -->
    <activityProfile>ActivityProfile-Baseline-KPVD-0-0-0</activityProfile>
    <actypeWeight>146100</actypeWeight>      <!-- in pounds -->
    <fuelSulfurContent>0.00068</fuelSulfurContent>
  </operation>

  <operation>
    <id>A_1</id>
    <aircraftType>
      <airframeModel>Airbus A319-100 Series</airframeModel>
      <engineCode>3CM028</engineCode>
      <apuName>APU GTCP 36-300 (80HP)</apuName>
      <groundSupportEquipmentLTOOperationSet>
        <groundSupportEquipmentLTOOperation>
          <gseID>8</gseID>
          <fuelType>Diesel</fuelType>
          <horsepower>88</horsepower>
          <loadFactor>0.8</loadFactor>
          <departureOpTime>3.9</departureOpTime>
        </groundSupportEquipmentLTOOperation>
        <groundSupportEquipmentLTOOperation>
          <gseID>13</gseID>
          <fuelType>Gasoline</fuelType>
          <horsepower>107</horsepower>
          <loadFactor>0.55</loadFactor>
          <departureOpTime>8</departureOpTime>
          <arrivalOpTime>8</arrivalOpTime>
        </groundSupportEquipmentLTOOperation>
        <groundSupportEquipmentLTOOperation>
          <gseID>14</gseID>
          <fuelType>Gasoline</fuelType>
          <horsepower>107</horsepower>
          <loadFactor>0.5</loadFactor>
          <departureOpTime>11</departureOpTime>
          <arrivalOpTime>12</arrivalOpTime>
        </groundSupportEquipmentLTOOperation>
        <groundSupportEquipmentLTOOperation>
          <gseID>17</gseID>
          <fuelType>Diesel</fuelType>
          <horsepower>210</horsepower>
          <loadFactor>0.53</loadFactor>
          <departureOpTime>9.7</departureOpTime>
        </groundSupportEquipmentLTOOperation>
        <groundSupportEquipmentLTOOperation>
          <gseID>29</gseID>
          <fuelType>Diesel</fuelType>
          <horsepower>175</horsepower>
          <loadFactor>0.25</loadFactor>
```

```
            <departureOpTime>14</departureOpTime>
          </groundSupportEquipmentLTOOperation>
          <groundSupportEquipmentLTOOperation>
            <gseID>36</gseID>
            <fuelType>Diesel</fuelType>
            <horsepower>56</horsepower>
            <loadFactor>0.25</loadFactor>
            <arrivalOpTime>2.1</arrivalOpTime>
          </groundSupportEquipmentLTOOperation>
          <groundSupportEquipmentLTOOperation>
            <gseID>41</gseID>
            <fuelType>Diesel</fuelType>
            <horsepower>235</horsepower>
            <loadFactor>0.2</loadFactor>
            <departureOpTime>8</departureOpTime>
            <arrivalOpTime>7</arrivalOpTime>
          </groundSupportEquipmentLTOOperation>
        </groundSupportEquipmentLTOOperationSet>
      </aircraftType>
      <numOperations>366</numOperations>
      <opType>A</opType>
      <arrivalAirport type="ICAO">KPVD</arrivalAirport>
      <arrivalGate>AC</arrivalGate>
      <arrivalApuTime>3.5</arrivalApuTime>
      <taxiOutDuration>10.72</taxiOutDuration>
      <taxiInDuration>6.24</taxiInDuration>
      <activityProfile>ActivityProfile-Baseline-KPVD-0-0-0</activityProfile>
      <actypeWeight>137800</actypeWeight>
      <fuelSulfurContent>0.00068</fuelSulfurContent>
    </operation>
  </case>
</caseSet>
```

Step 5: Full ASIF

The full ASIF, *asif_emissions_study.xml*, is located in the directory: C:\Program Files\FAA\AEDT\Examples

1. Import the full ASIF in AEDT.
2. Create an annualization.
3. Create a metric result.

Please note that both the aircraft operations and the non-aircraft operations in this study are defined using operational profiles. When running profile-based aircraft operations, the “Apply Delay & Sequencing Model on Taxi” modeling option must be selected, and operating configuration and taxi network must exist in the airport layout.

4 User-Defined ANP and BADA 4 Profiles

4.1 Overview

There are three ways of creating and adding user-defined ANP and BADA 4 profiles in an AEDT study:

- By using the profile editor in the AEDT Graphical User Interface (GUI), Equipment tab (see Section 7.2.1 in AEDT User Manual);
- Creating and importing ASIF partial; and
- Direct database injection.

Of these methods, the first two are preferred because they include application-provided constraint and error checking. The following table provides a feature summary of the the three methods.

This Chapter focuses on the ASIF method and the direct database injection method for adding user-defined profiles

- Section 4.2 and Section 4.3 provide information on creating ASIF files that can be imported using ASIF partial import and provide details that would facilitate direct database injection to create user-defined profiles.
- Section 4.4 describes how the AEDT GUI's export functionality can be used to generate ASIF files that can subsequently be edited by the user to create their own or custom ANP and BADA 4 flight profiles.

Three Different Methods of Adding User-Defined Profiles

	Validation & error checking	ANP procedural profile for fixed-wing aircraft	BADA 4 procedural profile for fixed-wing aircraft	ANP fixed-point profile for fixed-wing aircraft	ANP profiles for helicopters	Overflight profiles
Profile Editor in AEDT GUI	✓	✓	✓			
ASIF	✓	✓	✓	✓	✓	✓
Direct DB Injection		✓	✓	✓	✓	✓

It is expected that users who create and use user-defined profiles are knowledgeable about the physics of flight performance modeling and understand the significance and use of individual profile elements. Users are responsible for entering valid values that are within the expected ranges for each type of parameter. For detailed explanations of flight profiles, please refer to the AEDT Technical Manual and the AEDT User Manual.

Using non-default profiles, for review of FAA federal actions or other FAA regulatory purposes, require prior approval by the FAA office of Environment and Energy (AEE). Please refer to the AEDT User Manual, Appendix J for further information on requesting approval for use of non-default profiles

4.2 User-Defined ANP Profiles

Key Requirements for a New ANP Profile

User-defined ANP profiles can be added to an existing ANP aircraft or created in conjunction with a new ANP aircraft definition. A key requirement for a new profile is that the Profile Name cannot be a duplicate of an existing record for that aircraft type. The primary key that uniquely defines a Profile is composed of the Operation Type, Profile Name, and the Stage Length.

In addition, any user-defined ANP profiles should have a PROFILE_ID value in the FLT_ANP_AIRPLANE_PROFILES table that is both unique and greater than 100,000. When creating user-defined ANP profiles via the AEDT GUI or importing via ASIF, the requirement that the Profile ID be greater than 100,000 is automatically handled. When the user is creating user-defined ANP profiles via manual database injection, the user must ensure that this requirement is met.

ANP profile entries are stored in the FLT_ANP_AIRPLANE_PROFILES table in a study database. Each unique profile entry in this table is determined by the combination of the ANP Aircraft Type, the Operation Type, the Profile Name, and the Stage Length. The integer value for Profile ID also uniquely identifies each entry in this table. The table below provides a mapping of the input ASIF elements for ANP profiles to specific database columns.

ANP Profile – Mapping of ASIF Element to Database Table & Columns

Parameter	ASIF Element Name	Column in Table FLT_ANP_AIRPLANE_PROFILES	Reference Columns (where applicable)
ANP Aircraft Type	anpAirplaneId	ACFT_ID	FLT_ANP_AIRPLANES.ACFT_ID
Operation Type	operationType	OP_TYPE	
Profile Name	profileGroupId	PROF_ID1	
Stage Length	profileStageLength	PROF_ID2	
Profile ID	n/a	PROFILE_ID	

ANP profiles can consist of either procedure steps or fixed-points. Both types of profiles can be defined for any given ANP aircraft type.

ANP Profile – Procedure Steps

Individual steps for procedural ANP profiles are stored in the FLT_ANP_AIRPLANE_PROCEDURES table. Each unique profile in this table is determined by the combination of the ANP Aircraft Type, the Operation Type, the Profile Name, and the Stage Length. Each unique row in this table is determined by the combination of the previous four fields plus the Step Number. The table below provides a mapping of the input ASIF elements for ANP procedural steps to specific database columns.

ANP Profile, Procedural Steps – Mapping of ASIF Elements to Database Table & Columns

Parameter	ASIF Element Name	Column in Table FLT_ANP_AIRPLANE_PROCEDURES	Reference Columns (where applicable)
ANP Aircraft Type	anpAirplaneId	ACFT_ID	FLT_ANP_AIRPLANES.ACFT_ID
Operation Type	operationType	OP_TYPE	FLT_ANP_AIRPLANE_PROFILES.OP_TYPE
Profile Name	profileGroupId	PROF_ID1	FLT_ANP_AIRPLANE_PROFILES.PROF_ID1
Stage Length	profileStageLength	PROF_ID2	FLT_ANP_AIRPLANE_PROFILES.PROF_ID2
Step Number	stepNum	STEP_NUM	
Flap ID	flapId (optional)	FLAP_ID (nullable)	FLT_ANP_AIRPLANE_FLAPS.FLAP_ID
Step Type	stepType (optional)	STEP_TYPE (nullable)	
Thrust Type	thrustType (optional)	THRUST_TYPE (nullable)	
First Parameter	param1	PARAM1	
Second Parameter	param2	PARAM2	
Third Parameter	param3 (optional)	PARAM3 (nullable)	

Sample ASIF for User-Defined ANP Procedural Profile

Following is a sample ASIF block that allows for the partial import of user-defined ANP procedural profiles. Refer to the accompanying ASIF file named *UserDefinedANPProfiles-ProcedureSteps.xml* for the complete sample file.

```
<fleet>
   <anpProfileSet>
      <anpAirplaneId>1900D</anpAirplaneId>
      <profile>
         <operationType>A</operationType>
         <profileGroupId>USER</profileGroupId>
         <profileStageLength>1</profileStageLength>
         <weight>14000</weight>
         <procedureSteps>
            <step>
               <stepNum>1</stepNum>
               <flapId>ZERO-A</flapId>
               <stepType>D</stepType>
               <param1>6000</param1>
               <param2>160</param2>
               <param3>3</param3>
            </step>
            <step>
               <stepNum>2</stepNum>
               <stepType>B</stepType>
               <thrustType>V</thrustType>
               <param1>515.2</param1>
               <param2>84</param2>
               <param3>40</param3>
            </step>
            <!-- more steps -->
         </procedureSteps>
```

```
      </profile>
      <!-- additional profiles -->
   </anpProfileSet>
</fleet>
```

ANP Profile – Fixed-Point

The points of fixed-point ANP profiles are stored in the FLT_ANP_AIRPLANE_PROFILE_POINTS table. Each unique profile in this table is determined by the combination of the ANP Aircraft Type, the Operation Type, the Profile Name, and the Stage Length. Each unique row in this table is determined by the combination of the previous four fields plus the Point Number. The table below provides a mapping of the input ASIF elements for ANP fixed-point profiles to specific database columns.

ANP Profile, Fixed-Points – Mapping of ASIF Elements to Database Table & Columns

Parameter	ASIF Element Name	Column in Table FLT_ANP_AIRPLANE_PROFILE_POINTS	Reference Columns (where applicable)
ANP Aircraft Type	anpAirplaneId	ACFT_ID	FLT_ANP_AIRPLANES.ACFT_ID
Operation Type	operationType	OP_TYPE	FLT_ANP_AIRPLANE_PROFILES.OP_TYPE
Profile Name	profileGroupId	PROF_ID1	FLT_ANP_AIRPLANE_PROFILES.PROF_ID1
Stage Length	profileStageLength	PROF_ID2	FLT_ANP_AIRPLANE_PROFILES.PROF_ID2
Point Number	pointNum	PT_NUM	
Distance	distance	DISTANCE	
Altitude	altitude	ALTITUDE	
Speed	speed	SPEED	
Net Thrust per Engine	thrustSet	THR_SET	
Operation Mode	opMode (optional)	OP_MODE (nullable)	

Sample ASIF for User-Defined ANP Fixed-Point Profile

Following is a sample ASIF block that allows for the partial import of user-defined ANP fixed-point profiles. Refer to the accompanying ASIF file named *UserDefinedANPProfiles-ProfilePoints.xml* for the complete sample file.

```
<fleet>
   <anpProfileSet>
      <anpAirplaneId>1900D</anpAirplaneId>
      <profile>
         <operationType>A</operationType>
         <profileGroupId>USER</profileGroupId>
         <profileStageLength>1</profileStageLength>
         <weight>14000</weight>
         <profilePoints>
            <point>
               <pointNum>1</pointNum>
               <distance>-114487.00</distance>
               <altitude>6000.00</altitude>
               <speed>250.00</speed>
               <thrustSet>520.00</thrustSet>
```

```
            <opMode>A</opMode>
         </point>
         <point>
            <pointNum>2</pointNum>
            <distance>-57243.00</distance>
            <altitude>3000.00</altitude>
            <speed>124.00</speed>
            <thrustSet>3560.00</thrustSet>
            <opMode>A</opMode>
         </point>
         <!-- more points -->
      </profilePoints>
   </profile>
   <!-- additional profiles -->
</anpProfileSet>
</fleet>
```

4.3 User-Defined BADA 4 Profiles (for Existing BADA 4 Aircraft)

Key Requirements for a New BADA 4 Profile

User-defined BADA 4 profiles can be added to an existing BADA 4 aircraft (either system or user-created) or created in conjunction with a new BADA 4 aircraft definition. BADA 4 profile entries are stored in the FltBada4AirplaneProfile table.

A user-defined BADA 4 profile entry has several key identifiers. The first is a unique Profile ID that is a value greater than or equal to 400,000. When creating user-defined BADA 4 profiles via the AEDT GUI, or when importing new profiles via ASIF, the requirement that the Profile ID be greater than or equal to 400,000 is automatically handled. When the user is creating user-defined BADA 4 profiles via manual database injection, the user must ensure that this requirement is met.

The other required identifying components are the reference ANP Aircraft Type and the reference BADA 4 Aircraft Model. These fields are references to an existing ANP Aircraft from the FLT_ANP_AIRPLANES table (ACFT_ID field) and an existing BADA 4 Aircraft from the FLT_BADA4_ACM table (BADA4_ID). In ASIF, the BADA 4 Aircraft reference field is specified with a combination of the BADA 4 Model and the BADA 4 Engine Model from the FLT_BADA4_ACM table that uniquely identify the BADA 4 Aircraft.

The table below provides a mapping of the input ASIF elements for BADA 4 profiles to specific database columns.

BADA 4 Profile – Mapping of ASIF Elements to Database Table & Columns

Parameter	ASIF Element Name	Field Name in Table FltBada4AirplaneProfile	Reference Fields (where applicable)
Profile ID	n/a	ProfileID	
Profile Name	flightProcedure	FlightProcedure	
Reference ANP Aircraft	anpAirplaneId	AnpAirplaneID	FLT_ANP_AIRPLANES.ACFT_ID
Reference BADA4 Aircraft	bada4AirplaneModel	Bada4AirplaneID	FLT_BADA4_ACM.BADA4_ID matched using the MODEL and ENGINE fields from FLT_BADA4_ACM
Reference BADA4 Engine	bada4Engine		

Operation Type	operationType	OperationType	
Weight Class	weightClass	WeightClass	
Weight	weight	Weight	

Note that unlike the other elements, the bada4AirplaneModel and bada4Engine elements specified in ASIF are only used to determine a specific record match to a BADA4_ID value from the FLT_BADA4_ACM table and are not explicitly persisted as part of the new profile.

In AEDT 3c, only procedural profiles may be defined for user-defined BADA 4 profiles. Individual steps for BADA 4 profiles are stored in the FltBada4AirplaneProcedure table. The records for each unique profile in this table are solely determined by the Profile ID key which references the parent profile in the FltBada4AirplaneProfile table. Each row in this table has a unique identifier in the form of the auto-incremented database field of ProcedureStepID. However, each unique procedure step for any given profile is determined by the combination of the Profile ID and the Step Number.

The table below provides a mapping of the input ASIF elements for BADA 4 procedure steps to specific database columns.

BADA 4 Profile, Procedural Steps – Mapping of ASIF Elements to Database Table & Columns

Parameter	ASIF Element Name	Field Name in Table FltBada4AirplaneProcedure	Reference Fields (where applicable)
Step ID	n/a	ProcedureStepID	
Profile ID	n/a	ProfileID	FltBada4AirplaneProfile.ProfileID
Step Number	stepNumber	StepNumber	
Reference Configuration ID	configId	ConfigurationID	FLT_BADA4_AFCM_CONFIG.CONFIG_ID
Reference ANP Aircraft for Flaps	anpAirplaneId	AnpAirplaneID	FLT_ANP_AIRPLANE_FLAPS.ACFT_ID
Reference ANP Flap Setting	anpFlapId	AnpFlapID	FLT_ANP_AIRPLANE_FLAPS.FLAP_ID
Step Type	stepType	StepType	
Thrust Type	thrustType	ThrustType	
Altitude	altitude	Altitude	
Calibrated Airspeed	calibratedAirspeed	CalibratedAirspeed	
Mach Number	mach	MachNumber	
Thrust	thrust	Thrust	
Angle	angle	Angle	
Climb Rate	climbRate	ClimbRate	
Flight Segment Length	distance	Distance	
Percent Acceleration	percent	Percent	
Gear Down	gearDown	GearDown	

Sample ASIF for User-Defined BADA 4 Profile

Following is a sample ASIF block that allows for the partial import of user-defined BADA 4 profiles. Refer to the accompanying ASIF file named *UserDefinedBADA4Profiles.xml* for the complete sample file.

```
<fleet>
   <bada4ProfileSet>
      <anpAirplaneId>737300</anpAirplaneId>
      <bada4AirplaneModel>737-300</bada4AirplaneModel>
      <bada4Engine>CFM56-3B1 (20K)</bada4Engine>
      <bada4profile>
        <operationType>A</operationType>
        <flightProcedure>UserBADA4_A</flightProcedure>
        <weightClass>1</weightClass>
        <weight>102600</weight>
        <bada4ProcedureSteps>
          <step>
            <stepNumber>1</stepNumber>
            <configId>229</configId>
            <anpAirplaneId>737300</anpAirplaneId>
            <anpFlapId>ZERO</anpFlapId>
            <stepType>D</stepType>
            <altitude>6000</altitude>
            <calibratedAirspeed>250</calibratedAirspeed>
            <mach>0</mach>
            <thrust>0</thrust>
            <angle>3</angle>
            <climbRate>0</climbRate>
            <distance>0</distance>
            <percent>0</percent>
            <gearDown>0</gearDown>
          </step>
          <!-- more steps -->
         </bada4ProcedureSteps>
      </bada4profile>
      <!-- additional profiles -->
   </bada4ProfileSet>
</fleet>
```

4.4 Create User-Defined ANP and BADA 4 Profiles for New or Existing Aircraft by Using the GUI Export Aircraft Feature

AEDT 3c GUI supports adding and editing user-defined ANP and BADA 4 flight profiles of existing fixed-wing aircraft as well as creating new user-defined aircraft. This section explains how to add custom ANP and BADA 4 flight profiles to existing and new aircraft by exporting existing aircraft, modifying the exported ASIF, and reimporting the modified ASIF.

Create a New User-Defined Aircraft with Custom Profiles

Follow the steps below to create a new user-defined aircraft with custom ANP and/or BADA 4 flight profiles:

Step 1: Copy an existing system aircraft to create a new user-defined aircraft

1. In AEDT, go to the *Equipment* tab, *Aircraft*.

2. Select the aircraft to modify and click *Copy*.
3. Enter a suffix and click *Save*.
4. A new user-defined aircraft is created.

Step 2: Export the new aircraft then delete it

1. Select the new aircraft and click *Export Aircraft* button.
2. The aircraft data is exported as a partial ASIF.
3. Click the *Delete* button to delete the new aircraft. This aircraft is no longer needed, because it will be edited in the ASIF and imported back into AEDT.

Step 3: Open and edit the exported ASIF

1. Open the exported ASIF.
2. Under the <anpProfileSet> or the <bada4ProfileSet>, copy and paste one of the existing <profile> or <bada4Profile> sections.
3. Modify the new <profile> and/or <bada4profile> section by editing the profile properties. Ensure that profile names within each section are unique. Refer to the AEDT User Manual Appendix for details on how to define profiles for civil airplanes and helicopters.
4. Add additional profiles as needed.
5. Save the ASIF.

Step 4: Import the ASIF

1. In AEDT, in the *Equipment* tab, click *Import Aircraft* button, select the updated ASIF and click *Open*.The new aircraft is listed in the *Equipment* tab.
2. Select the new aircraft and confirm that custom profiles have been added.

Add Custom Profiles to Existing Aircraft

Follow the steps below to add user-defined ANP and/or BADA 4 flight profiles to existing system or user-defined aircraft:

Step 1: Export an existing aircraft and its profiles

1. In AEDT, go to the *Equipment* tab, *Aircraft*.
2. Select the aircraft to export.
3. Select the new aircraft and click *Export Aircraft* button.
4. The aircraft data is exported as a partial ASIF.

Step 2: Open and edit the exported ASIF

1. Open the exported ASIF.
2. Edit the file to only keep the <anpProfileSet> and/or the <bada4ProfileSet> sections and remove all the other sections.
3. Modify the <profile> or <bada4profile> sections by editing each profile's properties. Ensure that the Profile Name is changed for each profile to be different from any of the profile names that already exist for that aircraft. Refer to the AEDT User Manual Appendix for details on how to define profiles for civil airplanes and helicopters.
4. Add additional profiles as needed.
5. Save the ASIF.

Step 3: Import the ASIF

1. In AEDT, in the *Equipment* tab, click *Import Aircraft* button, select the updated ASIF and click *Open*.
2. Select the relevant aircraft and confirm that custom profiles have been added.

5 ASIF Design Consideration

5.1 Airport Layout and Runways

When defining an airport under the ***airportLayout*** element, users have the option to specify runway definitions using the ***runwaySet*** element. If runways are not specified in ASIF, then the runway data from the AEDT Airport database will be copied during the ASIF import.

When you add an existing airport to a study in AEDT GUI, AEDT will create a new airport layout for each instance when there has been a runway modification (e.g., extended runways or renamed runways). For example, add the KATL airport in AEDT GUI and confirm that multiple airport layouts are listed, each with different effective - expiration date range.

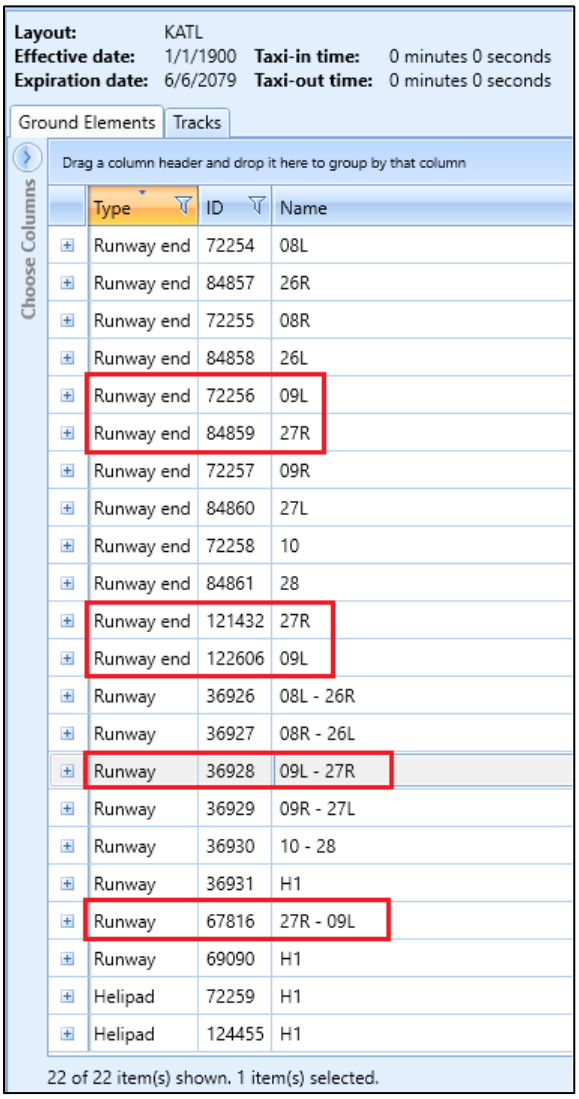
However, if you import such airport using ASIF without providing runway specifications, then AEDT will copy all the runways (both expired and the latest) from the Airport database into a single airport layout instead of creating multiple layouts. This means that the single airport layout will contain duplicate runway items once such airport is imported into AEDT.

In the example below, KATL is defined without any runway specifications. During ASIF import, AEDT will copy the entire history of KATL runways from the Airport database into the study database.

```
<airportLayout>
 <airportCode type="ICAO">KATL</airportCode>
</airportLayout>
```

The following screenshot shows the single airport layout for the KATL airport in AEDT GUI after importing the above ASIF example. Note that some items are listed twice – runway ends 09L and 27R, runways 09L-27R, and helipad H1.

In such a case, it is recommended to delete the duplicate runway ends and runways from the study. Review the effective date and expiration date of the runway ends/runways in the study database to determine which ones are expired vs. latest. Alternatively, specify runways in the ASIF using the ***runwaySet*** element.



5.2 Event Consolidation

AEDT calculates noise for all air operations (e.g. all instances of an aircraft and track) in a given case, which differs from the legacy tool, NIRS. In order to optimize noise modeling performance in AEDT, it is suggested to combine like operations in a case into a representative single air operation for entry into the ASIF.

5.3 Control Codes

The altitude and/or speed of an airplane as it passes over a track node can be controlled to some extent by assigning track controls to that track node. Track controls are an optional feature that are used to specify targets and restrictions on altitude and/or speed on tracks – altitude controls affect airplane altitude; and speed controls affect airplane speed.

Each track control has two components: a value and a code. The value establishes a reference altitude or speed (appropriate to the control type), and the code specifies how that value should be interpreted in flight analysis.

In the ASIF schema, an altitude control is assigned to a ***trackNode*** by providing the control altitude as ***trackNode/altitude***, and the control code as ***trackNode/altitude/control***. Likewise, a speed control is defined by providing ***trackNode/speed***, and the control code as ***trackNode/speed/control***. Note that no control is defined if any of the following are true:

- A value is not provided;
- A code is not provided; or
- The code provided has a value of "0" or "None".

Furthermore, AEDT will ignore the following controls:

- Altitude controls with altitude values below 500 ft. AFE.
- All speed controls, if using the Doc 29/BADA 3 performance model.
- All speed controls, if the operation is an overflight.
- All controls, if the operation is a circuit or touch-and-go.

Also note that if there are any controls defined on an overflight, there must be controls defined (and observed, per the control-ignoring rules above) on the first and last nodes of the track.

AEDT computes performance to the following extents:

- Departure and approach performance is computed between ground roll and the observed control that is trackwise furthest from ground roll.
- Overflight performance is computed from the first track point to the last track point (both of which must have observed controls).

Performance is computed as close as possible to the observed control values, subject to the airplane's performance capabilities, as described in the AEDT Technical Manual. The computed best effort to achieve these targeted values is checked against the restrictions implied by the control codes:

- Control code "1" or "At or Below": the airplane is not allowed above the value
- Control code "2" or "Match": the airplane is not allowed above or below the value
- Control code "3" or "At or Above": the airplane is not allowed below the value

If the best effort fails to comply with the restriction, the flight's performance is discarded by AEDT, logged in the error log, and its impact is excluded from environmental metrics. For more information on track controls, refer to Section 3.9.1 Track Control Flights in the AEDT Technical Manual.

When translating NIRS inputs to ASIF, omitting altitude controls with altitude values below 3000 ft AFE will lead to the most comparable result, as NIRS ignored these controls. When modeling runway to runway operations using sensor path data, define the flight path using the ASIF ***sensorPath*** element rather than the track element. Sensor paths provide more direct control of altitude for an aircraft trajectory.

5.4 Assign Default Ground Suport Equipment (GSE) to Aircraft Operations

The ***assignDefaultGse*** element in the ASIF schema is used to assign default ground support equipment (GSE) to aircraft operation instead of writing out each GSE operation.

In this departure operation example, the ***assignDefaultGse*** is set to true. This will assign the default GSE for "Airbus A319-100 Series" to the operation. The default GSEs for the Airbus A319-100 Series, departure operation are listed in the table below. The default GSE assignments for airframe is stored in the FLT_GSE_AC_DEFAULTS table.

```
<operation>
  <id>D_1</id>
  <aircraftType>
    <airframeModel>Airbus A319-100 Series</airframeModel>
    <engineCode>3CM028</engineCode>
    <apuName>APU GTCP 36-300 (80HP)</apuName>
    <assignDefaultGse>true</assignDefaultGse>
  </aircraftType>
  <numOperations>1</numOperations>
  <opType>D</opType>
  .........
  .........
```

Default GSEs for Airbus A319-100 Series – Departure Operation

GSE Name	Duration (mins)	Horsepower	Load Factor	Manufacture Year
Electric - None - Air Conditioner	23	0	0.75	NA
Diesel - ACE 180 - Air Start	7	425	0.9	NA
"Diesel - Stewart & Stevenson TUG GT-35, Douglas TBL-180 - Aircraft Tractor"	8	88	0.8	NA
Gasoline - Stewart & Stevenson TUG MA 50 - Baggage Tractor	38	107	0.55	NA
Gasoline - Stewart & Stevenson TUG 660 - Belt Loader	24	107	0.5	NA
Diesel - Hi-Way F650 - Cabin Service Truck	10	210	0.53	NA
Diesel - Hi-Way F650 - Catering Truck	8	210	0.53	NA
Diesel - F250 / F350 - Hydrant Truck	12	235	0.7	NA
Diesel - TLD 1410 - Lavatory Truck	0	56	0.25	NA
Diesel - F250 / F350 - Service Truck	8	235	0.2	NA
Electric - Gate Service - Water Service	12	0	0.2	NA

To specify individual GSEs for the aircraft operation, use the ***groundSupportEquipmentLTOOperationSet***, as follows:

```
<operation>
  <id>D_1</id>
  <aircraftType>
    <airframeModel>Airbus A319-100 Series</airframeModel>
    <engineCode>3CM028</engineCode>
    <apuName>APU GTCP 36-300 (80HP)</apuName>
    <groundSupportEquipmentLTOOperationSet>
      <groundSupportEquipmentLTOOperation>
        <gseID>8</gseID>
        <fuelType>Diesel</fuelType>
        <horsepower>88</horsepower>
        <loadFactor>0.8</loadFactor>
        <departureOpTime>3.9</departureOpTime>
      </groundSupportEquipmentLTOOperation>
      <groundSupportEquipmentLTOOperation>
        <gseID>13</gseID>
        <fuelType>Gasoline</fuelType>
        <horsepower>107</horsepower>
        <loadFactor>0.55</loadFactor>
        <departureOpTime>8</departureOpTime>
        <arrivalOpTime>8</arrivalOpTime>
      </groundSupportEquipmentLTOOperation>
      <groundSupportEquipmentLTOOperation>
        <gseID>14</gseID>
        <fuelType>Gasoline</fuelType>
        <horsepower>107</horsepower>
        <loadFactor>0.5</loadFactor>
        <departureOpTime>11</departureOpTime>
        <arrivalOpTime>12</arrivalOpTime>
      </groundSupportEquipmentLTOOperation>
      <groundSupportEquipmentLTOOperation>
        <gseID>17</gseID>
        <fuelType>Diesel</fuelType>
        <horsepower>210</horsepower>
        <loadFactor>0.53</loadFactor>
        <departureOpTime>9.7</departureOpTime>
      </groundSupportEquipmentLTOOperation>
      <groundSupportEquipmentLTOOperation>
        <gseID>29</gseID>
        <fuelType>Diesel</fuelType>
        <horsepower>175</horsepower>
        <loadFactor>0.25</loadFactor>
        <departureOpTime>14</departureOpTime>
      </groundSupportEquipmentLTOOperation>
      <groundSupportEquipmentLTOOperation>
        <gseID>36</gseID>
        <fuelType>Diesel</fuelType>
        <horsepower>56</horsepower>
        <loadFactor>0.25</loadFactor>
        <arrivalOpTime>2.1</arrivalOpTime>
```

```
      </groundSupportEquipmentLTOOperation>
      <groundSupportEquipmentLTOOperation>
        <gseID>41</gseID>
        <fuelType>Diesel</fuelType>
        <horsepower>235</horsepower>
        <loadFactor>0.2</loadFactor>
        <departureOpTime>8</departureOpTime>
        <arrivalOpTime>7</arrivalOpTime>
      </groundSupportEquipmentLTOOperation>
    </groundSupportEquipmentLTOOperationSet>
  </aircraftType>
  <numOperations>1</numOperations>
  <opType>D</opType>
  ..........
  ..........
```

6 ASIF Schema Documentation

Click on the following links to view descriptions for ASIF elements, groups, complex types and simple types.

Schema **ASIFMerge.xsd**

schema location: **ASIFMerge.xsd**
attributeFormDefault: **unqualified**
elementFormDefault: **qualified**

Elements

activityProfile
activityProfileSet
airportCapacity
airportConfig
airportConfigSet
airportLayoutSet
airportWeather
airportWeatherStation
annualization
annualizationCase
annualizationGroup
areaStationarySource
AsifXml
backbone
backboneNode
backboneNodes
boilerHeaterTypeCode
boundary
building
buildingSet
capacityPoint
case
caseSet
categoryAircraftEngine
categoryBoilerHeater
categoryDeicingArea
categoryFuelTank
categoryGenerator
categoryIncinerator
categoryOther
categoryRecordCode
categorySandSaltPile
categorySolventDegreaser
categorySurfaceCoatingPainting
categoryTrainingFire
centroid
climate
dailyProfile
dailyProfileSet
dispersionWeight
emissionsUsage
engineModeEmissionFactors
gate
gateSet
grid
groundSupportEquipmentGateAssignment
groundSupportEquipmentGateAssignmentSet
groundSupportEquipmentLTOOperation
groundSupportEquipmentLTOOperationSet
groundSupportEquipmentPopulationOperation
groundSupportEquipmentPopulationOperationSet
monthlyProfile
monthlyProfileSet
operation
operationalProfileSet
operations
options
parkingFacility
parkingFacilityOperation
parkingFacilityOperationSet
parkingFacilitySet
pointReceptor
pointStationarySource
polarGrid
polarReceptor
quarterHourlyProfile
quarterHourlyProfileSet

Groups

airportActivityGroup
annualizationGroupCase
coord2DGroup
latlonCoordGroup
nodeIdGroup
oneOrThreeCoords2DGroupSet
receptorGroup
utmCoordGroup

Complex types

aircraft
aircraftEngine
aircraftEngineMod
aircraftType
airframe
airport
airportCode
airportLayoutType
anpAirplane
anpFlaps
anpFlapsSet
anpHelicopter
anpHeloDirectivity
anpHeloDirectivitySet
anpHeloNoiseGroup
anpHeloNPDCurve
anpHeloNPDCurves
anpHeloProcedureStep
anpHeloProfile
anpHeloProfileSet
anpNoiseGroup
anpNPDCurve
anpNPDCurves
anpProcedureStep
anpProcedureSteps
anpProfile
anpProfilePoint
anpProfilePoints
anpProfileSet
anpThrustGeneral
anpThrustJet
anpThrustProp
anpThrustSet
anpTsfcCoefficients
auxiliaryPowerUnit
bada4ProcedureStep
bada4ProcedureSteps
bada4Profile
bada4ProfileSet
badaAirplane
badaAltitudeDistribution
badaAltitudeDistributionSet
badaConfig
badaConfigSet
badaFuel
badaProfile
badaProfileSet
badaThrust
coord2DType
coord3DElevationType
dispersionWeight1Type
dispersionWeight3Type
dispersionWeight5Type
dispersionWeight7Type
dispersionWeight9Type
emissionFactorSet
energyShare
engineModeEmissions
fleet
latitudeDecimalType
longitudeDecimalType
polygon2DType
polygon3DElevationType
profiles
runup
runwayEnd
scenarioAirportLayoutType

Simple types

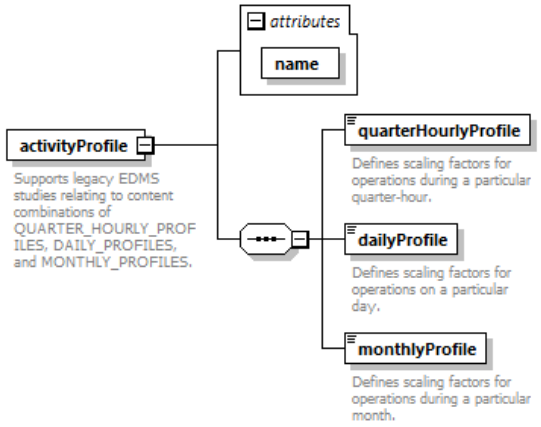
aircraftPerformanceModelType
AircraftSizeType
airframeModel
airportCodeType
anpAirplaneId
anpCoeffType
anpFlapId
anpHeloDirectId
anpHeloDirectivityId
anpHeloGroundType
anpHeloId
anpHeloNoiseId
anpHeloSideType
anpNoiseId
anpNpdNoiseType
anpNpdOpMode
anpOwnerType
anpSizeCode
apuName
bada4AirplaneModel
bada4Engine
bada4Suffix
badaAirplaneId
badaPhaseType
badaWakeType
directionType
doubleExclusive0Inclusive10
doubleExclusive10
doubleExclusive100
doubleExclusive1000
doubleExclusive10000
doubleExclusive2000
doubleExclusiveRange100
doubleInclusive1
doubleInclusive100
doubleInclusive1000
doubleInclusive10000
doubleInclusive2000
doubleInclusive24
doubleInclusive4000
doubleInclusiveRange0to600
doubleInclusiveRange1to30
doubleMin0
emissionsSourceType
emissionsUnitsType
empty-string
engineCode
engineModCode
engineModel
engineType
floatExclusive0Inclusive10
floatExclusive10
floatExclusive100
floatExclusive1000
floatExclusive10000
floatExclusive2000
floatExclusiveRange100
floatInclusive1
floatInclusive100
floatInclusive1000
floatInclusive10000
floatInclusive2000
floatInclusive24
floatInclusive4000
floatInclusiveRange1to30
floatInclusiveRange32to600
fuelType

receptorSet
recordCode
roadway
roadwayOperation
roadwayOperationSet
roadwaySet
runway
runwayAssignment
runwayAssignmentSet
runwaySet
scenario
scenarioAirportLayoutSet
sensorNode
sensorPath
stationarySource
stationarySourceOperation
stationarySourceOperationSet
stationarySourceSet
study
subtrack
taxiNode
taxiNodeSet
taxipath
taxipathSet
taxiTime
taxiway
taxiwaySet
track
trackNode
trackNodes
trackOpSet
trackref
trackSet
trackVector
trackVectors
userDefinedAirportSet
userGroundSupportEquipment
userGroundSupportEquipmentSet
vehicleEmissionFactors
volumeStationarySource
weatherData
windRose
windRoseData
windRoseStation

groundVehicleType
int0to23
int0to360
int0to5
int0to87
int1to13
int1to15
int1to2
int1to25
int1to4
int1to5
int1to8
int1to93
int5to65
int6to13
int89to148
latitudeDMSType
longitudeDMSType
nodeControlType
opType
originSourceType
profileType
quarterHourMinutes
string1
string10
string100
string11
string12
string14
string15
string16
string2
string20
string200
string25
string255
string3
string30
string32
string4
string40
string42
string5
string50
string6
string64
string66
string7
string8
string9
studyType
taxiModelType
timeInModeBasisType
trackType
trainingFireFuelType
vectorTrackType
wingType
yesNoType

element **activityProfile**

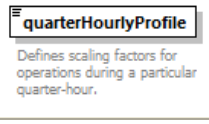
diagram	

	
properties	content complex
children	**quarterHourlyProfile** **dailyProfile** **monthlyProfile**
used by	element **activityProfileSet**
attributes	Name Type Use Default Fixed Annotation name **string100** required
annotation	documentation Supports legacy EDMS studies relating to content combinations of QUARTER_HOURLY_PROFILES, DAILY_PROFILES, and MONTHLY_PROFILES.

attribute **activityProfile/@name**

type	**string100**
properties	use required
facets	Kind Value Annotation minLength 0 maxLength 100

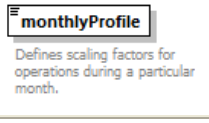
element **activityProfile/quarterHourlyProfile**

diagram	
type	**string100**
properties	content simple
used by	element **quarterHourlyProfileSet**
facets	Kind Value Annotation minLength 0 maxLength 100
annotation	documentation Defines scaling factors for operations during a particular quarter-hour.

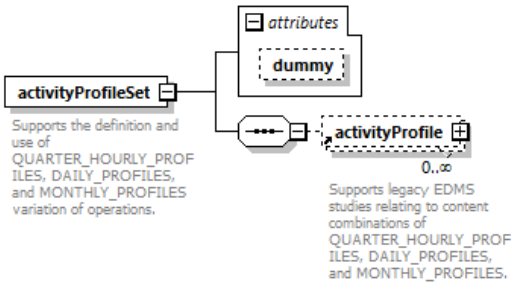
element **activityProfile/dailyProfile**

diagram	
type	**string100**
properties	content simple
used by	element **dailyProfileSet**
facets	Kind Value Annotation minLength 0 maxLength 100
annotation	documentation Defines scaling factors for operations on a particular day.

element **activityProfile/monthlyProfile**

diagram	
type	**string100**
properties	content simple
used by	element **monthlyProfileSet**
facets	Kind Value Annotation minLength 0 maxLength 100
annotation	documentation Defines scaling factors for operations during a particular month.

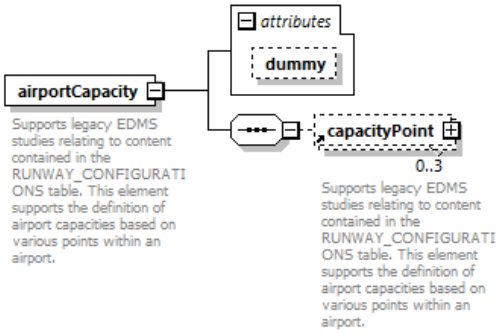
element **activityProfileSet**

diagram	
properties	content complex
children	**activityProfile**
used by	element **operationalProfileSet** complexType **airportLayoutType**
attributes	Name Type Use Default Fixed Annotation dummy **xs:int** optional
annotation	documentation Supports the definition and use of QUARTER_HOURLY_PROFILES, DAILY_PROFILES, and MONTHLY_PROFILES variation of operations.

attribute **activityProfileSet/@dummy**

type	**xs:int**
properties	use optional

element **airportCapacity**

diagram	
properties	content complex
children	**capacityPoint**
used by	element **airportConfig** complexTypes **airportLayoutType** **scenarioAirportLayoutType**
attributes	Name Type Use Default Fixed Annotation dummy **xs:int** optional

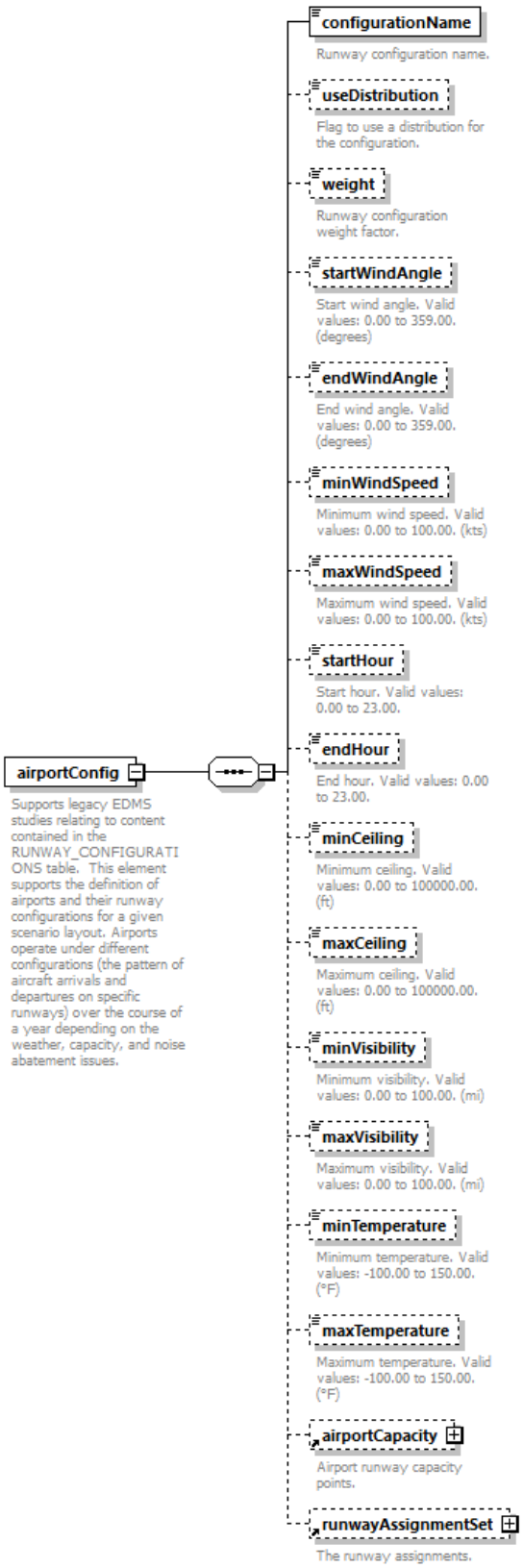
annotation	documentation Supports legacy EDMS studies relating to content contained in the RUNWAY_CONFIGURATIONS table. This element supports the definition of airport capacities based on various points within an airport.

attribute **airportCapacity/@dummy**

type	**xs:int**
properties	use optional

element **airportConfig**

diagram

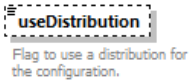


properties	content complex
children	**configurationName useDistribution weight startWindAngle endWindAngle minWindSpeed maxWindSpeed startHour endHour minCeiling maxCeiling minVisibility maxVisibility minTemperature maxTemperature airportCapacity runwayAssignmentSet**
used by	element **airportConfigSet**
annotation	documentation Supports legacy EDMS studies relating to content contained in the RUNWAY_CONFIGURATIONS table. This element supports the definition of airports and their runway configurations for a given scenario layout. Airports operate under different configurations (the pattern of aircraft arrivals and departures on specific runways) over the course of a year depending on the weather, capacity, and noise abatement issues.

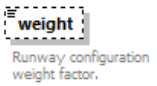
element **airportConfig/configurationName**

diagram	
type	**string100**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 100
annotation	documentation Runway configuration name.

element **airportConfig/useDistribution**

diagram	
type	**xs:boolean**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Flag to use a distribution for the configuration.

element **airportConfig/weight**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Runway configuration weight factor.

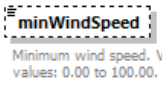
element **airportConfig/startWindAngle**

diagram	
type	**int0to360**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0 maxExclusive 360
annotation	documentation Start wind angle. Valid values: 0.00 to 359.00. (degrees)

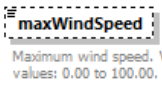
element **airportConfig/endWindAngle**

diagram	
type	**int0to360**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0 maxExclusive 360
annotation	documentation End wind angle. Valid values: 0.00 to 359.00. (degrees)

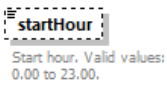
element **airportConfig/minWindSpeed**

diagram	
type	**doubleExclusive100**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0 maxExclusive 100
annotation	documentation Minimum wind speed. Valid values: 0.00 to 100.00. (kts)

element **airportConfig/maxWindSpeed**

diagram	
type	**doubleExclusive100**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0 maxExclusive 100
annotation	documentation Maximum wind speed. Valid values: 0.00 to 100.00. (kts)

element **airportConfig/startHour**

diagram	
type	**doubleInclusive24**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0 maxInclusive 24
annotation	documentation Start hour. Valid values: 0.00 to 23.00.

element **airportConfig/endHour**

diagram	endHour End hour. Valid values: 0.00 to 23.00.
type	**doubleInclusive24**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0 maxInclusive 24
annotation	documentation End hour. Valid values: 0.00 to 23.00.

element **airportConfig/minCeiling**

diagram	minCeiling Minimum ceiling. Valid values: 0.00 to 100000.00. (ft)
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Minimum ceiling. Valid values: 0.00 to 100000.00. (ft)

element **airportConfig/maxCeiling**

diagram	maxCeiling Maximum ceiling. Valid values: 0.00 to 100000.00. (ft)
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Maximum ceiling. Valid values: 0.00 to 100000.00. (ft)

element **airportConfig/minVisibility**

diagram	minVisibility Minimum visibility. Valid values: 0.00 to 100.00. (mi)
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Minimum visibility. Valid values: 0.00 to 100.00. (mi)

element **airportConfig/maxVisibility**

diagram	maxVisibility Maximum visibility. Valid values: 0.00 to 100.00. (mi)
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple

annotation	documentation Maximum visibility. Valid values: 0.00 to 100.00. (mi)

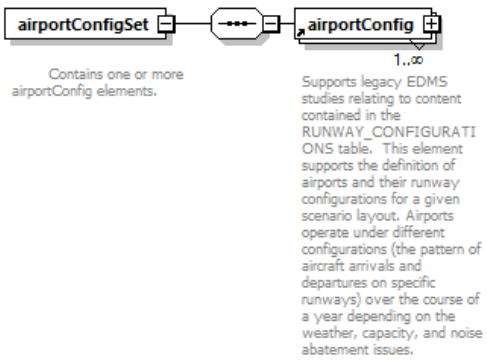
element **airportConfig/minTemperature**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Minimum temperature. Valid values: -100.00 to 150.00. (°F)

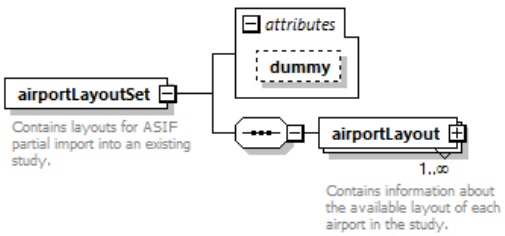
element **airportConfig/maxTemperature**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Maximum temperature. Valid values: -100.00 to 150.00. (°F)

element **airportConfigSet**

diagram	
properties	content complex
children	**airportConfig**
used by	complexTypes **airportLayoutType** **scenarioAirportLayoutType**
annotation	documentation Contains one or more airportConfig elements.

element **airportLayoutSet**

diagram	
properties	content complex

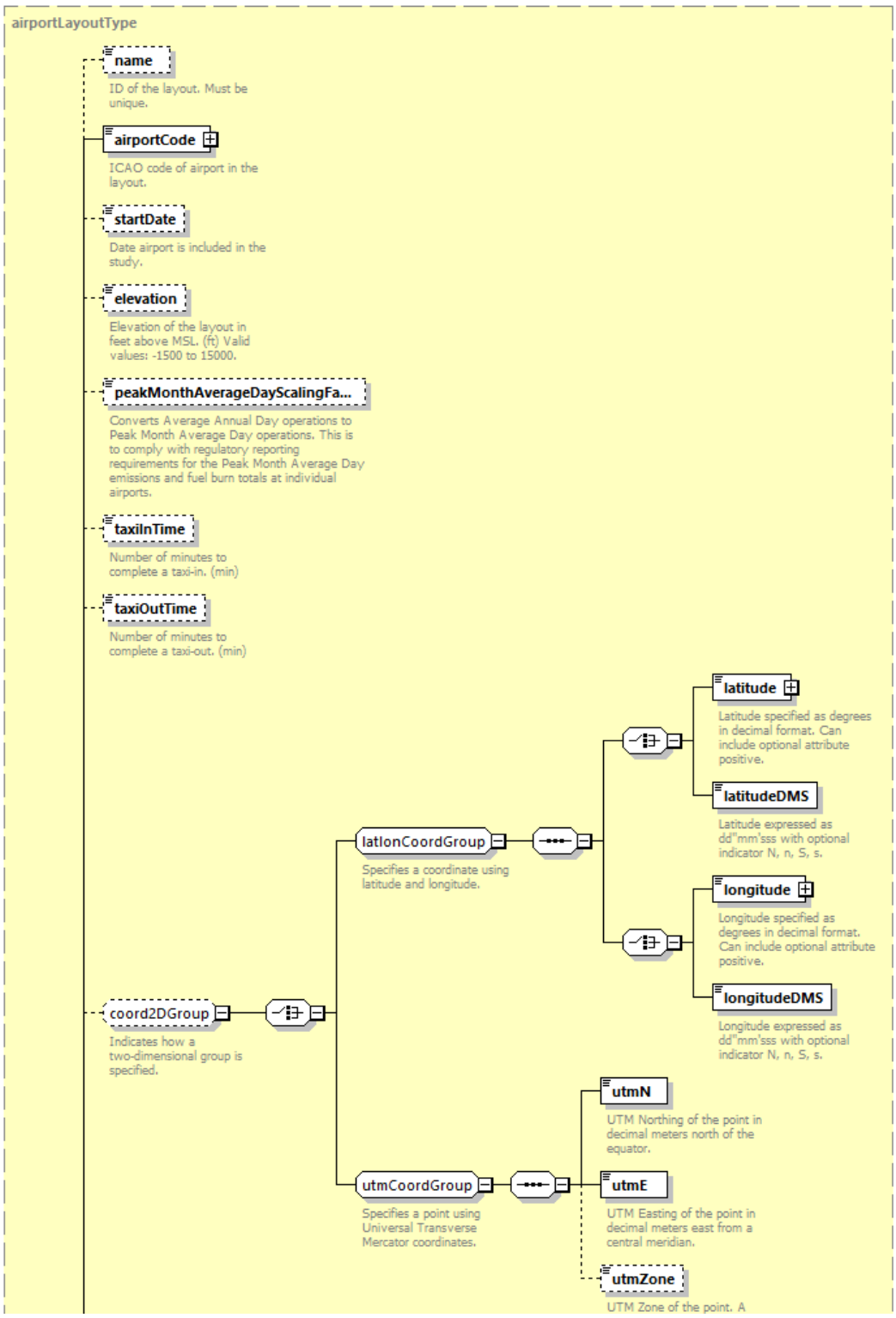
children	**airportLayout**
used by	elements **AsifXml** **study**
attributes	Name Type Use Default Fixed Annotation dummy **xs:int** optional
annotation	documentation Contains layouts for ASIF partial import into an existing study.

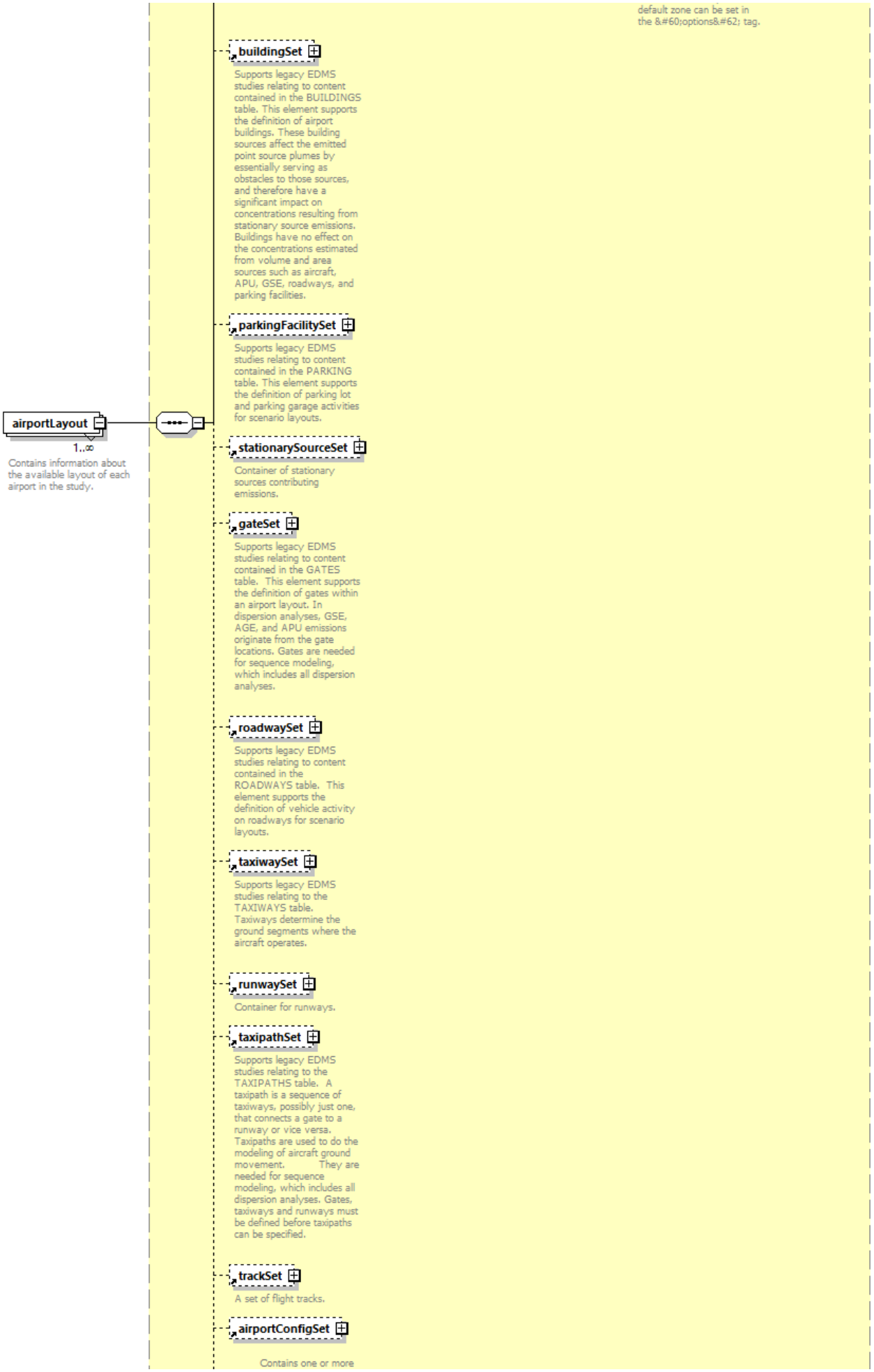
attribute **airportLayoutSet/@dummy**

type	**xs:int**
properties	use optional

element **airportLayoutSet/airportLayout**

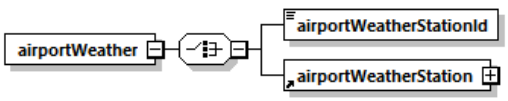
diagram



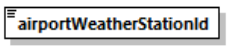

default zone can be set in the <options> tag.
buildingSet
Supports legacy EDMS studies relating to content contained in the BUILDINGS table. This element supports the definition of airport buildings. These building sources affect the emitted point source plumes by essentially serving as obstacles to those sources, and therefore have a significant impact on concentrations resulting from stationary source emissions. Buildings have no effect on the concentrations estimated from volume and area sources such as aircraft, APU, GSE, roadways, and parking facilities.
parkingFacilitySet
Supports legacy EDMS studies relating to content contained in the PARKING table. This element supports the definition of parking lot and parking garage activities for scenario layouts.
airportLayout
1..∞
Contains information about the available layout of each airport in the study.
stationarySourceSet
Container of stationary sources contributing emissions.
gateSet
Supports legacy EDMS studies relating to content contained in the GATES table. This element supports the definition of gates within an airport layout. In dispersion analyses, GSE, AGE, and APU emissions originate from the gate locations. Gates are needed for sequence modeling, which includes all dispersion analyses.
roadwaySet
Supports legacy EDMS studies relating to content contained in the ROADWAYS table. This element supports the definition of vehicle activity on roadways for scenario layouts.
taxiwaySet
Supports legacy EDMS studies relating to the TAXIWAYS table. Taxiways determine the ground segments where the aircraft operates.
runwaySet
Container for runways.
taxipathSet
Supports legacy EDMS studies relating to the TAXIPATHS table. A taxipath is a sequence of taxiways, possibly just one, that connects a gate to a runway or vice versa. Taxipaths are used to do the modeling of aircraft ground movement. They are needed for sequence modeling, which includes all dispersion analyses. Gates, taxiways and runways must be defined before taxipaths can be specified.
trackSet
A set of flight tracks.
airportConfigSet
Contains one or more

type	**airportLayoutType**
properties	minOcc 1 maxOcc unbounded content complex
children	**name** **airportCode** **startDate** **elevation** **peakMonthAverageDayScalingFactor** **taxiInTime** **taxiOutTime** **latitude** **latitudeDMS** **longitude** **longitudeDMS** **utmN** **utmE** **utmZone** **buildingSet** **parkingFacilitySet** **stationarySourceSet** **gateSet** **roadwaySet** **taxiwaySet** **runwaySet** **taxipathSet** **trackSet** **airportConfigSet** **airportCapacity** **quarterHourlyProfileSet** **dailyProfileSet** **monthlyProfileSet** **activityProfileSet**
annotation	documentation Contains information about the available layout of each airport in the study.

element **airportWeather**

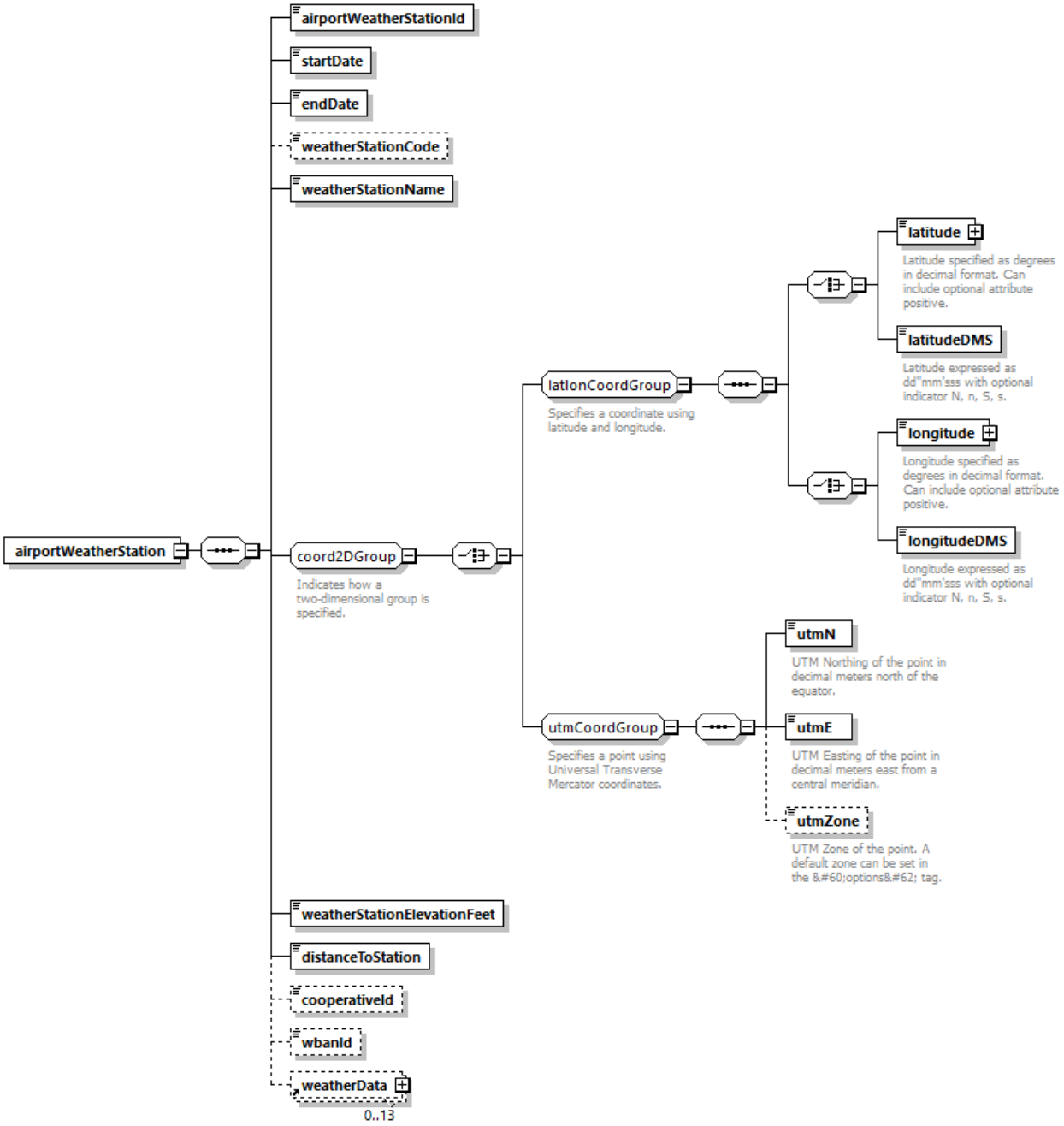
diagram	
properties	content complex
children	**airportWeatherStationId** **airportWeatherStation**
used by	complexType **airport**

element **airportWeather/airportWeatherStationId**

diagram	
type	**xs:int**
properties	content simple

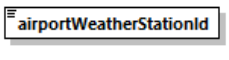
element **airportWeatherStation**

diagram	

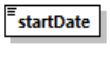


properties	content complex
children	**airportWeatherStationId startDate endDate weatherStationCode weatherStationName latitude latitudeDMS longitude longitudeDMS utmN utmE utmZone weatherStationElevationFeet distanceToStation cooperativeId wbanId weatherData**
used by	element **airportWeather**

element **airportWeatherStation/airportWeatherStationId**

diagram	
type	**xs:int**
properties	content simple

element **airportWeatherStation/startDate**

diagram	
type	**xs:date**
properties	content simple

element **airportWeatherStation/endDate**

diagram	endDate
type	**xs:date**
properties	content simple

element **airportWeatherStation/weatherStationCode**

diagram	weatherStationCode
type	**string5**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 5

element **airportWeatherStation/weatherStationName**

diagram	weatherStationName
type	**string25**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 25

element **airportWeatherStation/weatherStationElevationFeet**

diagram	weatherStationElevationFeet
type	**xs:int**
properties	content simple

element **airportWeatherStation/distanceToStation**

diagram	distanceToStation
type	**xs:double**
properties	content simple

element **airportWeatherStation/cooperativeId**

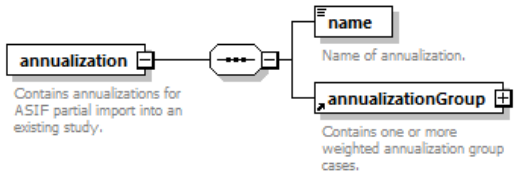
diagram	cooperativeId
type	**string6**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 6

element **airportWeatherStation/wbanId**

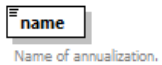
diagram	wbanId
type	**string5**
properties	minOcc 0 maxOcc 1

	content simple
facets	Kind Value Annotation minLength 0 maxLength 5

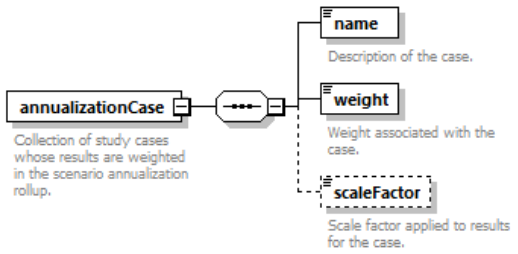
element **annualization**

diagram	
properties	content complex
children	**name annualizationGroup**
used by	elements **AsifXml scenario**
annotation	documentation Contains annualizations for ASIF partial import into an existing study.

element **annualization/name**

diagram	
type	**string255**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Name of annualization.

element **annualizationCase**

diagram	
properties	content complex
children	**name weight scaleFactor**
used by	group **annualizationGroupCase**
annotation	documentation Collection of study cases whose results are weighted in the scenario annualization rollup.

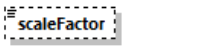
element **annualizationCase/name**

diagram	
type	**string255**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Description of the case.

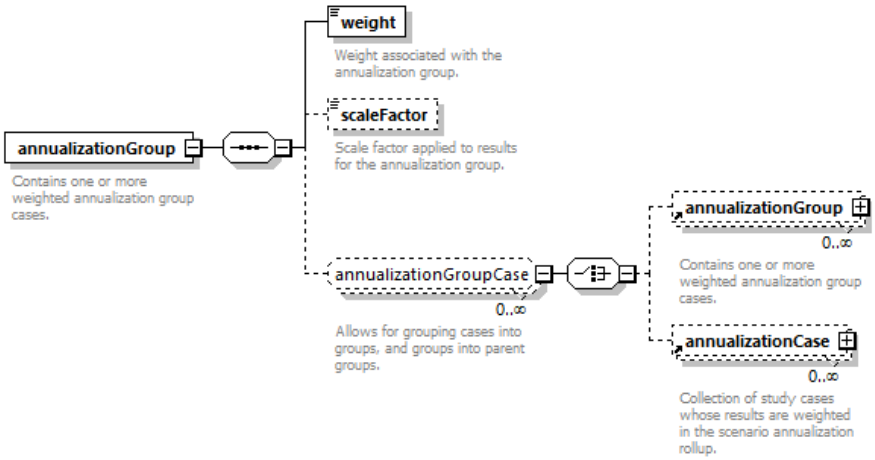
element **annualizationCase/weight**

diagram	
type	**xs:double**
properties	content simple
annotation	documentation Weight associated with the case.

element **annualizationCase/scaleFactor**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 1
annotation	documentation Scale factor applied to results for the case.

element **annualizationGroup**

diagram	
properties	content complex
children	**weight** **scaleFactor** **annualizationGroup** **annualizationCase**
used by	element **annualization** group **annualizationGroupCase**
annotation	documentation Contains one or more weighted annualization group cases.

element **annualizationGroup/weight**

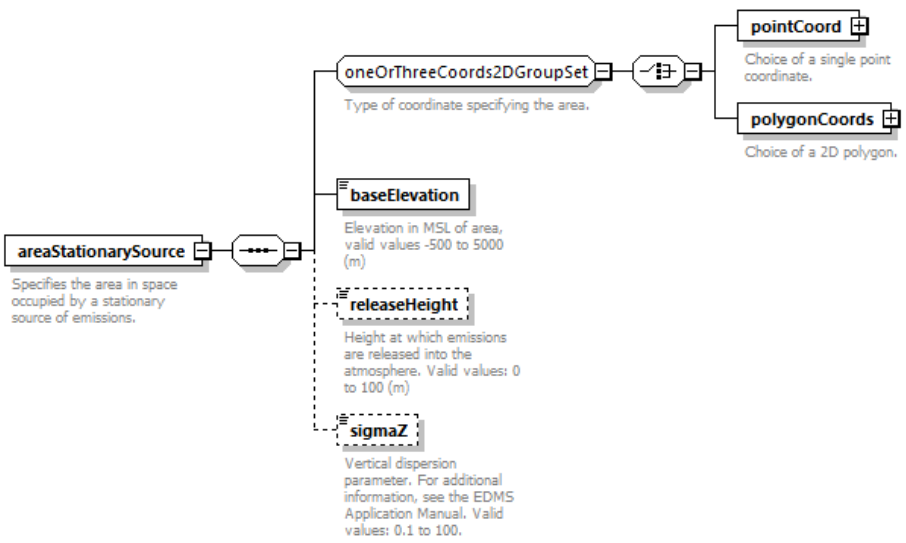
diagram	
type	**xs:double**
properties	content simple
annotation	documentation Weight associated with the annualization group.

element **annualizationGroup/scaleFactor**

diagram	

	scaleFactor Scale factor applied to results for the annualization group.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 1
annotation	documentation Scale factor applied to results for the annualization group.

element **areaStationarySource**

diagram	
properties	content complex
children	**pointCoord** **polygonCoords** **baseElevation** **releaseHeight** **sigmaZ**
used by	element **stationarySource**
annotation	documentation Specifies the area in space occupied by a stationary source of emissions.

element **areaStationarySource/baseElevation**

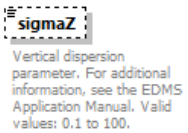
diagram	**baseElevation** Elevation in MSL of area, valid values -500 to 5000 (m)
type	**xs:double**
properties	content simple
annotation	documentation Elevation in MSL of area, valid values -500 to 5000 (m)

element **areaStationarySource/releaseHeight**

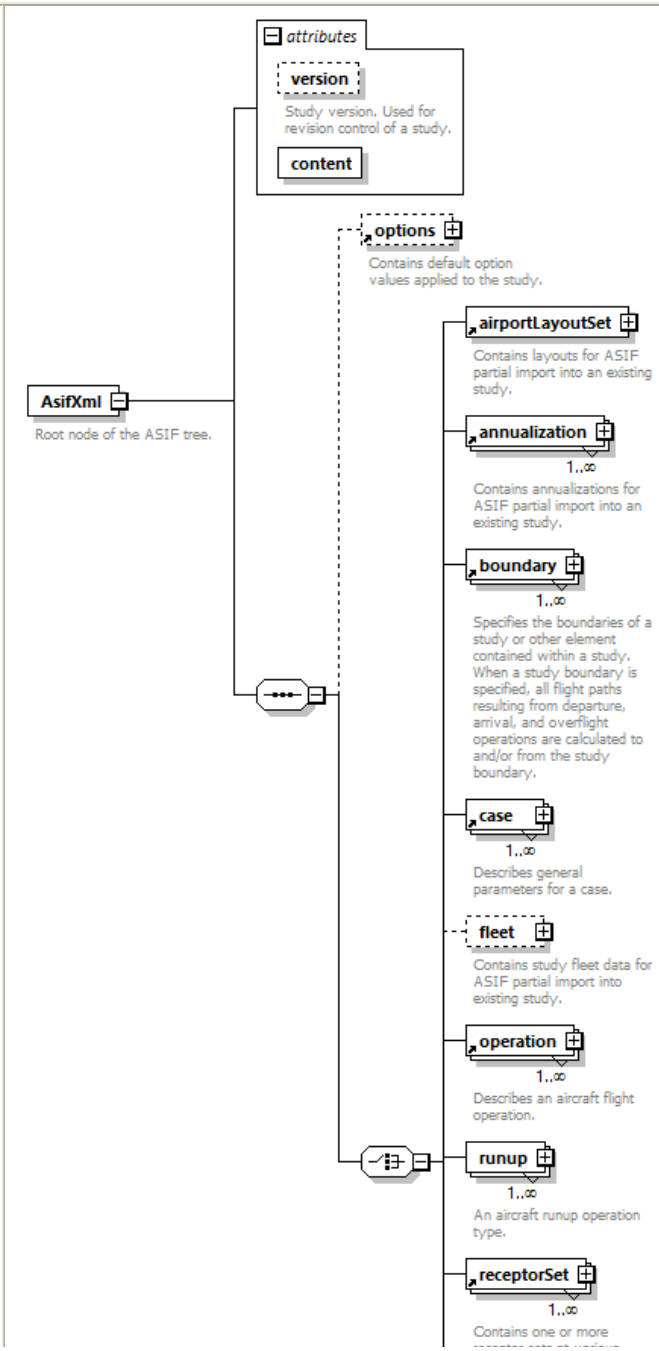
diagram	**releaseHeight** Height at which emissions are released into the atmosphere. Valid values: 0 to 100 (m)
type	**doubleInclusive100**
properties	minOcc 0 maxOcc 1 content simple default 0
facets	Kind Value Annotation minInclusive 0

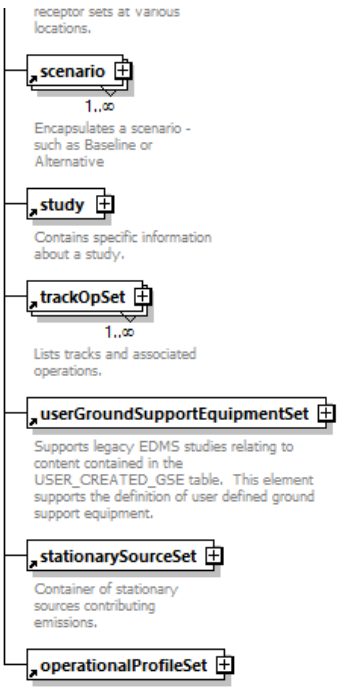
	maxInclusive 100
annotation	documentation Height at which emissions are released into the atmosphere. Valid values: 0 to 100 (m)

element **areaStationarySource/sigmaZ**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 0
annotation	documentation Vertical dispersion parameter. For additional information, see the EDMS Application Manual. Valid values: 0.1 to 100.

element **AsifXml**

diagram	



properties	content complex
children	**options airportLayoutSet annulization boundary case fleet operation runup receptorSet scenario study trackOpSet userGroundSupportEquipmentSet stationarySourceSet operationalProfileSet**

attributes	Name	Type	Use	Default	Fixed	Annotation
	version	**string16**	optional			documentation Study version. Used for revision control of a study.
	content	**derived by: xs:string**	required			

annotation	documentation Root node of the ASIF tree.

attribute **AsifXml/@version**

type	**string16**
properties	use optional

facets	Kind	Value	Annotation
	minLength	0	
	maxLength	16	

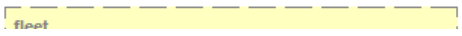
annotation	documentation Study version. Used for revision control of a study.

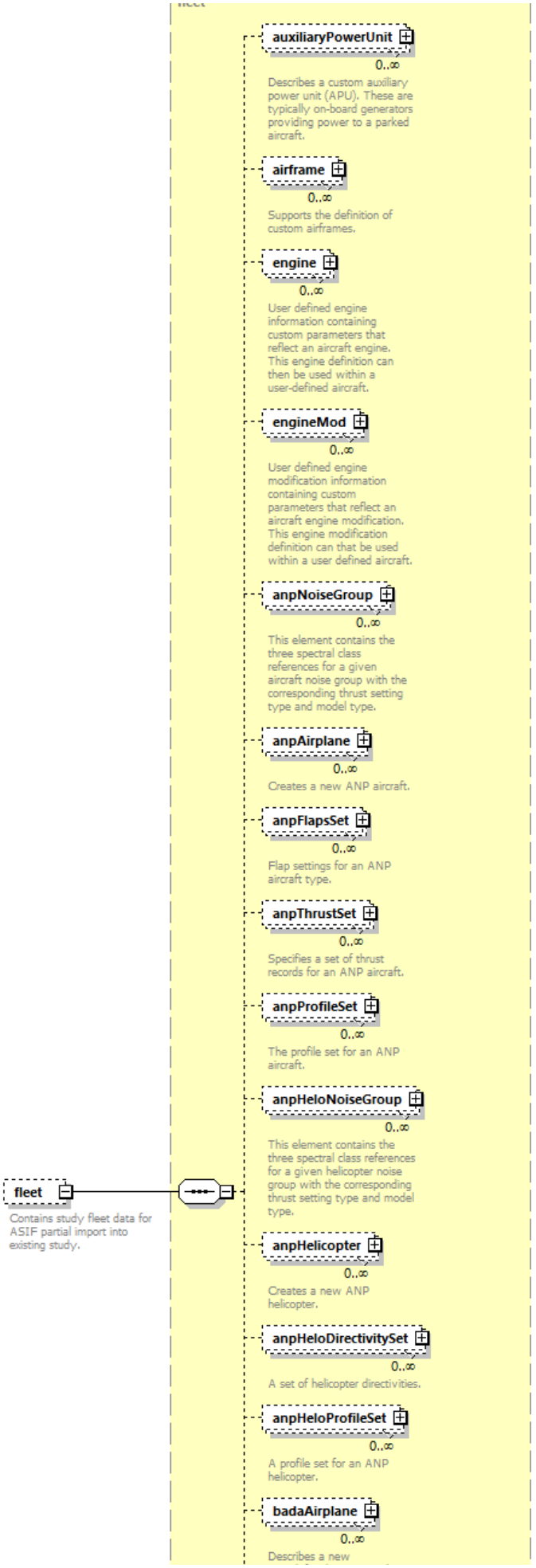
attribute **AsifXml/@content**

type	restriction of **xs:string**
properties	use required

facets	Kind	Value	Annotation
	enumeration	airportLayoutSet	
	enumeration	annualization	
	enumeration	case	
	enumeration	fleet	
	enumeration	receptorSets	
	enumeration	scenario	
	enumeration	study	
	enumeration	boundary	
	enumeration	trackOpSet	
	enumeration	runup	
	enumeration	userGroundSupportEquipmentSet	
	enumeration	stationarySourceSet	
	enumeration	operationalProfileSet	

element **AsifXml/fleet**

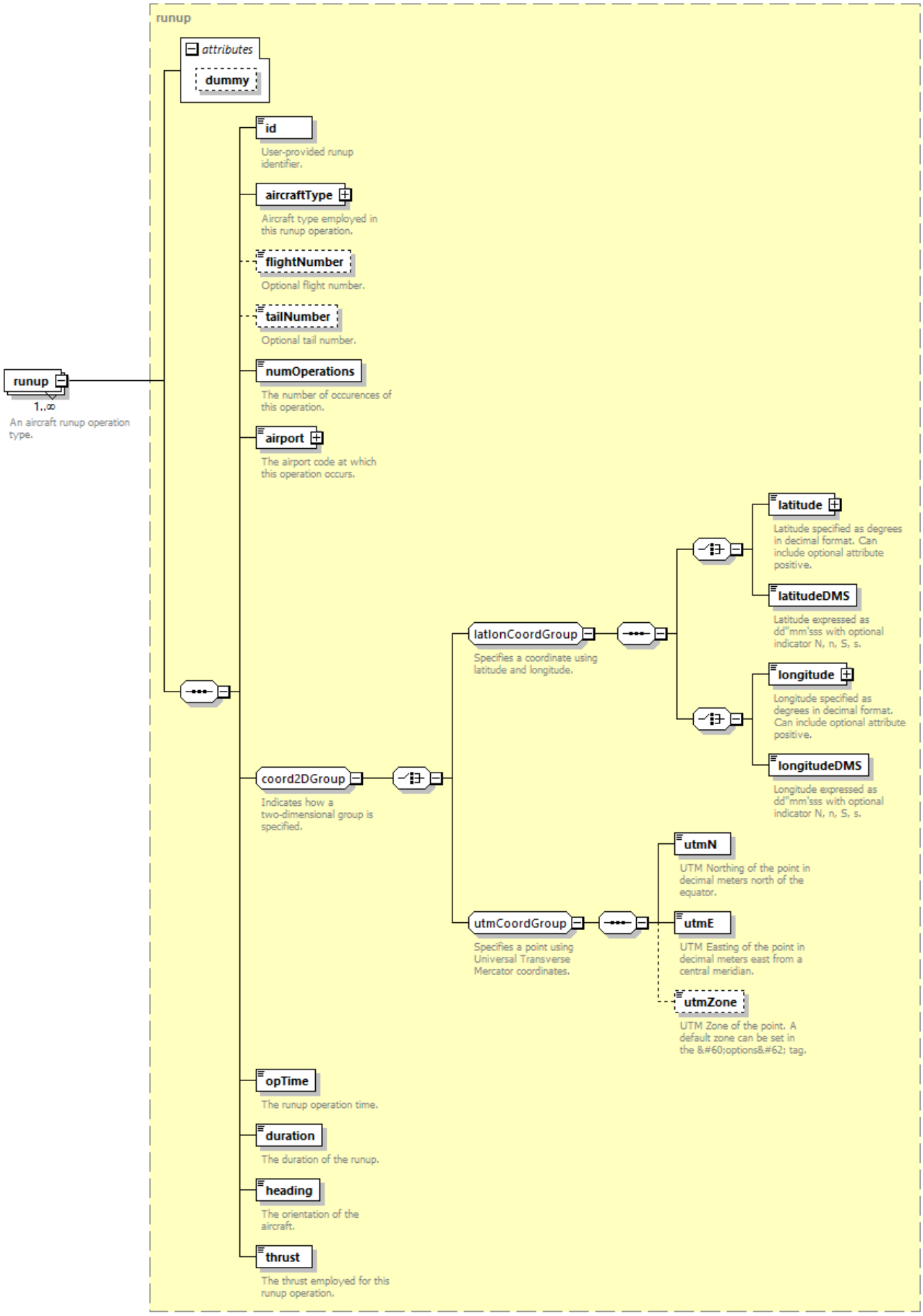
diagram	


fleet
Contains study fleet data for ASIF partial import into existing study.
auxiliaryPowerUnit
0..∞
Describes a custom auxiliary power unit (APU). These are typically on-board generators providing power to a parked aircraft.
airframe
0..∞
Supports the definition of custom airframes.
engine
0..∞
User defined engine information containing custom parameters that reflect an aircraft engine. This engine definition can then be used within a user-defined aircraft.
engineMod
0..∞
User defined engine modification information containing custom parameters that reflect an aircraft engine modification. This engine modification definition can that be used within a user defined aircraft.
anpNoiseGroup
0..∞
This element contains the three spectral class references for a given aircraft noise group with the corresponding thrust setting type and model type.
anpAirplane
0..∞
Creates a new ANP aircraft.
anpFlapsSet
0..∞
Flap settings for an ANP aircraft type.
anpThrustSet
0..∞
Specifies a set of thrust records for an ANP aircraft.
anpProfileSet
0..∞
The profile set for an ANP aircraft.
anpHeloNoiseGroup
0..∞
This element contains the three spectral class references for a given helicopter noise group with the corresponding thrust setting type and model type.
anpHelicopter
0..∞
Creates a new ANP helicopter.
anpHeloDirectivitySet
0..∞
A set of helicopter directivities.
anpHeloProfileSet
0..∞
A profile set for an ANP helicopter.
badaAirplane
0..∞
Describes a new

type	**fleet**
properties	minOcc 0 maxOcc 1 content complex
children	**auxiliaryPowerUnit airframe engine engineMod anpNoiseGroup anpAirplane anpFlapsSet anpThrustSet anpProfileSet anpHeloNoiseGroup anpHelicopter anpHeloDirectivitySet anpHeloProfileSet badaAirplane badaAltitudeDistributionSet badaDefaultAltitudeDistributionSet badaProfileSet badaConfigSet badaFuel badaThrust bada4ProfileSet aircraft energyShare**
annotation	documentation Contains study fleet data for ASIF partial import into existing study.

element **AsifXml/runup**

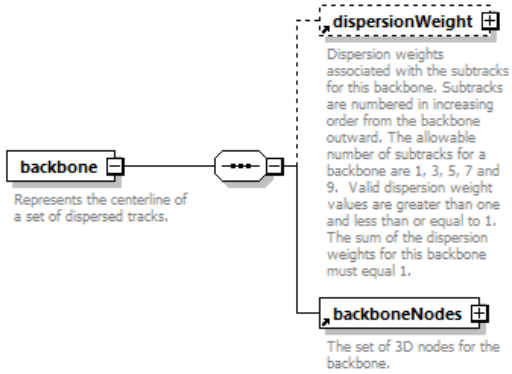
diagram	



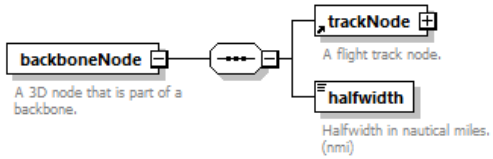
type	**runup**
properties	minOcc 1 maxOcc **unbounded**

	content complex
children	**id aircraftType flightNumber tailNumber numOperations airport latitude latitudeDMS longitude longitudeDMS utmN utmE utmZone opTime duration heading thrust**
attributes	Name Type Use Default Fixed Annotation dummy **xs:int** optional
annotation	documentation An aircraft runup operation type.

element **backbone**

diagram	
properties	content complex
children	**dispersionWeight backboneNodes**
used by	element **track**
annotation	documentation Represents the centerline of a set of dispersed tracks.

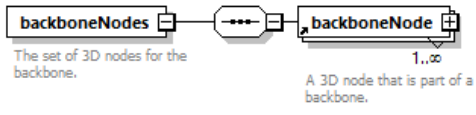
element **backboneNode**

diagram	
properties	content complex
children	**trackNode halfwidth**
used by	element **backboneNodes**
annotation	documentation A 3D node that is part of a backbone.

element **backboneNode/halfwidth**

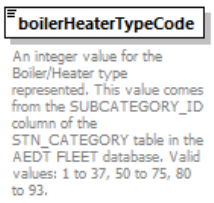
diagram	
type	**xs:double**
properties	content simple
annotation	documentation Halfwidth in nautical miles. (nmi)

element **backboneNodes**

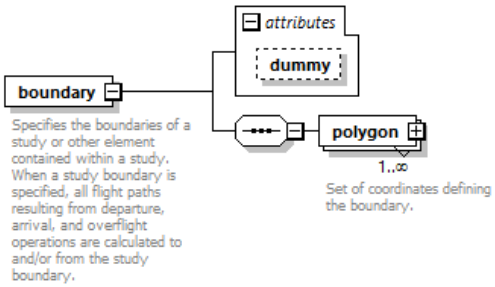
diagram	
properties	content complex
children	**backboneNode**

used by	element **backbone**
annotation	documentation The set of 3D nodes for the backbone.

element **boilerHeaterTypeCode**

diagram	
type	union of (restriction of **xs:integer**, restriction of **xs:integer**, restriction of **xs:integer**)
properties	content simple
used by	element **categoryBoilerHeater**
annotation	documentation An integer value for the Boiler/Heater type represented. This value comes from the SUBCATEGORY_ID column of the STN_CATEGORY table in the AEDT FLEET database. Valid values: 1 to 37, 50 to 75, 80 to 93.

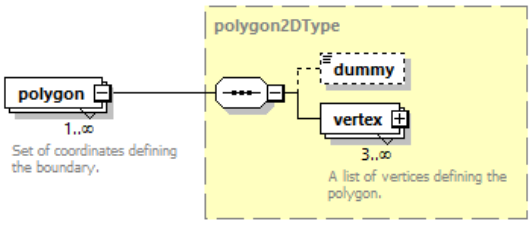
element **boundary**

diagram	
properties	content complex
children	**polygon**
used by	elements **AsifXml** **study**
attributes	Name Type Use Default Fixed Annotation dummy **xs:int** optional
annotation	documentation Specifies the boundaries of a study or other element contained within a study. When a study boundary is specified, all flight paths resulting from departure, arrival, and overflight operations are calculated to and/or from the study boundary.

attribute **boundary/@dummy**

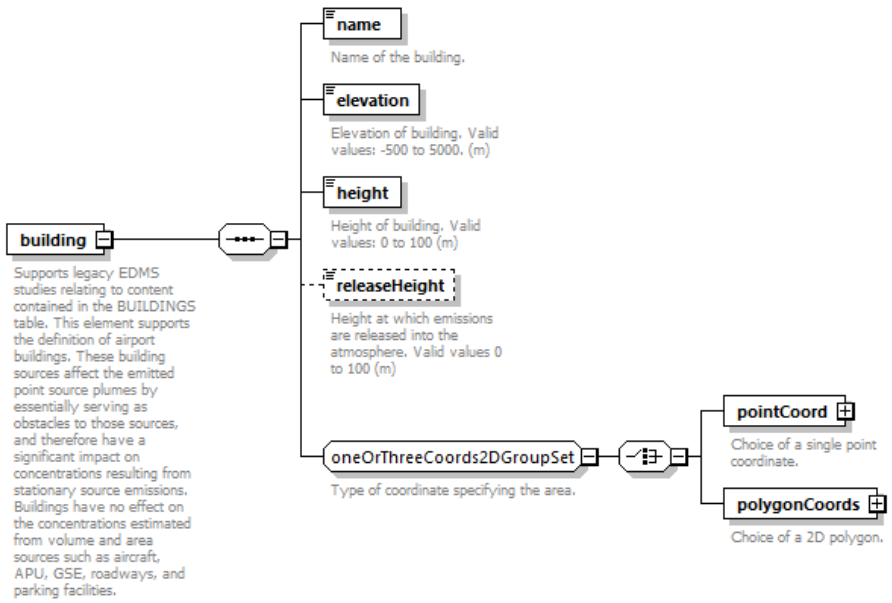
type	**xs:int**
properties	use optional

element **boundary/polygon**

diagram	
type	**polygon2DType**
properties	minOcc 1 maxOcc unbounded content complex
children	**dummy** **vertex**

annotation	documentation Set of coordinates defining the boundary.

element **building**

diagram	
properties	content complex
children	**name elevation height releaseHeight pointCoord polygonCoords**
used by	element **buildingSet**
annotation	documentation Supports legacy EDMS studies relating to content contained in the BUILDINGS table. This element supports the definition of airport buildings. These building sources affect the emitted point source plumes by essentially serving as obstacles to those sources, and therefore have a significant impact on concentrations resulting from stationary source emissions. Buildings have no effect on the concentrations estimated from volume and area sources such as aircraft, APU, GSE, roadways, and parking facilities.

element **building/name**

diagram	
type	**string255**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Name of the building.

element **building/elevation**

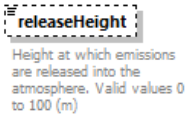
diagram	
type	**xs:double**
properties	content simple
annotation	documentation Elevation of building. Valid values: -500 to 5000. (m)

element **building/height**

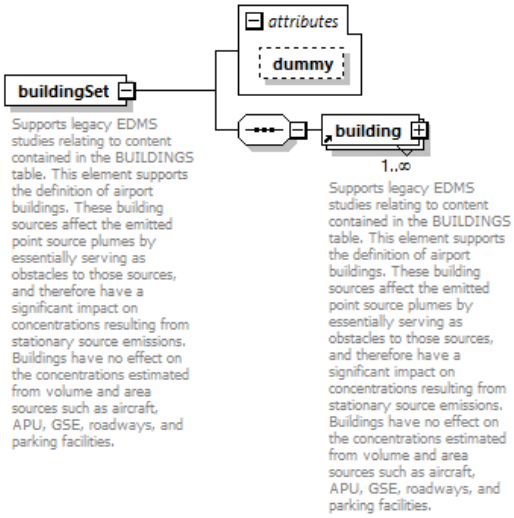
diagram	

type	**xs:double**
properties	content simple
annotation	documentation Height of building. Valid values: 0 to 100 (m)

element **building/releaseHeight**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Height at which emissions are released into the atmosphere. Valid values 0 to 100 (m)

element **buildingSet**

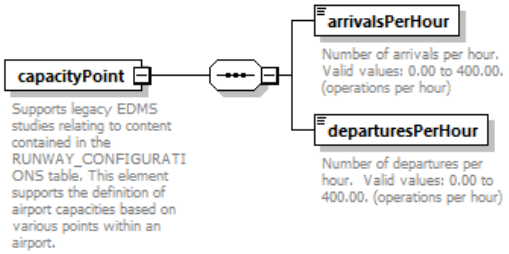
diagram	
properties	content complex
children	**building**
used by	complexType **airportLayoutType**
attributes	Name Type Use Default Fixed Annotation dummy **xs:int** optional
annotation	documentation Supports legacy EDMS studies relating to content contained in the BUILDINGS table. This element supports the definition of airport buildings. These building sources affect the emitted point source plumes by essentially serving as obstacles to those sources, and therefore have a significant impact on concentrations resulting from stationary source emissions. Buildings have no effect on the concentrations estimated from volume and area sources such as aircraft, APU, GSE, roadways, and parking facilities.

attribute **buildingSet/@dummy**

type	**xs:int**
properties	use optional

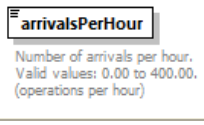
element **capacityPoint**

diagram	

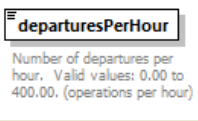


properties	content complex
children	**arrivalsPerHour departuresPerHour**
used by	element **airportCapacity**
annotation	documentation Supports legacy EDMS studies relating to content contained in the RUNWAY_CONFIGURATIONS table. This element supports the definition of airport capacities based on various points within an airport.

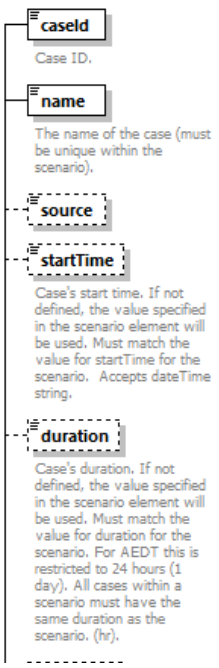
element **capacityPoint/arrivalsPerHour**

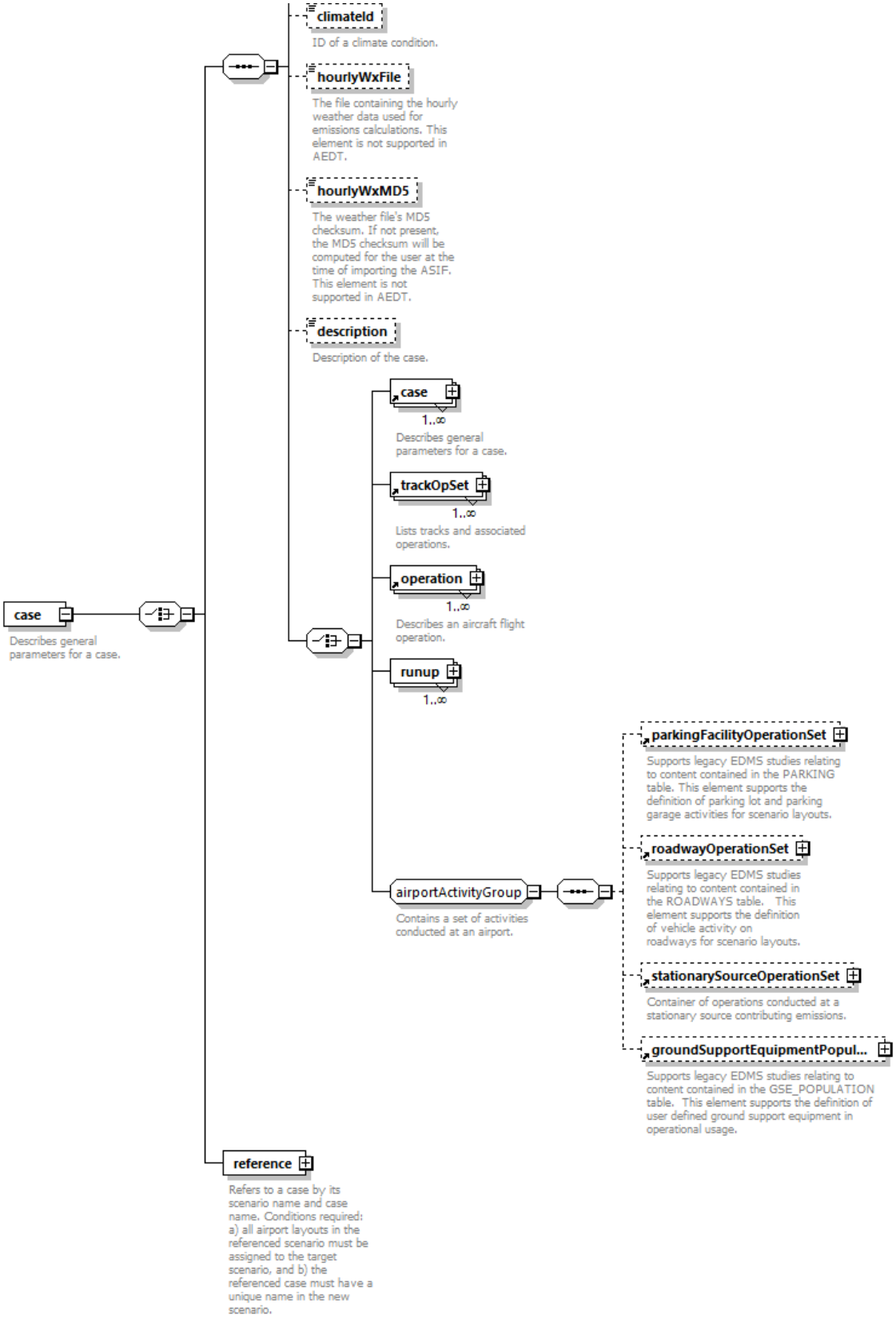
diagram	
type	**xs:double**
properties	content simple
annotation	documentation Number of arrivals per hour. Valid values: 0.00 to 400.00. (operations per hour)

element **capacityPoint/departuresPerHour**

diagram	
type	**xs:double**
properties	content simple
annotation	documentation Number of departures per hour. Valid values: 0.00 to 400.00. (operations per hour)

element **case**

diagram	



properties	content complex
children	**caseId name source startTime duration climateId hourlyWxFile hourlyWxMD5 description case trackOpSet operation runup parkingFacilityOperationSet roadwayOperationSet stationarySourceOperationSet groundSupportEquipmentPopulationOperationSet reference**
used by	elements **AsifXml case caseSet**
annotation	documentation Describes general parameters for a case.

element **case/caseId**

diagram	 Case ID.
type	**xs:int**
properties	content simple
annotation	documentation Case ID.

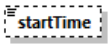
element **case/name**

diagram	 The name of the case (must be unique within the scenario).
type	**string255**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation The name of the case (must be unique within the scenario).

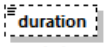
element **case/source**

diagram	
type	**emissionsSourceType**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation enumeration Container enumeration Aircraft enumeration GSE Population enumeration Parking Facilities enumeration Roadways enumeration Stationary Sources

element **case/startTime**

diagram	 Case's start time. If not defined, the value specified in the scenario element will be used. Must match the value for startTime for the scenario. Accepts dateTime string.
type	**xs:dateTime**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Case's start time. If not defined, the value specified in the scenario element will be used. Must match the value for startTime for the scenario. Accepts dateTime string.

element **case/duration**

diagram	 Case's duration. If not defined, the value specified in the scenario element will be used. Must match the value for duration for the scenario. For AEDT this is restricted to 24 hours (1 day). All cases within a scenario must have the same duration as the scenario. (hr).

type	**xs:int**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Case's duration. If not defined, the value specified in the scenario element will be used. Must match the value for duration for the scenario. For AEDT this is restricted to 24 hours (1 day). All cases within a scenario must have the same duration as the scenario. (hr).

element **case/climateId**

diagram	**climateId** ID of a climate condition.
type	**string8**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 8
annotation	documentation ID of a climate condition.

element **case/hourlyWxFile**

diagram	**hourlyWxFile** The file containing the hourly weather data used for emissions calculations. This element is not supported in AEDT.
type	**string255**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation The file containing the hourly weather data used for emissions calculations. This element is not supported in AEDT.

element **case/hourlyWxMD5**

diagram	**hourlyWxMD5** The weather file's MD5 checksum. If not present, the MD5 checksum will be computed for the user at the time of importing the ASIF. This element is not supported in AEDT.
type	**string16**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 16
annotation	documentation The weather file's MD5 checksum. If not present, the MD5 checksum will be computed for the user at the time of importing the ASIF. This element is not supported in AEDT.

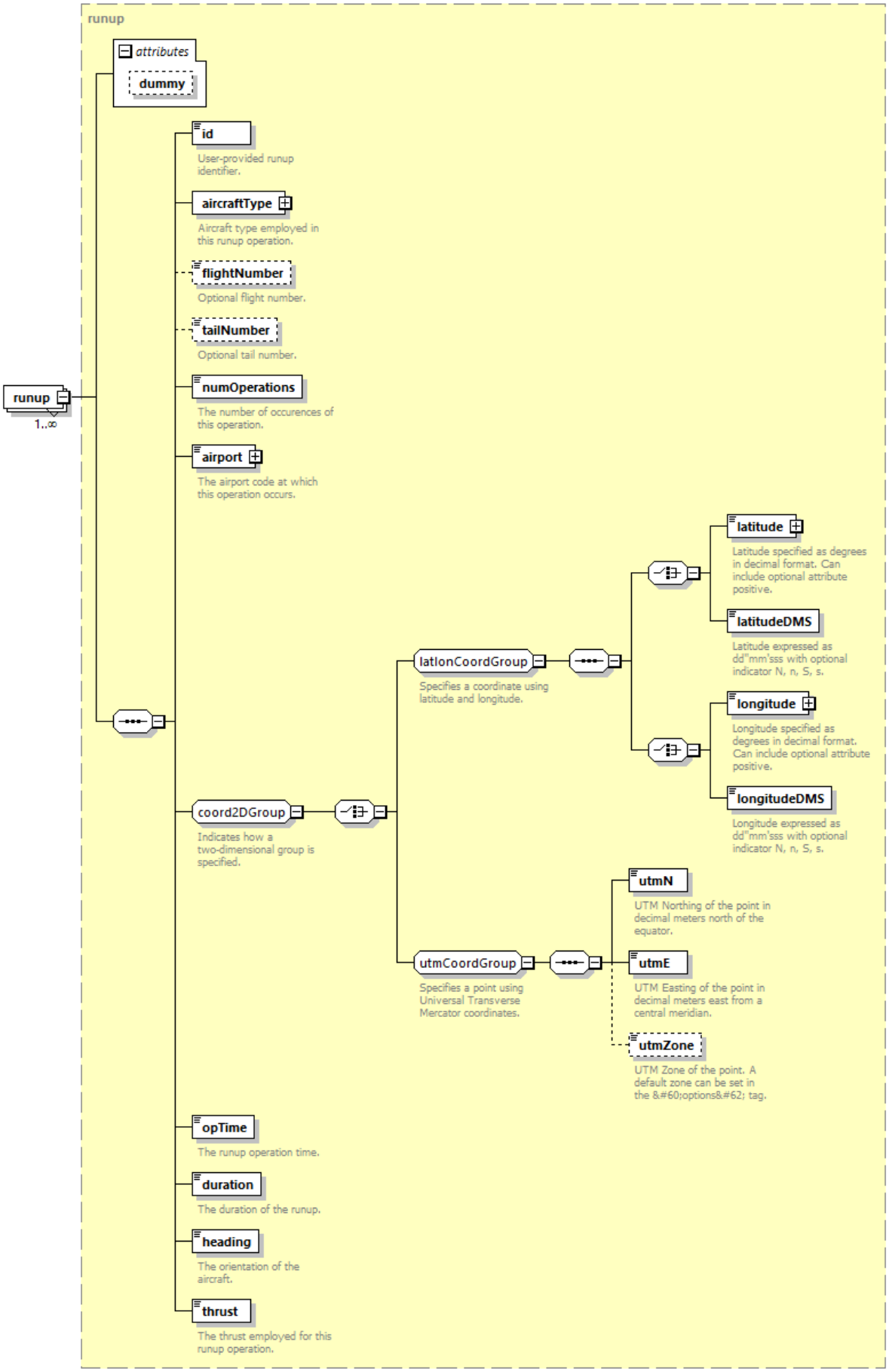
element **case/description**

diagram	**description** Description of the case.
type	**string255**

properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Description of the case.

element **case/runup**

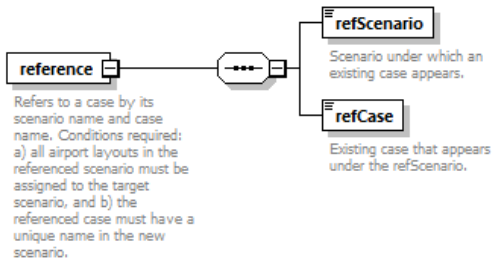
diagram	



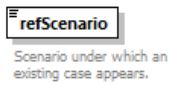
type	**runup**
properties	minOcc 1 maxOcc unbounded

	content complex
children	**id aircraftType flightNumber tailNumber numOperations airport latitude latitudeDMS longitude longitudeDMS utmN utmE utmZone opTime duration heading thrust**
attributes	Name Type Use Default Fixed Annotation dummy **xs:int** optional

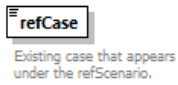
element **case/reference**

diagram	
properties	content complex
children	**refScenario refCase**
annotation	documentation Refers to a case by its scenario name and case name. Conditions required: a) all airport layouts in the referenced scenario must be assigned to the target scenario, and b) the referenced case must have a unique name in the new scenario.

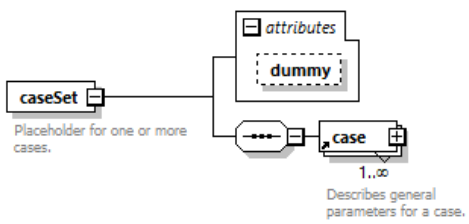
element **case/reference/refScenario**

diagram	
type	**string255**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Scenario under which an existing case appears.

element **case/reference/refCase**

diagram	
type	**string255**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Existing case that appears under the refScenario.

element **caseSet**

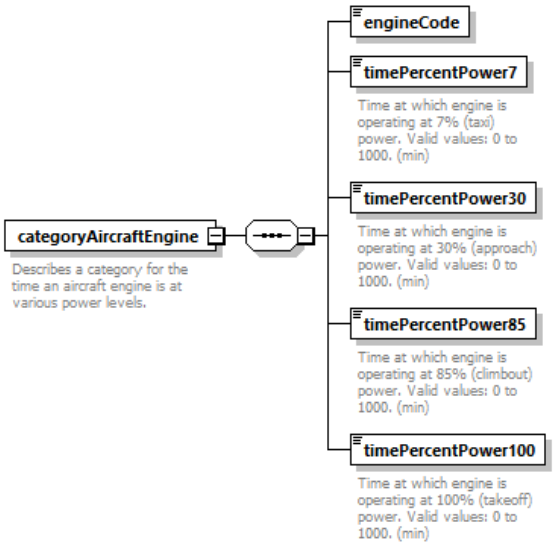
diagram	
properties	content complex
children	**case**
used by	element **scenario**

attributes	Name Type Use Default Fixed Annotation dummy **xs:int** optional
annotation	documentation Placeholder for one or more cases.

attribute **caseSet/@dummy**

type	**xs:int**
properties	use optional

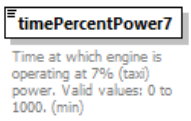
element **categoryAircraftEngine**

diagram	
properties	content complex
children	**engineCode timePercentPower7 timePercentPower30 timePercentPower85 timePercentPower100**
used by	element **stationarySource**
annotation	documentation Describes a category for the time an aircraft engine is at various power levels.

element **categoryAircraftEngine/engineCode**

diagram	
type	**string255**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255

element **categoryAircraftEngine/timePercentPower7**

diagram	
type	**doubleExclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxExclusive 1000
annotation	documentation Time at which engine is operating at 7% (taxi) power. Valid values: 0 to 1000. (min)

element **categoryAircraftEngine/timePercentPower30**

diagram	**timePercentPower30** Time at which engine is operating at 30% (approach) power. Valid values: 0 to 1000. (min)
type	**doubleExclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxExclusive 1000
annotation	documentation Time at which engine is operating at 30% (approach) power. Valid values: 0 to 1000. (min)

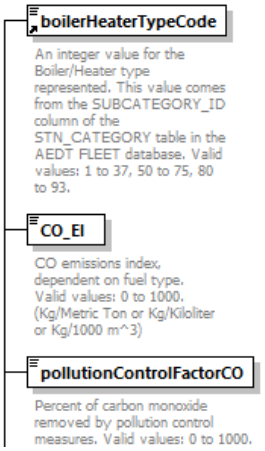
element **categoryAircraftEngine/timePercentPower85**

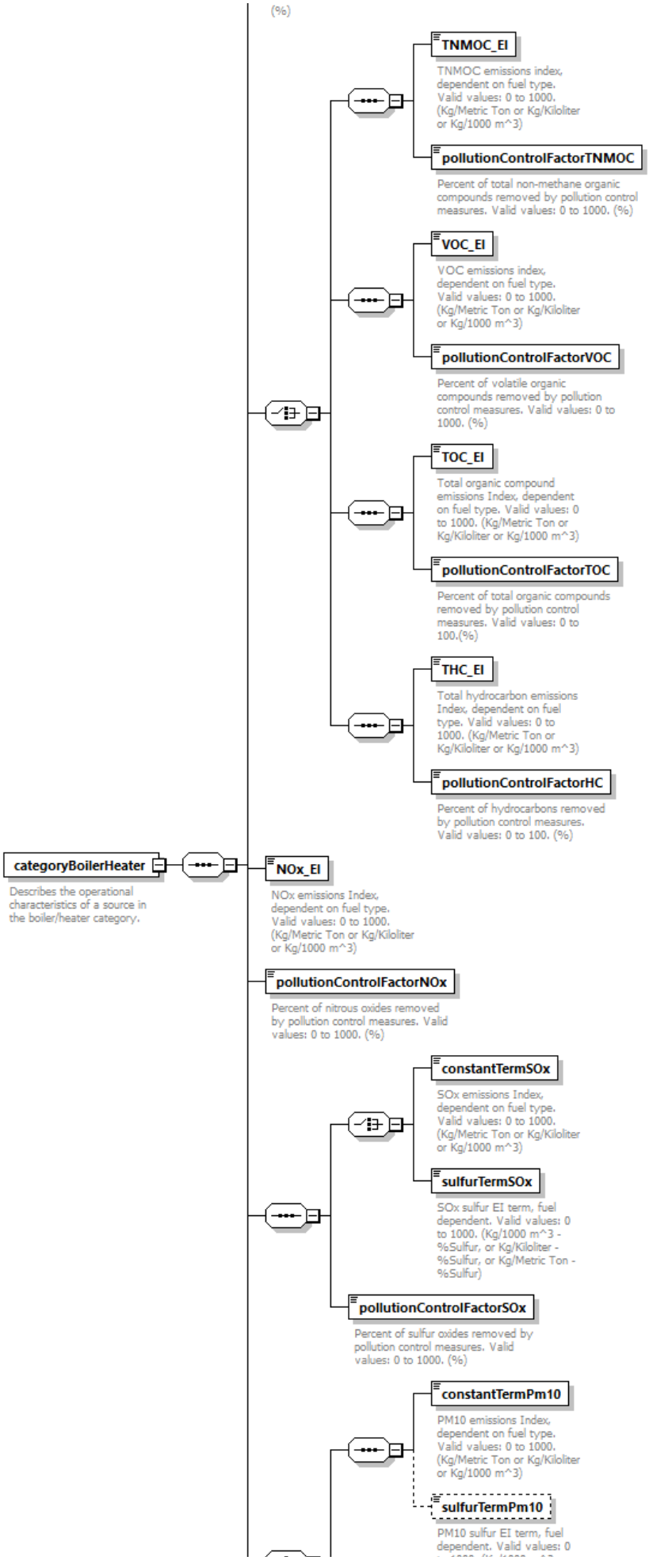
diagram	**timePercentPower85** Time at which engine is operating at 85% (climbout) power. Valid values: 0 to 1000. (min)
type	**doubleExclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxExclusive 1000
annotation	documentation Time at which engine is operating at 85% (climbout) power. Valid values: 0 to 1000. (min)

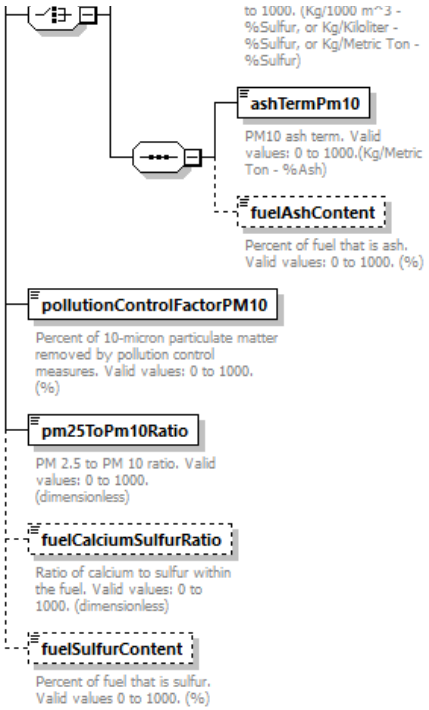
element **categoryAircraftEngine/timePercentPower100**

diagram	**timePercentPower100** Time at which engine is operating at 100% (takeoff) power. Valid values: 0 to 1000. (min)
type	**doubleExclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxExclusive 1000
annotation	documentation Time at which engine is operating at 100% (takeoff) power. Valid values: 0 to 1000. (min)

element **categoryBoilerHeater**

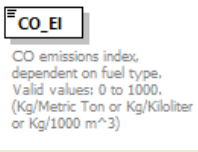
diagram	


(%)
TNMOC_EI
TNMOC emissions index, dependent on fuel type. Valid values: 0 to 1000. (Kg/Metric Ton or Kg/Kiloliter or Kg/1000 m^3)
pollutionControlFactorTNMOC
Percent of total non-methane organic compounds removed by pollution control measures. Valid values: 0 to 1000. (%)
VOC_EI
VOC emissions index, dependent on fuel type. Valid values: 0 to 1000. (Kg/Metric Ton or Kg/Kiloliter or Kg/1000 m^3)
pollutionControlFactorVOC
Percent of volatile organic compounds removed by pollution control measures. Valid values: 0 to 1000. (%)
TOC_EI
Total organic compound emissions Index, dependent on fuel type. Valid values: 0 to 1000. (Kg/Metric Ton or Kg/Kiloliter or Kg/1000 m^3)
pollutionControlFactorTOC
Percent of total organic compounds removed by pollution control measures. Valid values: 0 to 100.(%)
THC_EI
Total hydrocarbon emissions Index, dependent on fuel type. Valid values: 0 to 1000. (Kg/Metric Ton or Kg/Kiloliter or Kg/1000 m^3)
pollutionControlFactorHC
Percent of hydrocarbons removed by pollution control measures. Valid values: 0 to 100. (%)
categoryBoilerHeater
Describes the operational characteristics of a source in the boiler/heater category.
NOx_EI
NOx emissions Index, dependent on fuel type. Valid values: 0 to 1000. (Kg/Metric Ton or Kg/Kiloliter or Kg/1000 m^3)
pollutionControlFactorNOx
Percent of nitrous oxides removed by pollution control measures. Valid values: 0 to 1000. (%)
constantTermSOx
SOx emissions Index, dependent on fuel type. Valid values: 0 to 1000. (Kg/Metric Ton or Kg/Kiloliter or Kg/1000 m^3)
sulfurTermSOx
SOx sulfur EI term, fuel dependent. Valid values: 0 to 1000. (Kg/1000 m^3 - %Sulfur, or Kg/Kiloliter - %Sulfur, or Kg/Metric Ton - %Sulfur)
pollutionControlFactorSOx
Percent of sulfur oxides removed by pollution control measures. Valid values: 0 to 1000. (%)
constantTermPm10
PM10 emissions Index, dependent on fuel type. Valid values: 0 to 1000. (Kg/Metric Ton or Kg/Kiloliter or Kg/1000 m^3)
sulfurTermPm10
PM10 sulfur EI term, fuel dependent. Valid values: 0

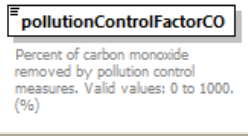


properties	content complex
children	**boilerHeaterTypeCode CO_EI pollutionControlFactorCO TNMOC_EI pollutionControlFactorTNMOC VOC_EI pollutionControlFactorVOC TOC_EI pollutionControlFactorTOC THC_EI pollutionControlFactorHC NOx_EI pollutionControlFactorNOx constantTermSOx sulfurTermSOx pollutionControlFactorSOx constantTermPm10 sulfurTermPm10 ashTermPm10 fuelAshContent pollutionControlFactorPM10 pm25ToPm10Ratio fuelCalciumSulfurRatio fuelSulfurContent**
used by	element **stationarySource**
annotation	documentation Describes the operational characteristics of a source in the boiler/heater category.

element **categoryBoilerHeater/CO_EI**

diagram	
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation CO emissions index, dependent on fuel type. Valid values: 0 to 1000. (Kg/Metric Ton or Kg/Kiloliter or Kg/1000 m^3)

element **categoryBoilerHeater/pollutionControlFactorCO**

diagram	
type	**doubleInclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Percent of carbon monoxide removed by pollution control measures. Valid values: 0 to 1000. (%)

element **categoryBoilerHeater/TNMOC_EI**

diagram	**TNMOC_EI** TNMOC emissions index, dependent on fuel type. Valid values: 0 to 1000. (Kg/Metric Ton or Kg/Kiloliter or Kg/1000 m^3)
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation TNMOC emissions index, dependent on fuel type. Valid values: 0 to 1000. (Kg/Metric Ton or Kg/Kiloliter or Kg/1000 m^3)

element **categoryBoilerHeater/pollutionControlFactorTNMOC**

diagram	**pollutionControlFactorTNMOC** Percent of total non-methane organic compounds removed by pollution control measures. Valid values: 0 to 1000. (%)
type	**doubleInclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Percent of total non-methane organic compounds removed by pollution control measures. Valid values: 0 to 1000. (%)

element **categoryBoilerHeater/VOC_EI**

diagram	**VOC_EI** VOC emissions index, dependent on fuel type. Valid values: 0 to 1000. (Kg/Metric Ton or Kg/Kiloliter or Kg/1000 m^3)
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation VOC emissions index, dependent on fuel type. Valid values: 0 to 1000. (Kg/Metric Ton or Kg/Kiloliter or Kg/1000 m^3)

element **categoryBoilerHeater/pollutionControlFactorVOC**

diagram	**pollutionControlFactorVOC** Percent of volatile organic compounds removed by pollution control measures. Valid values: 0 to 1000. (%)
type	**doubleInclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Percent of volatile organic compounds removed by pollution control measures. Valid values: 0 to 1000. (%)

element **categoryBoilerHeater/TOC_EI**

diagram	**TOC_EI** Total organic compound emissions Index, dependent on fuel type. Valid values: 0 to 1000. (Kg/Metric Ton or Kg/Kiloliter or Kg/1000 m^3)
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation Total organic compound emissions Index, dependent on fuel type. Valid values: 0 to 1000. (Kg/Metric Ton or Kg/Kiloliter or Kg/1000 m^3)

element **categoryBoilerHeater/pollutionControlFactorTOC**

diagram	**pollutionControlFactorTOC** Percent of total organic compounds removed by pollution control measures. Valid values: 0 to 100.(%)
type	**doubleInclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Percent of total organic compounds removed by pollution control measures. Valid values: 0 to 100.(%)

element **categoryBoilerHeater/THC_EI**

diagram	**THC_EI** Total hydrocarbon emissions Index, dependent on fuel type. Valid values: 0 to 1000. (Kg/Metric Ton or Kg/Kiloliter or Kg/1000 m^3)
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation Total hydrocarbon emissions Index, dependent on fuel type. Valid values: 0 to 1000. (Kg/Metric Ton or Kg/Kiloliter or Kg/1000 m^3)

element **categoryBoilerHeater/pollutionControlFactorHC**

diagram	**pollutionControlFactorHC** Percent of hydrocarbons removed by pollution control measures. Valid values: 0 to 100. (%)
type	**doubleInclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Percent of hydrocarbons removed by pollution control measures. Valid values: 0 to 100. (%)

element **categoryBoilerHeater/NOx_EI**

diagram	**NOx_EI** NOx emissions Index, dependent on fuel type. Valid values: 0 to 1000. (Kg/Metric Ton or Kg/Kiloliter or Kg/1000 m^3)
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation NOx emissions Index, dependent on fuel type. Valid values: 0 to 1000. (Kg/Metric Ton or Kg/Kiloliter or Kg/1000 m^3)

element **categoryBoilerHeater/pollutionControlFactorNOx**

diagram	**pollutionControlFactorNOx** Percent of nitrous oxides removed by pollution control measures. Valid values: 0 to 1000. (%)
type	**doubleInclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Percent of nitrous oxides removed by pollution control measures. Valid values: 0 to 1000. (%)

element **categoryBoilerHeater/constantTermSOx**

diagram	**constantTermSOx** SOx emissions Index, dependent on fuel type. Valid values: 0 to 1000. (Kg/Metric Ton or Kg/Kiloliter or Kg/1000 m^3)
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation SOx emissions Index, dependent on fuel type. Valid values: 0 to 1000. (Kg/Metric Ton or Kg/Kiloliter or Kg/1000 m^3)

element **categoryBoilerHeater/sulfurTermSOx**

diagram	**sulfurTermSOx** SOx sulfur EI term, fuel dependent. Valid values: 0 to 1000. (Kg/1000 m^3 - %Sulfur, or Kg/Kiloliter - %Sulfur, or Kg/Metric Ton - %Sulfur)
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation

	SOx sulfur EI term, fuel dependent. Valid values: 0 to 1000. (Kg/1000 m^3 - %Sulfur, or Kg/Kiloliter - %Sulfur, or Kg/Metric Ton - %Sulfur)

element **categoryBoilerHeater/pollutionControlFactorSOx**

diagram	**pollutionControlFactorSOx** Percent of sulfur oxides removed by pollution control measures. Valid values: 0 to 1000. (%)
type	**doubleInclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Percent of sulfur oxides removed by pollution control measures. Valid values: 0 to 1000. (%)

element **categoryBoilerHeater/constantTermPm10**

diagram	**constantTermPm10** PM10 emissions Index, dependent on fuel type. Valid values: 0 to 1000. (Kg/Metric Ton or Kg/Kiloliter or Kg/1000 m^3)
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation PM10 emissions Index, dependent on fuel type. Valid values: 0 to 1000. (Kg/Metric Ton or Kg/Kiloliter or Kg/1000 m^3)

element **categoryBoilerHeater/sulfurTermPm10**

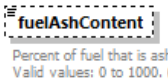
diagram	**sulfurTermPm10** PM10 sulfur EI term, fuel dependent. Valid values: 0 to 1000. (Kg/1000 m^3 - %Sulfur, or Kg/Kiloliter - %Sulfur, or Kg/Metric Ton - %Sulfur)
type	**doubleInclusive1000**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation PM10 sulfur EI term, fuel dependent. Valid values: 0 to 1000. (Kg/1000 m^3 - %Sulfur, or Kg/Kiloliter - %Sulfur, or Kg/Metric Ton - %Sulfur)

element **categoryBoilerHeater/ashTermPm10**

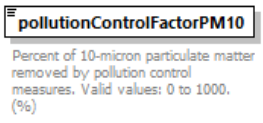
diagram	**ashTermPm10** PM10 ash term. Valid values: 0 to 1000.(Kg/Metric Ton - %Ash)
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000

annotation	documentation PM10 ash term. Valid values: 0 to 1000.(Kg/Metric Ton - %Ash)

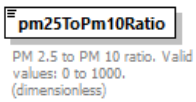
element **categoryBoilerHeater/fuelAshContent**

diagram	
type	**doubleExclusive100**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0 maxExclusive 100
annotation	documentation Percent of fuel that is ash. Valid values: 0 to 1000. (%)

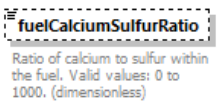
element **categoryBoilerHeater/pollutionControlFactorPM10**

diagram	
type	**doubleInclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Percent of 10-micron particulate matter removed by pollution control measures. Valid values: 0 to 1000. (%)

element **categoryBoilerHeater/pm25ToPm10Ratio**

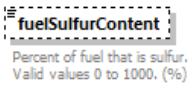
diagram	
type	**doubleInclusive1**
properties	content simple default 1
facets	Kind Value Annotation minInclusive 0 maxInclusive 1
annotation	documentation PM 2.5 to PM 10 ratio. Valid values: 0 to 1000. (dimensionless)

element **categoryBoilerHeater/fuelCalciumSulfurRatio**

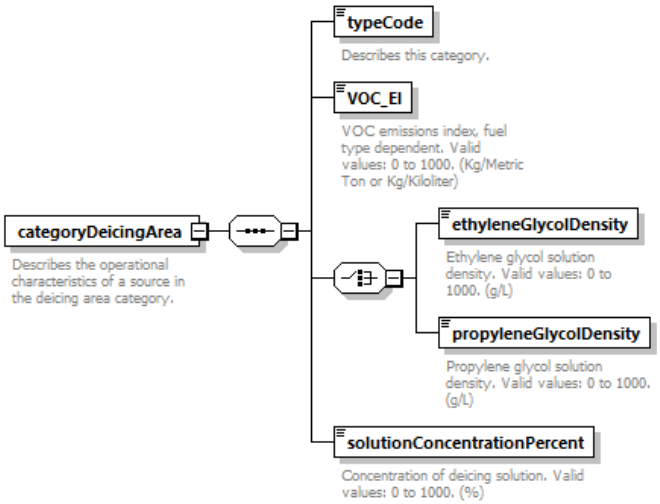
diagram	
type	**doubleExclusive1000**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0 maxExclusive 1000
annotation	documentation

	Ratio of calcium to sulfur within the fuel. Valid values: 0 to 1000. (dimensionless)

element **categoryBoilerHeater/fuelSulfurContent**

diagram	
type	**doubleExclusive100**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0 maxExclusive 100
annotation	documentation Percent of fuel that is sulfur. Valid values 0 to 1000. (%)

element **categoryDeicingArea**

diagram	
properties	content complex
children	**typeCode** **VOC_EI** **ethyleneGlycolDensity** **propyleneGlycolDensity** **solutionConcentrationPercent**
used by	element **stationarySource**
annotation	documentation Describes the operational characteristics of a source in the deicing area category.

element **categoryDeicingArea/typeCode**

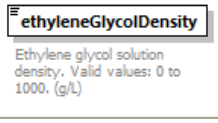
diagram	
type	**int1to4**
properties	content simple
facets	Kind Value Annotation minInclusive 1 maxInclusive 4
annotation	documentation Describes this category.

element **categoryDeicingArea/VOC_EI**

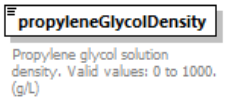
diagram	
type	**doubleInclusive1000**

properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation VOC emissions index, fuel type dependent. Valid values: 0 to 1000. (Kg/Metric Ton or Kg/Kiloliter)

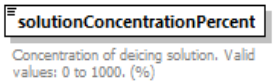
element **categoryDeicingArea/ethyleneGlycolDensity**

diagram	
type	**doubleExclusive2000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxExclusive 2000
annotation	documentation Ethylene glycol solution density. Valid values: 0 to 1000. (g/L)

element **categoryDeicingArea/propyleneGlycolDensity**

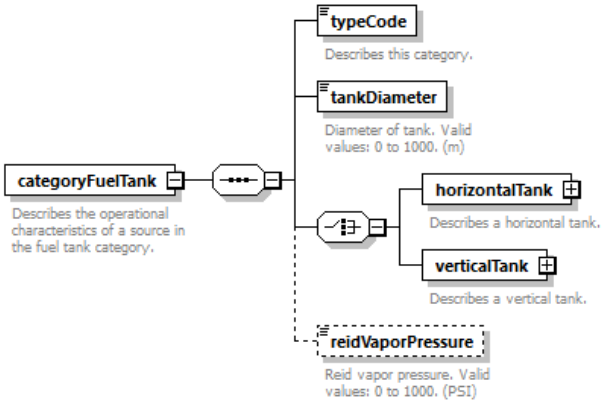
diagram	
type	**doubleExclusive2000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxExclusive 2000
annotation	documentation Propylene glycol solution density. Valid values: 0 to 1000. (g/L)

element **categoryDeicingArea/solutionConcentrationPercent**

diagram	
type	**doubleExclusive100**
properties	content simple default 50
facets	Kind Value Annotation minInclusive 0 maxExclusive 100
annotation	documentation Concentration of deicing solution. Valid values: 0 to 1000. (%)

element **categoryFuelTank**

diagram	

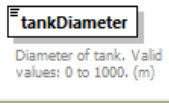


properties	content complex
children	**typeCode tankDiameter horizontalTank verticalTank reidVaporPressure**
used by	element **stationarySource**
annotation	documentation Describes the operational characteristics of a source in the fuel tank category.

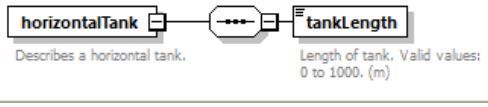
element **categoryFuelTank/typeCode**

diagram	
type	**int1to25**
properties	content simple
facets	Kind Value Annotation minInclusive 1 maxInclusive 25
annotation	documentation Describes this category.

element **categoryFuelTank/tankDiameter**

diagram	
type	**doubleExclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxExclusive 1000
annotation	documentation Diameter of tank. Valid values: 0 to 1000. (m)

element **categoryFuelTank/horizontalTank**

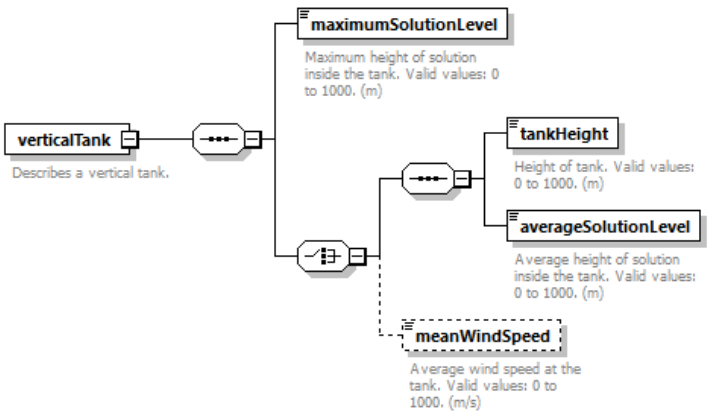
diagram	
properties	content complex
children	**tankLength**
annotation	documentation Describes a horizontal tank.

element **categoryFuelTank/horizontalTank/tankLength**

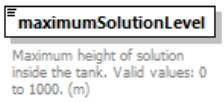
diagram	

	
type	**doubleExclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxExclusive 1000
annotation	documentation Length of tank. Valid values: 0 to 1000. (m)

element **categoryFuelTank/verticalTank**

diagram	
properties	content complex
children	**maximumSolutionLevel tankHeight averageSolutionLevel meanWindSpeed**
annotation	documentation Describes a vertical tank.

element **categoryFuelTank/verticalTank/maximumSolutionLevel**

diagram	
type	**doubleExclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxExclusive 1000
annotation	documentation Maximum height of solution inside the tank. Valid values: 0 to 1000. (m)

element **categoryFuelTank/verticalTank/tankHeight**

diagram	
type	**doubleExclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxExclusive 1000
annotation	documentation Height of tank. Valid values: 0 to 1000. (m)

element **categoryFuelTank/verticalTank/averageSolutionLevel**

diagram	**averageSolutionLevel** Average height of solution inside the tank. Valid values: 0 to 1000. (m)
type	**doubleExclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxExclusive 1000
annotation	documentation Average height of solution inside the tank. Valid values: 0 to 1000. (m)

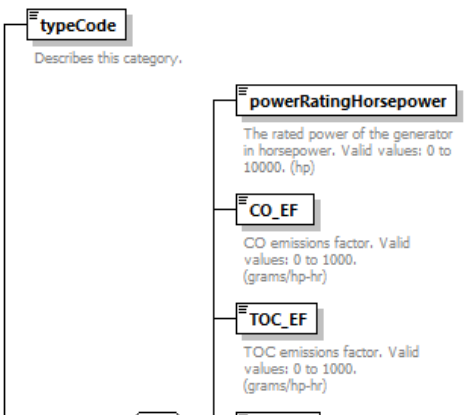
element **categoryFuelTank/verticalTank/meanWindSpeed**

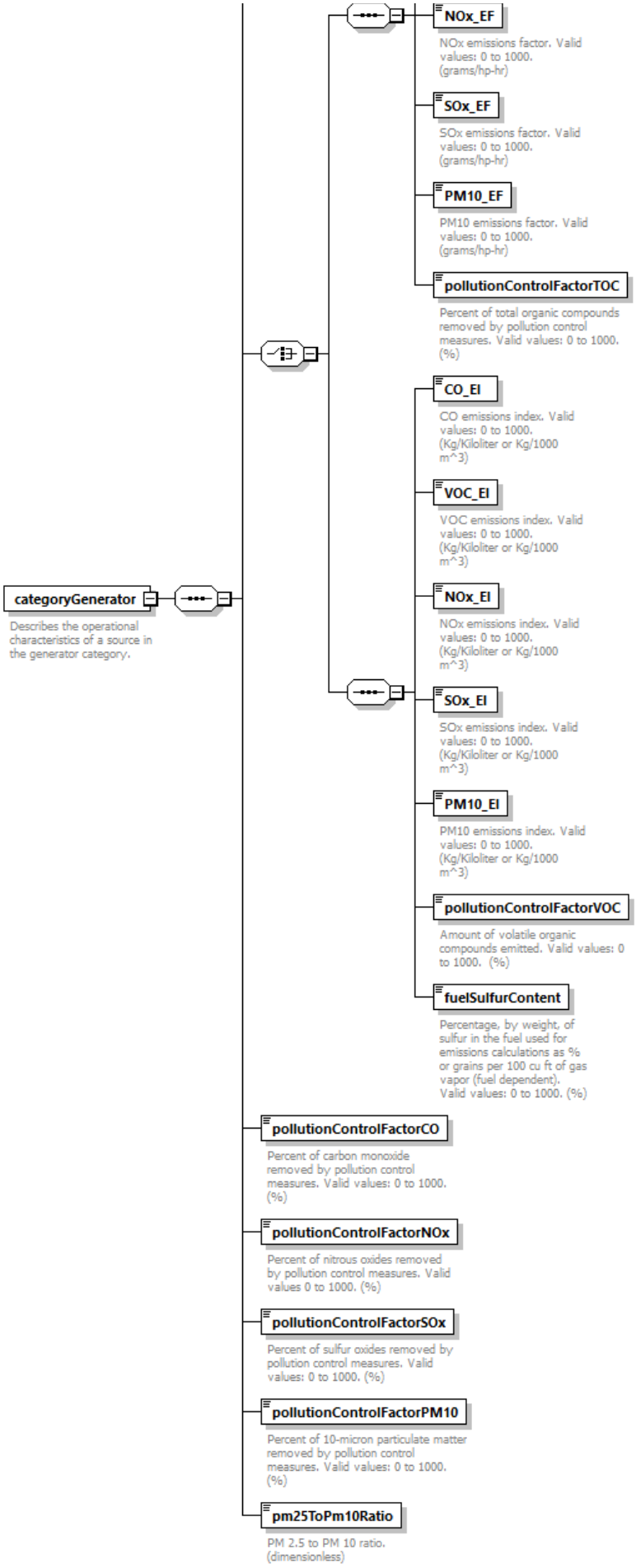
diagram	**meanWindSpeed** Average wind speed at the tank. Valid values: 0 to 1000. (m/s)
type	**doubleExclusive100**
properties	minOcc 0 maxOcc 1 content simple default 5
facets	Kind Value Annotation minInclusive 0 maxExclusive 100
annotation	documentation Average wind speed at the tank. Valid values: 0 to 1000. (m/s)

element **categoryFuelTank/reidVaporPressure**

diagram	**reidVaporPressure** Reid vapor pressure. Valid values: 0 to 1000. (PSI)
type	**int6to13**
properties	minOcc 0 maxOcc 1 content simple default 10
facets	Kind Value Annotation minInclusive 6 maxInclusive 13
annotation	documentation Reid vapor pressure. Valid values: 0 to 1000. (PSI)

element **categoryGenerator**

diagram	



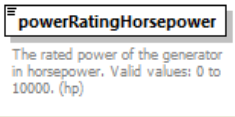
properties	content complex

children	**typeCode** **powerRatingHorsepower** **CO_EF** **TOC_EF** **NOx_EF** **SOx_EF** **PM10_EF** **pollutionControlFactorTOC** **CO_EI** **VOC_EI** **NOx_EI** **SOx_EI** **PM10_EI** **pollutionControlFactorVOC** **fuelSulfurContent** **pollutionControlFactorCO** **pollutionControlFactorNOx** **pollutionControlFactorSOx** **pollutionControlFactorPM10** **pm25ToPm10Ratio**
used by	element **stationarySource**
annotation	documentation Describes the operational characteristics of a source in the generator category.

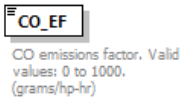
element **categoryGenerator/typeCode**

diagram	
type	**int1to8**
properties	content simple
facets	Kind Value Annotation minInclusive 1 maxInclusive 8
annotation	documentation Describes this category.

element **categoryGenerator/powerRatingHorsepower**

diagram	
type	**doubleInclusive10000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 10000
annotation	documentation The rated power of the generator in horsepower. Valid values: 0 to 10000. (hp)

element **categoryGenerator/CO_EF**

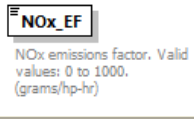
diagram	
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation CO emissions factor. Valid values: 0 to 1000. (grams/hp-hr)

element **categoryGenerator/TOC_EF**

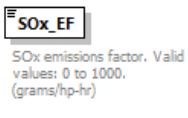
diagram	
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation

	TOC emissions factor. Valid values: 0 to 1000. (grams/hp-hr)

element **categoryGenerator/NOx_EF**

diagram	
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation NOx emissions factor. Valid values: 0 to 1000. (grams/hp-hr)

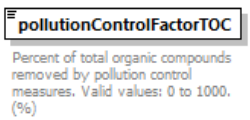
element **categoryGenerator/SOx_EF**

diagram	
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation SOx emissions factor. Valid values: 0 to 1000. (grams/hp-hr)

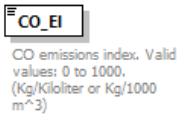
element **categoryGenerator/PM10_EF**

diagram	
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation PM10 emissions factor. Valid values: 0 to 1000. (grams/hp-hr)

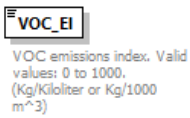
element **categoryGenerator/pollutionControlFactorTOC**

diagram	
type	**doubleInclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Percent of total organic compounds removed by pollution control measures. Valid values: 0 to 1000. (%)

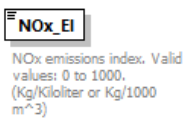
element **categoryGenerator/CO_EI**

diagram	
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation CO emissions index. Valid values: 0 to 1000. (Kg/Kiloliter or Kg/1000 m^3)

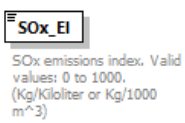
element **categoryGenerator/VOC_EI**

diagram	
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation VOC emissions index. Valid values: 0 to 1000. (Kg/Kiloliter or Kg/1000 m^3)

element **categoryGenerator/NOx_EI**

diagram	
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation NOx emissions index. Valid values: 0 to 1000. (Kg/Kiloliter or Kg/1000 m^3)

element **categoryGenerator/SOx_EI**

diagram	
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation SOx emissions index. Valid values: 0 to 1000. (Kg/Kiloliter or Kg/1000 m^3)

element **categoryGenerator/PM10_EI**

diagram	**PM10_EI** PM10 emissions index. Valid values: 0 to 1000. (Kg/Kiloliter or Kg/1000 m^3)
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation PM10 emissions index. Valid values: 0 to 1000. (Kg/Kiloliter or Kg/1000 m^3)

element **categoryGenerator/pollutionControlFactorVOC**

diagram	**pollutionControlFactorVOC** Amount of volatile organic compounds emitted. Valid values: 0 to 1000. (%)
type	**doubleInclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Amount of volatile organic compounds emitted. Valid values: 0 to 1000. (%)

element **categoryGenerator/fuelSulfurContent**

diagram	**fuelSulfurContent** Percentage, by weight, of sulfur in the fuel used for emissions calculations as % or grains per 100 cu ft of gas vapor (fuel dependent). Valid values: 0 to 1000. (%)
type	**doubleExclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxExclusive 100
annotation	documentation Percentage, by weight, of sulfur in the fuel used for emissions calculations as % or grains per 100 cu ft of gas vapor (fuel dependent). Valid values: 0 to 1000. (%)

element **categoryGenerator/pollutionControlFactorCO**

diagram	**pollutionControlFactorCO** Percent of carbon monoxide removed by pollution control measures. Valid values: 0 to 1000. (%)
type	**doubleInclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Percent of carbon monoxide removed by pollution control measures. Valid values: 0 to 1000. (%)

element **categoryGenerator/pollutionControlFactorNOx**

diagram	**pollutionControlFactorNOx** Percent of nitrous oxides removed by pollution control measures. Valid values 0 to 1000. (%)
type	**doubleInclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Percent of nitrous oxides removed by pollution control measures. Valid values 0 to 1000. (%)

element **categoryGenerator/pollutionControlFactorSOx**

diagram	**pollutionControlFactorSOx** Percent of sulfur oxides removed by pollution control measures. Valid values: 0 to 1000. (%)
type	**doubleInclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Percent of sulfur oxides removed by pollution control measures. Valid values: 0 to 1000. (%)

element **categoryGenerator/pollutionControlFactorPM10**

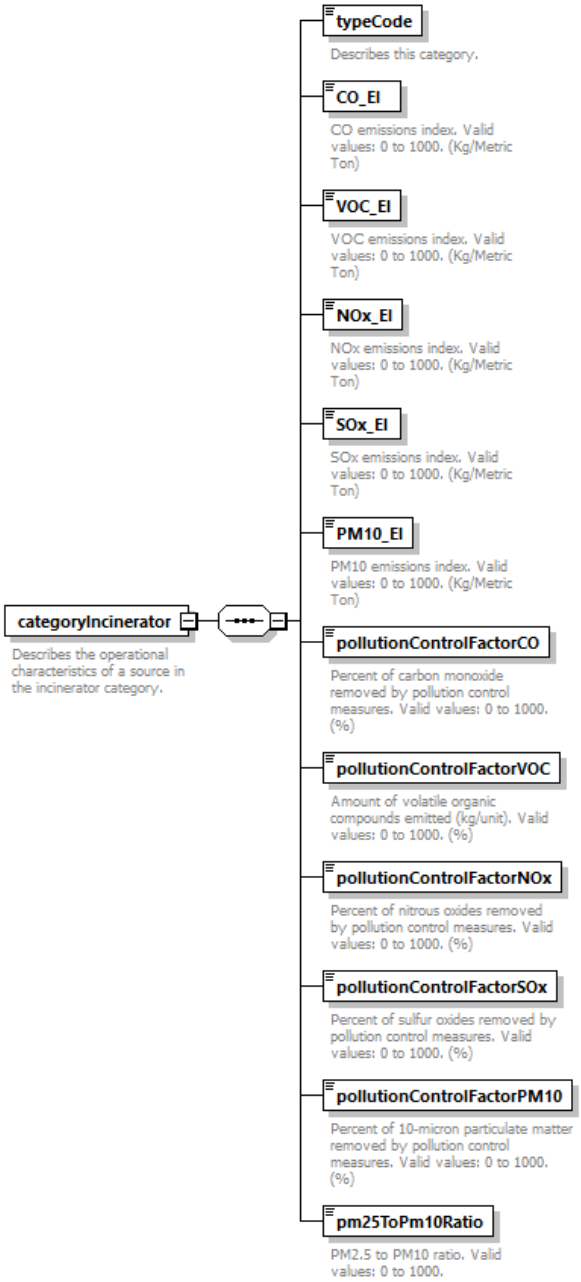
diagram	**pollutionControlFactorPM10** Percent of 10-micron particulate matter removed by pollution control measures. Valid values: 0 to 1000. (%)
type	**doubleInclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Percent of 10-micron particulate matter removed by pollution control measures. Valid values: 0 to 1000. (%)

element **categoryGenerator/pm25ToPm10Ratio**

diagram	**pm25ToPm10Ratio** PM 2.5 to PM 10 ratio. (dimensionless)
type	**doubleInclusive1**
properties	content simple default 1
facets	Kind Value Annotation minInclusive 0 maxInclusive 1
annotation	documentation PM 2.5 to PM 10 ratio. (dimensionless)

element **categoryIncinerator**

diagram	



properties	content complex
children	**typeCode CO_EI VOC_EI NOx_EI SOx_EI PM10_EI pollutionControlFactorCO pollutionControlFactorVOC pollutionControlFactorNOx pollutionControlFactorSOx pollutionControlFactorPM10 pm25ToPm10Ratio**
used by	element **stationarySource**
annotation	documentation Describes the operational characteristics of a source in the incinerator category.

element **categoryIncinerator/typeCode**

diagram	
type	**int1to2**
properties	content simple
facets	Kind Value Annotation minInclusive 1 maxInclusive 2
annotation	documentation Describes this category.

element **categoryIncinerator/CO_EI**

diagram	 CO emissions index. Valid values: 0 to 1000. (Kg/Metric Ton)
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation CO emissions index. Valid values: 0 to 1000. (Kg/Metric Ton)

element **categoryIncinerator/VOC_EI**

diagram	 VOC emissions index. Valid values: 0 to 1000. (Kg/Metric Ton)
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation VOC emissions index. Valid values: 0 to 1000. (Kg/Metric Ton)

element **categoryIncinerator/NOx_EI**

diagram	 NOx emissions index. Valid values: 0 to 1000. (Kg/Metric Ton)
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation NOx emissions index. Valid values: 0 to 1000. (Kg/Metric Ton)

element **categoryIncinerator/SOx_EI**

diagram	 SOx emissions index. Valid values: 0 to 1000. (Kg/Metric Ton)
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation SOx emissions index. Valid values: 0 to 1000. (Kg/Metric Ton)

element **categoryIncinerator/PM10_EI**

diagram	

	PM10_EI PM10 emissions index. Valid values: 0 to 1000. (Kg/Metric Ton)
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation PM10 emissions index. Valid values: 0 to 1000. (Kg/Metric Ton)

element **categoryIncinerator/pollutionControlFactorCO**

diagram	pollutionControlFactorCO Percent of carbon monoxide removed by pollution control measures. Valid values: 0 to 1000. (%)
type	**doubleInclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Percent of carbon monoxide removed by pollution control measures. Valid values: 0 to 1000. (%)

element **categoryIncinerator/pollutionControlFactorVOC**

diagram	pollutionControlFactorVOC Amount of volatile organic compounds emitted (kg/unit). Valid values: 0 to 1000. (%)
type	**doubleInclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Amount of volatile organic compounds emitted (kg/unit). Valid values: 0 to 1000. (%)

element **categoryIncinerator/pollutionControlFactorNOx**

diagram	pollutionControlFactorNOx Percent of nitrous oxides removed by pollution control measures. Valid values: 0 to 1000. (%)
type	**doubleInclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Percent of nitrous oxides removed by pollution control measures. Valid values: 0 to 1000. (%)

element **categoryIncinerator/pollutionControlFactorSOx**

diagram	

	pollutionControlFactorSOx Percent of sulfur oxides removed by pollution control measures. Valid values: 0 to 1000. (%)
type	**doubleInclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Percent of sulfur oxides removed by pollution control measures. Valid values: 0 to 1000. (%)

element **categoryIncinerator/pollutionControlFactorPM10**

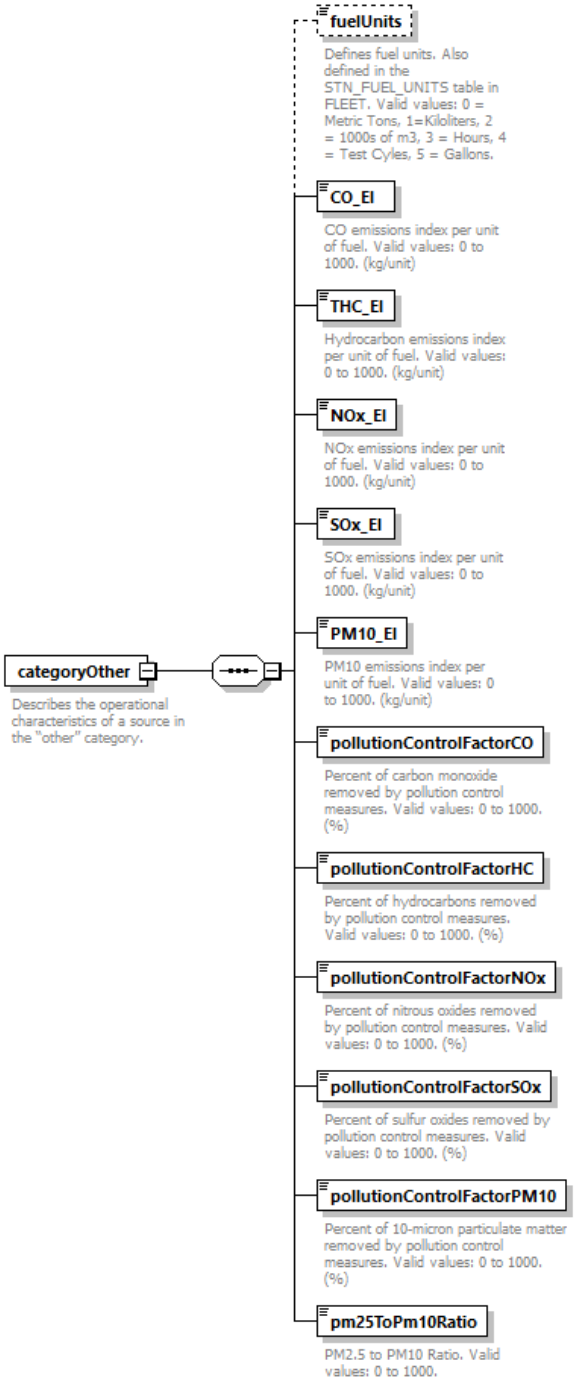
diagram	pollutionControlFactorPM10 Percent of 10-micron particulate matter removed by pollution control measures. Valid values: 0 to 1000. (%)
type	**doubleInclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Percent of 10-micron particulate matter removed by pollution control measures. Valid values: 0 to 1000. (%)

element **categoryIncinerator/pm25ToPm10Ratio**

diagram	pm25ToPm10Ratio PM2.5 to PM10 ratio. Valid values: 0 to 1000.
type	**doubleInclusive1**
properties	content simple default 1
facets	Kind Value Annotation minInclusive 0 maxInclusive 1
annotation	documentation PM2.5 to PM10 ratio. Valid values: 0 to 1000.

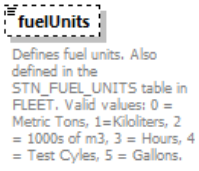
element **categoryOther**

diagram	



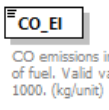
properties	content complex
children	**fuelUnits CO_EI THC_EI NOx_EI SOx_EI PM10_EI pollutionControlFactorCO pollutionControlFactorHC pollutionControlFactorNOx pollutionControlFactorSOx pollutionControlFactorPM10 pm25ToPm10Ratio**
used by	element **stationarySource**
annotation	documentation Describes the operational characteristics of a source in the “other” category.

element **categoryOther/fuelUnits**

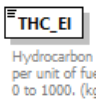
diagram	
type	**int0to5**

properties	minOcc 0 maxOcc 1 content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 5
annotation	documentation Defines fuel units. Also defined in the STN_FUEL_UNITS table in FLEET. Valid values: 0 = Metric Tons, 1=Kiloliters, 2 = 1000s of m3, 3 = Hours, 4 = Test Cyles, 5 = Gallons.

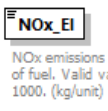
element **categoryOther/CO_EI**

diagram	
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation CO emissions index per unit of fuel. Valid values: 0 to 1000. (kg/unit)

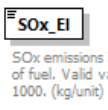
element **categoryOther/THC_EI**

diagram	
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation Hydrocarbon emissions index per unit of fuel. Valid values: 0 to 1000. (kg/unit)

element **categoryOther/NOx_EI**

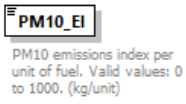
diagram	
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation NOx emissions index per unit of fuel. Valid values: 0 to 1000. (kg/unit)

element **categoryOther/SOx_EI**

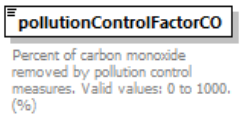
diagram	
type	**doubleInclusive1000**
properties	content simple

	default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation SOx emissions index per unit of fuel. Valid values: 0 to 1000. (kg/unit)

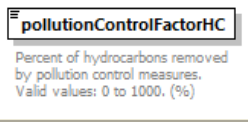
element **categoryOther/PM10_EI**

diagram	
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation PM10 emissions index per unit of fuel. Valid values: 0 to 1000. (kg/unit)

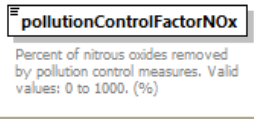
element **categoryOther/pollutionControlFactorCO**

diagram	
type	**doubleInclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Percent of carbon monoxide removed by pollution control measures. Valid values: 0 to 1000. (%)

element **categoryOther/pollutionControlFactorHC**

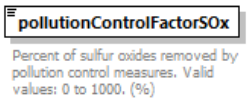
diagram	
type	**doubleInclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Percent of hydrocarbons removed by pollution control measures. Valid values: 0 to 1000. (%)

element **categoryOther/pollutionControlFactorNOx**

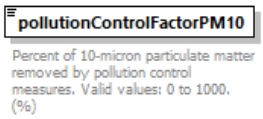
diagram	
type	**doubleInclusive100**
properties	content simple default 0
facets	Kind Value Annotation

	minInclusive 0 maxInclusive 100
annotation	documentation Percent of nitrous oxides removed by pollution control measures. Valid values: 0 to 1000. (%)

element **categoryOther/pollutionControlFactorSOx**

diagram	
type	**doubleInclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Percent of sulfur oxides removed by pollution control measures. Valid values: 0 to 1000. (%)

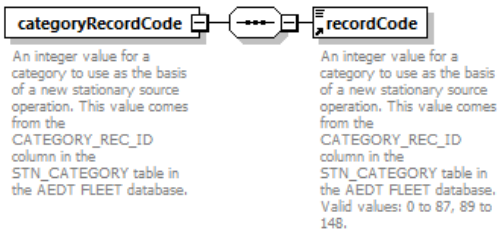
element **categoryOther/pollutionControlFactorPM10**

diagram	
type	**doubleInclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Percent of 10-micron particulate matter removed by pollution control measures. Valid values: 0 to 1000. (%)

element **categoryOther/pm25ToPm10Ratio**

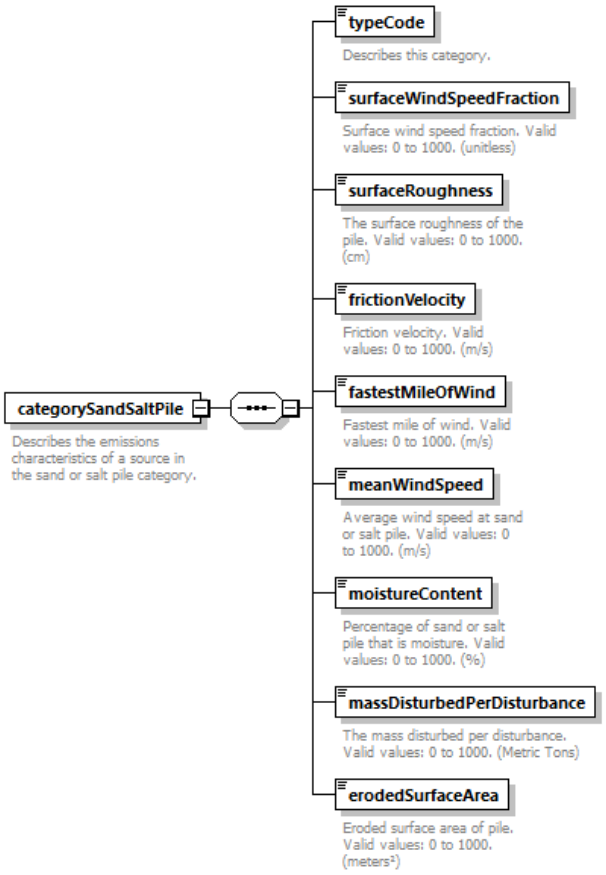
diagram	
type	**doubleInclusive1**
properties	content simple default 1
facets	Kind Value Annotation minInclusive 0 maxInclusive 1
annotation	documentation PM2.5 to PM10 Ratio. Valid values: 0 to 1000.

element **categoryRecordCode**

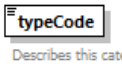
diagram	
properties	content complex
children	**recordCode**

used by	element **stationarySource**
annotation	documentation An integer value for a category to use as the basis of a new stationary source operation. This value comes from the CATEGORY_REC_ID column in the STN_CATEGORY table in the AEDT FLEET database.

element **categorySandSaltPile**

diagram	
properties	content complex
children	**typeCode surfaceWindSpeedFraction surfaceRoughness frictionVelocity fastestMileOfWind meanWindSpeed moistureContent massDisturbedPerDisturbance erodedSurfaceArea**
used by	element **stationarySource**
annotation	documentation Describes the emissions characteristics of a source in the sand or salt pile category.

element **categorySandSaltPile/typeCode**

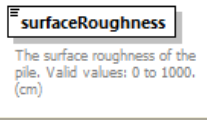
diagram	
type	**int1to5**
properties	content simple
facets	Kind Value Annotation minInclusive 1 maxInclusive 5
annotation	documentation Describes this category.

element **categorySandSaltPile/surfaceWindSpeedFraction**

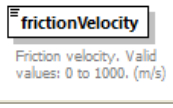
diagram	
type	**doubleInclusive1**

properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1
annotation	documentation Surface wind speed fraction. Valid values: 0 to 1000. (unitless)

element **categorySandSaltPile/surfaceRoughness**

diagram	
type	**doubleExclusiveRange100**
properties	content simple default 0.01
facets	Kind Value Annotation minExclusive 0 maxExclusive 100
annotation	documentation The surface roughness of the pile. Valid values: 0 to 1000. (cm)

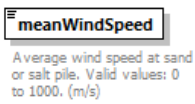
element **categorySandSaltPile/frictionVelocity**

diagram	
type	**doubleExclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxExclusive 100
annotation	documentation Friction velocity. Valid values: 0 to 1000. (m/s)

element **categorySandSaltPile/fastestMileOfWind**

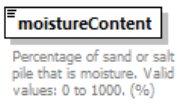
diagram	
type	**doubleExclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxExclusive 100
annotation	documentation Fastest mile of wind. Valid values: 0 to 1000. (m/s)

element **categorySandSaltPile/meanWindSpeed**

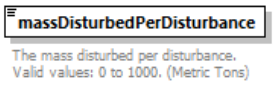
diagram	
type	**doubleExclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0

	maxExclusive 100
annotation	documentation Average wind speed at sand or salt pile. Valid values: 0 to 1000. (m/s)

element **categorySandSaltPile/moistureContent**

diagram	
type	**doubleExclusiveRange100**
properties	content simple default 0.01
facets	Kind Value Annotation minExclusive 0 maxExclusive 100
annotation	documentation Percentage of sand or salt pile that is moisture. Valid values: 0 to 1000. (%)

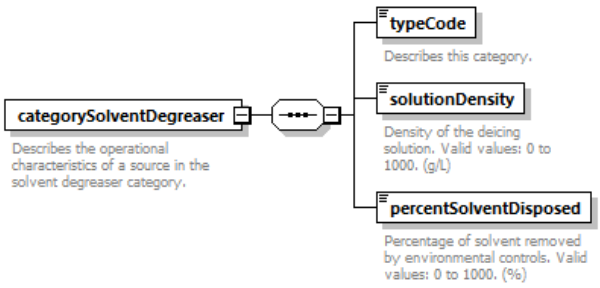
element **categorySandSaltPile/massDisturbedPerDisturbance**

diagram	
type	**doubleExclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxExclusive 1000
annotation	documentation The mass disturbed per disturbance. Valid values: 0 to 1000. (Metric Tons)

element **categorySandSaltPile/erodedSurfaceArea**

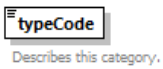
diagram	
type	**doubleExclusive10000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxExclusive 10000
annotation	documentation Eroded surface area of pile. Valid values: 0 to 1000. (meters²)

element **categorySolventDegreaser**

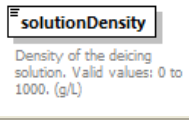
diagram	
properties	content complex
children	**typeCode solutionDensity percentSolventDisposed**

used by	element **stationarySource**
annotation	documentation Describes the operational characteristics of a source in the solvent degreaser category.

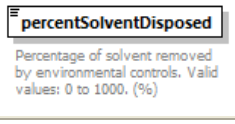
element **categorySolventDegreaser/typeCode**

diagram	
type	**int1to13**
properties	content simple
facets	Kind Value Annotation minInclusive 1 maxInclusive 13
annotation	documentation Describes this category.

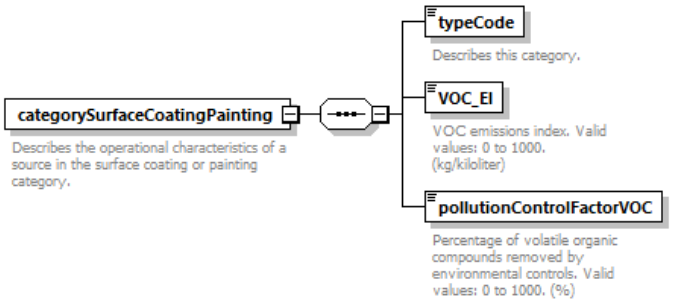
element **categorySolventDegreaser/solutionDensity**

diagram	
type	**doubleExclusive2000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxExclusive 2000
annotation	documentation Density of the deicing solution. Valid values: 0 to 1000. (g/L)

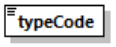
element **categorySolventDegreaser/percentSolventDisposed**

diagram	
type	**xs:double**
properties	content simple default 0
annotation	documentation Percentage of solvent removed by environmental controls. Valid values: 0 to 1000. (%)

element **categorySurfaceCoatingPainting**

diagram	
properties	content complex
children	**typeCode VOC_EI pollutionControlFactorVOC**
used by	element **stationarySource**
annotation	documentation Describes the operational characteristics of a source in the surface coating or painting category.

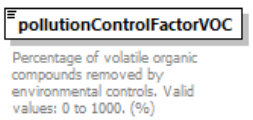
element **categorySurfaceCoatingPainting/typeCode**

diagram	
type	**int1to8**
properties	content simple
facets	Kind Value Annotation minInclusive 1 maxInclusive 8
annotation	documentation Describes this category.

element **categorySurfaceCoatingPainting/VOC_EI**

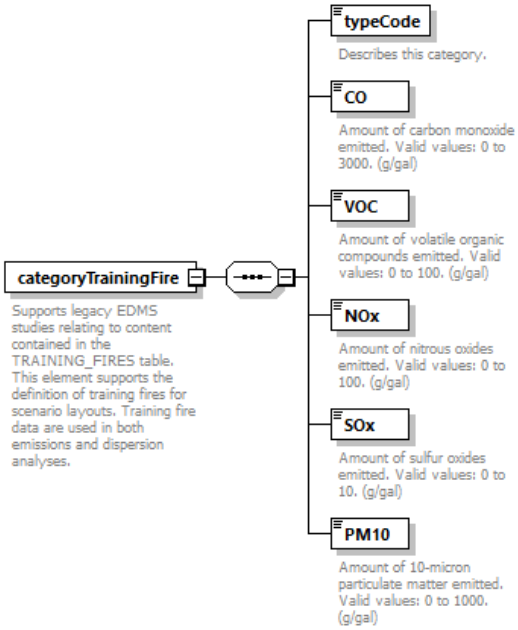
diagram	
type	**doubleInclusive1000**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 1000
annotation	documentation VOC emissions index. Valid values: 0 to 1000. (kg/kiloliter)

element **categorySurfaceCoatingPainting/pollutionControlFactorVOC**

diagram	
type	**doubleInclusive100**
properties	content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Percentage of volatile organic compounds removed by environmental controls. Valid values: 0 to 1000. (%)

element **categoryTrainingFire**

diagram	

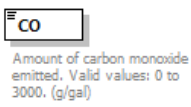


properties	content complex
children	**typeCode CO VOC NOx SOx PM10**
used by	element **stationarySource**
annotation	documentation Supports legacy EDMS studies relating to content contained in the TRAINING_FIRES table. This element supports the definition of training fires for scenario layouts. Training fire data are used in both emissions and dispersion analyses.

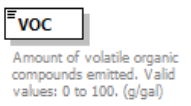
element **categoryTrainingFire/typeCode**

diagram	
type	**int1to5**
properties	content simple
facets	Kind Value Annotation minInclusive 1 maxInclusive 5
annotation	documentation Describes this category.

element **categoryTrainingFire/CO**

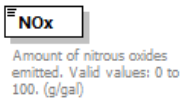
diagram	
type	**xs:double**
properties	content simple
annotation	documentation Amount of carbon monoxide emitted. Valid values: 0 to 3000. (g/gal)

element **categoryTrainingFire/VOC**

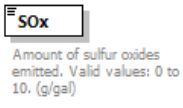
diagram	
type	**xs:double**
properties	content simple

annotation	documentation Amount of volatile organic compounds emitted. Valid values: 0 to 100. (g/gal)

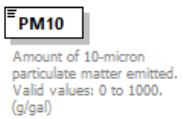
element **categoryTrainingFire/NOx**

diagram	
type	**xs:double**
properties	content simple
annotation	documentation Amount of nitrous oxides emitted. Valid values: 0 to 100. (g/gal)

element **categoryTrainingFire/SOx**

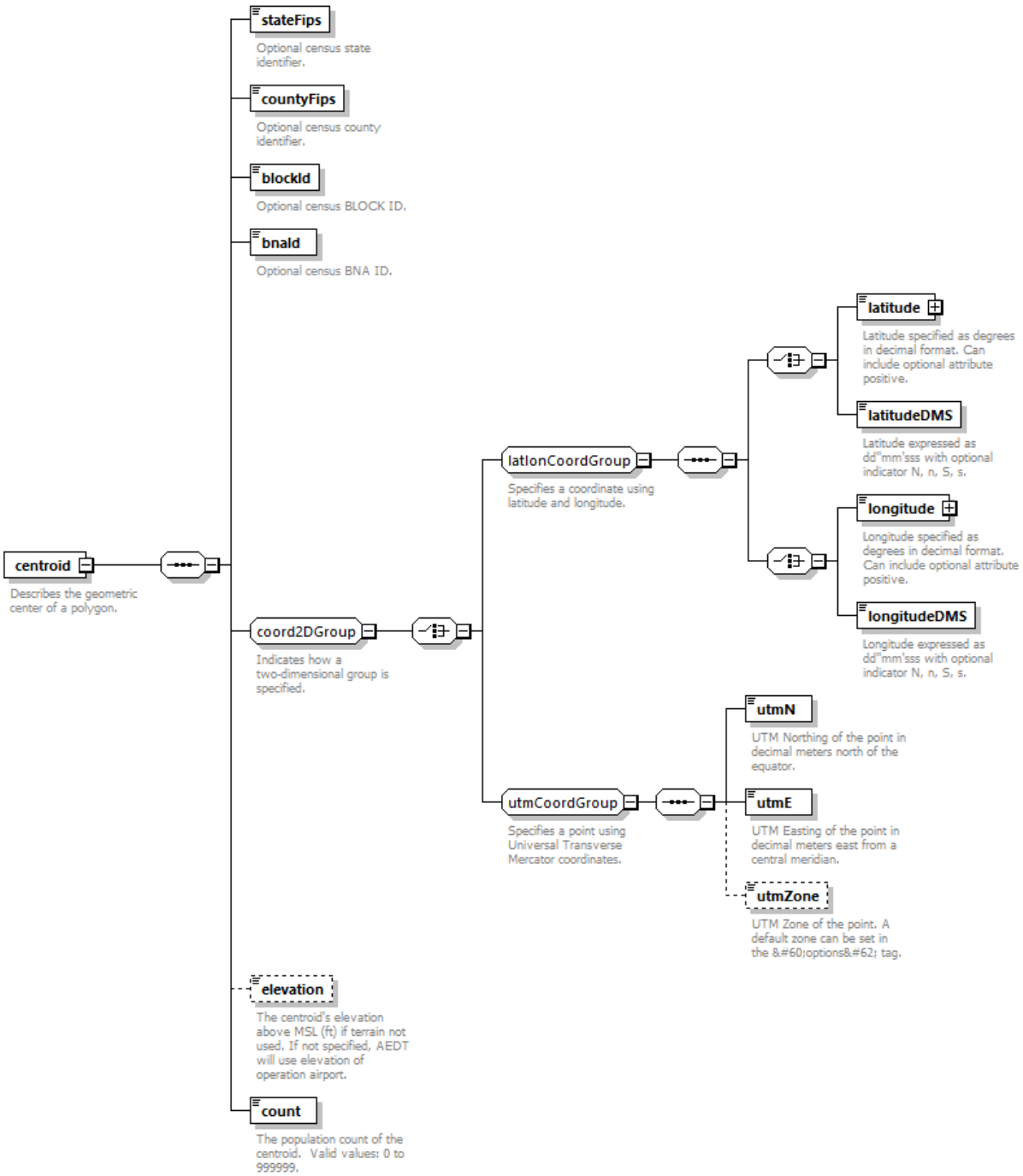
diagram	
type	**xs:double**
properties	content simple
annotation	documentation Amount of sulfur oxides emitted. Valid values: 0 to 10. (g/gal)

element **categoryTrainingFire/PM10**

diagram	
type	**xs:double**
properties	content simple
annotation	documentation Amount of 10-micron particulate matter emitted. Valid values: 0 to 1000. (g/gal)

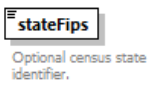
element **centroid**

diagram	



properties	content complex
children	**stateFips countyFips blockId bnaId latitude latitudeDMS longitude longitudeDMS utmN utmE utmZone elevation count**
used by	group **receptorGroup**
annotation	documentation Describes the geometric center of a polygon.

element **centroid/stateFips**

diagram	
type	**xs:int**
properties	content simple
annotation	documentation Optional census state identifier.

element **centroid/countyFips**

diagram	countyFips Optional census county identifier.
type	**xs:int**
properties	content simple
annotation	documentation Optional census county identifier.

element **centroid/blockId**

diagram	blockId Optional census BLOCK ID.
type	**xs:int**
properties	content simple
annotation	documentation Optional census BLOCK ID.

element **centroid/bnaId**

diagram	bnaId Optional census BNA ID.
type	**string6**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 6
annotation	documentation Optional census BNA ID.

element **centroid/elevation**

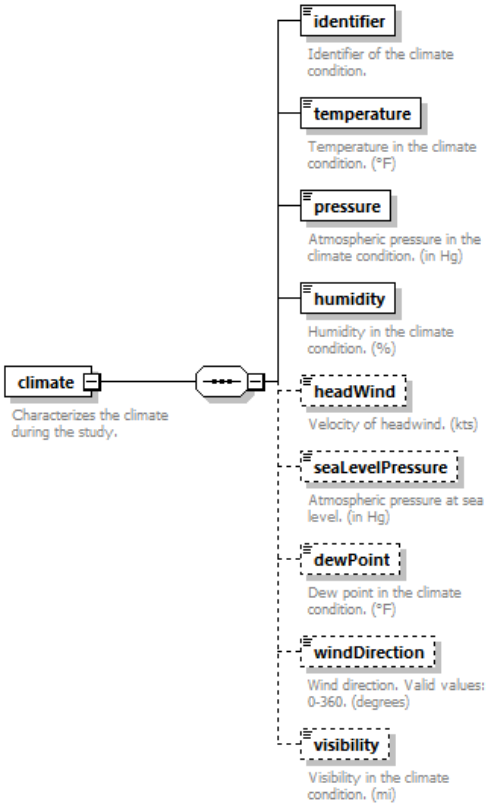
diagram	elevation The centroid's elevation above MSL (ft) if terrain not used. If not specified, AEDT will use elevation of operation airport.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation The centroid's elevation above MSL (ft) if terrain not used. If not specified, AEDT will use elevation of operation airport.

element **centroid/count**

diagram	count The population count of the centroid. Valid values: 0 to 999999.
type	**xs:int**
properties	content simple
annotation	documentation The population count of the centroid. Valid values: 0 to 999999.

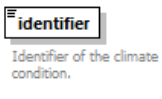
element **climate**

diagram	

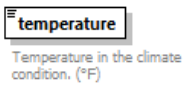


properties	content complex
children	**identifier temperature pressure humidity headWind seaLevelPressure dewPoint windDirection visibility**
used by	element **study**
annotation	documentation Characterizes the climate during the study.

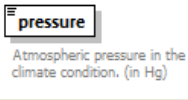
element **climate/identifier**

diagram	
type	**string8**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 8
annotation	documentation Identifier of the climate condition.

element **climate/temperature**

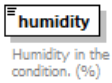
diagram	
type	**xs:float**
properties	content simple
annotation	documentation Temperature in the climate condition. (°F)

element **climate/pressure**

diagram	

type	**xs:float**
properties	content simple
annotation	documentation Atmospheric pressure in the climate condition. (in Hg)

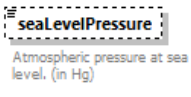
element **climate/humidity**

diagram	
type	**xs:double**
properties	content simple
annotation	documentation Humidity in the climate condition. (%)

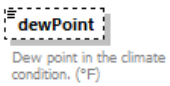
element **climate/headWind**

diagram	
type	**xs:float**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Velocity of headwind. (kts)

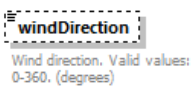
element **climate/seaLevelPressure**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Atmospheric pressure at sea level. (in Hg)

element **climate/dewPoint**

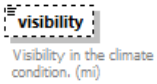
diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Dew point in the climate condition. (°F)

element **climate/windDirection**

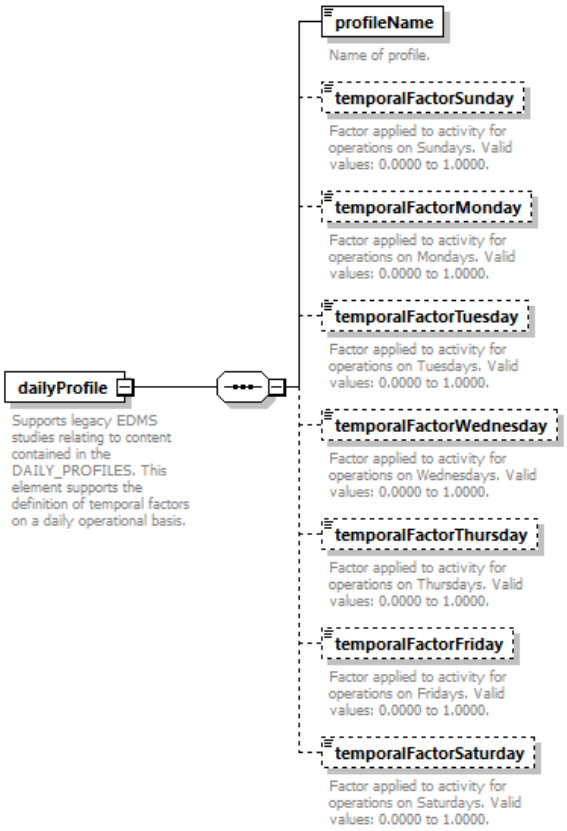
diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation

	Wind direction. Valid values: 0-360. (degrees)

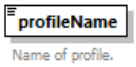
element **climate/visibility**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Visibility in the climate condition. (mi)

element **dailyProfile**

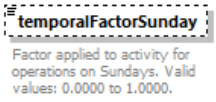
diagram	
properties	content complex
children	**profileName temporalFactorSunday temporalFactorMonday temporalFactorTuesday temporalFactorWednesday temporalFactorThursday temporalFactorFriday temporalFactorSaturday**
used by	element **dailyProfileSet**
annotation	documentation Supports legacy EDMS studies relating to content contained in the DAILY_PROFILES. This element supports the definition of temporal factors on a daily operational basis.

element **dailyProfile/profileName**

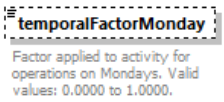
diagram	
type	**string100**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 100
annotation	documentation

	Name of profile.

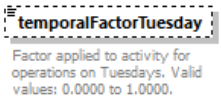
element **dailyProfile/temporalFactorSunday**

diagram	
type	**doubleMin0**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0
annotation	documentation Factor applied to activity for operations on Sundays. Valid values: 0.0000 to 1.0000.

element **dailyProfile/temporalFactorMonday**

diagram	
type	**doubleMin0**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0
annotation	documentation Factor applied to activity for operations on Mondays. Valid values: 0.0000 to 1.0000.

element **dailyProfile/temporalFactorTuesday**

diagram	
type	**doubleMin0**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0
annotation	documentation Factor applied to activity for operations on Tuesdays. Valid values: 0.0000 to 1.0000.

element **dailyProfile/temporalFactorWednesday**

diagram	
type	**doubleMin0**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0
annotation	documentation Factor applied to activity for operations on Wednesdays. Valid values: 0.0000 to 1.0000.

element **dailyProfile/temporalFactorThursday**

diagram	temporalFactorThursday Factor applied to activity for operations on Thursdays. Valid values: 0.0000 to 1.0000.
type	**doubleMin0**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0
annotation	documentation Factor applied to activity for operations on Thursdays. Valid values: 0.0000 to 1.0000.

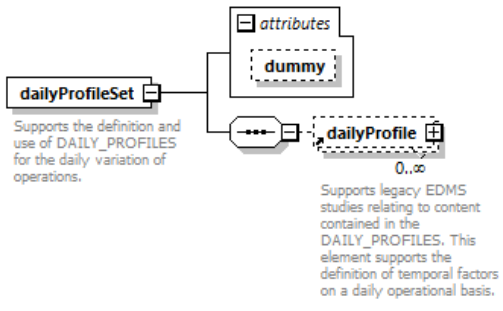
element **dailyProfile/temporalFactorFriday**

diagram	temporalFactorFriday Factor applied to activity for operations on Fridays. Valid values: 0.0000 to 1.0000.
type	**doubleMin0**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0
annotation	documentation Factor applied to activity for operations on Fridays. Valid values: 0.0000 to 1.0000.

element **dailyProfile/temporalFactorSaturday**

diagram	temporalFactorSaturday Factor applied to activity for operations on Saturdays. Valid values: 0.0000 to 1.0000.
type	**doubleMin0**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0
annotation	documentation Factor applied to activity for operations on Saturdays. Valid values: 0.0000 to 1.0000.

element **dailyProfileSet**

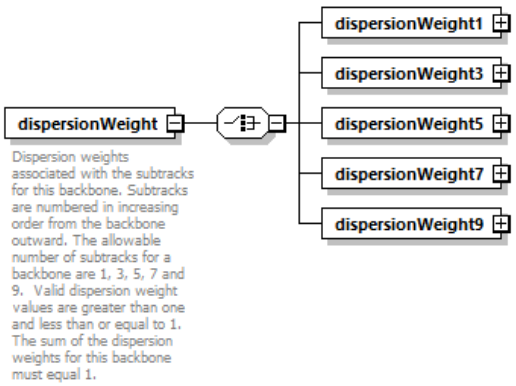
diagram	
properties	content complex
children	**dailyProfile**
used by	element **operationalProfileSet** complexType **airportLayoutType**
attributes	Name Type Use Default Fixed Annotation dummy **xs:int** optional

annotation	documentation Supports the definition and use of DAILY_PROFILES for the daily variation of operations.

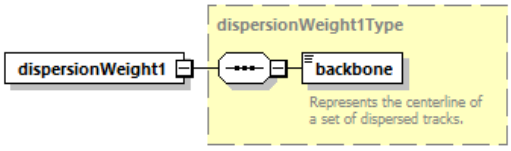
attribute **dailyProfileSet/@dummy**

type	**xs:int**
properties	use optional

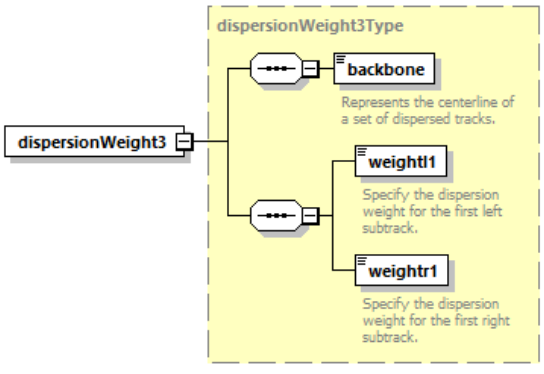
element **dispersionWeight**

diagram	
properties	content complex
children	**dispersionWeight1** **dispersionWeight3** **dispersionWeight5** **dispersionWeight7** **dispersionWeight9**
used by	element **backbone**
annotation	documentation Dispersion weights associated with the subtracks for this backbone. Subtracks are numbered in increasing order from the backbone outward. The allowable number of subtracks for a backbone are 1, 3, 5, 7 and 9. Valid dispersion weight values are greater than one and less than or equal to 1. The sum of the dispersion weights for this backbone must equal 1.

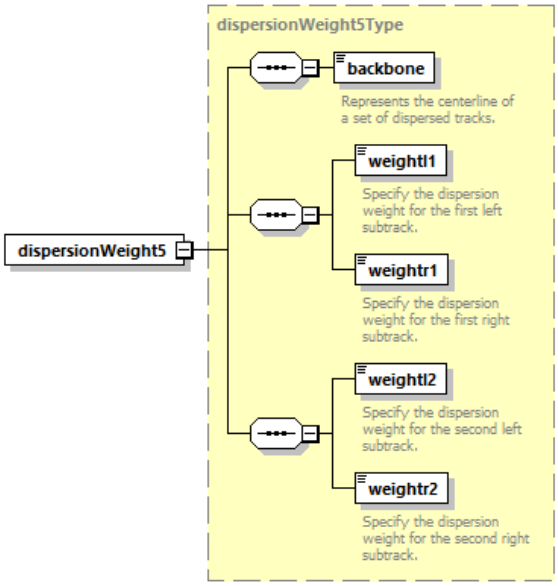
element **dispersionWeight/dispersionWeight1**

diagram	
type	**dispersionWeight1Type**
properties	content complex
children	**backbone**

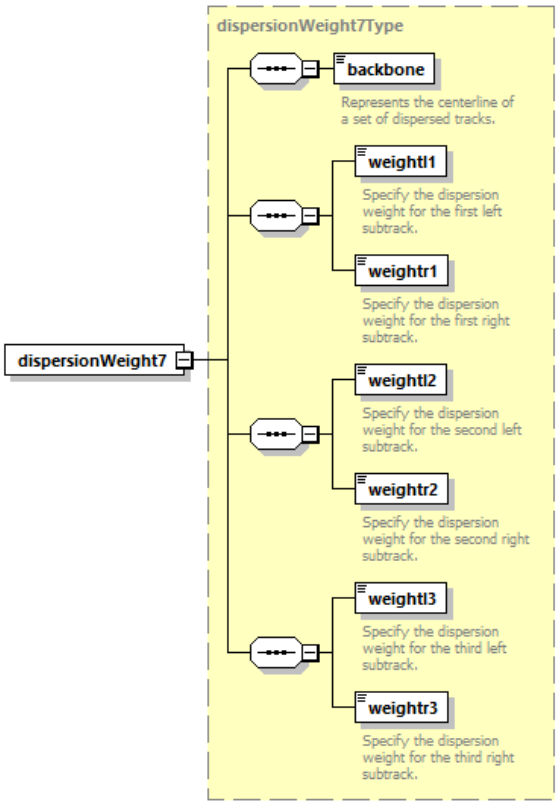
element **dispersionWeight/dispersionWeight3**

diagram	
type	**dispersionWeight3Type**
properties	content complex
children	**backbone** **weightl1** **weightr1**

element **dispersionWeight/dispersionWeight5**

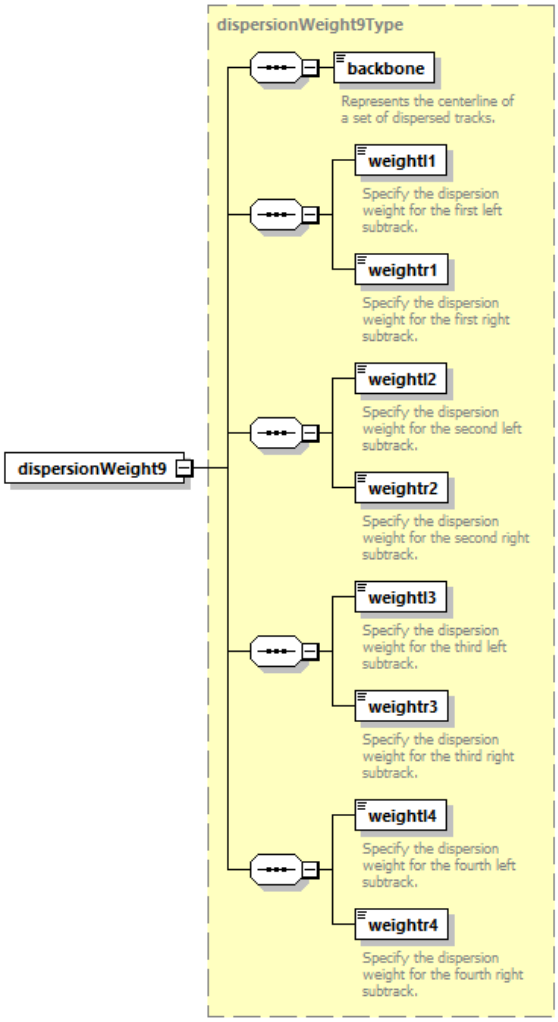
diagram	
type	**dispersionWeight5Type**
properties	content complex
children	**backbone weightl1 weightr1 weightl2 weightr2**

element **dispersionWeight/dispersionWeight7**

diagram	
type	**dispersionWeight7Type**
properties	content complex
children	**backbone weightl1 weightr1 weightl2 weightr2 weightl3 weightr3**

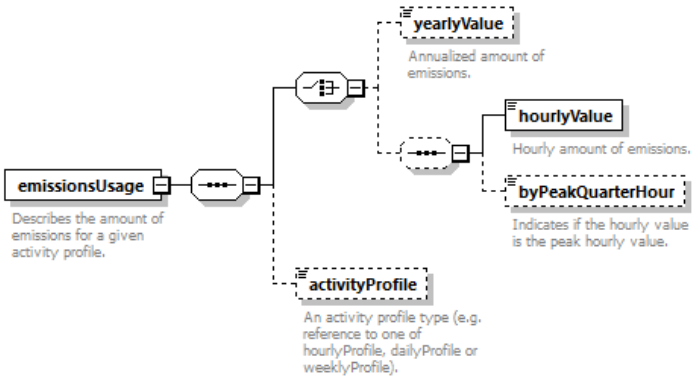
element **dispersionWeight/dispersionWeight9**

diagram	



type	**dispersionWeight9Type**
properties	content complex
children	**backbone weightl1 weightr1 weightl2 weightr2 weightl3 weightr3 weightl4 weightr4**

element **emissionsUsage**

diagram	
properties	content complex
children	**yearlyValue hourlyValue byPeakQuarterHour activityProfile**
used by	elements **parkingFacilityOperation roadwayOperation stationarySourceOperation**
annotation	documentation Describes the amount of emissions for a given activity profile.

element **emissionsUsage/yearlyValue**

diagram	

	yearlyValue Annualized amount of emissions.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Annualized amount of emissions.

element **emissionsUsage/hourlyValue**

diagram	hourlyValue Hourly amount of emissions.
type	**xs:double**
properties	content simple
annotation	documentation Hourly amount of emissions.

element **emissionsUsage/byPeakQuarterHour**

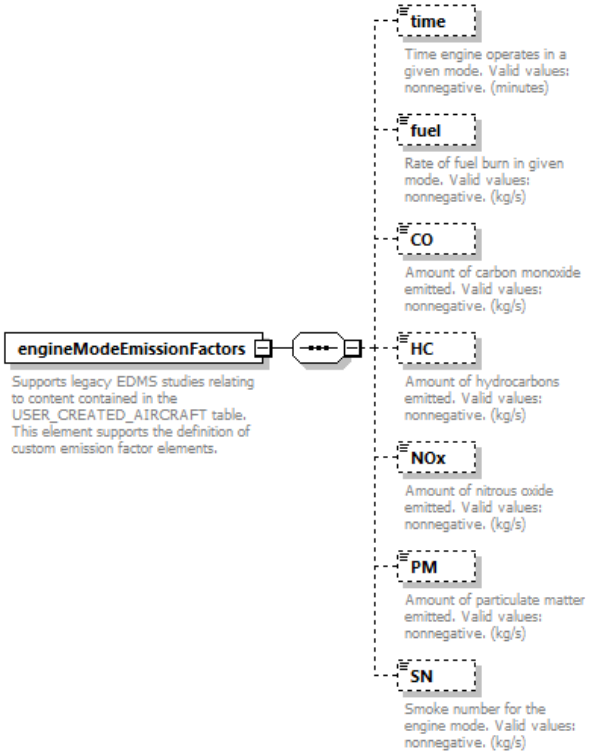
diagram	byPeakQuarterHour Indicates if the hourly value is the peak hourly value.
type	**xs:boolean**
properties	minOcc 0 maxOcc 1 content simple default false
annotation	documentation Indicates if the hourly value is the peak hourly value.

element **emissionsUsage/activityProfile**

diagram	activityProfile An activity profile type (e.g. reference to one of hourlyProfile, dailyProfile or weeklyProfile).
type	**string40**
properties	minOcc 0 maxOcc 1 content simple
used by	element **activityProfileSet**
facets	Kind Value Annotation minLength 0 maxLength 40
annotation	documentation An activity profile type (e.g. reference to one of hourlyProfile, dailyProfile or weeklyProfile).

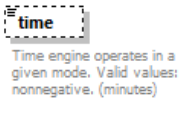
element **engineModeEmissionFactors**

diagram	

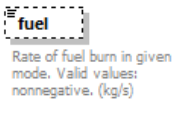


properties	content complex
children	**time fuel CO HC NOx PM SN**
annotation	documentation Supports legacy EDMS studies relating to content contained in the USER_CREATED_AIRCRAFT table. This element supports the definition of custom emission factor elements.

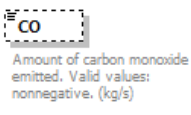
element **engineModeEmissionFactors/time**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 0
annotation	documentation Time engine operates in a given mode. Valid values: nonnegative. (minutes)

element **engineModeEmissionFactors/fuel**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 0
annotation	documentation Rate of fuel burn in given mode. Valid values: nonnegative. (kg/s)

element **engineModeEmissionFactors/CO**

diagram	

type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 0
annotation	documentation Amount of carbon monoxide emitted. Valid values: nonnegative. (kg/s)

element **engineModeEmissionFactors/HC**

diagram	 Amount of hydrocarbons emitted. Valid values: nonnegative. (kg/s)
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 0
annotation	documentation Amount of hydrocarbons emitted. Valid values: nonnegative. (kg/s)

element **engineModeEmissionFactors/NOx**

diagram	 Amount of nitrous oxide emitted. Valid values: nonnegative. (kg/s)
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 0
annotation	documentation Amount of nitrous oxide emitted. Valid values: nonnegative. (kg/s)

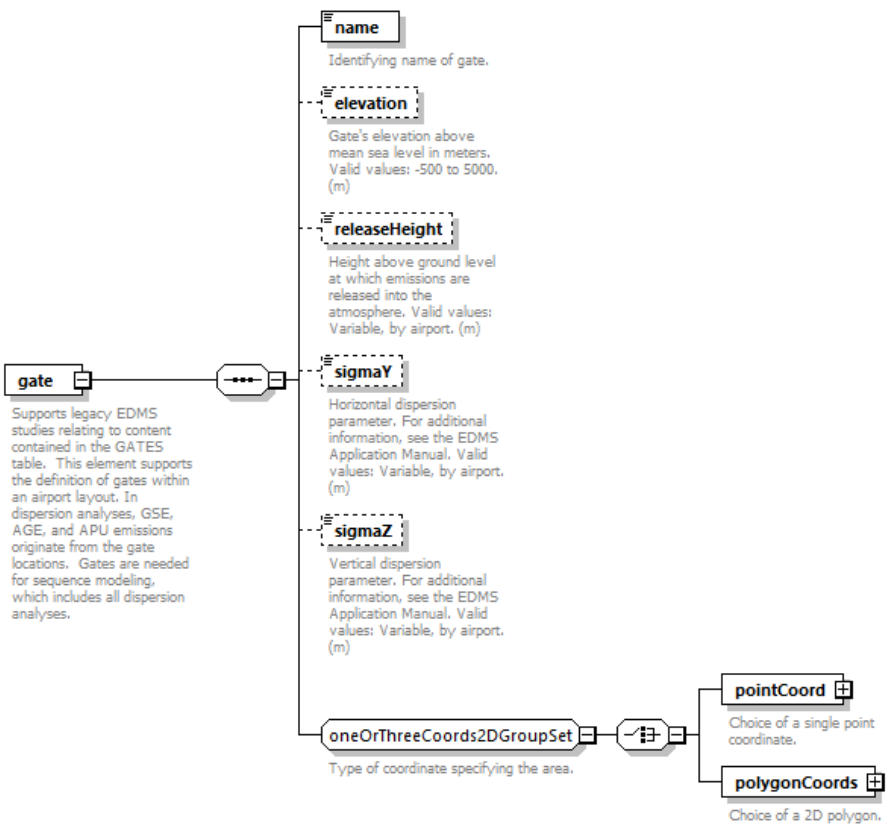
element **engineModeEmissionFactors/PM**

diagram	 Amount of particulate matter emitted. Valid values: nonnegative. (kg/s)
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 0
annotation	documentation Amount of particulate matter emitted. Valid values: nonnegative. (kg/s)

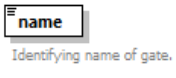
element **engineModeEmissionFactors/SN**

diagram	 Smoke number for the engine mode. Valid values: nonnegative. (kg/s)
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 0
annotation	documentation Smoke number for the engine mode. Valid values: nonnegative. (kg/s)

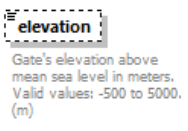
element **gate**

diagram	
properties	content complex
children	**name elevation releaseHeight sigmaY sigmaZ pointCoord polygonCoords**
used by	element **gateSet**
annotation	documentation Supports legacy EDMS studies relating to content contained in the GATES table. This element supports the definition of gates within an airport layout. In dispersion analyses, GSE, AGE, and APU emissions originate from the gate locations. Gates are needed for sequence modeling, which includes all dispersion analyses.

element **gate/name**

diagram	
type	**string40**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 40
annotation	documentation Identifying name of gate.

element **gate/elevation**

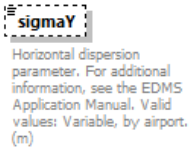
diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation

	Gate's elevation above mean sea level in meters. Valid values: -500 to 5000. (m)

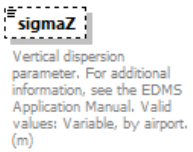
element **gate/releaseHeight**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Height above ground level at which emissions are released into the atmosphere. Valid values: Variable, by airport. (m)

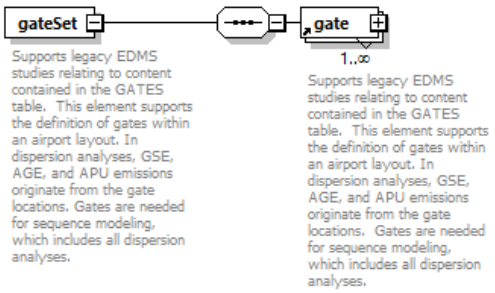
element **gate/sigmaY**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Horizontal dispersion parameter. For additional information, see the EDMS Application Manual. Valid values: Variable, by airport. (m)

element **gate/sigmaZ**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Vertical dispersion parameter. For additional information, see the EDMS Application Manual. Valid values: Variable, by airport. (m)

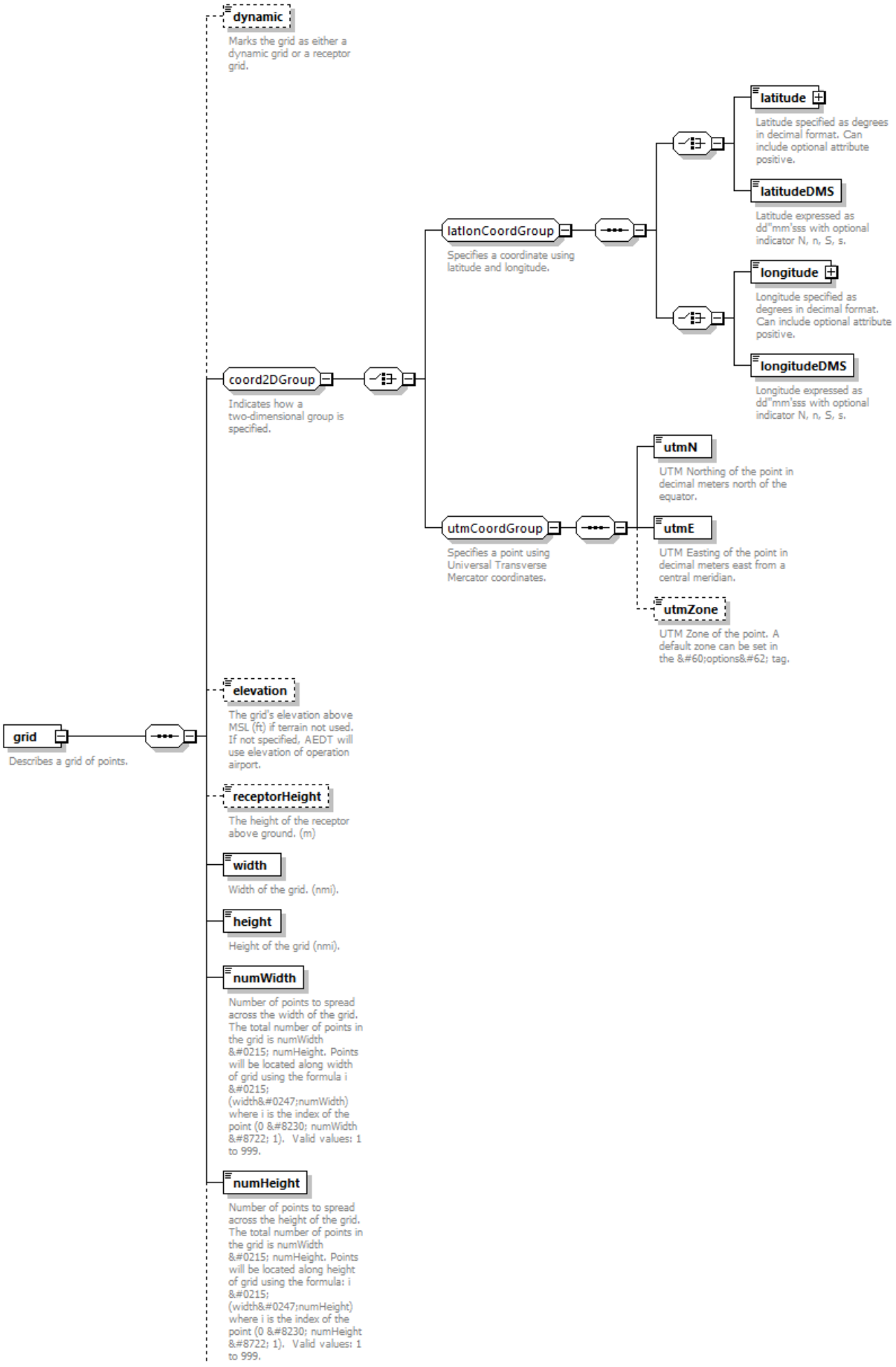
element **gateSet**

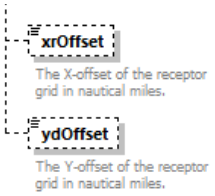
diagram	
properties	content complex
children	**gate**
used by	complexType **airportLayoutType**
annotation	documentation Supports legacy EDMS studies relating to content contained in the GATES table. This element supports the definition of gates within an airport layout. In dispersion analyses, GSE,

	AGE, and APU emissions originate from the gate locations. Gates are needed for sequence modeling, which includes all dispersion analyses.

element **grid**

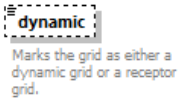
diagram





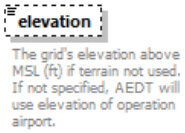
properties	content complex
children	**dynamic latitude latitudeDMS longitude longitudeDMS utmN utmE utmZone elevation receptorHeight width height numWidth numHeight xrOffset ydOffset**
used by	group **receptorGroup**
annotation	documentation Describes a grid of points.

element **grid/dynamic**



type	**xs:boolean**
properties	minOcc 0 maxOcc 1 content simple default false
annotation	documentation Marks the grid as either a dynamic grid or a receptor grid.

element **grid/elevation**



type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation The grid's elevation above MSL (ft) if terrain not used. If not specified, AEDT will use elevation of operation airport.

element **grid/receptorHeight**

type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation The height of the receptor above ground. (m)

element **grid/width**

type	**xs:double**
properties	content simple
annotation	documentation Width of the grid. (nmi).

element **grid/height**

diagram	**height** Height of the grid (nmi).
type	**xs:double**
properties	content simple
annotation	documentation Height of the grid (nmi).

element **grid/numWidth**

diagram	**numWidth** Number of points to spread across the width of the grid. The total number of points in the grid is numWidth × numHeight. Points will be located along width of grid using the formula i × (width÷numWidth) where i is the index of the point (0 … numWidth − 1). Valid values: 1 to 999.
type	**xs:int**
properties	content simple
annotation	documentation Number of points to spread across the width of the grid. The total number of points in the grid is numWidth × numHeight. Points will be located along width of grid using the formula i × (width÷numWidth) where i is the index of the point (0 … numWidth − 1). Valid values: 1 to 999.

element **grid/numHeight**

diagram	**numHeight** Number of points to spread across the height of the grid. The total number of points in the grid is numWidth × numHeight. Points will be located along height of grid using the formula: i × (width÷numHeight) where i is the index of the point (0 … numHeight − 1). Valid values: 1 to 999.
type	**xs:int**
properties	content simple
annotation	documentation Number of points to spread across the height of the grid. The total number of points in the grid is numWidth × numHeight. Points will be located along height of grid using the formula: i × (width÷numHeight) where i is the index of the point (0 … numHeight − 1). Valid values: 1 to 999.

element **grid/xrOffset**

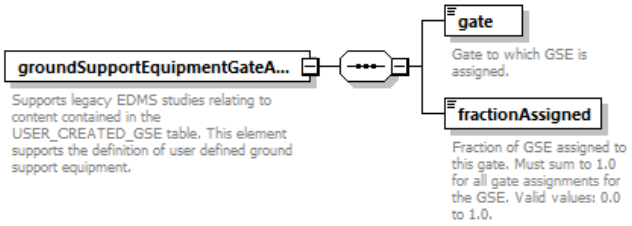
diagram	**xrOffset** The X-offset of the receptor grid in nautical miles.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 0
annotation	documentation The X-offset of the receptor grid in nautical miles.

element **grid/ydOffset**

diagram	**ydOffset** The Y-offset of the receptor grid in nautical miles.

type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 0
annotation	documentation The Y-offset of the receptor grid in nautical miles.

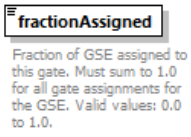
element **groundSupportEquipmentGateAssignment**

diagram	
properties	content complex
children	**gate** **fractionAssigned**
used by	element **groundSupportEquipmentGateAssignmentSet**
annotation	documentation Supports legacy EDMS studies relating to content contained in the USER_CREATED_GSE table. This element supports the definition of user defined ground support equipment.

element **groundSupportEquipmentGateAssignment/gate**

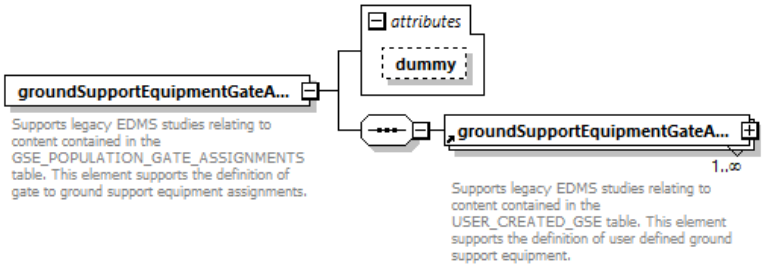
diagram	
type	**string20**
properties	content simple
used by	element **gateSet**
facets	Kind Value Annotation minLength 0 maxLength 20
annotation	documentation Gate to which GSE is assigned.

element **groundSupportEquipmentGateAssignment/fractionAssigned**

diagram	
type	**doubleInclusive1**
properties	content simple
facets	Kind Value Annotation minInclusive 0 maxInclusive 1
annotation	documentation Fraction of GSE assigned to this gate. Must sum to 1.0 for all gate assignments for the GSE. Valid values: 0.0 to 1.0.

element **groundSupportEquipmentGateAssignmentSet**

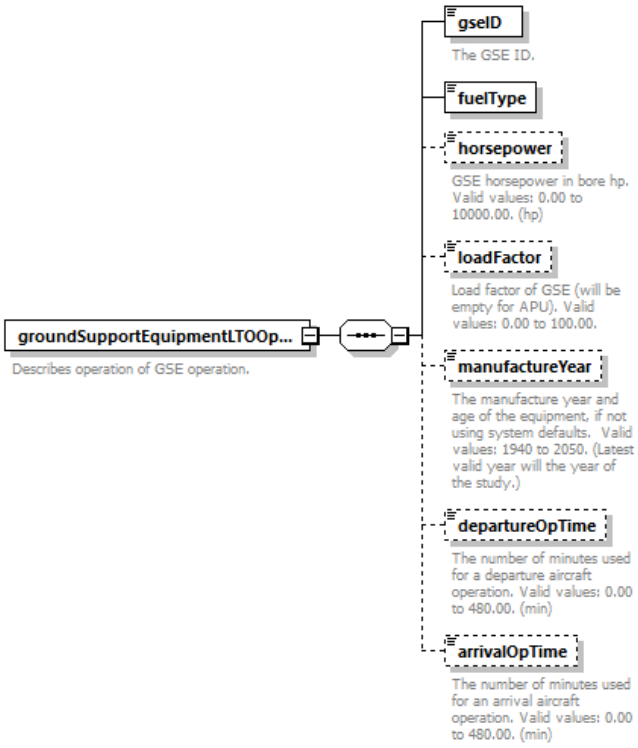
diagram	

	
properties	content complex
children	**groundSupportEquipmentGateAssignment**
used by	element **groundSupportEquipmentPopulationOperation**
attributes	Name Type Use Default Fixed Annotation dummy **xs:int** optional
annotation	documentation Supports legacy EDMS studies relating to content contained in the GSE_POPULATION_GATE_ASSIGNMENTS table. This element supports the definition of gate to ground support equipment assignments.

attribute **groundSupportEquipmentGateAssignmentSet/@dummy**

type	**xs:int**
properties	use optional

element **groundSupportEquipmentLTOOperation**

diagram	
properties	content complex
children	**gseID fuelType horsepower loadFactor manufactureYear departureOpTime arrivalOpTime**
used by	element **groundSupportEquipmentLTOOperationSet**
annotation	documentation Describes operation of GSE operation.

element **groundSupportEquipmentLTOOperation/gseID**

diagram	
type	**xs:int**

properties	content simple
annotation	documentation The GSE ID.

element **groundSupportEquipmentLTOOperation/fuelType**

diagram	fuelType
type	**fuelType**
properties	content simple
facets	Kind Value Annotation pattern G|Gasoline|D|Diesel|C|Compressed Natural Gas|L|Liquefied Petroleum Gas|E|Electric

element **groundSupportEquipmentLTOOperation/horsepower**

diagram	horsepower GSE horsepower in bore hp. Valid values: 0.00 to 10000.00. (hp)
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation GSE horsepower in bore hp. Valid values: 0.00 to 10000.00. (hp)

element **groundSupportEquipmentLTOOperation/loadFactor**

diagram	loadFactor Load factor of GSE (will be empty for APU). Valid values: 0.00 to 100.00.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Load factor of GSE (will be empty for APU). Valid values: 0.00 to 100.00.

element **groundSupportEquipmentLTOOperation/manufactureYear**

diagram	manufactureYear The manufacture year and age of the equipment, if not using system defaults. Valid values: 1940 to 2050. (Latest valid year will the year of the study.)
type	**xs:int**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation The manufacture year and age of the equipment, if not using system defaults. Valid values: 1940 to 2050. (Latest valid year will the year of the study.)

element **groundSupportEquipmentLTOOperation/departureOpTime**

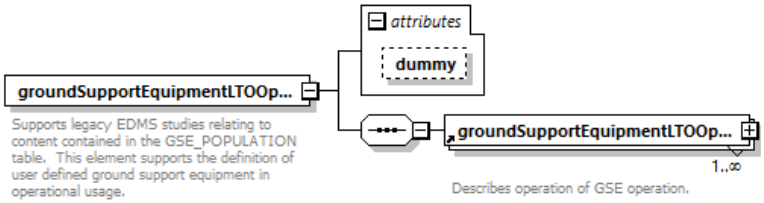
diagram	departureOpTime The number of minutes used for a departure aircraft operation. Valid values: 0.00 to 480.00. (min)
type	**xs:double**
properties	minOcc 0 maxOcc 1

	content simple
annotation	documentation The number of minutes used for a departure aircraft operation. Valid values: 0.00 to 480.00. (min)

element **groundSupportEquipmentLTOOperation/arrivalOpTime**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation The number of minutes used for an arrival aircraft operation. Valid values: 0.00 to 480.00. (min)

element **groundSupportEquipmentLTOOperationSet**

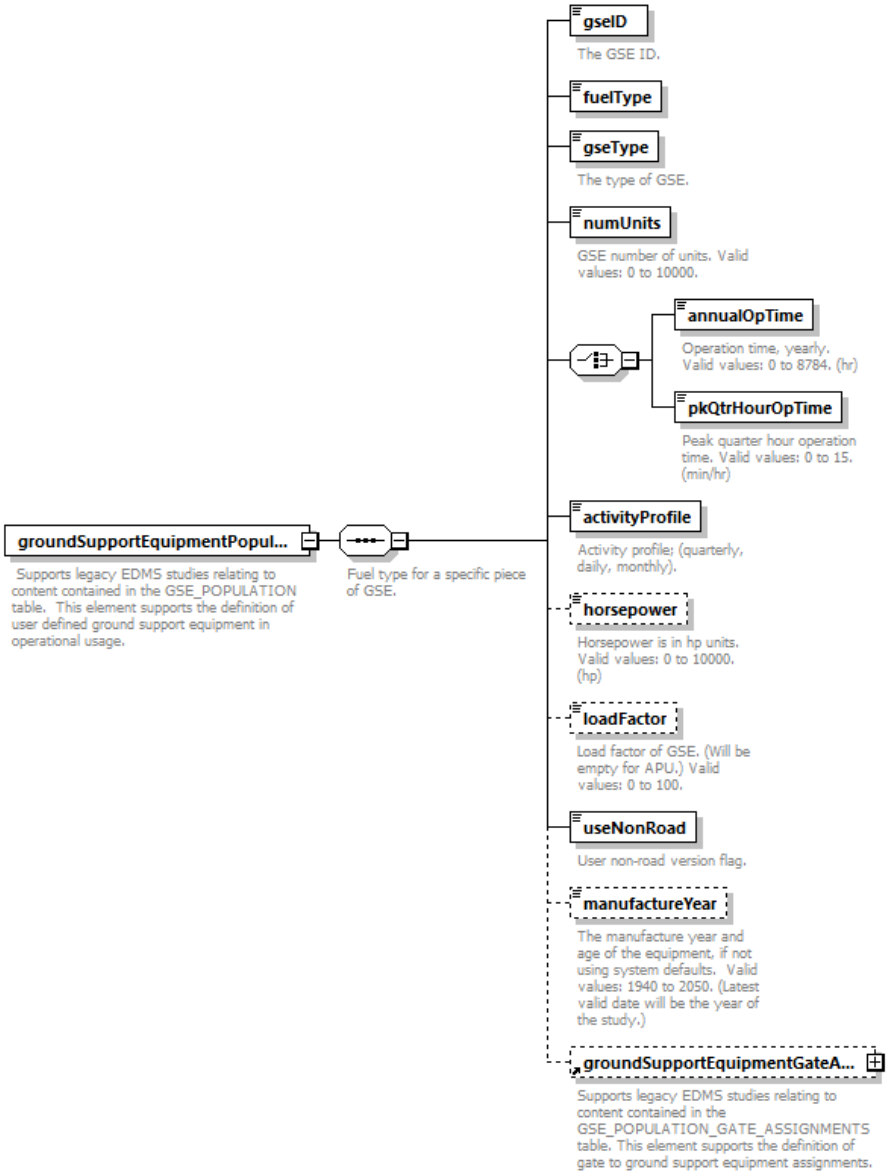
diagram	
properties	content complex
children	**groundSupportEquipmentLTOOperation**
used by	complexType **aircraftType**
attributes	Name Type Use Default Fixed Annotation dummy **xs:int** optional
annotation	documentation Supports legacy EDMS studies relating to content contained in the GSE_POPULATION table. This element supports the definition of user defined ground support equipment in operational usage.

attribute **groundSupportEquipmentLTOOperationSet/@dummy**

type	**xs:int**
properties	use optional

element **groundSupportEquipmentPopulationOperation**

diagram	

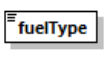


properties	content complex
children	**gseID fuelType gseType numUnits annualOpTime pkQtrHourOpTime activityProfile horsepower loadFactor useNonRoad manufactureYear groundSupportEquipmentGateAssignmentSet**
used by	element **groundSupportEquipmentPopulationOperationSet**
annotation	documentation Supports legacy EDMS studies relating to content contained in the GSE_POPULATION table. This element supports the definition of user defined ground support equipment in operational usage.

element **groundSupportEquipmentPopulationOperation/gseID**

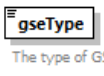
diagram	
type	**xs:int**
properties	content simple
annotation	documentation The GSE ID.

element **groundSupportEquipmentPopulationOperation/fuelType**

diagram	
type	**fuelType**

properties	content simple
facets	Kind Value Annotation pattern G|Gasoline|D|Diesel|C|Compressed Natural Gas|L|Liquefied Petroleum Gas|E|Electric

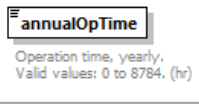
element **groundSupportEquipmentPopulationOperation/gseType**

diagram	
type	**xs:string**
properties	content simple
annotation	documentation The type of GSE.

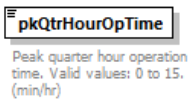
element **groundSupportEquipmentPopulationOperation/numUnits**

diagram	
type	**xs:double**
properties	content simple
annotation	documentation GSE number of units. Valid values: 0 to 10000.

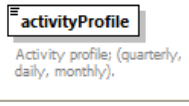
element **groundSupportEquipmentPopulationOperation/annualOpTime**

diagram	
type	**xs:double**
properties	content simple
annotation	documentation Operation time, yearly. Valid values: 0 to 8784. (hr)

element **groundSupportEquipmentPopulationOperation/pkQtrHourOpTime**

diagram	
type	**xs:double**
properties	content simple
annotation	documentation Peak quarter hour operation time. Valid values: 0 to 15. (min/hr)

element **groundSupportEquipmentPopulationOperation/activityProfile**

diagram	
type	**string40**
properties	content simple
used by	element **activityProfileSet**
facets	Kind Value Annotation minLength 0 maxLength 40
annotation	documentation Activity profile; (quarterly, daily, monthly).

element **groundSupportEquipmentPopulationOperation/horsepower**

diagram	**horsepower** Horsepower is in hp units. Valid values: 0 to 10000. (hp)
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Horsepower is in hp units. Valid values: 0 to 10000. (hp)

element **groundSupportEquipmentPopulationOperation/loadFactor**

diagram	**loadFactor** Load factor of GSE. (Will be empty for APU.) Valid values: 0 to 100.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Load factor of GSE. (Will be empty for APU.) Valid values: 0 to 100.

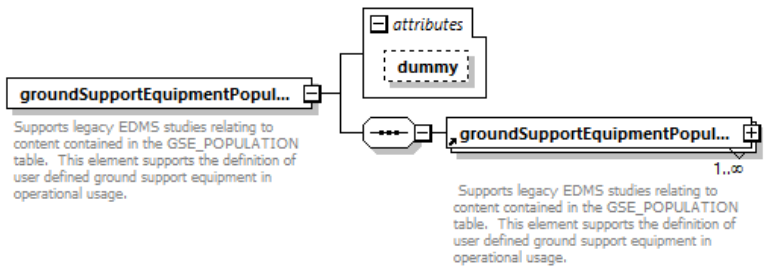
element **groundSupportEquipmentPopulationOperation/useNonRoad**

diagram	**useNonRoad** User non-road version flag.
type	**xs:boolean**
properties	content simple
annotation	documentation User non-road version flag.

element **groundSupportEquipmentPopulationOperation/manufactureYear**

diagram	**manufactureYear** The manufacture year and age of the equipment, if not using system defaults. Valid values: 1940 to 2050. (Latest valid date will be the year of the study.)
type	**xs:int**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation The manufacture year and age of the equipment, if not using system defaults. Valid values: 1940 to 2050. (Latest valid date will be the year of the study.)

element **groundSupportEquipmentPopulationOperationSet**

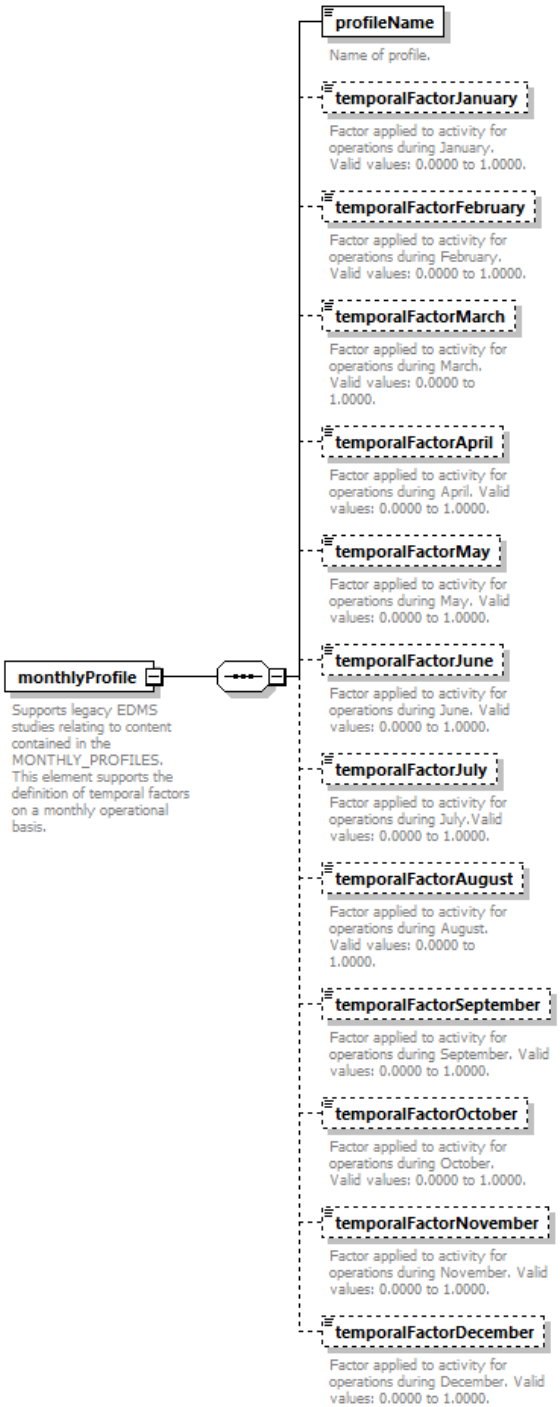
diagram	
properties	content complex
children	**groundSupportEquipmentPopulationOperation**
used by	group **airportActivityGroup**

attributes	Name Type Use Default Fixed Annotation dummy **xs:int** optional
annotation	documentation Supports legacy EDMS studies relating to content contained in the GSE_POPULATION table. This element supports the definition of user defined ground support equipment in operational usage.

attribute **groundSupportEquipmentPopulationOperationSet/@dummy**

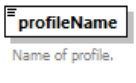
type	**xs:int**
properties	use optional

element **monthlyProfile**

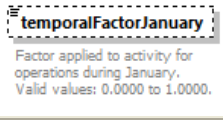
diagram	
properties	content complex
children	**profileName temporalFactorJanuary temporalFactorFebruary temporalFactorMarch temporalFactorApril temporalFactorMay temporalFactorJune temporalFactorJuly temporalFactorAugust temporalFactorSeptember temporalFactorOctober temporalFactorNovember temporalFactorDecember**

used by	element **monthlyProfileSet**
annotation	documentation Supports legacy EDMS studies relating to content contained in the MONTHLY_PROFILES. This element supports the definition of temporal factors on a monthly operational basis.

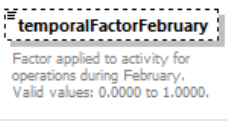
element **monthlyProfile/profileName**

diagram	
type	**string100**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 100
annotation	documentation Name of profile.

element **monthlyProfile/temporalFactorJanuary**

diagram	
type	**doubleMin0**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0
annotation	documentation Factor applied to activity for operations during January. Valid values: 0.0000 to 1.0000.

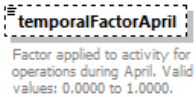
element **monthlyProfile/temporalFactorFebruary**

diagram	
type	**doubleMin0**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0
annotation	documentation Factor applied to activity for operations during February. Valid values: 0.0000 to 1.0000.

element **monthlyProfile/temporalFactorMarch**

diagram	
type	**doubleMin0**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0
annotation	documentation Factor applied to activity for operations during March. Valid values: 0.0000 to 1.0000.

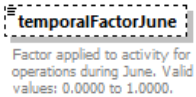
element **monthlyProfile/temporalFactorApril**

diagram	
type	**doubleMin0**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0
annotation	documentation Factor applied to activity for operations during April. Valid values: 0.0000 to 1.0000.

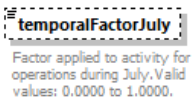
element **monthlyProfile/temporalFactorMay**

diagram	
type	**doubleMin0**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0
annotation	documentation Factor applied to activity for operations during May. Valid values: 0.0000 to 1.0000.

element **monthlyProfile/temporalFactorJune**

diagram	
type	**doubleMin0**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0
annotation	documentation Factor applied to activity for operations during June. Valid values: 0.0000 to 1.0000.

element **monthlyProfile/temporalFactorJuly**

diagram	
type	**doubleMin0**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0
annotation	documentation Factor applied to activity for operations during July.Valid values: 0.0000 to 1.0000.

element **monthlyProfile/temporalFactorAugust**

diagram	

	temporalFactorAugust Factor applied to activity for operations during August. Valid values: 0.0000 to 1.0000.
type	**doubleMin0**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0
annotation	documentation Factor applied to activity for operations during August. Valid values: 0.0000 to 1.0000.

element **monthlyProfile/temporalFactorSeptember**

diagram	temporalFactorSeptember Factor applied to activity for operations during September. Valid values: 0.0000 to 1.0000.
type	**doubleMin0**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0
annotation	documentation Factor applied to activity for operations during September. Valid values: 0.0000 to 1.0000.

element **monthlyProfile/temporalFactorOctober**

diagram	temporalFactorOctober Factor applied to activity for operations during October. Valid values: 0.0000 to 1.0000.
type	**doubleMin0**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0
annotation	documentation Factor applied to activity for operations during October. Valid values: 0.0000 to 1.0000.

element **monthlyProfile/temporalFactorNovember**

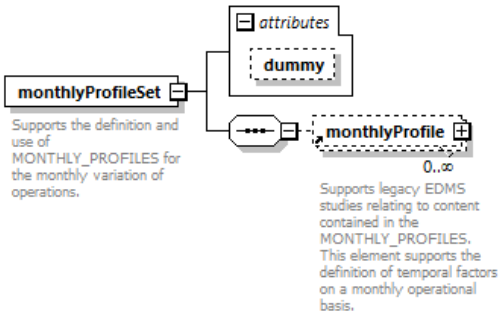
diagram	temporalFactorNovember Factor applied to activity for operations during November. Valid values: 0.0000 to 1.0000.
type	**doubleMin0**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0
annotation	documentation Factor applied to activity for operations during November. Valid values: 0.0000 to 1.0000.

element **monthlyProfile/temporalFactorDecember**

diagram	

	temporalFactorDecember Factor applied to activity for operations during December. Valid values: 0.0000 to 1.0000.
type	**doubleMin0**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0
annotation	documentation Factor applied to activity for operations during December. Valid values: 0.0000 to 1.0000.

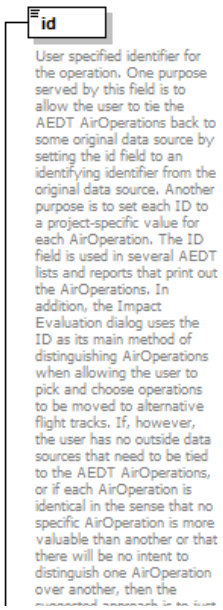
element **monthlyProfileSet**

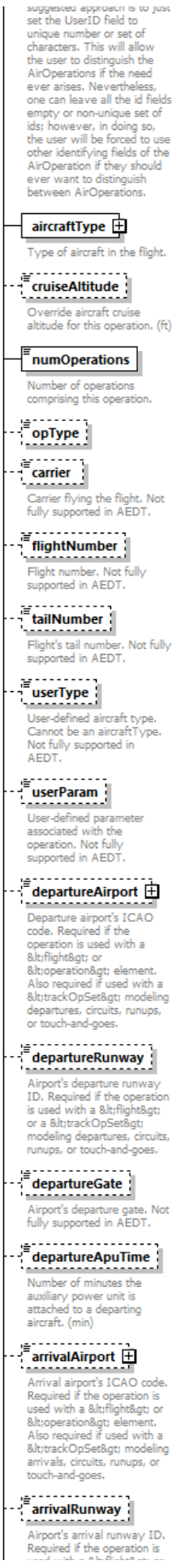
diagram	
properties	content complex
children	**monthlyProfile**
used by	element **operationalProfileSet** complexType **airportLayoutType**
attributes	Name Type Use Default Fixed Annotation dummy **xs:int** optional
annotation	documentation Supports the definition and use of MONTHLY_PROFILES for the monthly variation of operations.

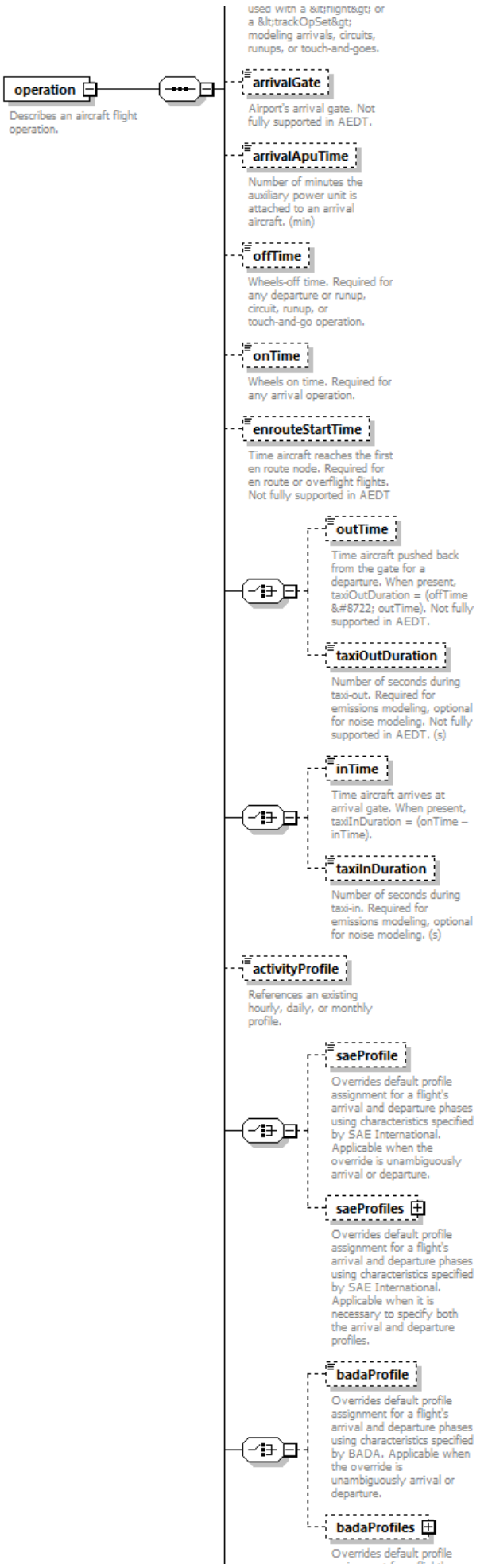
attribute **monthlyProfileSet/@dummy**

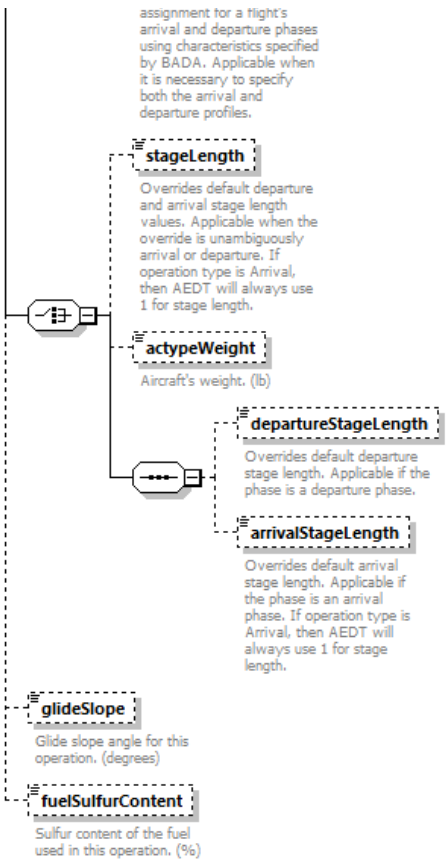
type	**xs:int**
properties	use optional

element **operation**

diagram	


suggested approach is to just set the UserID field to unique number or set of characters. This will allow the user to distinguish the AirOperations if the need ever arises. Nevertheless, one can leave all the id fields empty or non-unique set of ids; however, in doing so, the user will be forced to use other identifying fields of the AirOperation if they should ever want to distinguish between AirOperations.
aircraftType
Type of aircraft in the flight.
cruiseAltitude
Override aircraft cruise altitude for this operation. (ft)
numOperations
Number of operations comprising this operation.
opType
carrier
Carrier flying the flight. Not fully supported in AEDT.
flightNumber
Flight number. Not fully supported in AEDT.
tailNumber
Flight's tail number. Not fully supported in AEDT.
userType
User-defined aircraft type. Cannot be an aircraftType. Not fully supported in AEDT.
userParam
User-defined parameter associated with the operation. Not fully supported in AEDT.
departureAirport
Departure airport's ICAO code. Required if the operation is used with a <flight> or <operation> element. Also required if used with a <trackOpSet> modeling departures, circuits, runups, or touch-and-goes.
departureRunway
Airport's departure runway ID. Required if the operation is used with a <flight> or a <trackOpSet> modeling departures, circuits, runups, or touch-and-goes.
departureGate
Airport's departure gate. Not fully supported in AEDT.
departureApuTime
Number of minutes the auxiliary power unit is attached to a departing aircraft. (min)
arrivalAirport
Arrival airport's ICAO code. Required if the operation is used with a <flight> or <operation> element. Also required if used with a <trackOpSet> modeling arrivals, circuits, runups, or touch-and-goes.
arrivalRunway
Airport's arrival runway ID. Required if the operation is


used with a <flight> or a <trackOpSet> modeling arrivals, circuits, runups, or touch-and-goes.
operation
Describes an aircraft flight operation.
arrivalGate
Airport's arrival gate. Not fully supported in AEDT.
arrivalApuTime
Number of minutes the auxiliary power unit is attached to an arrival aircraft. (min)
offTime
Wheels-off time. Required for any departure or runup, circuit, runup, or touch-and-go operation.
onTime
Wheels on time. Required for any arrival operation.
enrouteStartTime
Time aircraft reaches the first en route node. Required for en route or overflight flights. Not fully supported in AEDT
outTime
Time aircraft pushed back from the gate for a departure. When present, taxiOutDuration = (offTime − outTime). Not fully supported in AEDT.
taxiOutDuration
Number of seconds during taxi-out. Required for emissions modeling, optional for noise modeling. Not fully supported in AEDT. (s)
inTime
Time aircraft arrives at arrival gate. When present, taxiInDuration = (onTime – inTime).
taxiInDuration
Number of seconds during taxi-in. Required for emissions modeling, optional for noise modeling. (s)
activityProfile
References an existing hourly, daily, or monthly profile.
saeProfile
Overrides default profile assignment for a flight's arrival and departure phases using characteristics specified by SAE International. Applicable when the override is unambiguously arrival or departure.
saeProfiles
Overrides default profile assignment for a flight's arrival and departure phases using characteristics specified by SAE International. Applicable when it is necessary to specify both the arrival and departure profiles.
badaProfile
Overrides default profile assignment for a flight's arrival and departure phases using characteristics specified by BADA. Applicable when the override is unambiguously arrival or departure.
badaProfiles
Overrides default profile



properties	content complex
children	**id aircraftType cruiseAltitude numOperations opType carrier flightNumber tailNumber userType userParam departureAirport departureRunway departureGate departureApuTime arrivalAirport arrivalRunway arrivalGate arrivalApuTime offTime onTime enrouteStartTime outTime taxiOutDuration inTime taxiInDuration activityProfile saeProfile saeProfiles badaProfile badaProfiles stageLength actypeWeight departureStageLength arrivalStageLength glideSlope fuelSulfurContent**
used by	elements **AsifXml case operations**
annotation	documentation Describes an aircraft flight operation.

element **operation/id**

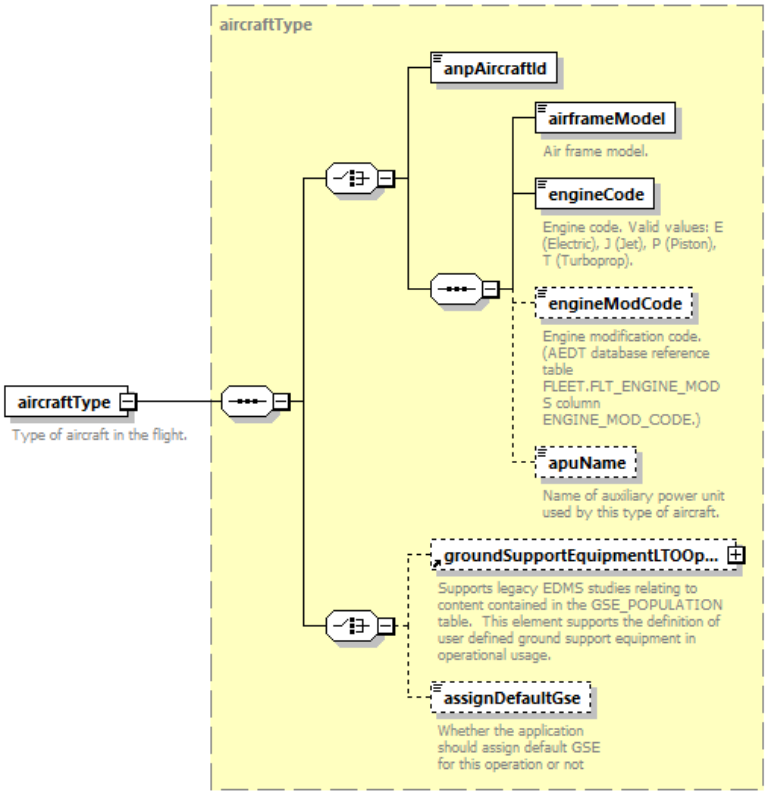
diagram	

User specified identifier for the operation. One purpose served by this field is to allow the user to tie the AEDT AirOperations back to some original data source by setting the id field to an identifying identifier from the original data source. Another purpose is to set each ID to a project-specific value for each AirOperation. The ID field is used in several AEDT lists and reports that print out the AirOperations. In addition, the Impact Evaluation dialog uses the ID as its main method of distinguishing AirOperations when allowing the user to pick and choose operations to be moved to alternative flight tracks. If, however, the user has no outside data sources that need to be tied to the AEDT AirOperations, or if each AirOperation is identical in the sense that no specific AirOperation is more valuable than another or that there will be no intent to distinguish one AirOperation over another, then the suggested approach is to just set the UserID field to unique number or set of characters. This will allow the user to distinguish the AirOperations if the need ever arises. Nevertheless, one can leave all the id fields empty or non-unique set of ids; however, in doing so, the user will be forced to use other identifying fields of the AirOperation if they should ever want to distinguish between AirOperations.

type	**string16**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 16
annotation	documentation User specified identifier for the operation. One purpose served by this field is to allow the user to tie the AEDT AirOperations back to some original data source by setting the id field to an identifying identifier from the original data source. Another purpose is to set each ID to a project-specific value for each AirOperation. The ID field is used in several AEDT lists and reports that print out the AirOperations. In addition, the Impact Evaluation dialog uses the ID as its main method of distinguishing AirOperations when allowing the user to pick and choose operations to be moved to alternative flight tracks. If, however, the user has no outside data sources that need to be tied to the AEDT AirOperations, or if each AirOperation is identical in the sense that no specific AirOperation is more valuable than another or that there will be no intent to distinguish one AirOperation over another, then the suggested approach is to just set the UserID field to unique number or set of characters. This will allow the user to distinguish the AirOperations if the need ever arises. Nevertheless, one can leave all the id fields empty or non-unique set of ids; however, in doing so, the user will be forced to use other identifying fields of the AirOperation if they should ever want to distinguish between AirOperations.

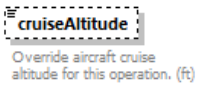
element **operation/aircraftType**

diagram	



type	**aircraftType**
properties	content complex
children	**anpAircraftId airframeModel engineCode engineModCode apuName groundSupportEquipmentLTOOperationSet assignDefaultGse**
annotation	documentation Type of aircraft in the flight.

element **operation/cruiseAltitude**



type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Override aircraft cruise altitude for this operation. (ft)

element **operation/numOperations**

type	**xs:double**
properties	content simple
annotation	documentation Number of operations comprising this operation.

element **operation/opType**

type	**opType**
properties	minOcc 0 maxOcc 1

	content simple
facets	Kind Value Annotation pattern A|Arrival|D|Departure|V|Overflight|F|Circuit|T|TouchAndGo|R|Runup|W|RunwayToRunway|L|LTO|LandingTakoff|X|Taxi

element **operation/carrier**

diagram	carrier Carrier flying the flight. Not fully supported in AEDT.
type	**string4**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 4
annotation	documentation Carrier flying the flight. Not fully supported in AEDT.

element **operation/flightNumber**

diagram	flightNumber Flight number. Not fully supported in AEDT.
type	**string16**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 16
annotation	documentation Flight number. Not fully supported in AEDT.

element **operation/tailNumber**

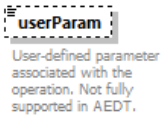
diagram	tailNumber Flight's tail number. Not fully supported in AEDT.
type	**string8**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 8
annotation	documentation Flight's tail number. Not fully supported in AEDT.

element **operation/userType**

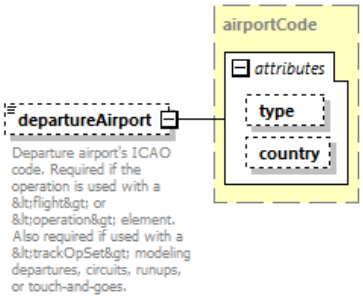
diagram	userType User-defined aircraft type. Cannot be an aircraftType. Not fully supported in AEDT.
type	**string12**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 12

annotation	documentation User-defined aircraft type. Cannot be an aircraftType. Not fully supported in AEDT.

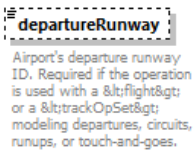
element **operation/userParam**

diagram	
type	**string16**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 16
annotation	documentation User-defined parameter associated with the operation. Not fully supported in AEDT.

element **operation/departureAirport**

diagram	
type	**airportCode**
properties	minOcc 0 maxOcc 1 content complex
facets	Kind Value Annotation minLength 0 maxLength 4
attributes	Name Type Use Default Fixed Annotation type **airportCodeType** optional ANY country **string3** optional ANY
annotation	documentation Departure airport's ICAO code. Required if the operation is used with a <flight> or <operation> element. Also required if used with a <trackOpSet> modeling departures, circuits, runups, or touch-and-goes.

element **operation/departureRunway**

diagram	
type	**string8**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 8
annotation	documentation Airport's departure runway ID. Required if the operation is used with a <flight> or a <trackOpSet> modeling departures, circuits, runups, or touch-and-goes.

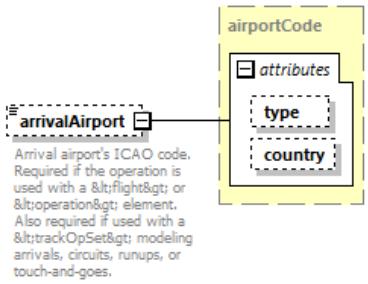
element **operation/departureGate**

diagram	**departureGate** Airport's departure gate. Not fully supported in AEDT.
type	**string40**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 40
annotation	documentation Airport's departure gate. Not fully supported in AEDT.

element **operation/departureApuTime**

diagram	**departureApuTime** Number of minutes the auxiliary power unit is attached to a departing aircraft. (min)
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Number of minutes the auxiliary power unit is attached to a departing aircraft. (min)

element **operation/arrivalAirport**

diagram	
type	**airportCode**
properties	minOcc 0 maxOcc 1 content complex
facets	Kind Value Annotation minLength 0 maxLength 4
attributes	Name Type Use Default Fixed Annotation type **airportCodeType** optional ANY country **string3** optional ANY
annotation	documentation Arrival airport's ICAO code. Required if the operation is used with a <flight> or <operation> element. Also required if used with a <trackOpSet> modeling arrivals, circuits, runups, or touch-and-goes.

element **operation/arrivalRunway**

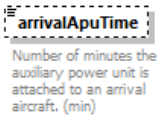
diagram	**arrivalRunway** Airport's arrival runway ID. Required if the operation is used with a <flight> or a <trackOpSet> modeling arrivals, circuits, runups, or touch-and-goes.
type	**string8**

properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 8
annotation	documentation Airport's arrival runway ID. Required if the operation is used with a <flight> or a <trackOpSet> modeling arrivals, circuits, runups, or touch-and-goes.

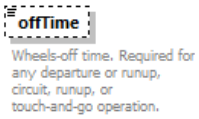
element **operation/arrivalGate**

diagram	
type	**string40**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 40
annotation	documentation Airport's arrival gate. Not fully supported in AEDT.

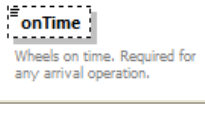
element **operation/arrivalApuTime**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Number of minutes the auxiliary power unit is attached to an arrival aircraft. (min)

element **operation/offTime**

diagram	
type	**xs:dateTime**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Wheels-off time. Required for any departure or runup, circuit, runup, or touch-and-go operation.

element **operation/onTime**

diagram	
type	**xs:dateTime**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Wheels on time. Required for any arrival operation.

element **operation/enrouteStartTime**

diagram	**enrouteStartTime** Time aircraft reaches the first en route node. Required for en route or overflight flights. Not fully supported in AEDT
type	**xs:dateTime**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Time aircraft reaches the first en route node. Required for en route or overflight flights. Not fully supported in AEDT

element **operation/outTime**

diagram	**outTime** Time aircraft pushed back from the gate for a departure. When present, taxiOutDuration = (offTime − outTime). Not fully supported in AEDT.
type	**xs:dateTime**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Time aircraft pushed back from the gate for a departure. When present, taxiOutDuration = (offTime − outTime). Not fully supported in AEDT.

element **operation/taxiOutDuration**

diagram	**taxiOutDuration** Number of seconds during taxi-out. Required for emissions modeling, optional for noise modeling. Not fully supported in AEDT. (s)
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Number of seconds during taxi-out. Required for emissions modeling, optional for noise modeling. Not fully supported in AEDT. (s)

element **operation/inTime**

diagram	**inTime** Time aircraft arrives at arrival gate. When present, taxiInDuration = (onTime – inTime).
type	**xs:dateTime**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Time aircraft arrives at arrival gate. When present, taxiInDuration = (onTime – inTime).

element **operation/taxiInDuration**

diagram	**taxiInDuration** Number of seconds during taxi-in. Required for emissions modeling, optional for noise modeling. (s)
type	**xs:double**

properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Number of seconds during taxi-in. Required for emissions modeling, optional for noise modeling. (s)

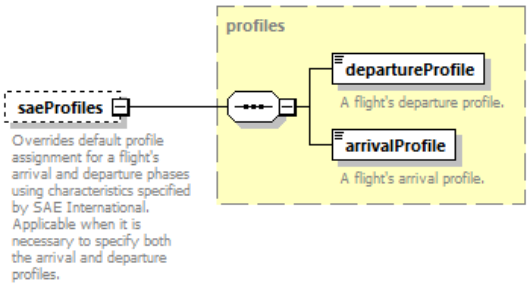
element **operation/activityProfile**

diagram	
type	**string100**
properties	minOcc 0 maxOcc 1 content simple
used by	element **activityProfileSet**
facets	Kind Value Annotation minLength 0 maxLength 100
annotation	documentation References an existing hourly, daily, or monthly profile.

element **operation/saeProfile**

diagram	
type	**profileType**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Overrides default profile assignment for a flight's arrival and departure phases using characteristics specified by SAE International. Applicable when the override is unambiguously arrival or departure.

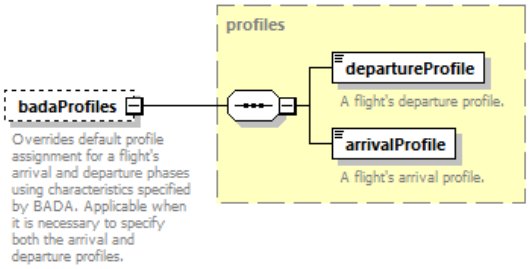
element **operation/saeProfiles**

diagram	
type	**profiles**
properties	minOcc 0 maxOcc 1 content complex
children	**departureProfile arrivalProfile**
annotation	documentation Overrides default profile assignment for a flight's arrival and departure phases using characteristics specified by SAE International. Applicable when it is necessary to specify both the arrival and departure profiles.

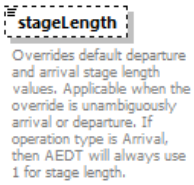
element **operation/badaProfile**

diagram	
type	**profileType**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Overrides default profile assignment for a flight's arrival and departure phases using characteristics specified by BADA. Applicable when the override is unambiguously arrival or departure.

element **operation/badaProfiles**

diagram	
type	**profiles**
properties	minOcc 0 maxOcc 1 content complex
children	**departureProfile arrivalProfile**
annotation	documentation Overrides default profile assignment for a flight's arrival and departure phases using characteristics specified by BADA. Applicable when it is necessary to specify both the arrival and departure profiles.

element **operation/stageLength**

diagram	
type	**string1**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 1
annotation	documentation Overrides default departure and arrival stage length values. Applicable when the override is unambiguously arrival or departure. If operation type is Arrival, then AEDT will always use 1 for stage length.

element **operation/actypeWeight**

diagram	

	actypeWeight Aircraft's weight. (lb)
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Aircraft's weight. (lb)

element **operation/departureStageLength**

diagram	**departureStageLength** Overrides default departure stage length. Applicable if the phase is a departure phase.
type	**string1**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 1
annotation	documentation Overrides default departure stage length. Applicable if the phase is a departure phase.

element **operation/arrivalStageLength**

diagram	**arrivalStageLength** Overrides default arrival stage length. Applicable if the phase is an arrival phase. If operation type is Arrival, then AEDT will always use 1 for stage length.
type	**string1**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 1
annotation	documentation Overrides default arrival stage length. Applicable if the phase is an arrival phase. If operation type is Arrival, then AEDT will always use 1 for stage length.

element **operation/glideSlope**

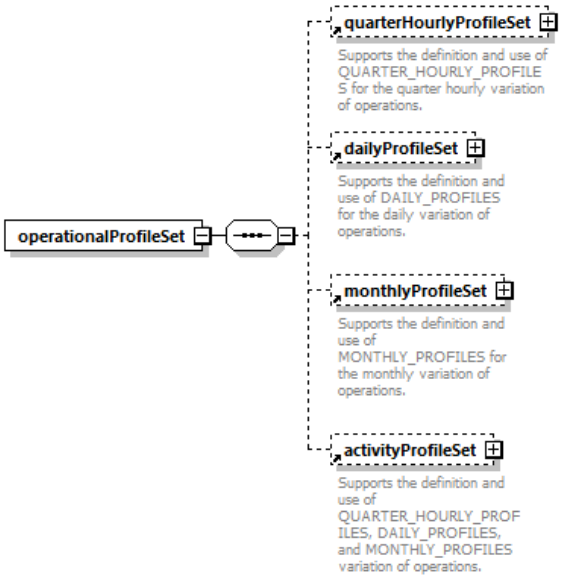
diagram	**glideSlope** Glide slope angle for this operation. (degrees)
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Glide slope angle for this operation. (degrees)

element **operation/fuelSulfurContent**

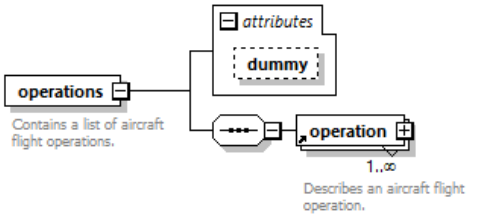
diagram	**fuelSulfurContent** Sulfur content of the fuel used in this operation. (%)
type	**xs:double**

properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Sulfur content of the fuel used in this operation. (%)

element **operationalProfileSet**

diagram	
properties	content complex
children	**quarterHourlyProfileSet** **dailyProfileSet** **monthlyProfileSet** **activityProfileSet**
used by	element **AsifXml**

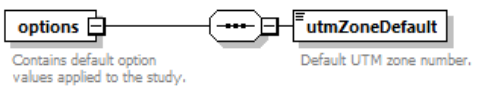
element **operations**

diagram	
properties	content complex
children	**operation**
used by	element **trackOpSet**
attributes	Name Type Use Default Fixed Annotation dummy **xs:int** optional
annotation	documentation Contains a list of aircraft flight operations.

attribute **operations/@dummy**

type	**xs:int**
properties	use optional

element **options**

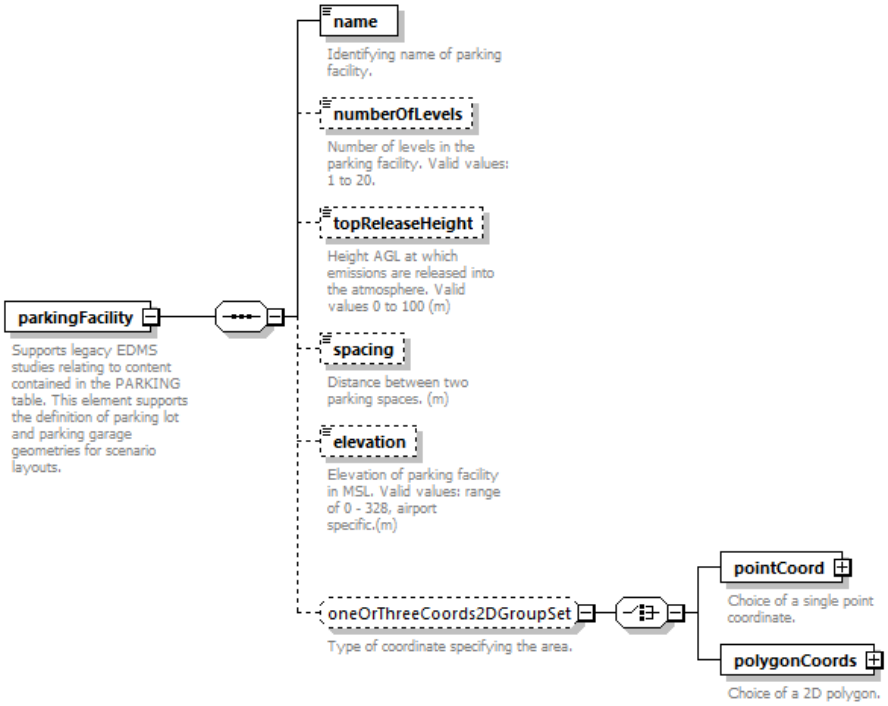
diagram	
properties	content complex
children	**utmZoneDefault**

used by	element **AsifXml**
annotation	documentation Contains default option values applied to the study.

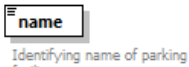
element **options/utmZoneDefault**

diagram	
type	**xs:int**
properties	content simple default -1
annotation	documentation Default UTM zone number.

element **parkingFacility**

diagram	
properties	content complex
children	**name numberOfLevels topReleaseHeight spacing elevation pointCoord polygonCoords**
used by	element **parkingFacilitySet**
annotation	documentation Supports legacy EDMS studies relating to content contained in the PARKING table. This element supports the definition of parking lot and parking garage geometries for scenario layouts.

element **parkingFacility/name**

diagram	
type	**string40**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 40
annotation	documentation Identifying name of parking facility.

element **parkingFacility/numberOfLevels**

diagram	**numberOfLevels** Number of levels in the parking facility. Valid values: 1 to 20.
type	**xs:int**
properties	minOcc 0 maxOcc 1 content simple default 1
annotation	documentation Number of levels in the parking facility. Valid values: 1 to 20.

element **parkingFacility/topReleaseHeight**

diagram	**topReleaseHeight** Height AGL at which emissions are released into the atmosphere. Valid values 0 to 100 (m)
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Height AGL at which emissions are released into the atmosphere. Valid values 0 to 100 (m)

element **parkingFacility/spacing**

diagram	**spacing** Distance between two parking spaces. (m)
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Distance between two parking spaces. (m)

element **parkingFacility/elevation**

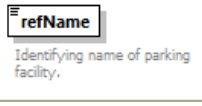
diagram	**elevation** Elevation of parking facility in MSL. Valid values: range of 0 - 328, airport specific.(m)
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 0
annotation	documentation Elevation of parking facility in MSL. Valid values: range of 0 - 328, airport specific.(m)

element **parkingFacilityOperation**

diagram	

properties	content complex
children	**refName** **useAnnualFigures** **vehicleType** **fuelType** **emissionsUsage** **averageSpeed** **averageDistanceTraveled** **averageIdleTime** **vehicleEmissionFactors**
used by	element **parkingFacilityOperationSet**
annotation	documentation Supports legacy EDMS studies relating to content contained in the PARKING table. This element supports the definition of parking lot and parking garage activities for scenario layouts.

element **parkingFacilityOperation/refName**

diagram	
type	**string40**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 40
annotation	documentation Identifying name of parking facility.

element **parkingFacilityOperation/useAnnualFigures**

diagram	**useAnnualFigures** Indicates if the quantities in the element are annualized.
type	**xs:boolean**
properties	minOcc 0 maxOcc 1 content simple default false
annotation	documentation Indicates if the quantities in the element are annualized.

element **parkingFacilityOperation/vehicleType**

diagram	**vehicleType** Type of vehicle involved in the operation. Valid values: 0 = Default Fleet Mix, 1 = Passenger Cars, 2 = Light Trucks 1, 3 = Light Trucks 2, 4 = Light Trucks 3, 5 = Light Trucks 4, 6 = Class 2b Heavy Trucks, 7 = Class 3 Heavy Trucks, 8 = Class 4 Heavy Trucks, 9 = Class 5 Heavy Trucks, 10 = Class 6 Heavy Trucks, 11 = Class 7 Heavy Trucks, 12 = Class 8a Heavy Trucks, 13 = Class 8b Heavy Trucks, 14 = School Buses, 15 = Transit and Urban Buses, 16 = Motorcycle.
type	**groundVehicleType**
properties	content simple
facets	Kind Value Annotation pattern 0|Default Fleet Mix|1|Passenger Cars|2|Light Trucks 1|3|Light Trucks 2|4|Light Trucks 3|5|Light Trucks 4|6|Class 2b Heavy Trucks|7|Class 3 Heavy Trucks|8|Class 4 Heavy Trucks|9|Class 5 Heavy Trucks|10|Class 6 Heavy Trucks|11|Class 7 Heavy Trucks|12|Class 8a Heavy Trucks|13|Class 8b Heavy Trucks|14|School Busses|15|Transit and Urban Busses|16|Motorcycle
annotation	documentation Type of vehicle involved in the operation. Valid values: 0 = Default Fleet Mix, 1 = Passenger Cars, 2 = Light Trucks 1, 3 = Light Trucks 2, 4 = Light Trucks 3, 5 = Light Trucks 4, 6 = Class 2b Heavy Trucks, 7 = Class 3 Heavy Trucks, 8 = Class 4 Heavy Trucks, 9 = Class 5 Heavy Trucks, 10 = Class 6 Heavy Trucks, 11 = Class 7 Heavy Trucks, 12 = Class 8a Heavy Trucks, 13 = Class 8b Heavy Trucks, 14 = School Buses, 15 = Transit and Urban Buses, 16 = Motorcycle.

element **parkingFacilityOperation/fuelType**

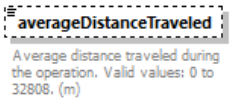
diagram	**fuelType** Type of fuel involved in the operation.
type	**fuelType**
properties	minOcc 0 maxOcc 1 content simple default G
facets	Kind Value Annotation pattern G|Gasoline|D|Diesel|C|Compressed Natural Gas|L|Liquefied Petroleum Gas|E|Electric
annotation	documentation Type of fuel involved in the operation.

element **parkingFacilityOperation/averageSpeed**

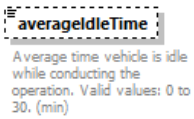
diagram	**averageSpeed** Average speed during the operation. Valid values: 2.5 to 40. (mph)
type	**xs:double**
properties	minOcc 0 maxOcc 1

	content simple default 10
annotation	documentation Average speed during the operation. Valid values: 2.5 to 40. (mph)

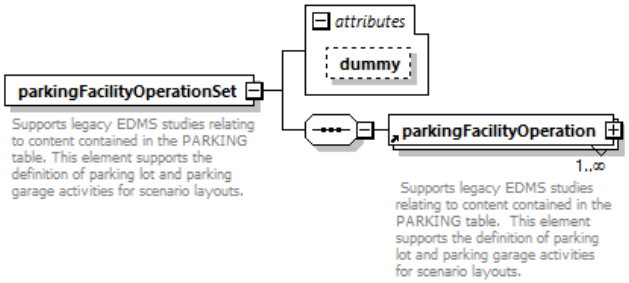
element **parkingFacilityOperation/averageDistanceTraveled**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 0
annotation	documentation Average distance traveled during the operation. Valid values: 0 to 32808. (m)

element **parkingFacilityOperation/averageIdleTime**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 0
annotation	documentation Average time vehicle is idle while conducting the operation. Valid values: 0 to 30. (min)

element **parkingFacilityOperationSet**

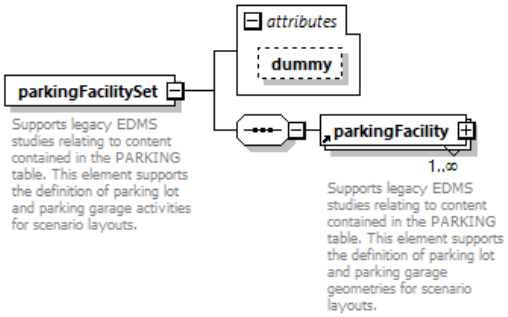
diagram	
properties	content complex
children	**parkingFacilityOperation**
used by	group **airportActivityGroup**
attributes	Name Type Use Default Fixed Annotation dummy **xs:int** optional
annotation	documentation Supports legacy EDMS studies relating to content contained in the PARKING table. This element supports the definition of parking lot and parking garage activities for scenario layouts.

attribute **parkingFacilityOperationSet/@dummy**

type	**xs:int**
properties	use optional

element **parkingFacilitySet**

diagram	



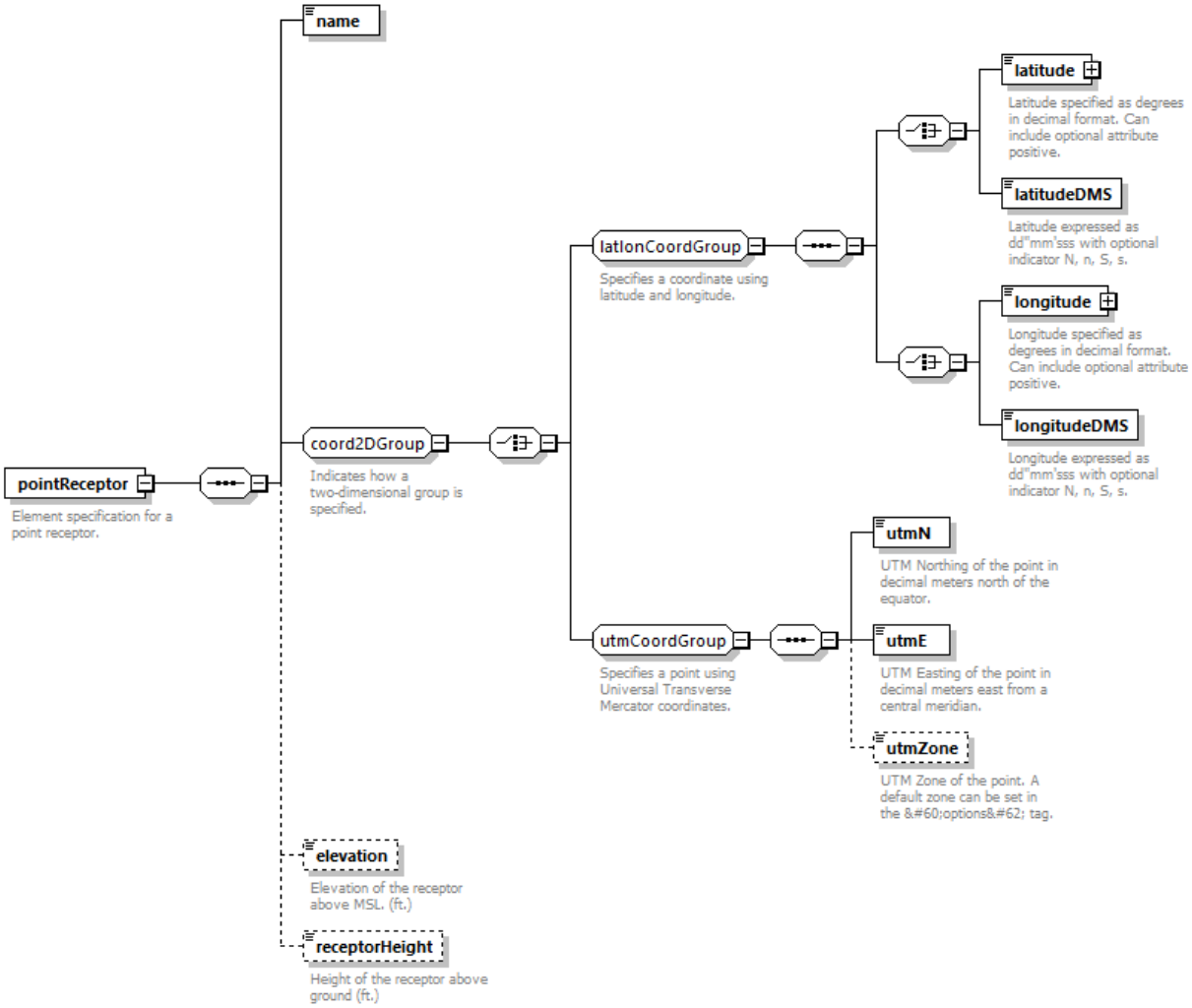
properties	content complex
children	**parkingFacility**
used by	complexType **airportLayoutType**
attributes	Name Type Use Default Fixed Annotation dummy **xs:int** optional
annotation	documentation Supports legacy EDMS studies relating to content contained in the PARKING table. This element supports the definition of parking lot and parking garage activities for scenario layouts.

attribute **parkingFacilitySet/@dummy**

type	**xs:int**
properties	use optional

element **pointReceptor**

diagram



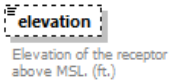
properties	content complex

children	**name latitude latitudeDMS longitude longitudeDMS utmN utmE utmZone elevation receptorHeight**
used by	group **receptorGroup**
annotation	documentation Element specification for a point receptor.

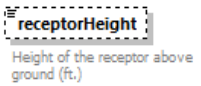
element **pointReceptor/name**

diagram	
type	**string255**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255

element **pointReceptor/elevation**

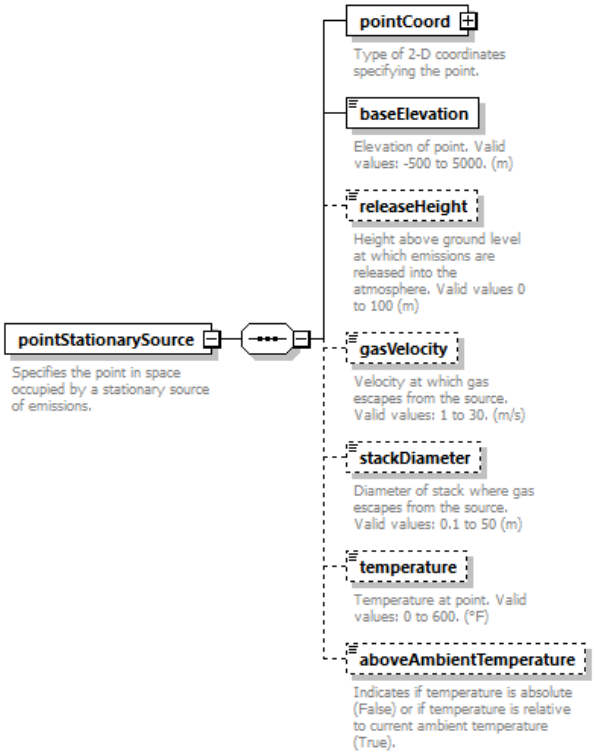
diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Elevation of the receptor above MSL. (ft.)

element **pointReceptor/receptorHeight**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Height of the receptor above ground (ft.)

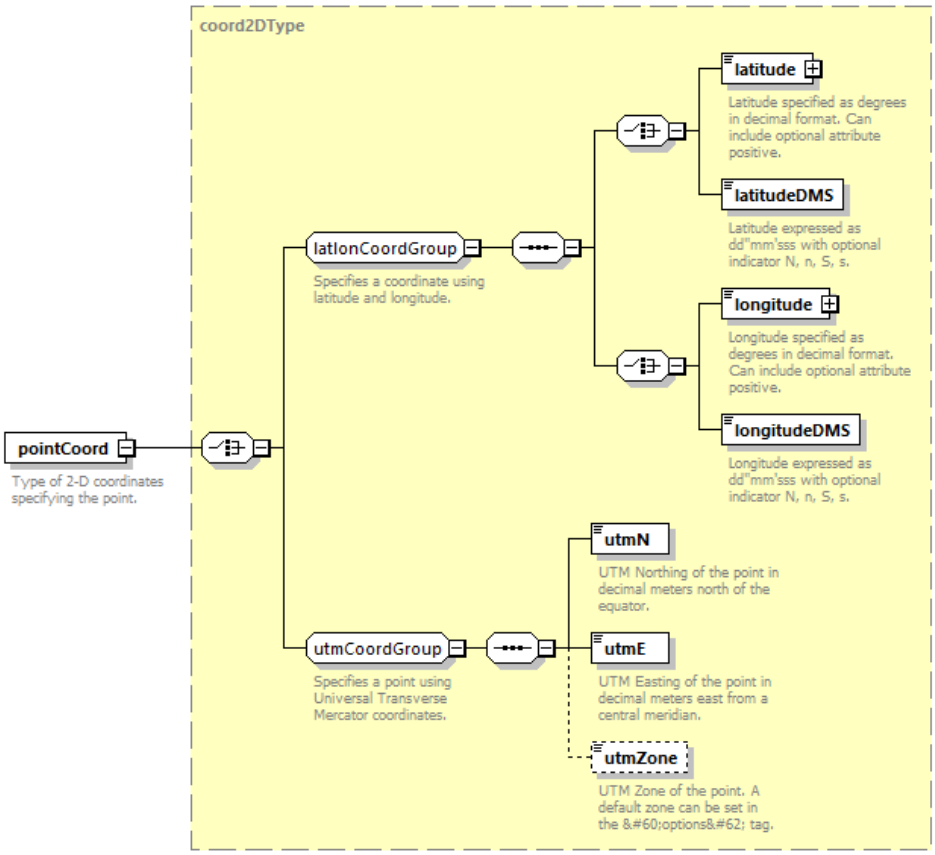
element **pointStationarySource**

diagram	



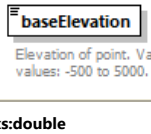
properties	content complex
children	**pointCoord baseElevation releaseHeight gasVelocity stackDiameter temperature aboveAmbientTemperature**
used by	element **stationarySource**
annotation	documentation Specifies the point in space occupied by a stationary source of emissions.

element **pointStationarySource/pointCoord**

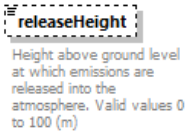
diagram	
type	**coord2DType**

properties	content complex
children	**latitude latitudeDMS longitude longitudeDMS utmN utmE utmZone**
annotation	documentation Type of 2-D coordinates specifying the point.

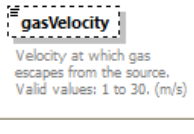
element **pointStationarySource/baseElevation**

diagram	
type	**xs:double**
properties	content simple
annotation	documentation Elevation of point. Valid values: -500 to 5000. (m)

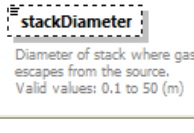
element **pointStationarySource/releaseHeight**

diagram	
type	**doubleInclusive100**
properties	minOcc 0 maxOcc 1 content simple default 0
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Height above ground level at which emissions are released into the atmosphere. Valid values 0 to 100 (m)

element **pointStationarySource/gasVelocity**

diagram	
type	**doubleInclusiveRange1to30**
properties	minOcc 0 maxOcc 1 content simple default 1
facets	Kind Value Annotation minInclusive 1 maxInclusive 30
annotation	documentation Velocity at which gas escapes from the source. Valid values: 1 to 30. (m/s)

element **pointStationarySource/stackDiameter**

diagram	
type	**doubleExclusive0Inclusive10**
properties	minOcc 0 maxOcc 1 content simple default 0.1
facets	Kind Value Annotation

	maxInclusive 10 minExclusive 0
annotation	documentation Diameter of stack where gas escapes from the source. Valid values: 0.1 to 50 (m)

element **pointStationarySource/temperature**

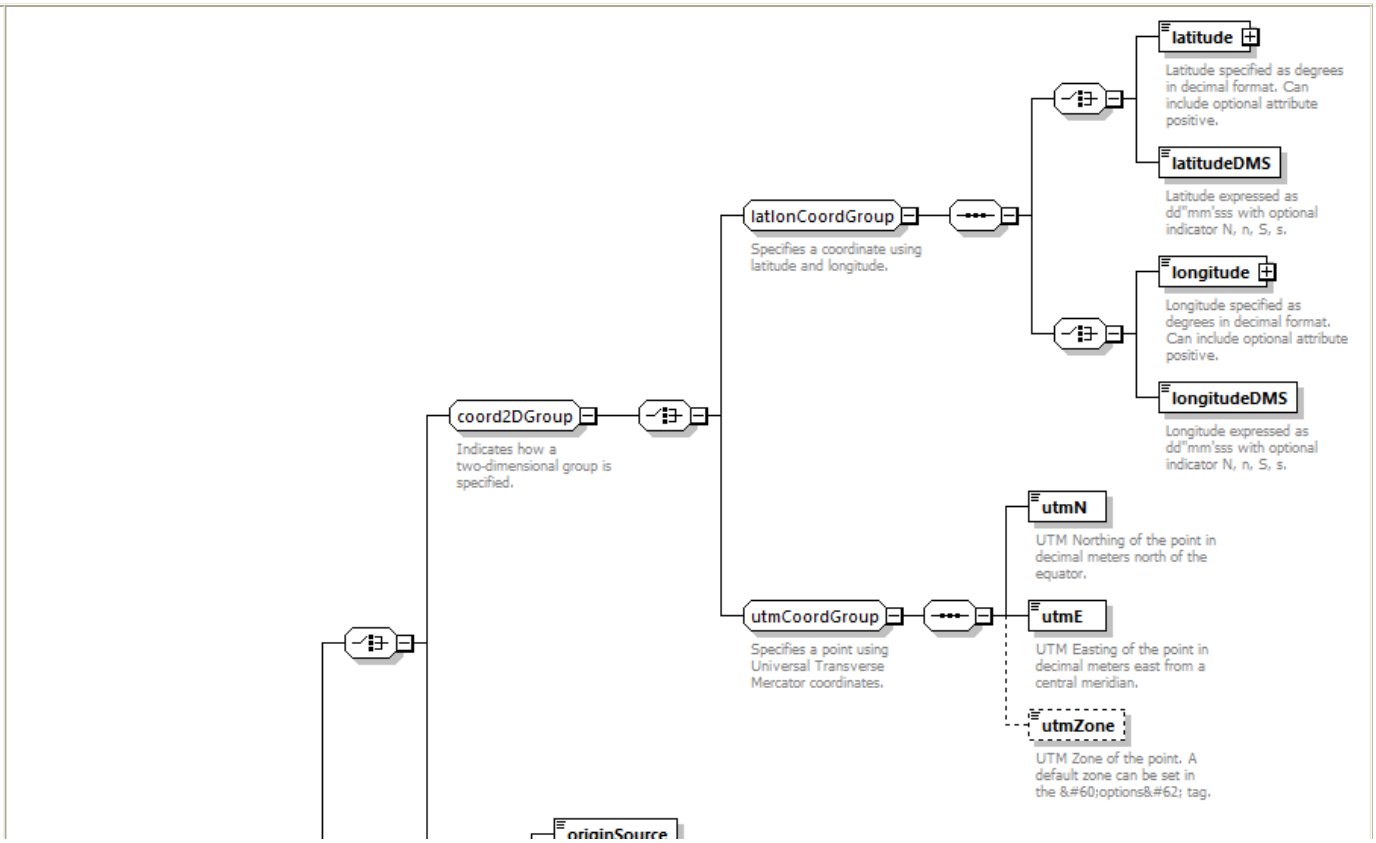
diagram	**temperature** Temperature at point. Valid values: 0 to 600. (°F)
type	**doubleInclusiveRange0to600**
properties	minOcc 0 maxOcc 1 content simple default 32
facets	Kind Value Annotation minInclusive 0 maxInclusive 600
annotation	documentation Temperature at point. Valid values: 0 to 600. (°F)

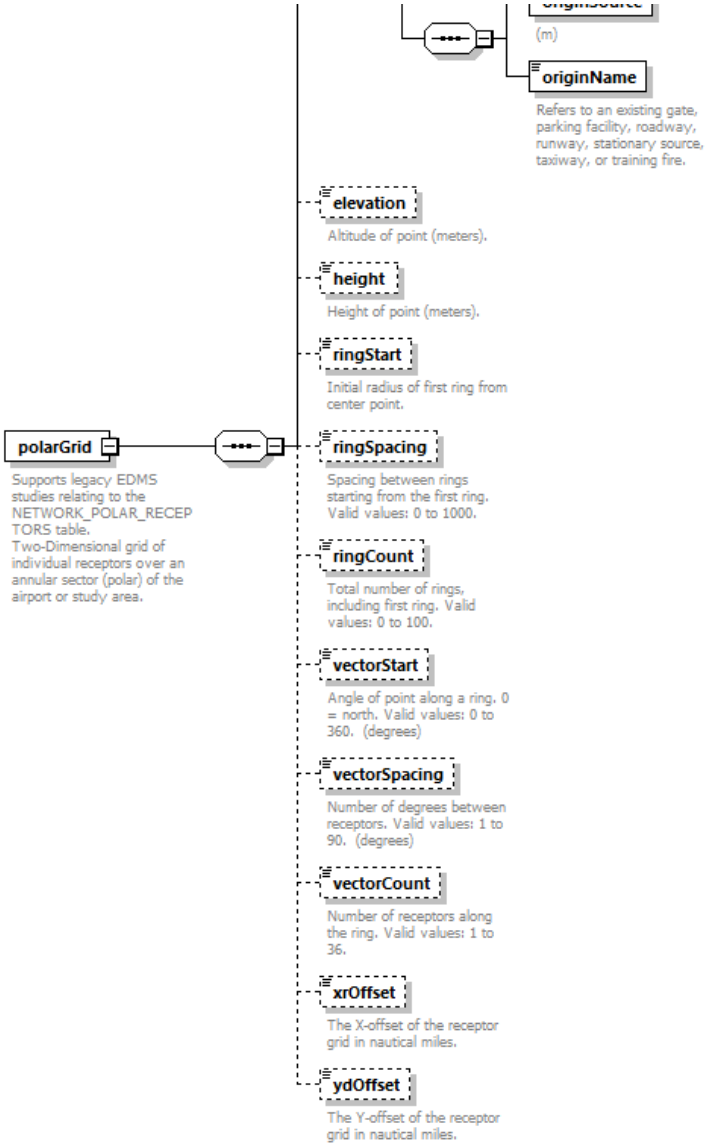
element **pointStationarySource/aboveAmbientTemperature**

diagram	**aboveAmbientTemperature** Indicates if temperature is absolute (False) or if temperature is relative to current ambient temperature (True).
type	**xs:boolean**
properties	minOcc 0 maxOcc 1 content simple default false
annotation	documentation Indicates if temperature is absolute (False) or if temperature is relative to current ambient temperature (True).

element **polarGrid**

diagram





properties	content complex
children	**latitude latitudeDMS longitude longitudeDMS utmN utmE utmZone originSource originName elevation height ringStart ringSpacing ringCount vectorStart vectorSpacing vectorCount xrOffset ydOffset**
used by	group **receptorGroup**
annotation	documentation Supports legacy EDMS studies relating to the NETWORK_POLAR_RECEPTORS table. Two-Dimensional grid of individual receptors over an annular sector (polar) of the airport or study area.

element **polarGrid/originSource**

diagram	
type	**originSourceType**
properties	content simple
facets	Kind Value Annotation pattern Gate|Parking Facility|Roadway|Runway|Stionary Source|Taxiway|Training Fire
annotation	documentation (m)

element **polarGrid/originName**

diagram	

	originName Refers to an existing gate, parking facility, roadway, runway, stationary source, taxiway, or training fire.
type	**string40**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 40
annotation	documentation Refers to an existing gate, parking facility, roadway, runway, stationary source, taxiway, or training fire.

element **polarGrid/elevation**

diagram	**elevation** Altitude of point (meters).
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Altitude of point (meters).

element **polarGrid/height**

diagram	**height** Height of point (meters).
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 0
annotation	documentation Height of point (meters).

element **polarGrid/ringStart**

diagram	**ringStart** Initial radius of first ring from center point.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 1
annotation	documentation Initial radius of first ring from center point.

element **polarGrid/ringSpacing**

diagram	**ringSpacing** Spacing between rings starting from the first ring. Valid values: 0 to 1000.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 1
annotation	documentation Spacing between rings starting from the first ring. Valid values: 0 to 1000.

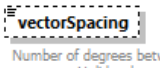
element **polarGrid/ringCount**

diagram	
type	**xs:int**
properties	minOcc 0 maxOcc 1 content simple default 1
annotation	documentation Total number of rings, including first ring. Valid values: 0 to 100.

element **polarGrid/vectorStart**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 0
annotation	documentation Angle of point along a ring. 0 = north. Valid values: 0 to 360. (degrees)

element **polarGrid/vectorSpacing**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 1
annotation	documentation Number of degrees between receptors. Valid values: 1 to 90. (degrees)

element **polarGrid/vectorCount**

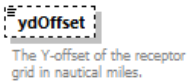
diagram	
type	**xs:int**
properties	minOcc 0 maxOcc 1 content simple default 1
annotation	documentation Number of receptors along the ring. Valid values: 1 to 36.

element **polarGrid/xrOffset**

diagram	
type	**xs:double**
properties	minOcc 0

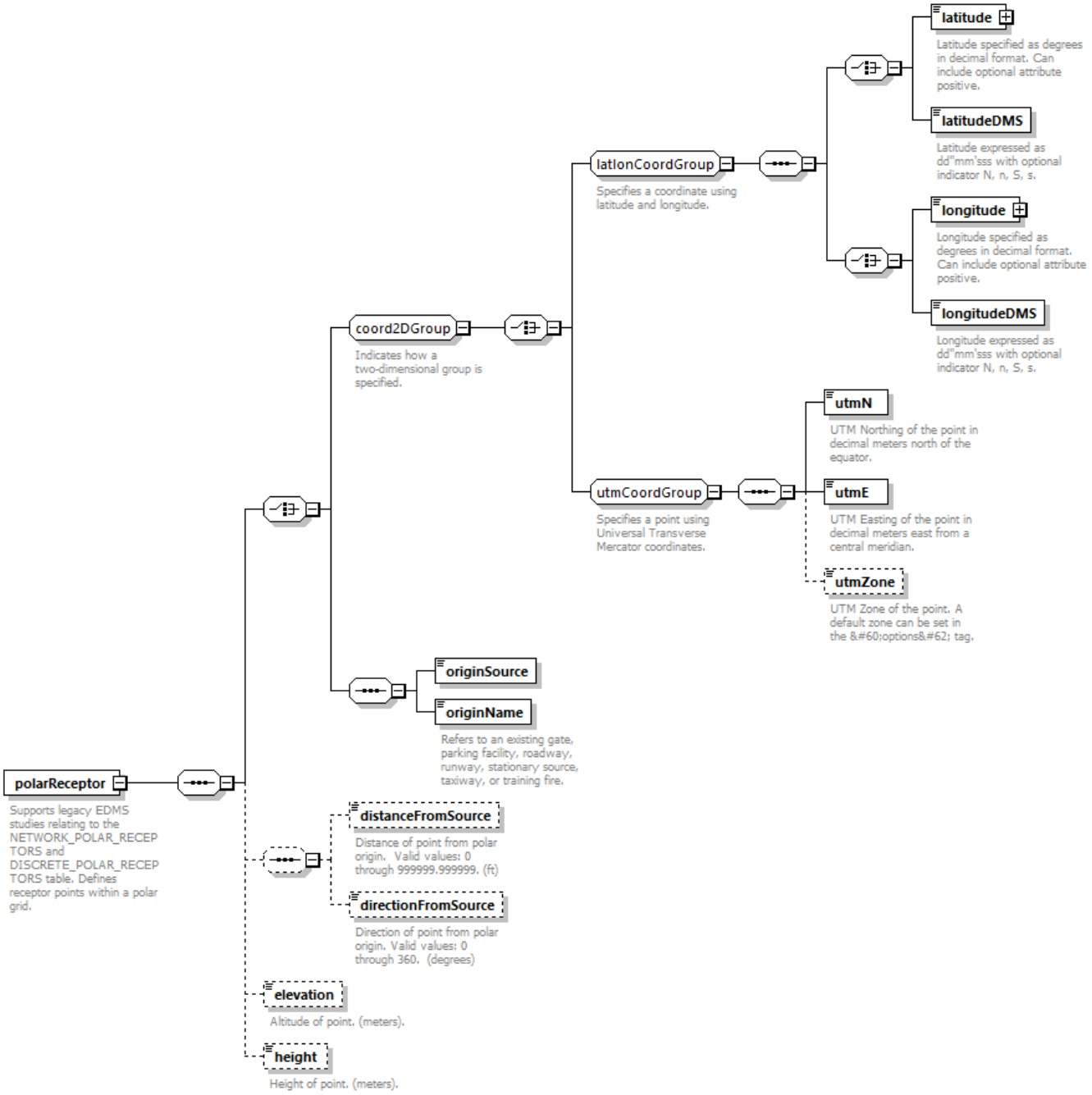
	maxOcc 1 content simple default 0
annotation	documentation The X-offset of the receptor grid in nautical miles.

element **polarGrid/ydOffset**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 0
annotation	documentation The Y-offset of the receptor grid in nautical miles.

element **polarReceptor**

diagram	



properties	content complex
children	**latitude latitudeDMS longitude longitudeDMS utmN utmE utmZone originSource originName distanceFromSource directionFromSource elevation height**
used by	group **receptorGroup**
annotation	documentation Supports legacy EDMS studies relating to the NETWORK_POLAR_RECEPTORS and DISCRETE_POLAR_RECEPTORS table. Defines receptor points within a polar grid.

element **polarReceptor/originSource**

diagram	originSource
type	**originSourceType**
properties	content simple
facets	Kind Value Annotation pattern Gate|Parking Facility|Roadway|Runway|Stionary Source|Taxiway|Training Fire

element **polarReceptor/originName**

diagram	

	originName Refers to an existing gate, parking facility, roadway, runway, stationary source, taxiway, or training fire.
type	string40
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 40
annotation	documentation Refers to an existing gate, parking facility, roadway, runway, stationary source, taxiway, or training fire.

element **polarReceptor/distanceFromSource**

diagram	distanceFromSource Distance of point from polar origin. Valid values: 0 through 999999.999999. (ft)
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Distance of point from polar origin. Valid values: 0 through 999999.999999. (ft)

element **polarReceptor/directionFromSource**

diagram	directionFromSource Direction of point from polar origin. Valid values: 0 through 360. (degrees)
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Direction of point from polar origin. Valid values: 0 through 360. (degrees)

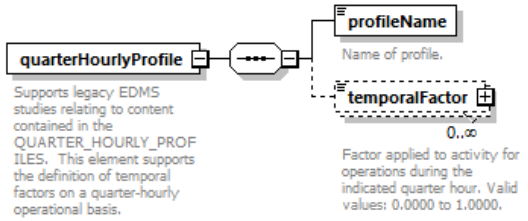
element **polarReceptor/elevation**

diagram	elevation Altitude of point. (meters).
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 0
annotation	documentation Altitude of point. (meters).

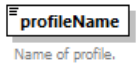
element **polarReceptor/height**

diagram	height Height of point. (meters).
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 0
annotation	documentation Height of point. (meters).

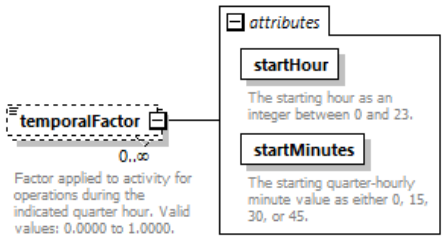
element **quarterHourlyProfile**

diagram	
properties	content complex
children	**profileName** **temporalFactor**
used by	element **quarterHourlyProfileSet**
annotation	documentation Supports legacy EDMS studies relating to content contained in the QUARTER_HOURLY_PROFILES. This element supports the definition of temporal factors on a quarter-hourly operational basis.

element **quarterHourlyProfile/profileName**

diagram	
type	**string100**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 100
annotation	documentation Name of profile.

element **quarterHourlyProfile/temporalFactor**

diagram	
type	extension of **doubleMin0**
properties	minOcc 0 maxOcc unbounded content complex
facets	Kind Value Annotation minInclusive 0

attributes

Name	Type	Use	Default	Fixed	Annotation
startHour	**int0to23**	required			documentation The starting hour as an integer between 0 and 23.
startMinutes	**quarterHourMinutes**	required			documentation The starting quarter-hourly minute value as either 0, 15, 30, or 45.

annotation	documentation Factor applied to activity for operations during the indicated quarter hour. Valid values: 0.0000 to 1.0000.

attribute **quarterHourlyProfile/temporalFactor/@startHour**

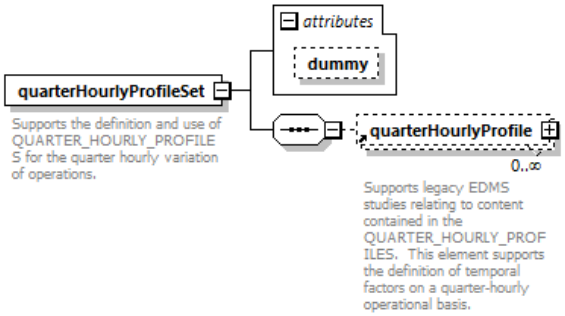
type	**int0to23**
properties	use required
facets	Kind Value Annotation

	minInclusive 0 maxInclusive 23
annotation	documentation The starting hour as an integer between 0 and 23.

attribute **quarterHourlyProfile/temporalFactor/@startMinutes**

type	**quarterHourMinutes**
properties	use required
facets	Kind Value Annotation enumeration 0 enumeration 15 enumeration 30 enumeration 45
annotation	documentation The starting quarter-hourly minute value as either 0, 15, 30, or 45.

element **quarterHourlyProfileSet**

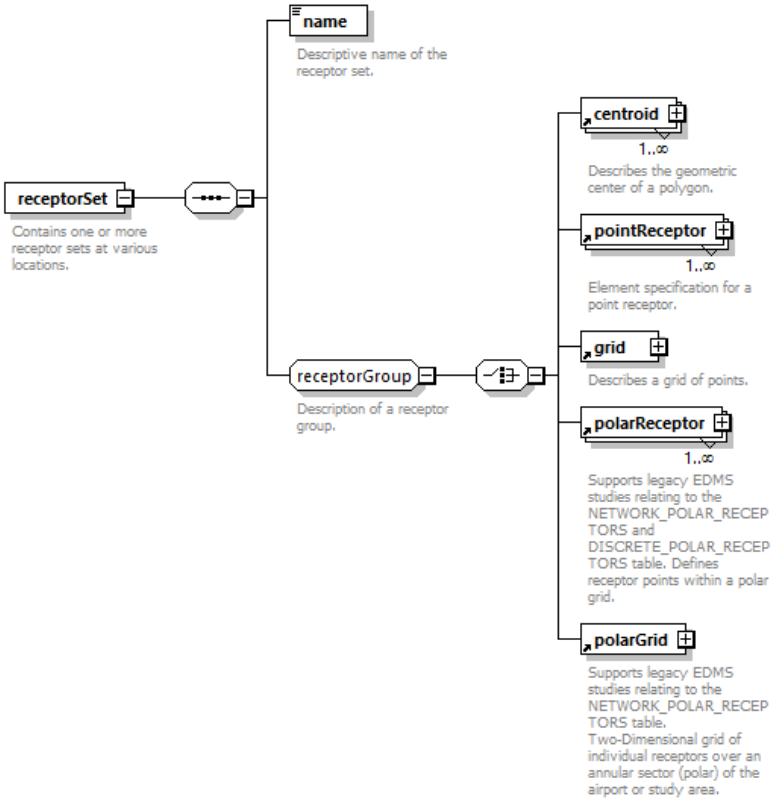
diagram	
properties	content complex
children	**quarterHourlyProfile**
used by	element **operationalProfileSet** complexType **airportLayoutType**
attributes	Name Type Use Default Fixed Annotation dummy **xs:int** optional
annotation	documentation Supports the definition and use of QUARTER_HOURLY_PROFILES for the quarter hourly variation of operations.

attribute **quarterHourlyProfileSet/@dummy**

type	**xs:int**
properties	use optional

element **receptorSet**

diagram	

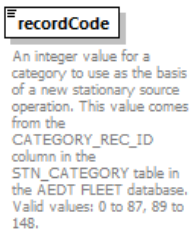


properties	content complex
children	**name centroid pointReceptor grid polarReceptor polarGrid**
used by	elements **AsifXml study**
annotation	documentation Contains one or more receptor sets at various locations.

element **receptorSet/name**

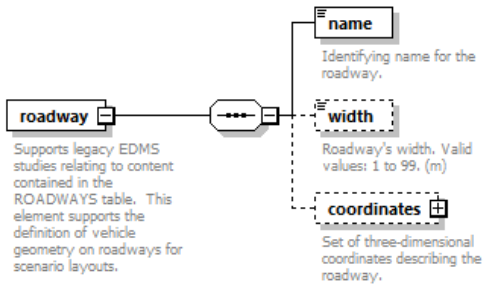
diagram	
type	**string255**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Descriptive name of the receptor set.

element **recordCode**

diagram	
type	union of (restriction of **xs:int**, restriction of **xs:int**)
properties	content simple
used by	element **categoryRecordCode**
annotation	documentation An integer value for a category to use as the basis of a new stationary source operation. This value comes from the CATEGORY_REC_ID column in the STN_CATEGORY table in the

	AEDT FLEET database. Valid values: 0 to 87, 89 to 148.

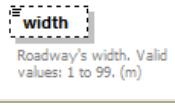
element **roadway**

diagram	
properties	content complex
children	**name width coordinates**
used by	element **roadwaySet**
annotation	documentation Supports legacy EDMS studies relating to content contained in the ROADWAYS table. This element supports the definition of vehicle geometry on roadways for scenario layouts.

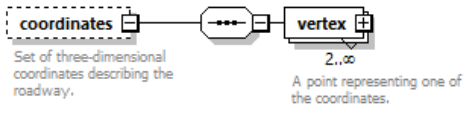
element **roadway/name**

diagram	
type	**string40**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 40
annotation	documentation Identifying name for the roadway.

element **roadway/width**

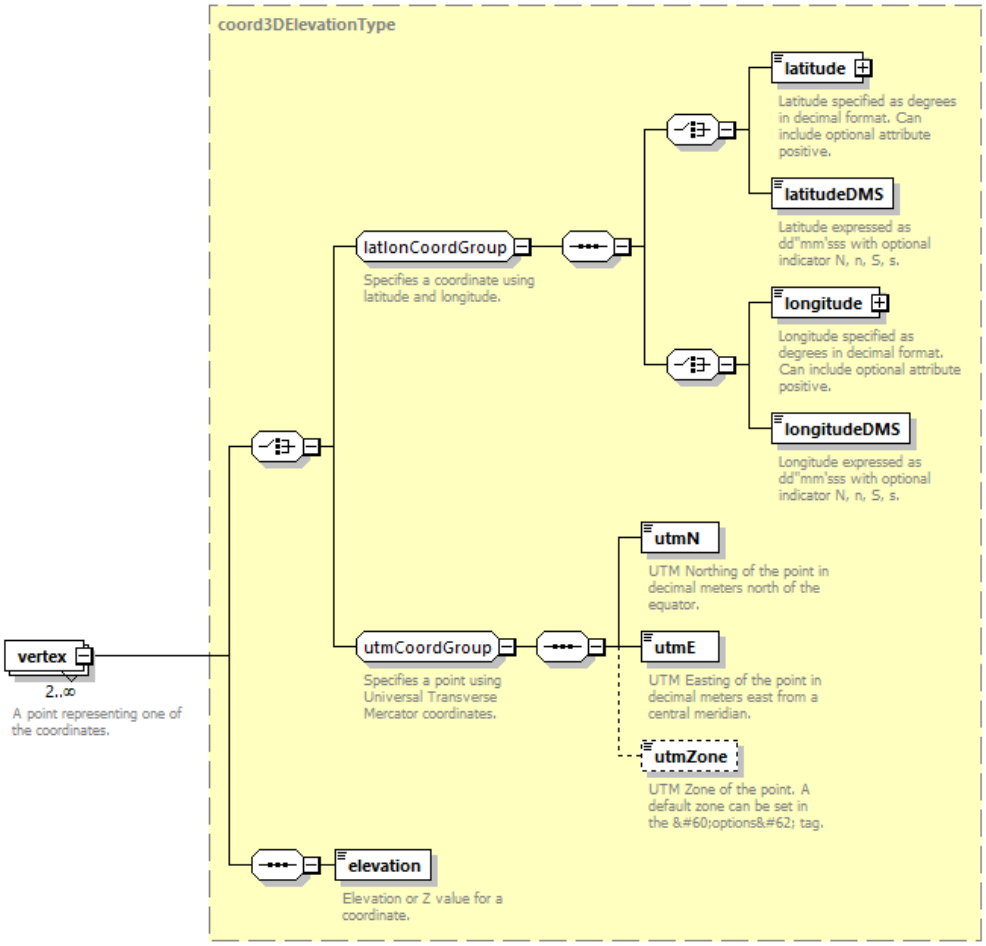
diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 0
annotation	documentation Roadway's width. Valid values: 1 to 99. (m)

element **roadway/coordinates**

diagram	
properties	minOcc 0 maxOcc 1 content complex
children	**vertex**
annotation	documentation Set of three-dimensional coordinates describing the roadway.

element **roadway/coordinates/vertex**

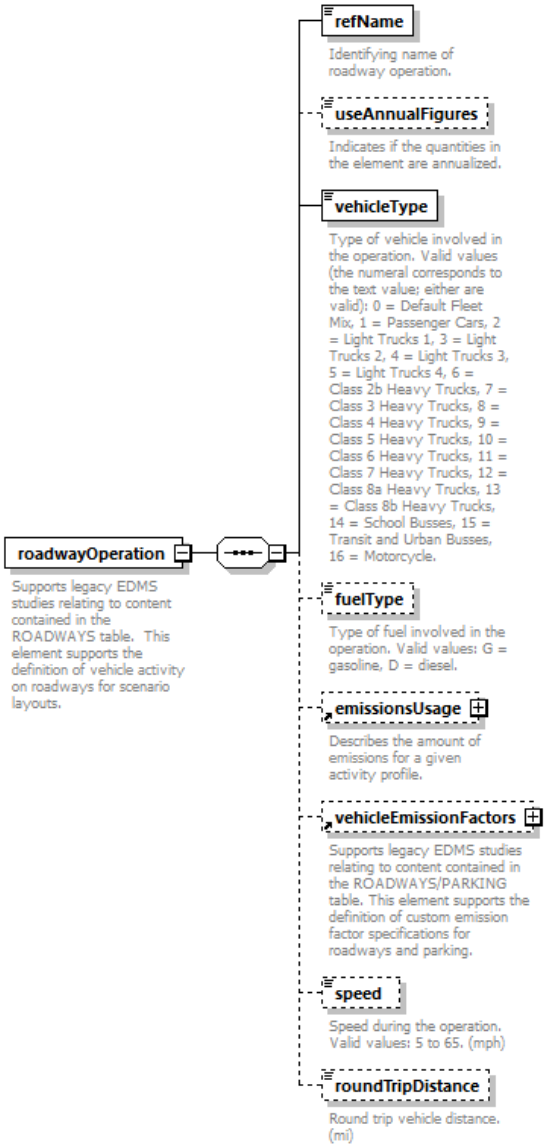
diagram	



type	**coord3DElevationType**
properties	minOcc 2 maxOcc unbounded content complex
children	**latitude latitudeDMS longitude longitudeDMS utmN utmE utmZone elevation**
annotation	documentation A point representing one of the coordinates.

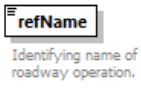
element **roadwayOperation**

diagram	

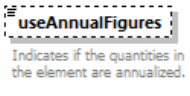


properties	content complex
children	**refName** **useAnnualFigures** **vehicleType** **fuelType** **emissionsUsage** **vehicleEmissionFactors** **speed** **roundTripDistance**
used by	element **roadwayOperationSet**
annotation	documentation Supports legacy EDMS studies relating to content contained in the ROADWAYS table. This element supports the definition of vehicle activity on roadways for scenario layouts.

element **roadwayOperation/refName**

diagram	
type	**string40**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 40
annotation	documentation Identifying name of roadway operation.

element **roadwayOperation/useAnnualFigures**

diagram	

type	**xs:boolean**
properties	minOcc 0 maxOcc 1 content simple default false
annotation	documentation Indicates if the quantities in the element are annualized.

element **roadwayOperation/vehicleType**

diagram	**vehicleType** Type of vehicle involved in the operation. Valid values (the numeral corresponds to the text value; either are valid): 0 = Default Fleet Mix, 1 = Passenger Cars, 2 = Light Trucks 1, 3 = Light Trucks 2, 4 = Light Trucks 3, 5 = Light Trucks 4, 6 = Class 2b Heavy Trucks, 7 = Class 3 Heavy Trucks, 8 = Class 4 Heavy Trucks, 9 = Class 5 Heavy Trucks, 10 = Class 6 Heavy Trucks, 11 = Class 7 Heavy Trucks, 12 = Class 8a Heavy Trucks, 13 = Class 8b Heavy Trucks, 14 = School Busses, 15 = Transit and Urban Busses, 16 = Motorcycle.
type	**groundVehicleType**
properties	content simple
facets	Kind Value Annotation pattern 0|Default Fleet Mix|1|Passenger Cars|2|Light Trucks 1|3|Light Trucks 2|4|Light Trucks 3|5|Light Trucks 4|6|Class 2b Heavy Trucks|7|Class 3 Heavy Trucks|8|Class 4 Heavy Trucks|9|Class 5 Heavy Trucks|10|Class 6 Heavy Trucks|11|Class 7 Heavy Trucks|12|Class 8a Heavy Trucks|13|Class 8b Heavy Trucks|14|School Busses|15|Transit and Urban Busses|16|Motorcycle
annotation	documentation Type of vehicle involved in the operation. Valid values (the numeral corresponds to the text value; either are valid): 0 = Default Fleet Mix, 1 = Passenger Cars, 2 = Light Trucks 1, 3 = Light Trucks 2, 4 = Light Trucks 3, 5 = Light Trucks 4, 6 = Class 2b Heavy Trucks, 7 = Class 3 Heavy Trucks, 8 = Class 4 Heavy Trucks, 9 = Class 5 Heavy Trucks, 10 = Class 6 Heavy Trucks, 11 = Class 7 Heavy Trucks, 12 = Class 8a Heavy Trucks, 13 = Class 8b Heavy Trucks, 14 = School Busses, 15 = Transit and Urban Busses, 16 = Motorcycle.

element **roadwayOperation/fuelType**

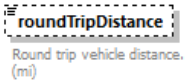
diagram	**fuelType** Type of fuel involved in the operation. Valid values: G = gasoline, D = diesel.
type	**fuelType**
properties	minOcc 0 maxOcc 1 content simple default G
facets	Kind Value Annotation pattern G|Gasoline|D|Diesel|C|Compressed Natural Gas|L|Liquefied Petroleum Gas|E|Electric
annotation	documentation Type of fuel involved in the operation. Valid values: G = gasoline, D = diesel.

element **roadwayOperation/speed**

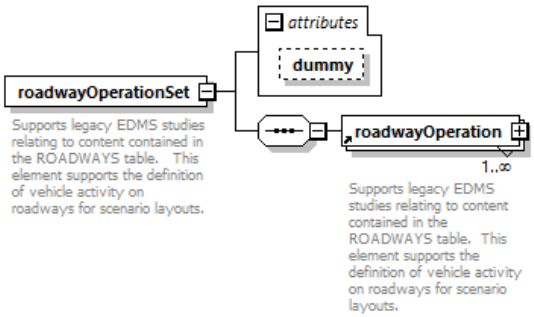
diagram	**speed** Speed during the operation. Valid values: 5 to 65. (mph)
type	**int5to65**
properties	minOcc 0 maxOcc 1 content simple default 35
facets	Kind Value Annotation minInclusive 5 maxInclusive 65

annotation	documentation Speed during the operation. Valid values: 5 to 65. (mph)

element **roadwayOperation/roundTripDistance**

diagram	
type	**doubleInclusive4000**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0 maxInclusive 4000
annotation	documentation Round trip vehicle distance. (mi)

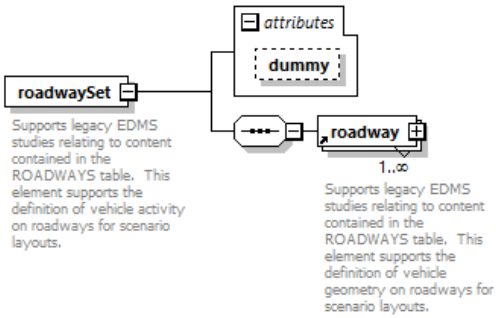
element **roadwayOperationSet**

diagram	
properties	content complex
children	**roadwayOperation**
used by	group **airportActivityGroup**
attributes	Name Type Use Default Fixed Annotation dummy **xs:int** optional
annotation	documentation Supports legacy EDMS studies relating to content contained in the ROADWAYS table. This element supports the definition of vehicle activity on roadways for scenario layouts.

attribute **roadwayOperationSet/@dummy**

type	**xs:int**
properties	use optional

element **roadwaySet**

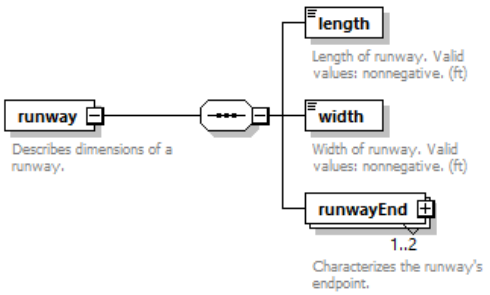
diagram	
properties	content complex
children	**roadway**
used by	complexType **airportLayoutType**
attributes	Name Type Use Default Fixed Annotation

	dummy **xs:int** optional
annotation	documentation Supports legacy EDMS studies relating to content contained in the ROADWAYS table. This element supports the definition of vehicle activity on roadways for scenario layouts.

attribute **roadwaySet/@dummy**

type	**xs:int**
properties	use optional

element **runway**

diagram	
properties	content complex
children	**length** **width** **runwayEnd**
used by	element **runwaySet**
annotation	documentation Describes dimensions of a runway.

element **runway/length**

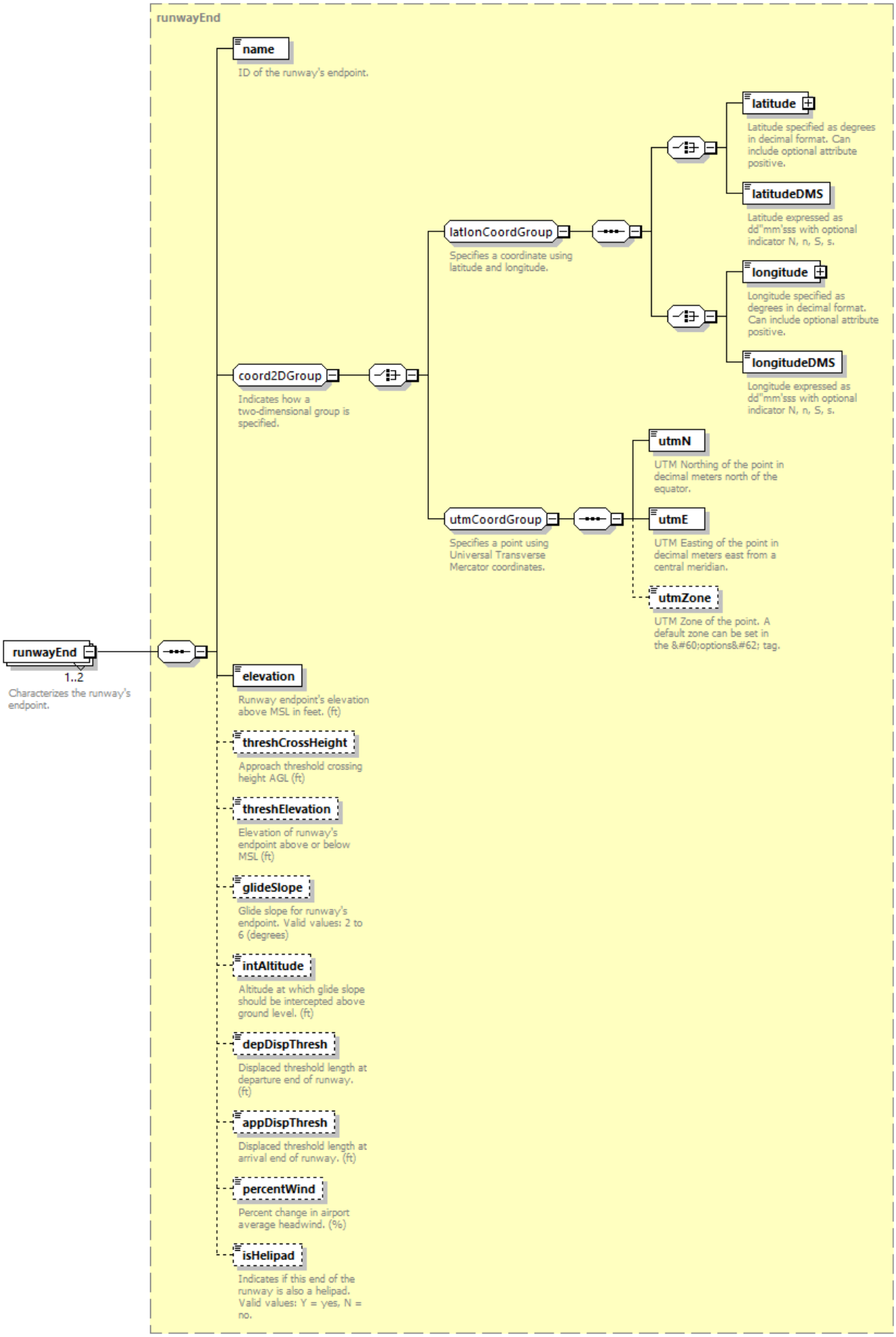
diagram	
type	**xs:short**
properties	content simple
annotation	documentation Length of runway. Valid values: nonnegative. (ft)

element **runway/width**

diagram	
type	**xs:short**
properties	content simple
annotation	documentation Width of runway. Valid values: nonnegative. (ft)

element **runway/runwayEnd**

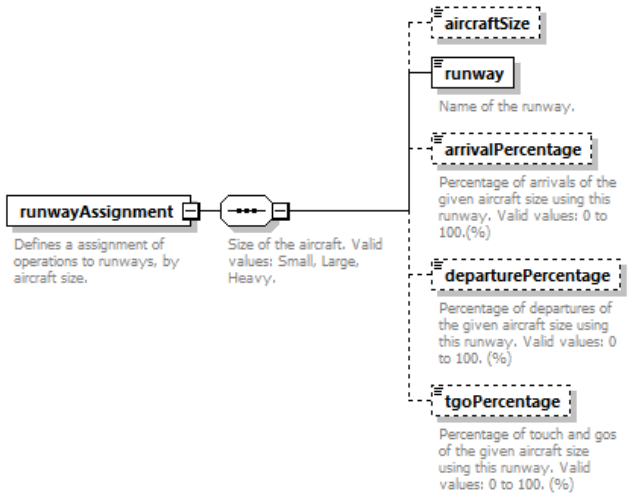
diagram	



type	**runwayEnd**
properties	minOcc 1

	maxOcc 2 content complex
children	**name latitude latitudeDMS longitude longitudeDMS utmN utmE utmZone elevation threshCrossHeight threshElevation glideSlope intAltitude depDispThresh appDispThresh percentWind isHelipad**
annotation	documentation Characterizes the runway's endpoint.

element **runwayAssignment**

diagram	
properties	content complex
children	**aircraftSize runway arrivalPercentage departurePercentage tgoPercentage**
used by	element **runwayAssignmentSet**
annotation	documentation Defines a assignment of operations to runways, by aircraft size.

element **runwayAssignment/aircraftSize**

diagram	aircraftSize
type	**AircraftSizeType**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation enumeration S enumeration L enumeration H

element **runwayAssignment/runway**

diagram	runway Name of the runway.
type	**string8**
properties	content simple
used by	element **runwaySet**
facets	Kind Value Annotation minLength 0 maxLength 8
annotation	documentation Name of the runway.

element **runwayAssignment/arrivalPercentage**

diagram	

	arrivalPercentage Percentage of arrivals of the given aircraft size using this runway. Valid values: 0 to 100.(%)
type	**doubleInclusive100**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Percentage of arrivals of the given aircraft size using this runway. Valid values: 0 to 100.(%)

element **runwayAssignment/departurePercentage**

diagram	**departurePercentage** Percentage of departures of the given aircraft size using this runway. Valid values: 0 to 100. (%)
type	**doubleInclusive100**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Percentage of departures of the given aircraft size using this runway. Valid values: 0 to 100. (%)

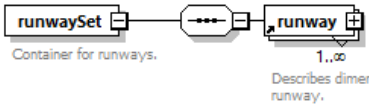
element **runwayAssignment/tgoPercentage**

diagram	**tgoPercentage** Percentage of touch and gos of the given aircraft size using this runway. Valid values: 0 to 100. (%)
type	**doubleInclusive100**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Percentage of touch and gos of the given aircraft size using this runway. Valid values: 0 to 100. (%)

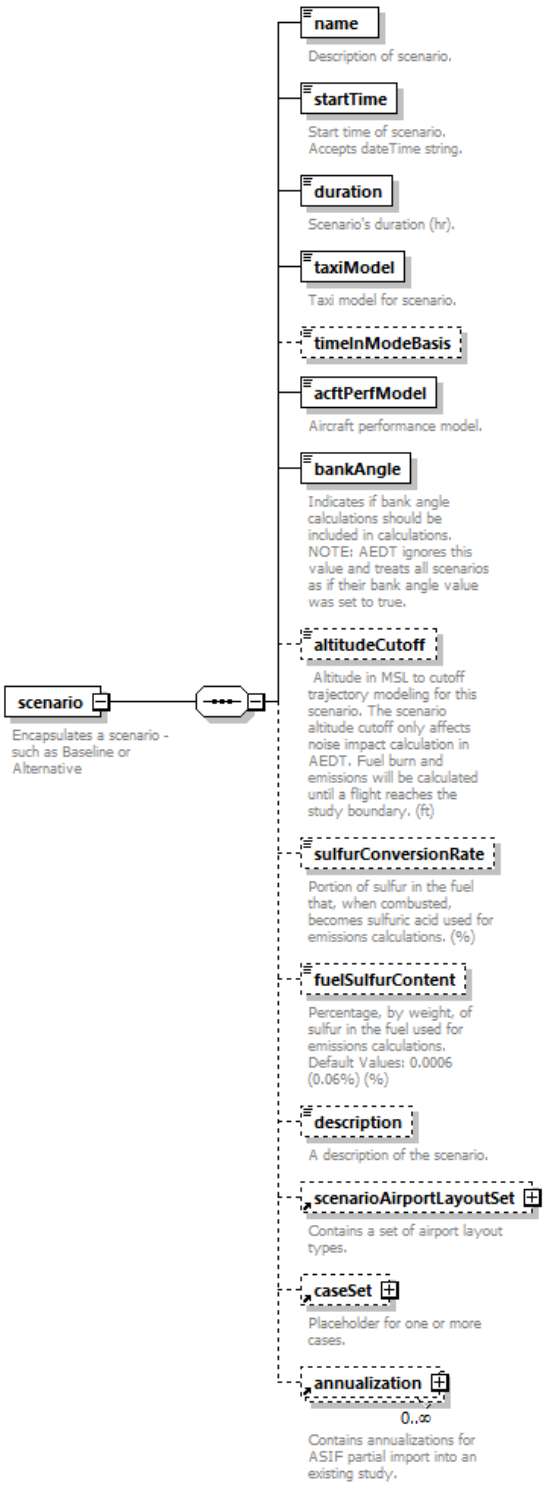
element **runwayAssignmentSet**

diagram	**runwayAssignmentSet** — Contains a set of runway assignments. **runwayAssignment** 1..∞ — Defines a assignment of operations to runways, by aircraft size.
properties	content complex
children	**runwayAssignment**
used by	element **airportConfig**
annotation	documentation Contains a set of runway assignments.

element **runwaySet**

diagram	
properties	content complex
children	**runway**
used by	complexType **airportLayoutType**
annotation	documentation Container for runways.

element **scenario**

diagram	
properties	content complex

children	**name startTime duration taxiModel timeInModeBasis acftPerfModel bankAngle altitudeCutoff sulfurConversionRate fuelSulfurContent description scenarioAirportLayoutSet caseSet annualization**
used by	elements **AsifXml study**
annotation	documentation Encapsulates a scenario - such as Baseline or Alternative

element **scenario/name**

diagram	**name** Description of scenario.
type	**string255**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Description of scenario.

element **scenario/startTime**

diagram	**startTime** Start time of scenario. Accepts dateTime string.
type	**xs:dateTime**
properties	content simple
annotation	documentation Start time of scenario. Accepts dateTime string.

element **scenario/duration**

diagram	**duration** Scenario's duration (hr).
type	**xs:int**
properties	content simple
annotation	documentation Scenario's duration (hr).

element **scenario/taxiModel**

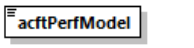
diagram	**taxiModel** Taxi model for scenario.
type	**taxiModelType**
properties	content simple
facets	Kind Value Annotation enumeration UserSpecified enumeration Delayed enumeration Sequencing
annotation	documentation Taxi model for scenario.

element **scenario/timeInModeBasis**

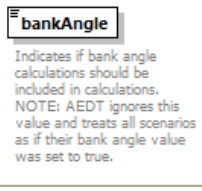
diagram	**timeInModeBasis**
type	**timeInModeBasisType**
properties	minOcc 0 maxOcc 1 content simple default ICAO

facets	Kind Value Annotation enumeration Performance enumeration ICAO

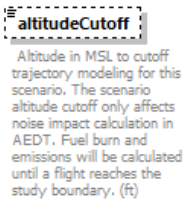
element **scenario/acftPerfModel**

diagram	
type	**aircraftPerformanceModelType**
properties	content simple
facets	Kind Value Annotation enumeration ICAO enumeration SAE1845
annotation	documentation Aircraft performance model.

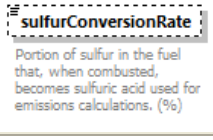
element **scenario/bankAngle**

diagram	
type	**xs:boolean**
properties	content simple
annotation	documentation Indicates if bank angle calculations should be included in calculations. NOTE: AEDT ignores this value and treats all scenarios as if their bank angle value was set to true.

element **scenario/altitudeCutoff**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 18000
annotation	documentation Altitude in MSL to cutoff trajectory modeling for this scenario. The scenario altitude cutoff only affects noise impact calculation in AEDT. Fuel burn and emissions will be calculated until a flight reaches the study boundary. (ft)

element **scenario/sulfurConversionRate**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Portion of sulfur in the fuel that, when combusted, becomes sulfuric acid used for emissions calculations. (%)

element **scenario/fuelSulfurContent**

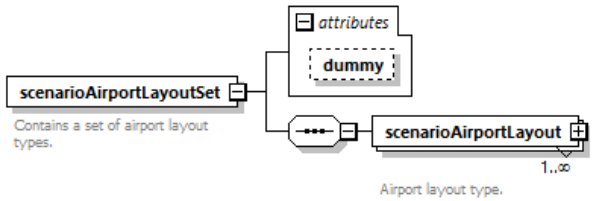
diagram	

	fuelSulfurContent Percentage, by weight, of sulfur in the fuel used for emissions calculations. Default Values: 0.0006 (0.06%) (%)
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Percentage, by weight, of sulfur in the fuel used for emissions calculations. Default Values: 0.0006 (0.06%) (%)

element **scenario/description**

diagram	**description** A description of the scenario.
type	**string255**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation A description of the scenario.

element **scenarioAirportLayoutSet**

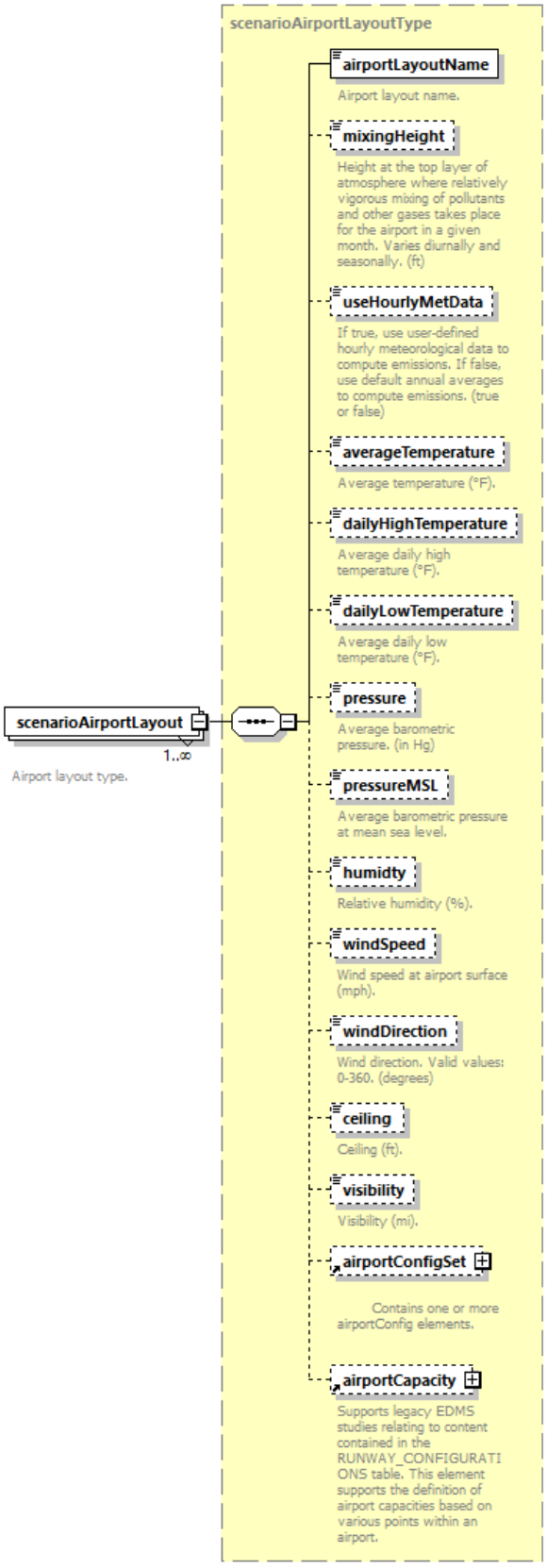
diagram	
properties	content complex
children	**scenarioAirportLayout**
used by	element **scenario**
attributes	Name Type Use Default Fixed Annotation dummy **xs:int** optional
annotation	documentation Contains a set of airport layout types.

attribute **scenarioAirportLayoutSet/@dummy**

type	**xs:int**
properties	use optional

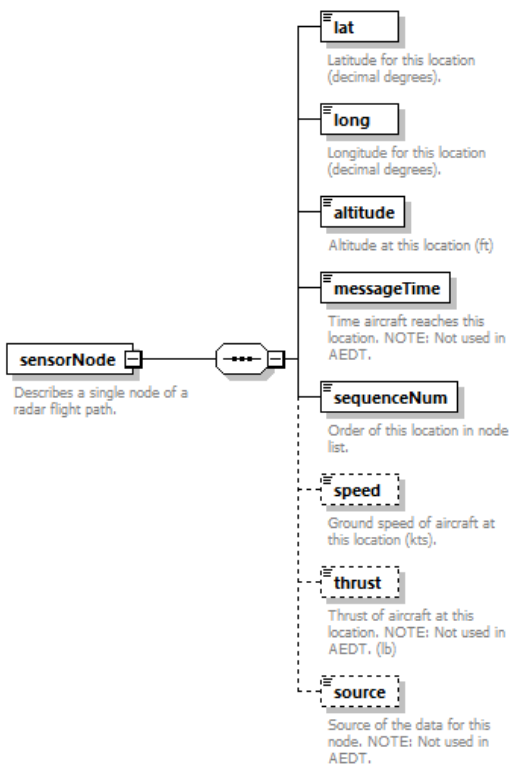
element **scenarioAirportLayoutSet/scenarioAirportLayout**

diagram	

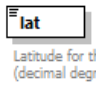


type	**scenarioAirportLayoutType**
properties	minOcc 1 maxOcc unbounded content complex
children	**airportLayoutName** **mixingHeight** **useHourlyMetData** **averageTemperature** **dailyHighTemperature** **dailyLowTemperature** **pressure** **pressureMSL** **humidty** **windSpeed** **windDirection** **ceiling** **visibility** **airportConfigSet** **airportCapacity**
annotation	documentation Airport layout type.

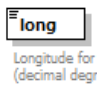
element **sensorNode**

diagram	
properties	content complex
children	**lat long altitude messageTime sequenceNum speed thrust source**
used by	element **sensorPath**
annotation	documentation Describes a single node of a radar flight path.

element **sensorNode/lat**

diagram	
type	**xs:double**
properties	content simple
annotation	documentation Latitude for this location (decimal degrees).

element **sensorNode/long**

diagram	
type	**xs:double**
properties	content simple
annotation	documentation Longitude for this location (decimal degrees).

element **sensorNode/altitude**

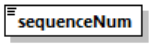
diagram	
type	**xs:double**
properties	content simple

annotation	documentation Altitude at this location (ft)

element **sensorNode/messageTime**

diagram	 Time aircraft reaches this location. NOTE: Not used in AEDT.
type	**xs:dateTime**
properties	content simple
annotation	documentation Time aircraft reaches this location. NOTE: Not used in AEDT.

element **sensorNode/sequenceNum**

diagram	 Order of this location in node list.
type	**xs:int**
properties	content simple
annotation	documentation Order of this location in node list.

element **sensorNode/speed**

diagram	 Ground speed of aircraft at this location (kts).
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Ground speed of aircraft at this location (kts).

element **sensorNode/thrust**

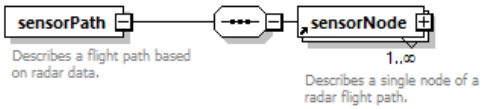
diagram	 Thrust of aircraft at this location. NOTE: Not used in AEDT. (lb)
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Thrust of aircraft at this location. NOTE: Not used in AEDT. (lb)

element **sensorNode/source**

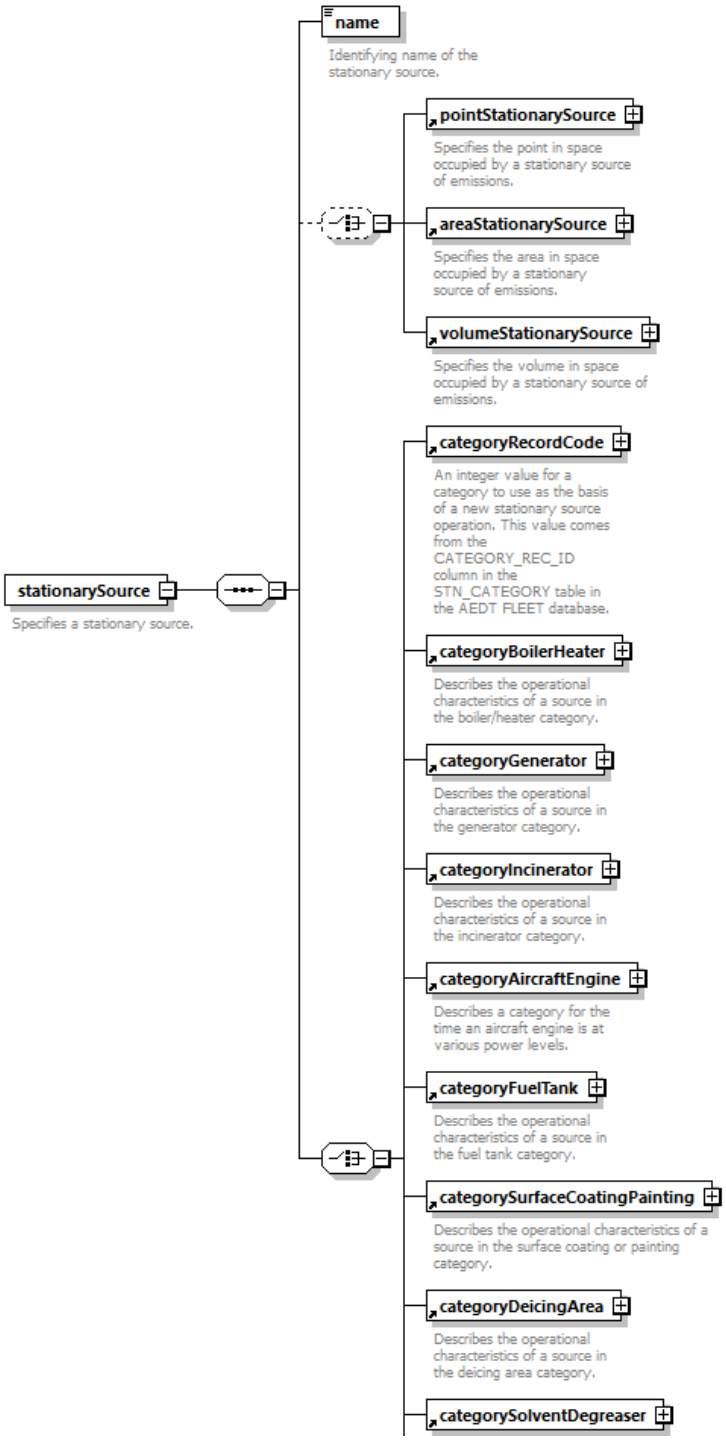
diagram	 Source of the data for this node. NOTE: Not used in AEDT.
type	**string255**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 255

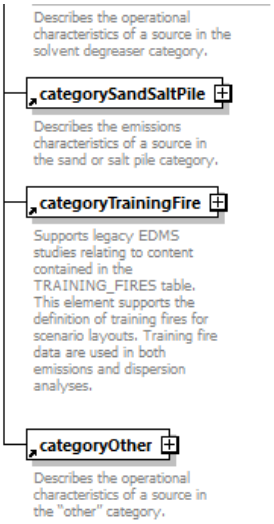
annotation	documentation Source of the data for this node. NOTE: Not used in AEDT.

element **sensorPath**

diagram	
properties	content complex
children	**sensorNode**
used by	element **trackOpSet**
annotation	documentation Describes a flight path based on radar data.

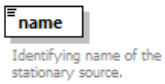
element **stationarySource**

diagram	

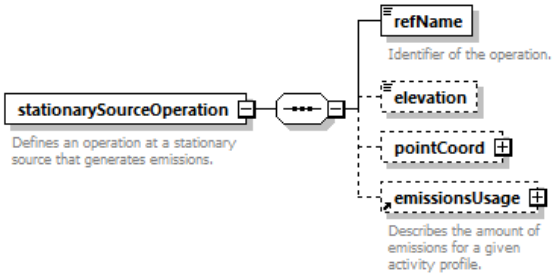


properties	content complex
children	**name pointStationarySource areaStationarySource volumeStationarySource categoryRecordCode categoryBoilerHeater categoryGenerator categoryIncinerator categoryAircraftEngine categoryFuelTank categorySurfaceCoatingPainting categoryDeicingArea categorySolventDegreaser categorySandSaltPile categoryTrainingFire categoryOther**
used by	element **stationarySourceSet**
annotation	documentation Specifies a stationary source.

element **stationarySource/name**

diagram	
type	**string40**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 40
annotation	documentation Identifying name of the stationary source.

element **stationarySourceOperation**

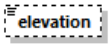
diagram	
properties	content complex
children	**refName elevation pointCoord emissionsUsage**
used by	element **stationarySourceOperationSet**
annotation	documentation Defines an operation at a stationary source that generates emissions.

element **stationarySourceOperation/refName**

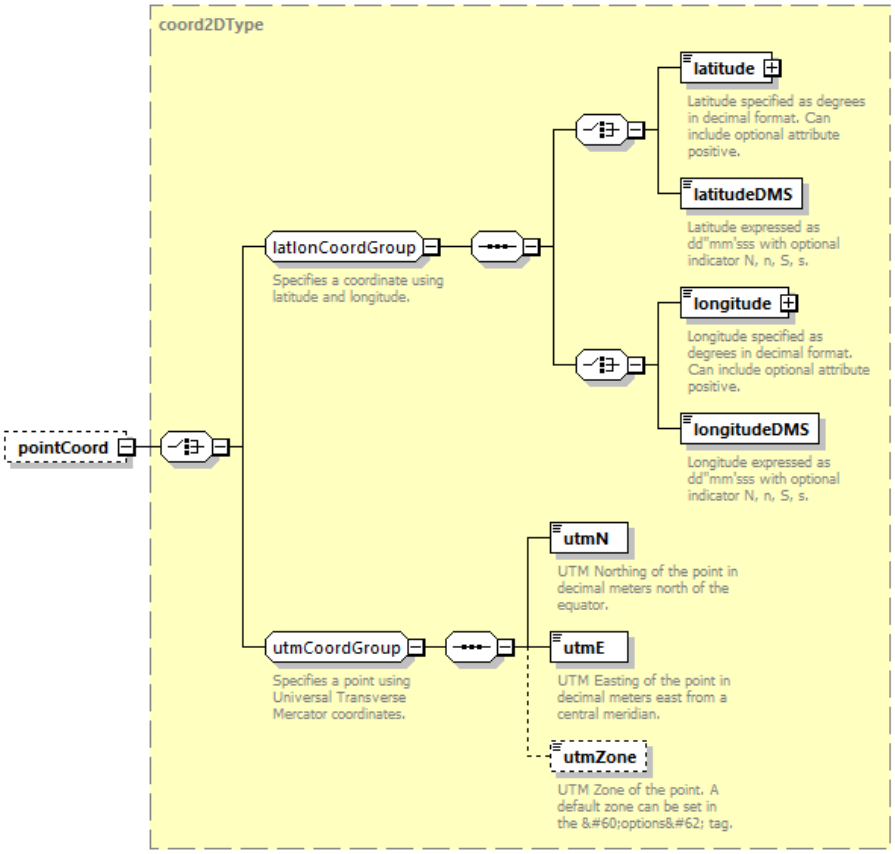
diagram	

type	**string40**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 40
annotation	documentation Identifier of the operation.

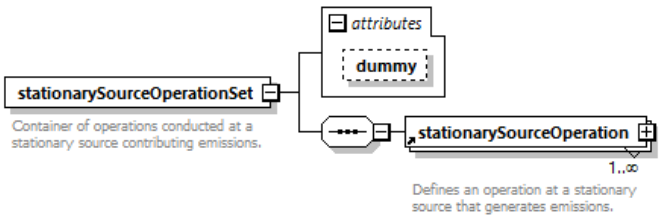
element **stationarySourceOperation/elevation**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple

element **stationarySourceOperation/pointCoord**

diagram	
type	**coord2DType**
properties	minOcc 0 maxOcc 1 content complex
children	**latitude latitudeDMS longitude longitudeDMS utmN utmE utmZone**

element **stationarySourceOperationSet**

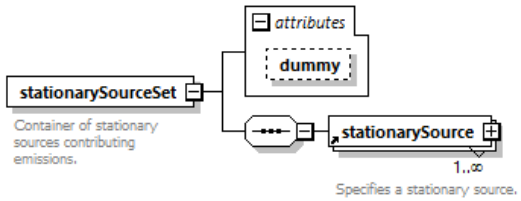
diagram	

properties	content complex
children	**stationarySourceOperation**
used by	group **airportActivityGroup**
attributes	Name Type Use Default Fixed Annotation dummy **xs:int** optional
annotation	documentation Container of operations conducted at a stationary source contributing emissions.

attribute **stationarySourceOperationSet/@dummy**

type	**xs:int**
properties	use optional

element **stationarySourceSet**

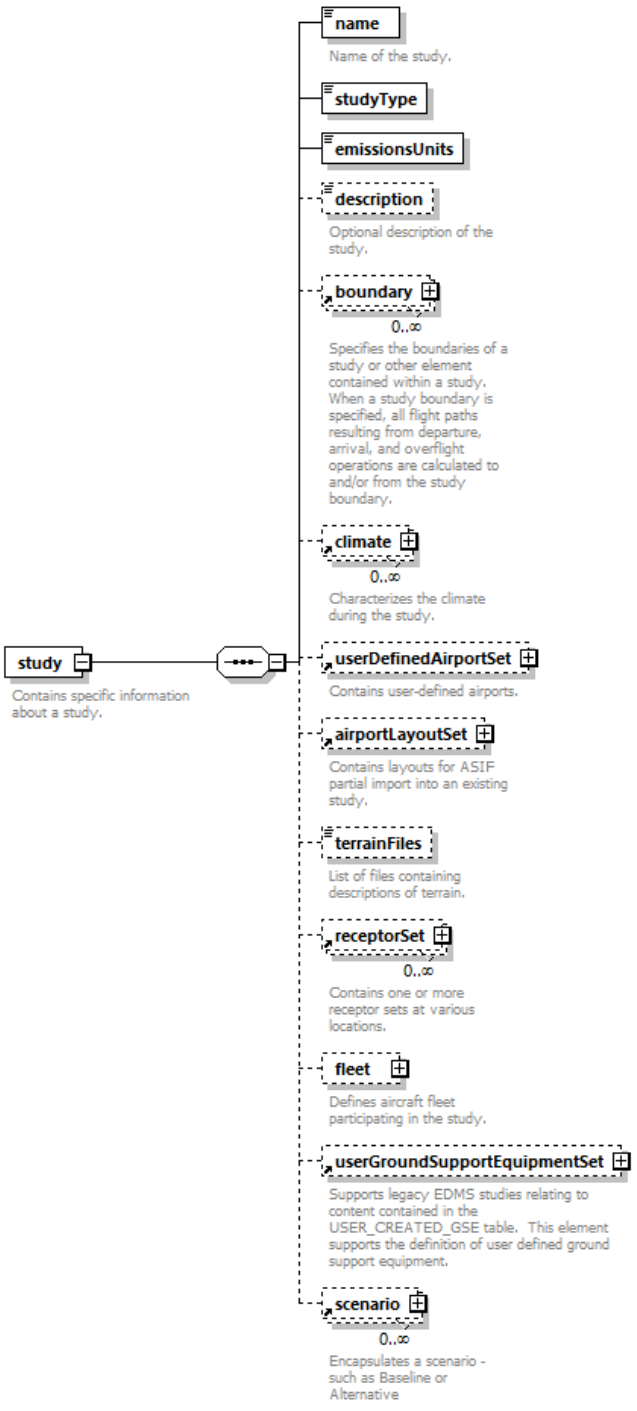
diagram	
properties	content complex
children	**stationarySource**
used by	element **AsifXml** complexType **airportLayoutType**
attributes	Name Type Use Default Fixed Annotation dummy **xs:int** optional
annotation	documentation Container of stationary sources contributing emissions.

attribute **stationarySourceSet/@dummy**

type	**xs:int**
properties	use optional

element **study**

diagram	



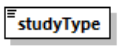
properties	content complex
children	**name studyType emissionsUnits description boundary climate userDefinedAirportSet airportLayoutSet terrainFiles receptorSet fleet userGroundSupportEquipmentSet scenario**
used by	element **AsifXml**
annotation	documentation Contains specific information about a study.

element **study/name**

diagram	
type	**string255**
properties	content simple
facets	Kind Value Annotation minLength 0

	maxLength 255
annotation	documentation Name of the study.

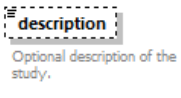
element **study/studyType**

diagram	
type	**studyType**
properties	content simple
facets	Kind Value Annotation enumeration Emissions enumeration Dispersion enumeration Noise and Emissions enumeration Noise and Dispersion

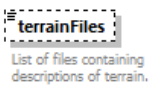
element **study/emissionsUnits**

diagram	
type	**emissionsUnitsType**
properties	content simple
facets	Kind Value Annotation enumeration MetricTonnes enumeration Kilograms enumeration Grams enumeration ImperialTons enumeration Pounds

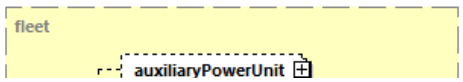
element **study/description**

diagram	
type	**string255**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Optional description of the study.

element **study/terrainFiles**

diagram	
type	**string255**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation List of files containing descriptions of terrain.

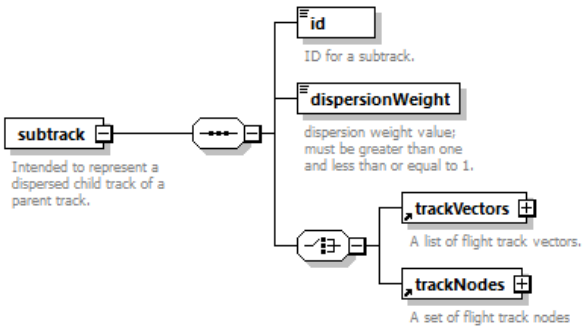
element **study/fleet**

diagram	


0..∞
Describes a custom auxiliary power unit (APU). These are typically on-board generators providing power to a parked aircraft.
airframe
0..∞
Supports the definition of custom airframes.
engine
0..∞
User defined engine information containing custom parameters that reflect an aircraft engine. This engine definition can then be used within a user-defined aircraft.
engineMod
0..∞
User defined engine modification information containing custom parameters that reflect an aircraft engine modification. This engine modification definition can that be used within a user defined aircraft.
anpNoiseGroup
0..∞
This element contains the three spectral class references for a given aircraft noise group with the corresponding thrust setting type and model type.
anpAirplane
0..∞
Creates a new ANP aircraft.
anpFlapsSet
0..∞
Flap settings for an ANP aircraft type.
anpThrustSet
0..∞
Specifies a set of thrust records for an ANP aircraft.
anpProfileSet
0..∞
The profile set for an ANP aircraft.
anpHeloNoiseGroup
0..∞
This element contains the three spectral class references for a given helicopter noise group with the corresponding thrust setting type and model type.
fleet
Defines aircraft fleet participating in the study.
anpHelicopter
0..∞
Creates a new ANP helicopter.
anpHeloDirectivitySet
0..∞
A set of helicopter directivities.
anpHeloProfileSet
0..∞
A profile set for an ANP helicopter.
badaAirplane
0..∞
Describes a new user-defined BADA airplane.

type	**fleet**
properties	minOcc 0 maxOcc 1 content complex
children	**auxiliaryPowerUnit airframe engine engineMod anpNoiseGroup anpAirplane anpFlapsSet anpThrustSet anpProfileSet anpHeloNoiseGroup anpHelicopter anpHeloDirectivitySet anpHeloProfileSet badaAirplane badaAltitudeDistributionSet badaDefaultAltitudeDistributionSet badaProfileSet badaConfigSet badaFuel badaThrust bada4ProfileSet aircraft energyShare**
annotation	documentation Defines aircraft fleet participating in the study.

element **subtrack**

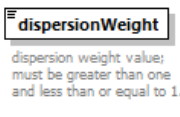
diagram	
properties	content complex
children	**id dispersionWeight trackVectors trackNodes**
used by	element **track**
annotation	documentation

	Intended to represent a dispersed child track of a parent track.

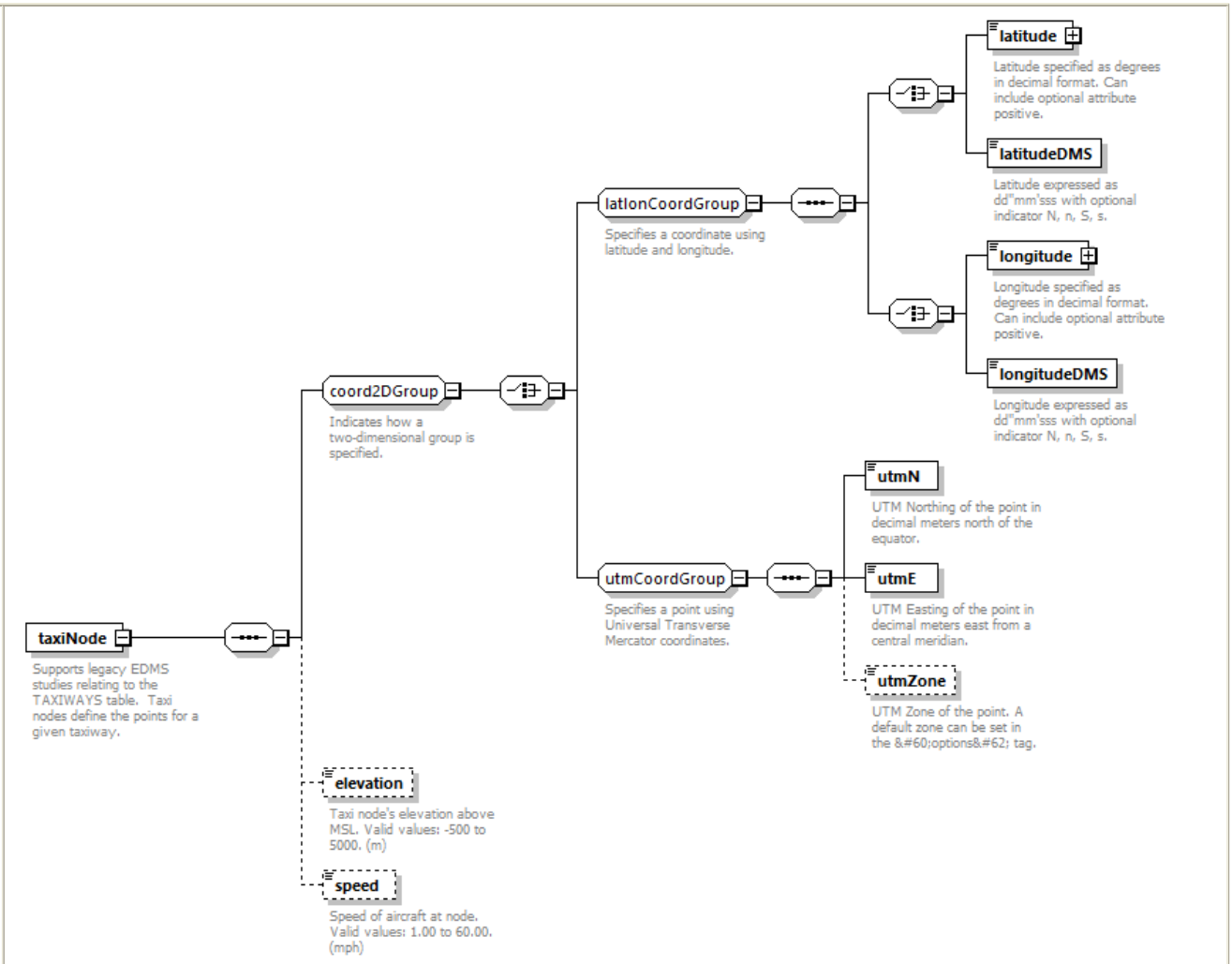
element **subtrack/id**

diagram	
type	**xs:int**
properties	content simple
annotation	documentation ID for a subtrack.

element **subtrack/dispersionWeight**

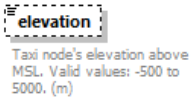
diagram	
type	**xs:double**
properties	content simple
used by	element **backbone**
annotation	documentation dispersion weight value; must be greater than one and less than or equal to 1.

element **taxiNode**

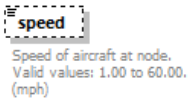
diagram	
properties	content complex
children	**latitude latitudeDMS longitude longitudeDMS utmN utmE utmZone elevation speed**
used by	element **taxiNodeSet**

annotation	documentation Supports legacy EDMS studies relating to the TAXIWAYS table. Taxi nodes define the points for a given taxiway.

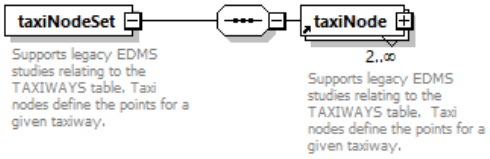
element **taxiNode/elevation**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 0
annotation	documentation Taxi node's elevation above MSL. Valid values: -500 to 5000. (m)

element **taxiNode/speed**

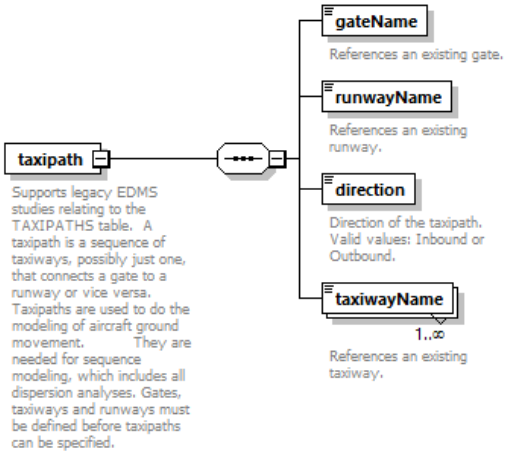
diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 0
annotation	documentation Speed of aircraft at node. Valid values: 1.00 to 60.00. (mph)

element **taxiNodeSet**

diagram	
properties	content complex
children	**taxiNode**
used by	element **taxiway**
annotation	documentation Supports legacy EDMS studies relating to the TAXIWAYS table. Taxi nodes define the points for a given taxiway.

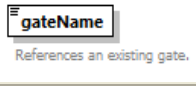
element **taxipath**

diagram	

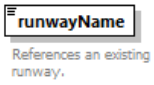


properties	content complex
children	**gateName runwayName direction taxiwayName**
used by	element **taxipathSet**
annotation	documentation Supports legacy EDMS studies relating to the TAXIPATHS table. A taxipath is a sequence of taxiways, possibly just one, that connects a gate to a runway or vice versa. Taxipaths are used to do the modeling of aircraft ground movement. They are needed for sequence modeling, which includes all dispersion analyses. Gates, taxiways and runways must be defined before taxipaths can be specified.

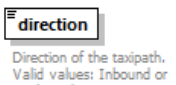
element **taxipath/gateName**

diagram	
type	**string40**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 40
annotation	documentation References an existing gate.

element **taxipath/runwayName**

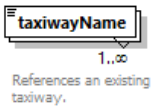
diagram	
type	**string8**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 8
annotation	documentation References an existing runway.

element **taxipath/direction**

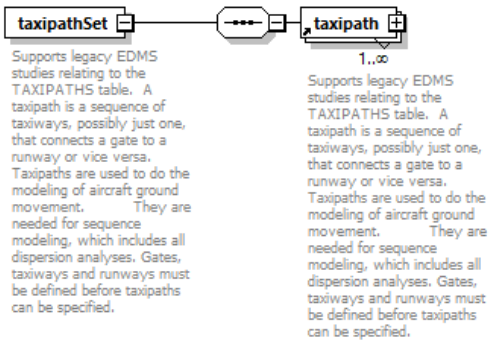
diagram	
type	**directionType**
properties	content simple
facets	Kind Value Annotation pattern A|Arrival|D|Departure|I|Inbound|O|Outbound

annotation	documentation Direction of the taxipath. Valid values: Inbound or Outbound.

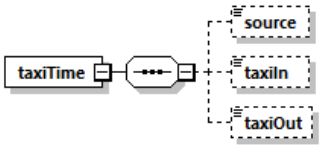
element **taxipath/taxiwayName**

diagram	
type	**string20**
properties	minOcc 1 maxOcc unbounded content simple
facets	Kind Value Annotation minLength 0 maxLength 20
annotation	documentation References an existing taxiway.

element **taxipathSet**

diagram	
properties	content complex
children	**taxipath**
used by	complexType **airportLayoutType**
annotation	documentation Supports legacy EDMS studies relating to the TAXIPATHS table. A taxipath is a sequence of taxiways, possibly just one, that connects a gate to a runway or vice versa. Taxipaths are used to do the modeling of aircraft ground movement. They are needed for sequence modeling, which includes all dispersion analyses. Gates, taxiways and runways must be defined before taxipaths can be specified.

element **taxiTime**

diagram	
properties	content complex
children	**source taxiIn taxiOut**
used by	complexType **airport**

element **taxiTime/source**

diagram	
type	**string6**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation

	minLength 0 maxLength 6

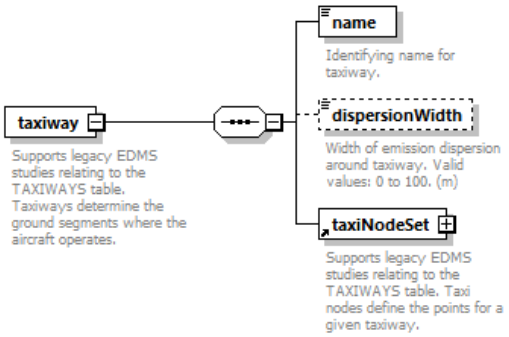
element **taxiTime/taxiIn**

diagram	
type	**xs:int**
properties	minOcc 0 maxOcc 1 content simple

element **taxiTime/taxiOut**

diagram	
type	**xs:int**
properties	minOcc 0 maxOcc 1 content simple

element **taxiway**

diagram	
properties	content complex
children	**name dispersionWidth taxiNodeSet**
used by	element **taxiwaySet**
annotation	documentation Supports legacy EDMS studies relating to the TAXIWAYS table. Taxiways determine the ground segments where the aircraft operates.

element **taxiway/name**

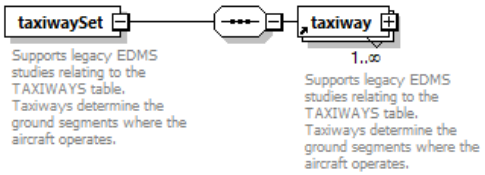
diagram	
type	**string20**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 20
annotation	documentation Identifying name for taxiway.

element **taxiway/dispersionWidth**

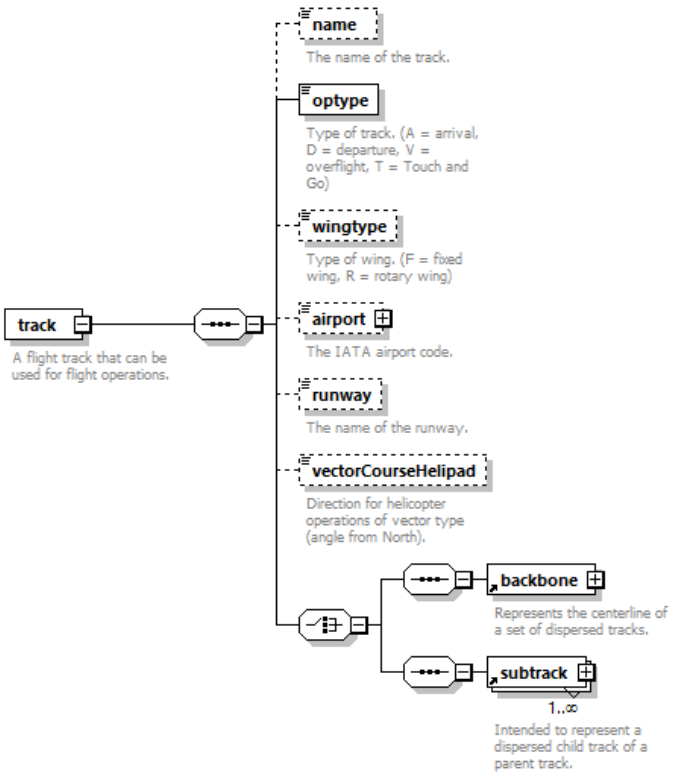
diagram	
type	**doubleExclusive100**
properties	minOcc 0

	maxOcc 1 content simple default 1
facets	Kind Value Annotation minInclusive 0 maxExclusive 100
annotation	documentation Width of emission dispersion around taxiway. Valid values: 0 to 100. (m)

element **taxiwaySet**

diagram	
properties	content complex
children	**taxiway**
used by	complexType **airportLayoutType**
annotation	documentation Supports legacy EDMS studies relating to the TAXIWAYS table. Taxiways determine the ground segments where the aircraft operates.

element **track**

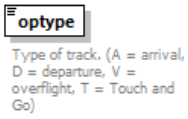
diagram	
properties	content complex
children	**name optype wingtype airport runway vectorCourseHelipad backbone subtrack**
used by	elements **trackOpSet trackSet**
annotation	documentation A flight track that can be used for flight operations.

element **track/name**

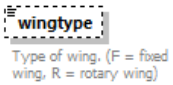
diagram	

type	**string64**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 64
annotation	documentation The name of the track.

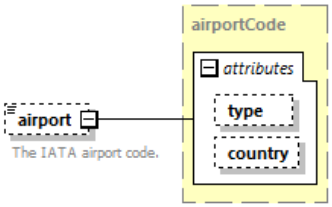
element **track/optype**

diagram	
type	**trackType**
properties	content simple
facets	Kind Value Annotation pattern A|Arrival|D|Departure|V|Overflight|T|TouchAndGo|X|ArrivalHeliTaxi|O|DepartureHeliTaxi
annotation	documentation Type of track. (A = arrival, D = departure, V = overflight, T = Touch and Go)

element **track/wingtype**

diagram	
type	**wingType**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation pattern F|FixedWing|R|RotaryWing
annotation	documentation Type of wing. (F = fixed wing, R = rotary wing)

element **track/airport**

diagram	
type	**airportCode**
properties	minOcc 0 maxOcc 1 content complex
facets	Kind Value Annotation minLength 0 maxLength 4

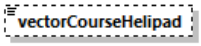
attributes	Name	Type	Use	Default	Fixed	Annotation
	type	**airportCodeType**	optional	ANY		
	country	**string3**	optional	ANY		

annotation	documentation The IATA airport code.

element **track/runway**

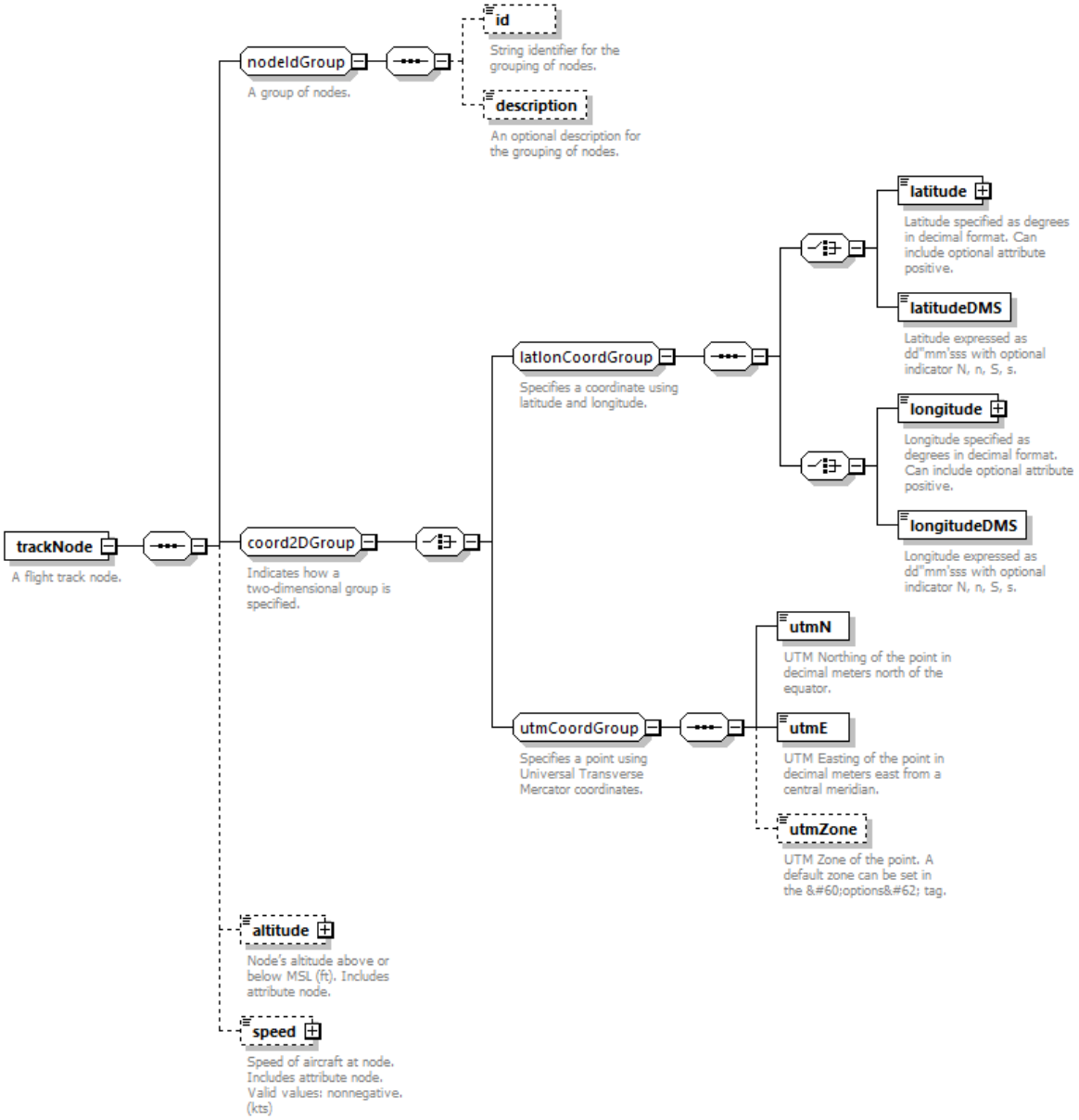
diagram	 The name of the runway.
type	**string8**
properties	minOcc 0 maxOcc 1 content simple
used by	element **runwaySet**
facets	Kind Value Annotation minLength 0 maxLength 8
annotation	documentation The name of the runway.

element **track/vectorCourseHelipad**

diagram	 Direction for helicopter operations of vector type (angle from North).
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Direction for helicopter operations of vector type (angle from North).

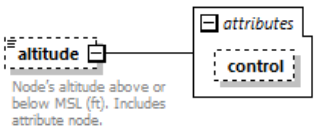
element **trackNode**

diagram	



properties	content complex
children	**id description latitude latitudeDMS longitude longitudeDMS utmN utmE utmZone altitude speed**
used by	elements **backboneNode trackNodes**
annotation	documentation A flight track node.

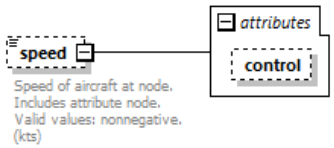
element **trackNode/altitude**

diagram	
type	extension of **xs:double**
properties	minOcc 0 maxOcc 1 content complex
attributes	Name: control; Type: **nodeControlType**; Use: optional; Default: ; Fixed: ; Annotation:
annotation	documentation Node's altitude above or below MSL (ft). Includes attribute node.

attribute **trackNode/altitude/@control**

type	**nodeControlType**
properties	use optional
facets	Kind Value Annotation pattern 0|None|1|AtOrBelow|2|Match|3|AtOrAbove

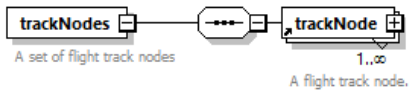
element **trackNode/speed**

diagram	
type	extension of **xs:double**
properties	minOcc 0 maxOcc 1 content complex
attributes	Name Type Use Default Fixed Annotation control **nodeControlType** optional
annotation	documentation Speed of aircraft at node. Includes attribute node. Valid values: nonnegative. (kts)

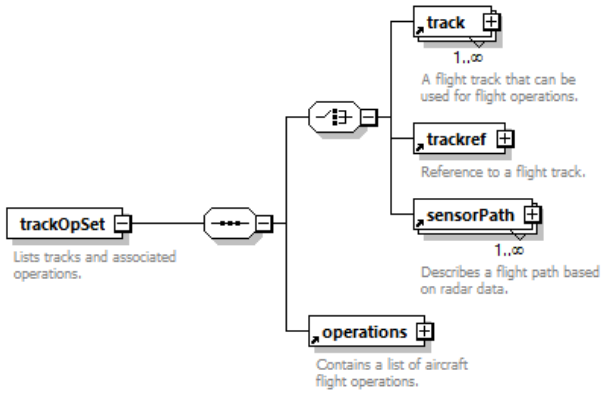
attribute **trackNode/speed/@control**

type	**nodeControlType**
properties	use optional
facets	Kind Value Annotation pattern 0|None|1|AtOrBelow|2|Match|3|AtOrAbove

element **trackNodes**

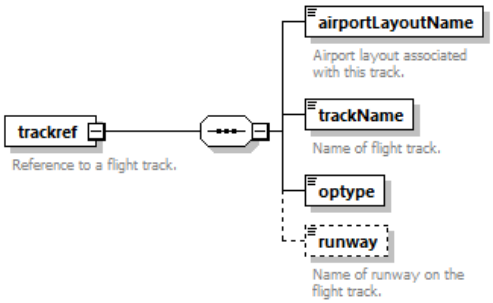
diagram	
properties	content complex
children	**trackNode**
used by	element **subtrack**
annotation	documentation A set of flight track nodes

element **trackOpSet**

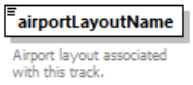
diagram	
properties	content complex
children	**track** **trackref** **sensorPath** **operations**
used by	elements **AsifXml** **case**

annotation	documentation Lists tracks and associated operations.

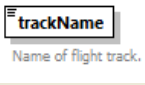
element **trackref**

diagram	
properties	content complex
children	**airportLayoutName** **trackName** **optype** **runway**
used by	element **trackOpSet**
annotation	documentation Reference to a flight track.

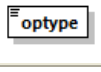
element **trackref/airportLayoutName**

diagram	
type	**string255**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Airport layout associated with this track.

element **trackref/trackName**

diagram	
type	**string255**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Name of flight track.

element **trackref/optype**

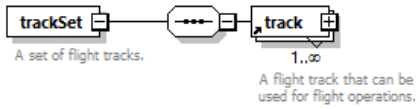
diagram	
type	**trackType**
properties	content simple
facets	Kind Value Annotation pattern A|Arrival|D|Departure|V|Overflight|T|TouchAndGo|X|ArrivalHeliTaxi|O|DepartureHeliTaxi

element **trackref/runway**

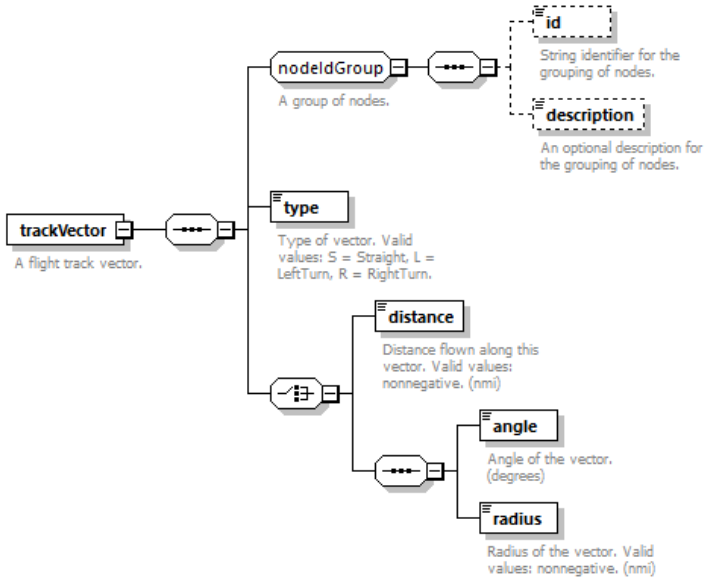
diagram	

type	**string8**
properties	minOcc 0 maxOcc 1 content simple
used by	element **runwaySet**
facets	Kind Value Annotation minLength 0 maxLength 8
annotation	documentation Name of runway on the flight track.

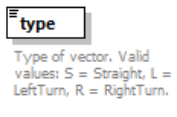
element **trackSet**

diagram	
properties	content complex
children	**track**
used by	complexType **airportLayoutType**
annotation	documentation A set of flight tracks.

element **trackVector**

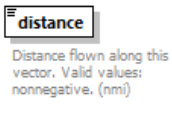
diagram	
properties	content complex
children	**id description type distance angle radius**
used by	element **trackVectors**
annotation	documentation A flight track vector.

element **trackVector/type**

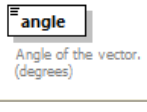
diagram	
type	**vectorTrackType**
properties	content simple
facets	Kind Value Annotation pattern S|Straight|L|LeftTurn|R|RightTurn

annotation	documentation Type of vector. Valid values: S = Straight, L = LeftTurn, R = RightTurn.

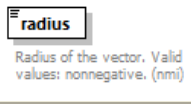
element **trackVector/distance**

diagram	
type	**xs:double**
properties	content simple
annotation	documentation Distance flown along this vector. Valid values: nonnegative. (nmi)

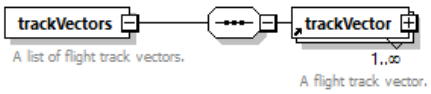
element **trackVector/angle**

diagram	
type	**xs:double**
properties	content simple
annotation	documentation Angle of the vector. (degrees)

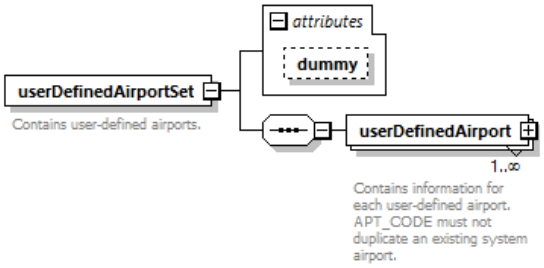
element **trackVector/radius**

diagram	
type	**xs:double**
properties	content simple
annotation	documentation Radius of the vector. Valid values: nonnegative. (nmi)

element **trackVectors**

diagram	
properties	content complex
children	**trackVector**
used by	element **subtrack**
annotation	documentation A list of flight track vectors.

element **userDefinedAirportSet**

diagram	
properties	content complex
children	**userDefinedAirport**
used by	element **study**
attributes	Name Type Use Default Fixed Annotation

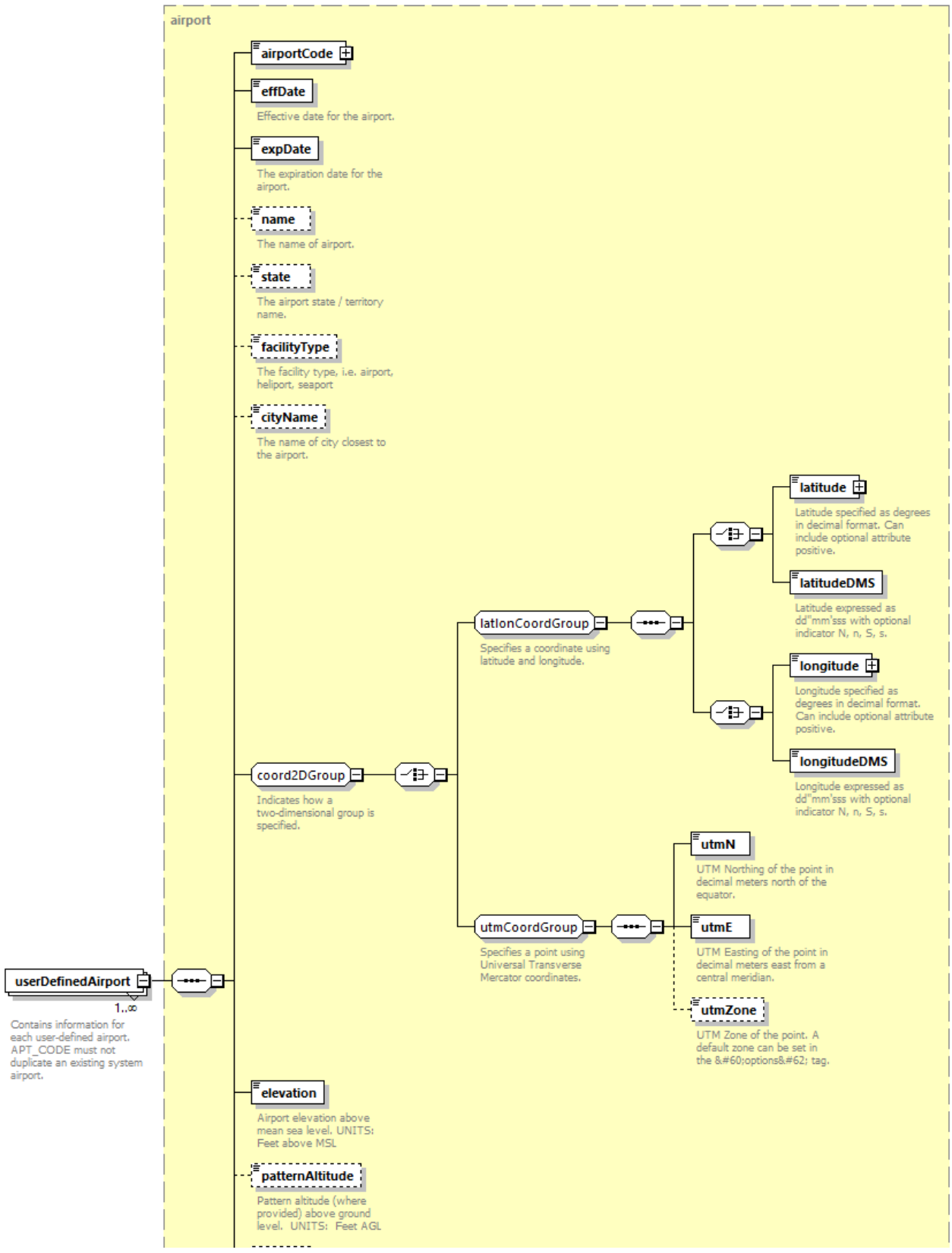
	dummy **xs:int** optional
annotation	documentation Contains user-defined airports.

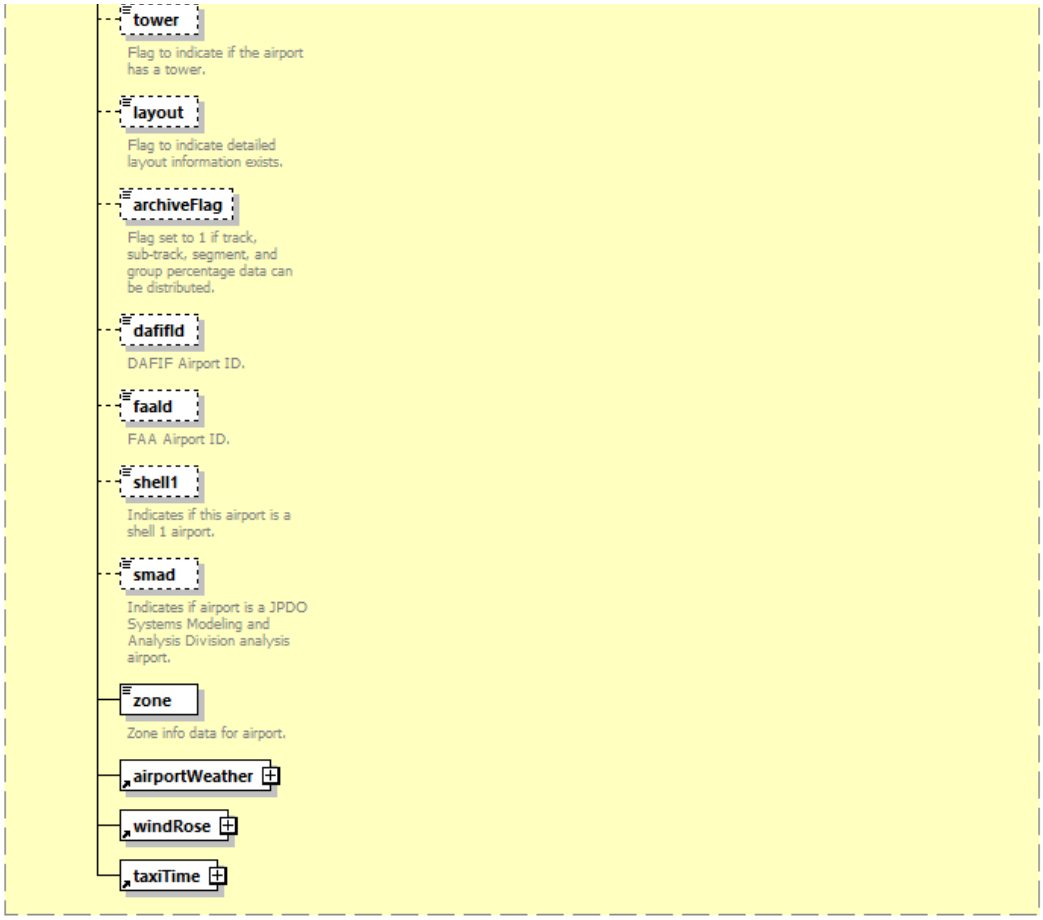
attribute **userDefinedAirportSet/@dummy**

type	**xs:int**
properties	use optional

element **userDefinedAirportSet/userDefinedAirport**

diagram

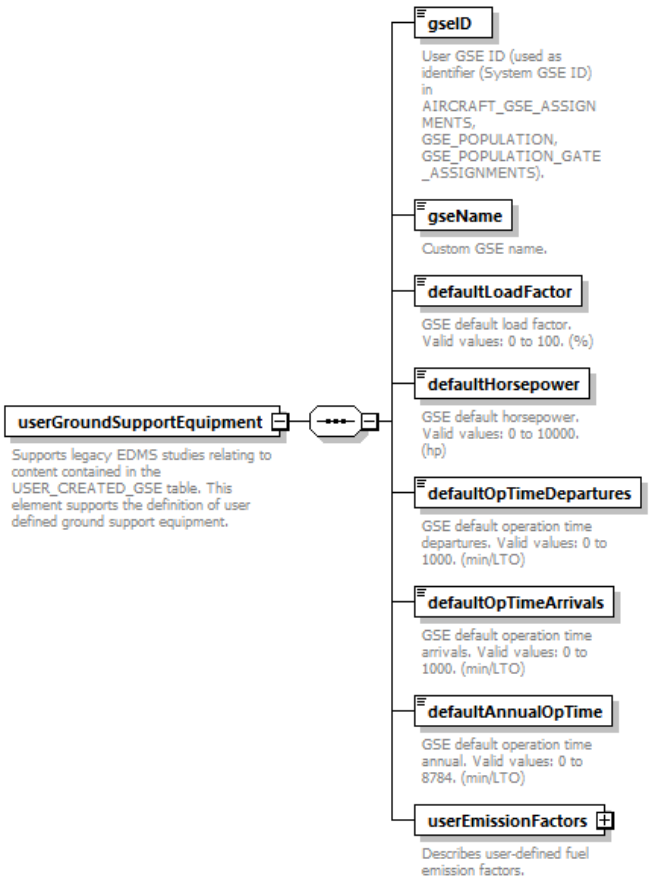




type	**airport**
properties	minOcc 1 maxOcc unbounded content complex
children	**airportCode effDate expDate name state facilityType cityName latitude latitudeDMS longitude longitudeDMS utmN utmE utmZone elevation patternAltitude tower layout archiveFlag dafifId faaId shell1 smad zone airportWeather windRose taxiTime**
annotation	documentation Contains information for each user-defined airport. APT_CODE must not duplicate an existing system airport.

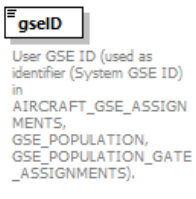
element **userGroundSupportEquipment**

diagram	



properties	content complex
children	**gseID gseName defaultLoadFactor defaultHorsepower defaultOpTimeDepartures defaultOpTimeArrivals defaultAnnualOpTime userEmissionFactors**
used by	element **userGroundSupportEquipmentSet**
annotation	documentation Supports legacy EDMS studies relating to content contained in the USER_CREATED_GSE table. This element supports the definition of user defined ground support equipment.

element **userGroundSupportEquipment/gseID**

diagram	
type	**xs:int**
properties	content simple
annotation	documentation User GSE ID (used as identifier (System GSE ID) in AIRCRAFT_GSE_ASSIGNMENTS, GSE_POPULATION, GSE_POPULATION_GATE_ASSIGNMENTS).

element **userGroundSupportEquipment/gseName**

diagram	
type	**string40**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 40
annotation	documentation Custom GSE name.

element **userGroundSupportEquipment/defaultLoadFactor**

diagram	**defaultLoadFactor** GSE default load factor. Valid values: 0 to 100. (%)
type	**doubleInclusive1**
properties	content simple
facets	Kind Value Annotation minInclusive 0 maxInclusive 1
annotation	documentation GSE default load factor. Valid values: 0 to 100. (%)

element **userGroundSupportEquipment/defaultHorsepower**

diagram	**defaultHorsepower** GSE default horsepower. Valid values: 0 to 10000. (hp)
type	**xs:double**
properties	content simple
annotation	documentation GSE default horsepower. Valid values: 0 to 10000. (hp)

element **userGroundSupportEquipment/defaultOpTimeDepartures**

diagram	**defaultOpTimeDepartures** GSE default operation time departures. Valid values: 0 to 1000. (min/LTO)
type	**xs:double**
properties	content simple
annotation	documentation GSE default operation time departures. Valid values: 0 to 1000. (min/LTO)

element **userGroundSupportEquipment/defaultOpTimeArrivals**

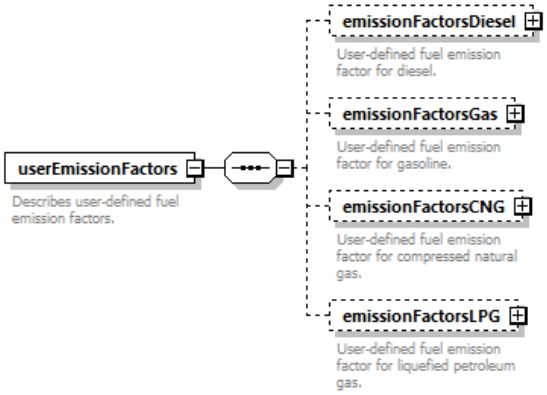
diagram	**defaultOpTimeArrivals** GSE default operation time arrivals. Valid values: 0 to 1000. (min/LTO)
type	**xs:double**
properties	content simple
annotation	documentation GSE default operation time arrivals. Valid values: 0 to 1000. (min/LTO)

element **userGroundSupportEquipment/defaultAnnualOpTime**

diagram	**defaultAnnualOpTime** GSE default operation time annual. Valid values: 0 to 8784. (min/LTO)
type	**xs:double**
properties	content simple
annotation	documentation GSE default operation time annual. Valid values: 0 to 8784. (min/LTO)

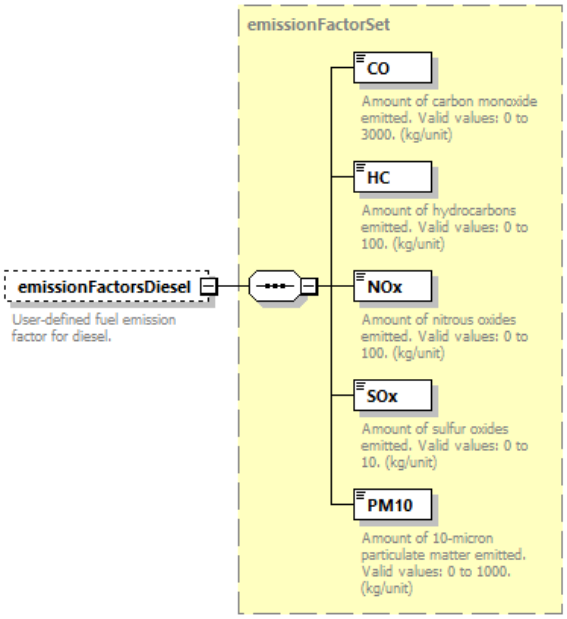
element **userGroundSupportEquipment/userEmissionFactors**

diagram	



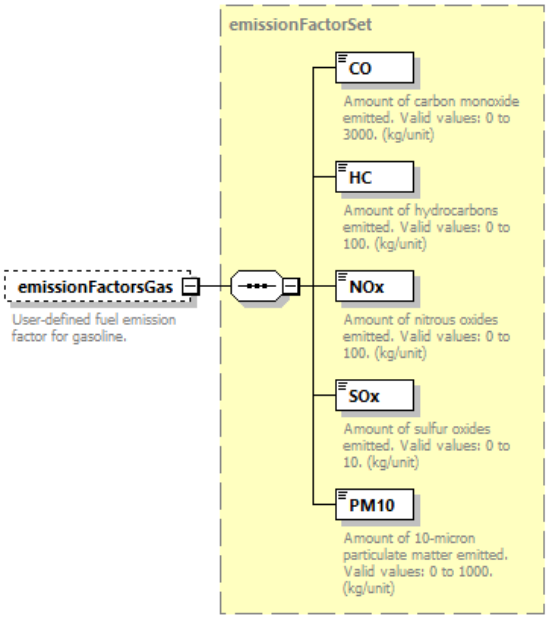
properties	content complex
children	**emissionFactorsDiesel** **emissionFactorsGas** **emissionFactorsCNG** **emissionFactorsLPG**
annotation	documentation Describes user-defined fuel emission factors.

element **userGroundSupportEquipment/userEmissionFactors/emissionFactorsDiesel**

diagram	
type	**emissionFactorSet**
properties	minOcc 0 maxOcc 1 content complex
children	**CO** **HC** **NOx** **SOx** **PM10**
annotation	documentation User-defined fuel emission factor for diesel.

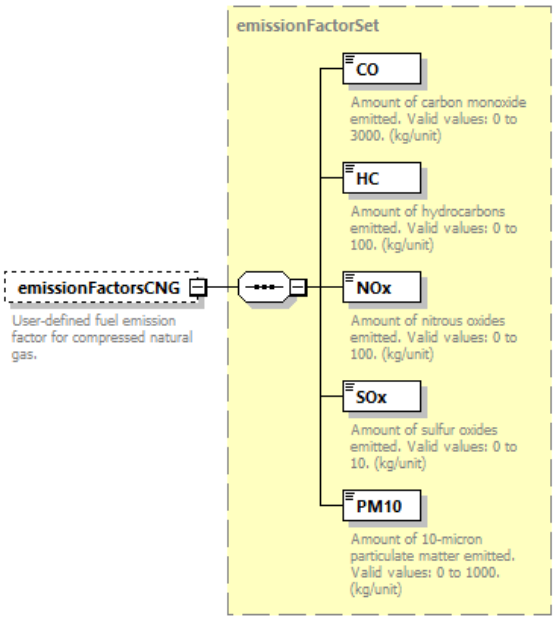
element **userGroundSupportEquipment/userEmissionFactors/emissionFactorsGas**

diagram	



type	**emissionFactorSet**
properties	minOcc 0 maxOcc 1 content complex
children	**CO HC NOx SOx PM10**
annotation	documentation User-defined fuel emission factor for gasoline.

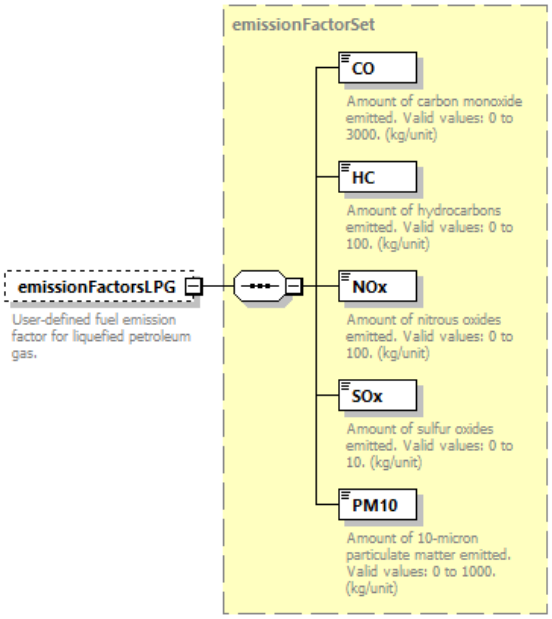
element **userGroundSupportEquipment/userEmissionFactors/emissionFactorsCNG**



type	**emissionFactorSet**
properties	minOcc 0 maxOcc 1 content complex
children	**CO HC NOx SOx PM10**
annotation	documentation User-defined fuel emission factor for compressed natural gas.

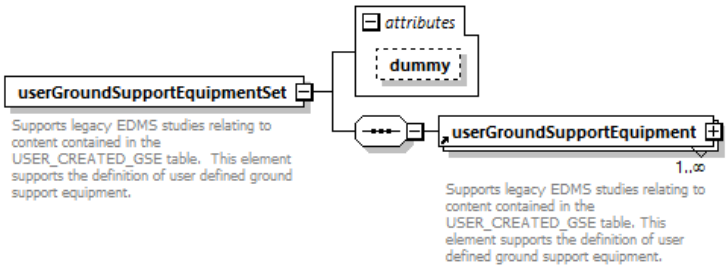
element **userGroundSupportEquipment/userEmissionFactors/emissionFactorsLPG**

diagram	



type	**emissionFactorSet**
properties	minOcc 0 maxOcc 1 content complex
children	**CO HC NOx SOx PM10**
annotation	documentation User-defined fuel emission factor for liquefied petroleum gas.

element **userGroundSupportEquipmentSet**

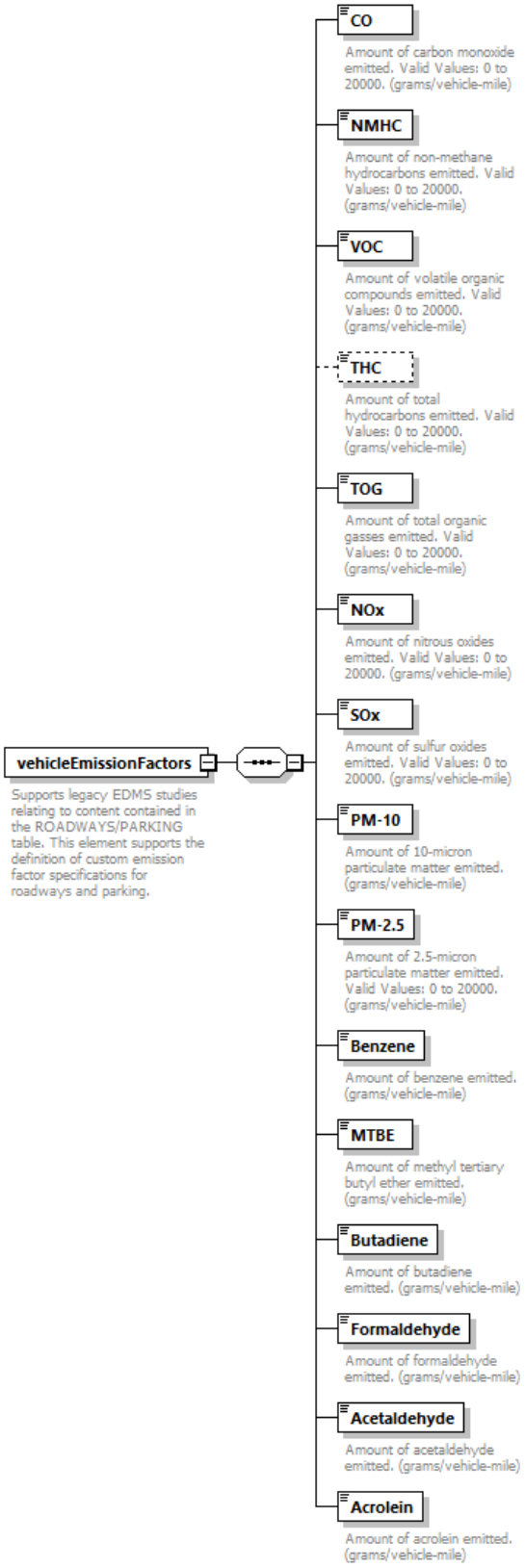
diagram	
properties	content complex
children	**userGroundSupportEquipment**
used by	elements **AsifXml study**
attributes	Name Type Use Default Fixed Annotation dummy **xs:int** optional
annotation	documentation Supports legacy EDMS studies relating to content contained in the USER_CREATED_GSE table. This element supports the definition of user defined ground support equipment.

attribute **userGroundSupportEquipmentSet/@dummy**

type	**xs:int**
properties	use optional

element **vehicleEmissionFactors**

diagram	



properties	content complex
children	**CO NMHC VOC THC TOG NOx SOx PM-10 PM-2.5 Benzene MTBE Butadiene Formaldehyde Acetaldehyde Acrolein**
used by	elements **parkingFacilityOperation roadwayOperation**
annotation	documentation Supports legacy EDMS studies relating to content contained in the ROADWAYS/PARKING table. This element supports the definition of custom emission factor specifications for roadways and parking.

element **vehicleEmissionFactors/CO**

diagram	 Amount of carbon monoxide emitted. Valid Values: 0 to 20000. (grams/vehicle-mile)
type	**xs:double**
properties	content simple
annotation	documentation Amount of carbon monoxide emitted. Valid Values: 0 to 20000. (grams/vehicle-mile)

element **vehicleEmissionFactors/NMHC**

diagram	 Amount of non-methane hydrocarbons emitted. Valid Values: 0 to 20000. (grams/vehicle-mile)
type	**xs:double**
properties	content simple
annotation	documentation Amount of non-methane hydrocarbons emitted. Valid Values: 0 to 20000. (grams/vehicle-mile)

element **vehicleEmissionFactors/VOC**

diagram	 Amount of volatile organic compounds emitted. Valid Values: 0 to 20000. (grams/vehicle-mile)
type	**xs:double**
properties	content simple
annotation	documentation Amount of volatile organic compounds emitted. Valid Values: 0 to 20000. (grams/vehicle-mile)

element **vehicleEmissionFactors/THC**

diagram	 Amount of total hydrocarbons emitted. Valid Values: 0 to 20000. (grams/vehicle-mile)
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Amount of total hydrocarbons emitted. Valid Values: 0 to 20000. (grams/vehicle-mile)

element **vehicleEmissionFactors/TOG**

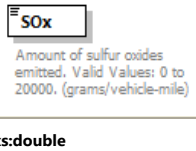
diagram	 Amount of total organic gasses emitted. Valid Values: 0 to 20000. (grams/vehicle-mile)
type	**xs:double**
properties	content simple
annotation	documentation Amount of total organic gasses emitted. Valid Values: 0 to 20000. (grams/vehicle-mile)

element **vehicleEmissionFactors/NOx**

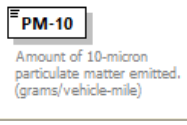
diagram	 Amount of nitrous oxides emitted. Valid Values: 0 to 20000. (grams/vehicle-mile)

type	**xs:double**
properties	content simple
annotation	documentation Amount of nitrous oxides emitted. Valid Values: 0 to 20000. (grams/vehicle-mile)

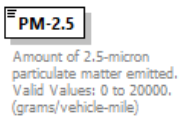
element **vehicleEmissionFactors/SOx**

diagram	
type	**xs:double**
properties	content simple
annotation	documentation Amount of sulfur oxides emitted. Valid Values: 0 to 20000. (grams/vehicle-mile)

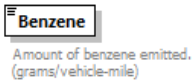
element **vehicleEmissionFactors/PM-10**

diagram	
type	**xs:double**
properties	content simple
annotation	documentation Amount of 10-micron particulate matter emitted. (grams/vehicle-mile)

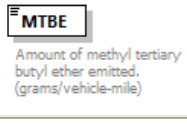
element **vehicleEmissionFactors/PM-2.5**

diagram	
type	**xs:double**
properties	content simple
annotation	documentation Amount of 2.5-micron particulate matter emitted. Valid Values: 0 to 20000. (grams/vehicle-mile)

element **vehicleEmissionFactors/Benzene**

diagram	
type	**xs:double**
properties	content simple
annotation	documentation Amount of benzene emitted. (grams/vehicle-mile)

element **vehicleEmissionFactors/MTBE**

diagram	
type	**xs:double**
properties	content simple
annotation	documentation Amount of methyl tertiary butyl ether emitted. (grams/vehicle-mile)

element **vehicleEmissionFactors/Butadiene**

diagram	**Butadiene** Amount of butadiene emitted. (grams/vehicle-mile)
type	**xs:double**
properties	content simple
annotation	documentation Amount of butadiene emitted. (grams/vehicle-mile)

element **vehicleEmissionFactors/Formaldehyde**

diagram	**Formaldehyde** Amount of formaldehyde emitted. (grams/vehicle-mile)
type	**xs:double**
properties	content simple
annotation	documentation Amount of formaldehyde emitted. (grams/vehicle-mile)

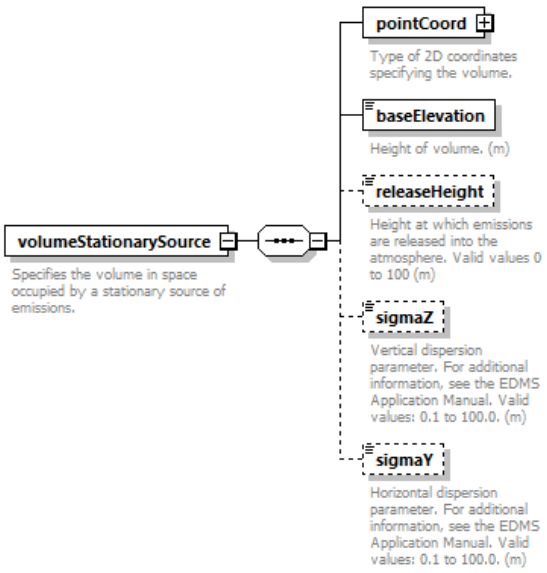
element **vehicleEmissionFactors/Acetaldehyde**

diagram	**Acetaldehyde** Amount of acetaldehyde emitted. (grams/vehicle-mile)
type	**xs:double**
properties	content simple
annotation	documentation Amount of acetaldehyde emitted. (grams/vehicle-mile)

element **vehicleEmissionFactors/Acrolein**

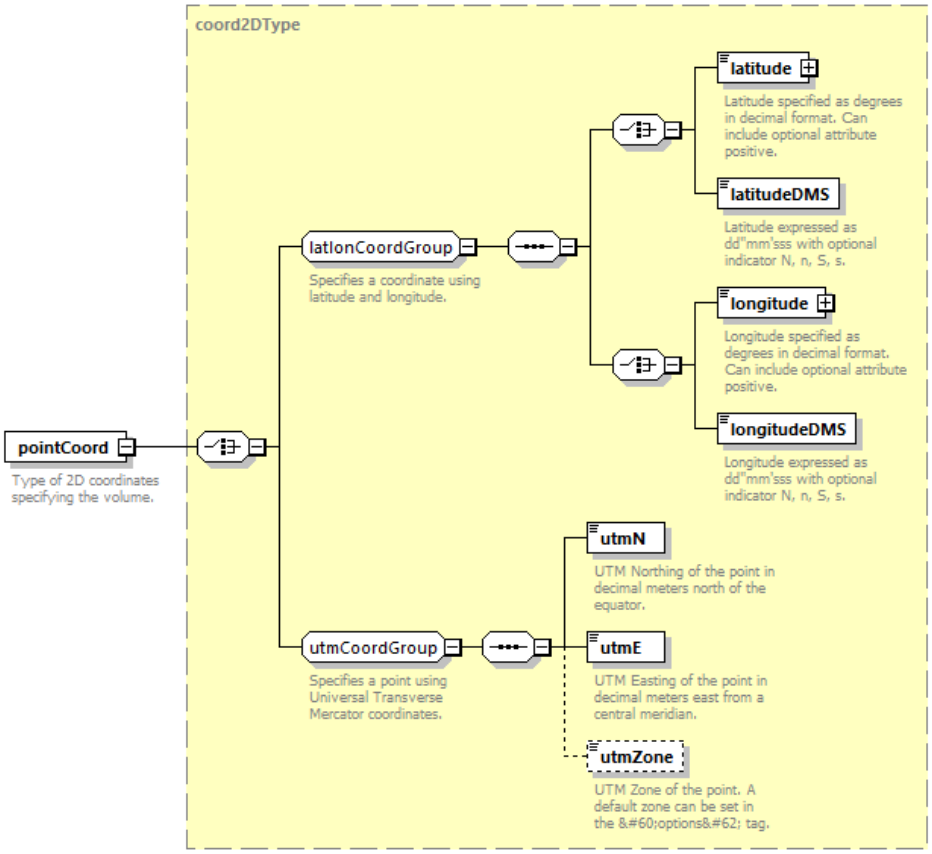
diagram	**Acrolein** Amount of acrolein emitted. (grams/vehicle-mile)
type	**xs:double**
properties	content simple
annotation	documentation Amount of acrolein emitted. (grams/vehicle-mile)

element **volumeStationarySource**

diagram	
properties	content complex

children	**pointCoord** **baseElevation** **releaseHeight** **sigmaZ** **sigmaY**
used by	element **stationarySource**
annotation	documentation Specifies the volume in space occupied by a stationary source of emissions.

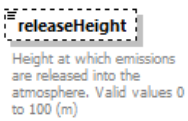
element **volumeStationarySource/pointCoord**

diagram	
type	**coord2DType**
properties	content complex
children	**latitude** **latitudeDMS** **longitude** **longitudeDMS** **utmN** **utmE** **utmZone**
annotation	documentation Type of 2D coordinates specifying the volume.

element **volumeStationarySource/baseElevation**

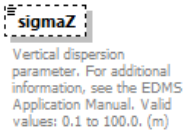
diagram	
type	**xs:double**
properties	content simple
annotation	documentation Height of volume. (m)

element **volumeStationarySource/releaseHeight**

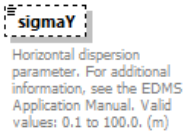
diagram	
type	**doubleInclusive100**
properties	minOcc 0 maxOcc 1 content simple default 0

facets	Kind Value Annotation minInclusive 0 maxInclusive 100
annotation	documentation Height at which emissions are released into the atmosphere. Valid values 0 to 100 (m)

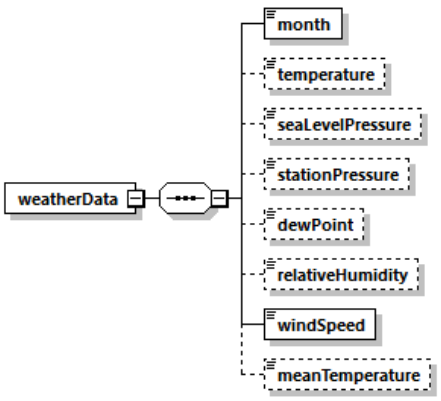
element **volumeStationarySource/sigmaZ**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 0
annotation	documentation Vertical dispersion parameter. For additional information, see the EDMS Application Manual. Valid values: 0.1 to 100.0. (m)

element **volumeStationarySource/sigmaY**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 0
annotation	documentation Horizontal dispersion parameter. For additional information, see the EDMS Application Manual. Valid values: 0.1 to 100.0. (m)

element **weatherData**

diagram	
properties	content complex
children	**month temperature seaLevelPressure stationPressure dewPoint relativeHumidity windSpeed meanTemperature**
used by	element **airportWeatherStation**

element **weatherData/month**

diagram	
type	**string3**
properties	content simple
facets	Kind Value Annotation

	minLength 0 maxLength 3

element **weatherData/temperature**

diagram	temperature
type	**xs:decimal**
properties	minOcc 0 maxOcc 1 content simple

element **weatherData/seaLevelPressure**

diagram	seaLevelPressure
type	**xs:decimal**
properties	minOcc 0 maxOcc 1 content simple

element **weatherData/stationPressure**

diagram	stationPressure
type	**xs:decimal**
properties	minOcc 0 maxOcc 1 content simple

element **weatherData/dewPoint**

diagram	dewPoint
type	**xs:decimal**
properties	minOcc 0 maxOcc 1 content simple

element **weatherData/relativeHumidity**

diagram	relativeHumidity
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple

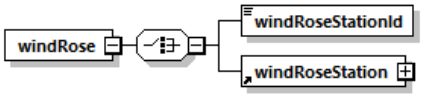
element **weatherData/windSpeed**

diagram	windSpeed
type	**xs:decimal**
properties	content simple

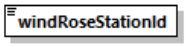
element **weatherData/meanTemperature**

diagram	meanTemperature
type	**xs:decimal**
properties	minOcc 0 maxOcc 1 content simple

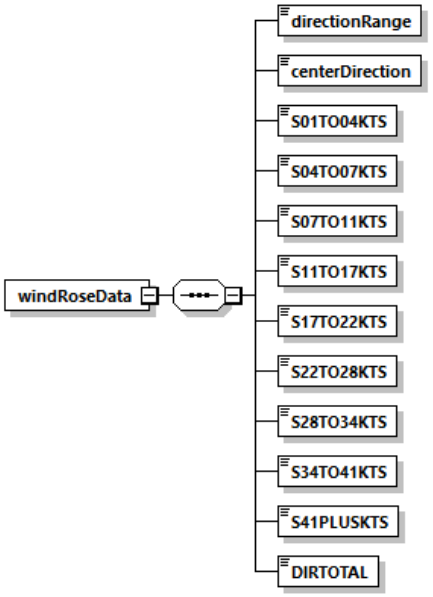
element **windRose**

diagram	
properties	content complex
children	**windRoseStationId** **windRoseStation**
used by	complexType **airport**

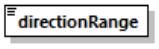
element **windRose/windRoseStationId**

diagram	
type	**string5**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 5

element **windRoseData**

diagram	
properties	content complex
children	**directionRange** **centerDirection** **S01TO04KTS** **S04TO07KTS** **S07TO11KTS** **S11TO17KTS** **S17TO22KTS** **S22TO28KTS** **S28TO34KTS** **S34TO41KTS** **S41PLUSKTS** **DIRTOTAL**
used by	element **windRoseStation**

element **windRoseData/directionRange**

diagram	
type	**string14**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 14

element **windRoseData/centerDirection**

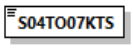
diagram	
type	**xs:int**

properties	content simple

element **windRoseData/S01TO04KTS**

diagram	
type	**xs:int**
properties	content simple

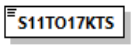
element **windRoseData/S04TO07KTS**

diagram	
type	**xs:int**
properties	content simple

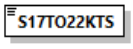
element **windRoseData/S07TO11KTS**

diagram	
type	**xs:int**
properties	content simple

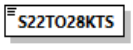
element **windRoseData/S11TO17KTS**

diagram	
type	**xs:int**
properties	content simple

element **windRoseData/S17TO22KTS**

diagram	
type	**xs:int**
properties	content simple

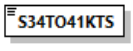
element **windRoseData/S22TO28KTS**

diagram	
type	**xs:int**
properties	content simple

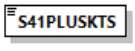
element **windRoseData/S28TO34KTS**

diagram	
type	**xs:int**
properties	content simple

element **windRoseData/S34TO41KTS**

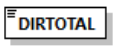
diagram	
type	**xs:int**
properties	content simple

element **windRoseData/S41PLUSKTS**

diagram	

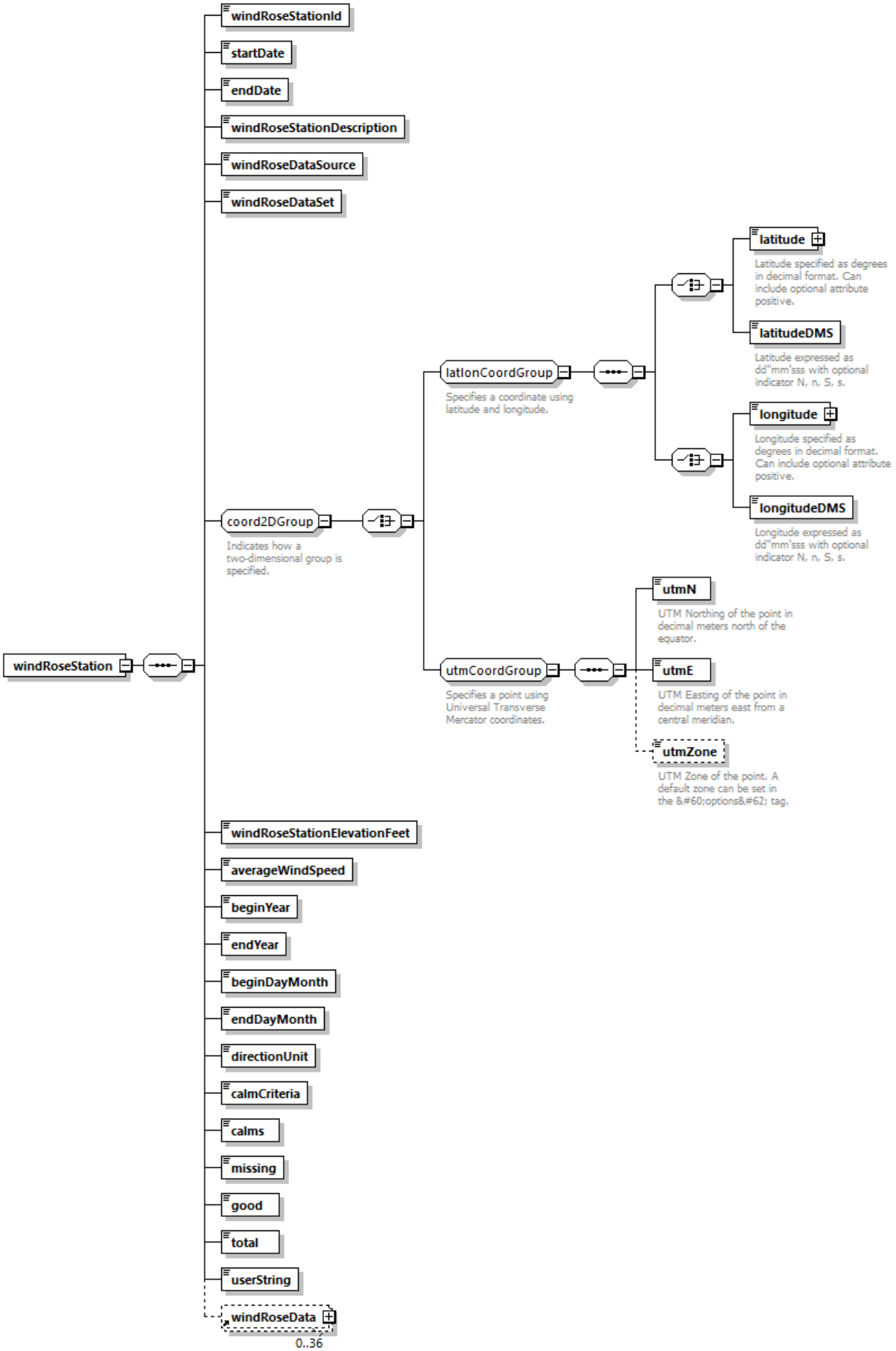
type	**xs:int**
properties	content simple

element **windRoseData/DIRTOTAL**

diagram	
type	**xs:int**
properties	content simple

element **windRoseStation**

diagram	



properties	content complex
children	**windRoseStationId startDate endDate windRoseStationDescription windRoseDataSource windRoseDataSet latitude latitudeDMS longitude longitudeDMS utmN utmE utmZone windRoseStationElevationFeet averageWindSpeed beginYear endYear beginDayMonth endDayMonth directionUnit calmCriteria calms missing good total**

	userString windRoseData
used by	element **windRose**

element **windRoseStation/windRoseStationId**

diagram	windRoseStationId
type	**string5**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 5

element **windRoseStation/startDate**

diagram	startDate
type	**xs:date**
properties	content simple

element **windRoseStation/endDate**

diagram	endDate
type	**xs:date**
properties	content simple

element **windRoseStation/windRoseStationDescription**

diagram	windRoseStationDescription
type	**string42**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 42

element **windRoseStation/windRoseDataSource**

diagram	windRoseDataSource
type	**string32**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 32

element **windRoseStation/windRoseDataSet**

diagram	windRoseDataSet
type	**string66**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 66

element **windRoseStation/windRoseStationElevationFeet**

diagram	windRoseStationElevationFeet
type	**xs:int**

properties	content simple

element **windRoseStation/averageWindSpeed**

diagram	averageWindSpeed
type	**xs:double**
properties	content simple

element **windRoseStation/beginYear**

diagram	beginYear
type	**xs:int**
properties	content simple

element **windRoseStation/endYear**

diagram	endYear
type	**xs:int**
properties	content simple

element **windRoseStation/beginDayMonth**

diagram	beginDayMonth
type	**string12**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 12

element **windRoseStation/endDayMonth**

diagram	endDayMonth
type	**string11**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 11

element **windRoseStation/directionUnit**

diagram	directionUnit
type	**string9**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 9

element **windRoseStation/calmCriteria**

diagram	calmCriteria
type	**string11**
properties	content simple
facets	Kind Value Annotation minLength 0

	maxLength 11

element **windRoseStation/calms**

diagram	calms
type	**xs:int**
properties	content simple

element **windRoseStation/missing**

diagram	missing
type	**xs:int**
properties	content simple

element **windRoseStation/good**

diagram	good
type	**xs:int**
properties	content simple

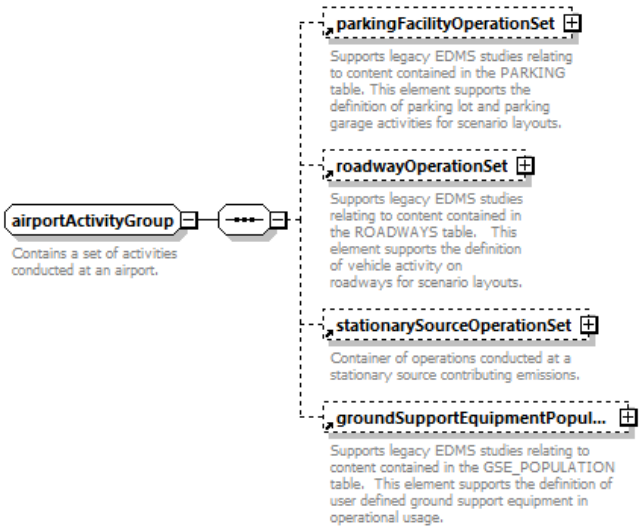
element **windRoseStation/total**

diagram	total
type	**xs:int**
properties	content simple

element **windRoseStation/userString**

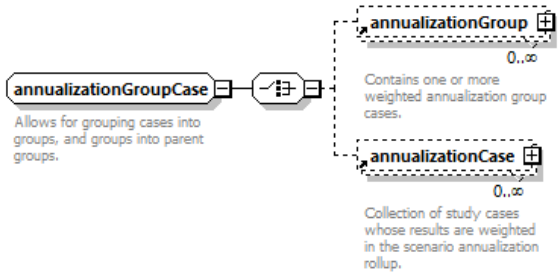
diagram	userString
type	**string11**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 11

group **airportActivityGroup**

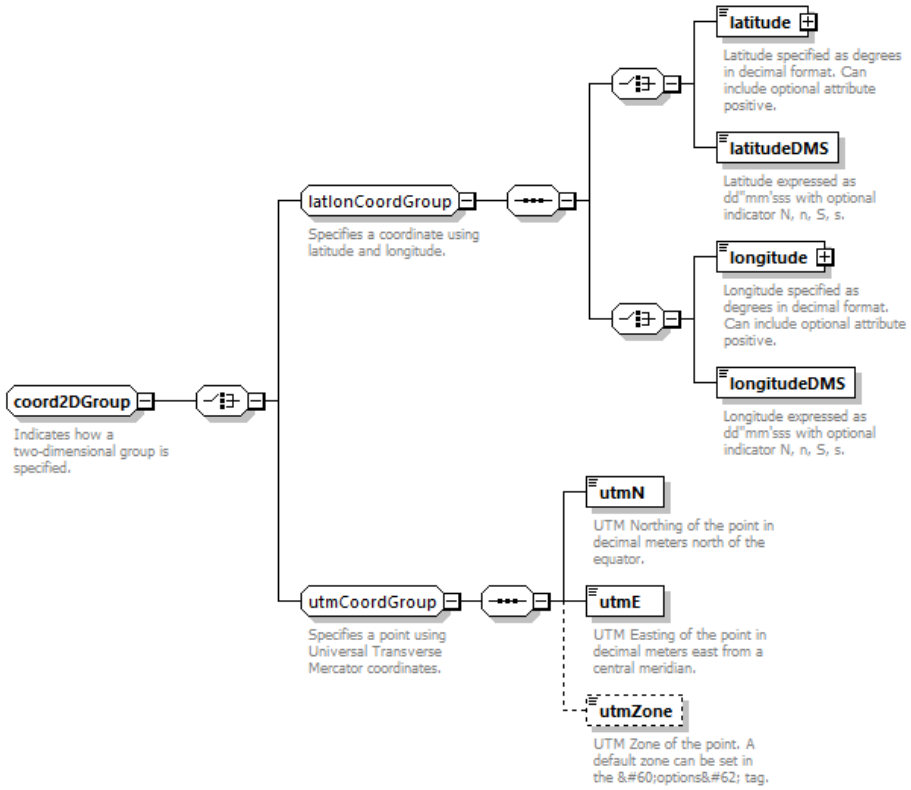
diagram	
children	**parkingFacilityOperationSet roadwayOperationSet stationarySourceOperationSet groundSupportEquipmentPopulationOperationSet**
used by	element **case**

annotation	documentation Contains a set of activities conducted at an airport.

group **annualizationGroupCase**

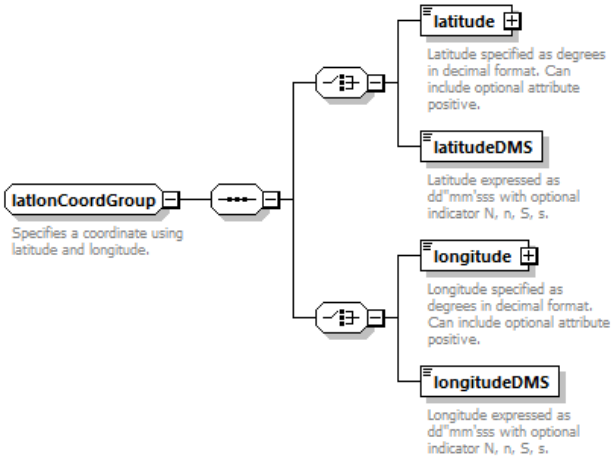
diagram	
children	**annualizationGroup annualizationCase**
used by	element **annualizationGroup**
annotation	documentation Allows for grouping cases into groups, and groups into parent groups.

group **coord2DGroup**

diagram	
children	**latitude latitudeDMS longitude longitudeDMS utmN utmE utmZone**
used by	elements **airportWeatherStation centroid grid pointReceptor polarGrid polarReceptor taxiNode trackNode windRoseStation** complexTypes **airport airportLayoutType runup runwayEnd**
annotation	documentation Indicates how a two-dimensional group is specified.

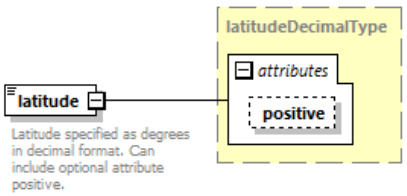
group **latlonCoordGroup**

diagram	

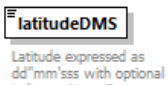


children	**latitude latitudeDMS longitude longitudeDMS**
used by	complexType **coord2DType** group **coord2DGroup**
annotation	documentation Specifies a coordinate using latitude and longitude.

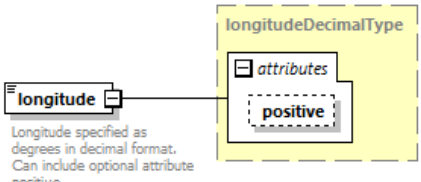
element **latlonCoordGroup/latitude**

diagram	
type	**latitudeDecimalType**
properties	content complex
attributes	Name: positive; Type: **derived by: xs:string**; Use: optional; Default: N; Fixed: ; Annotation:
annotation	documentation Latitude specified as degrees in decimal format. Can include optional attribute positive.

element **latlonCoordGroup/latitudeDMS**

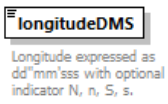
diagram	
type	**latitudeDMSType**
properties	content simple
facets	Kind: pattern; Value: [0-9]{2}[\-|:|"][0-9]{2}[\-|:|'][0-9]{2}(.[0-9]{3})?[N|n|S|s]; Annotation:
annotation	documentation Latitude expressed as dd°mm'sss with optional indicator N, n, S, s.

element **latlonCoordGroup/longitude**

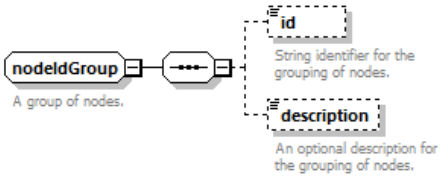
diagram	
type	**longitudeDecimalType**
properties	content complex

attributes	Name	Type	Use	Default	Fixed	Annotation
	positive	**derived by: xs:string**	optional	E		
annotation	documentation Longitude specified as degrees in decimal format. Can include optional attribute positive.					

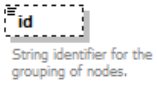
element **latlonCoordGroup/longitudeDMS**

diagram	
type	**longitudeDMSType**
properties	content simple
facets	Kind Value Annotation pattern [0-9]?[0-9]{2}[\-|:|"][0-9]{2}[\-|:|'][0-9]{2}(.[0-9]{3})?[E|e|W|w]
annotation	documentation Longitude expressed as dd"mm'sss with optional indicator N, n, S, s.

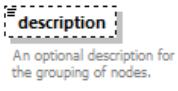
group **nodeIdGroup**

diagram	
children	**id** **description**
used by	elements **trackNode** **trackVector**
annotation	documentation A group of nodes.

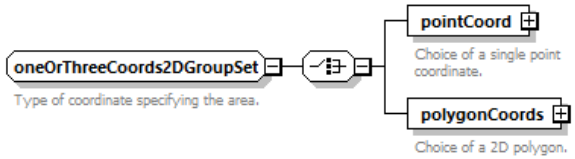
element **nodeIdGroup/id**

diagram	
type	**string16**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 16
annotation	documentation String identifier for the grouping of nodes.

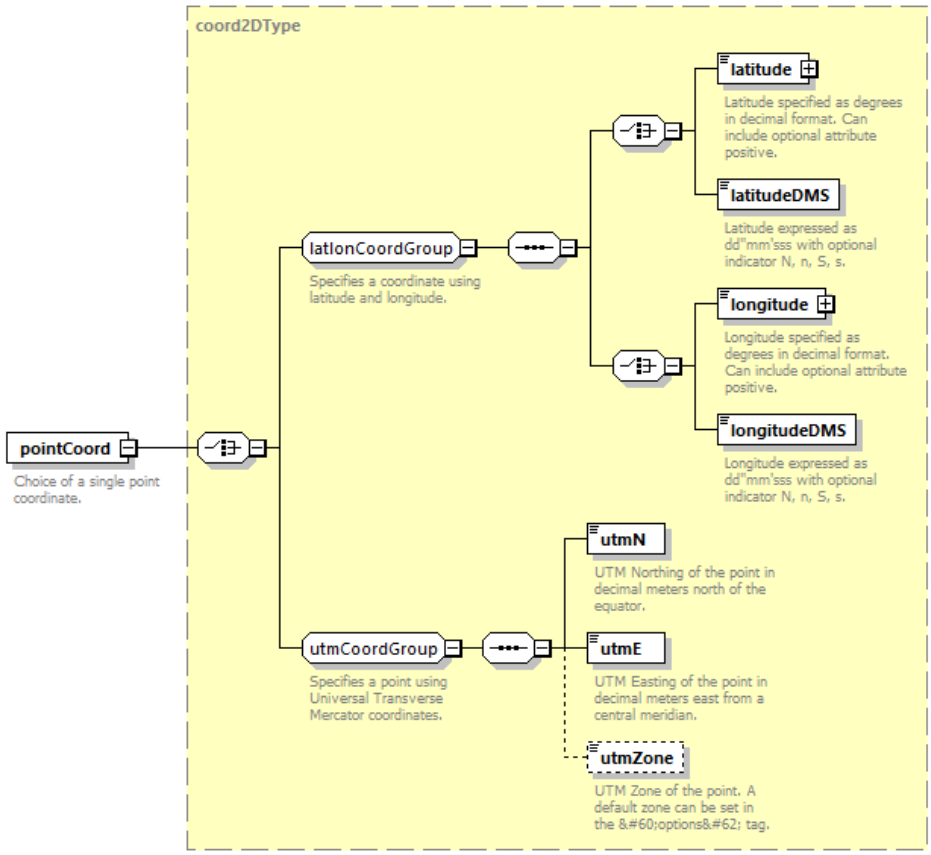
element **nodeIdGroup/description**

diagram	
type	**string16**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 16
annotation	documentation An optional description for the grouping of nodes.

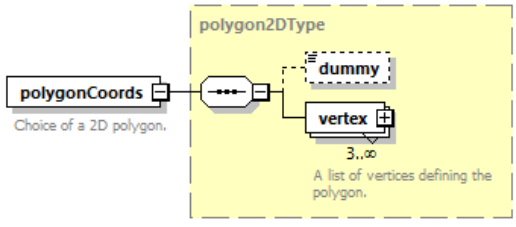
group **oneOrThreeCoords2DGroupSet**

diagram	
children	**pointCoord** **polygonCoords**
used by	elements **areaStationarySource** **building** **gate** **parkingFacility**
annotation	documentation Type of coordinate specifying the area.

element **oneOrThreeCoords2DGroupSet/pointCoord**

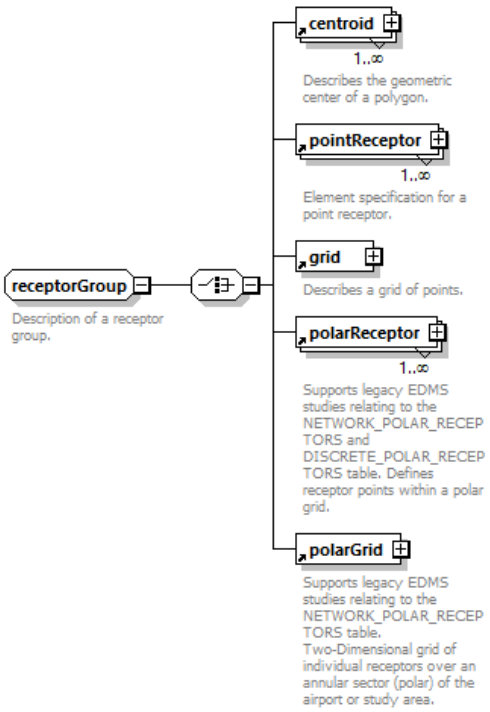
diagram	
type	**coord2DType**
properties	content complex
children	**latitude** **latitudeDMS** **longitude** **longitudeDMS** **utmN** **utmE** **utmZone**
annotation	documentation Choice of a single point coordinate.

element **oneOrThreeCoords2DGroupSet/polygonCoords**

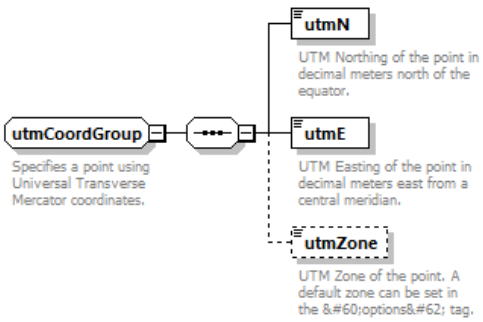
diagram	
type	**polygon2DType**
properties	content complex

children	**dummy vertex**
annotation	documentation Choice of a 2D polygon.

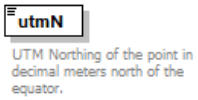
group **receptorGroup**

diagram	
children	**centroid pointReceptor grid polarReceptor polarGrid**
used by	element **receptorSet**
annotation	documentation Description of a receptor group.

group **utmCoordGroup**

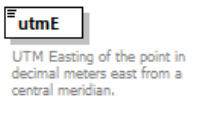
diagram	
children	**utmN utmE utmZone**
used by	complexType **coord2DType** group **coord2DGroup**
annotation	documentation Specifies a point using Universal Transverse Mercator coordinates.

element **utmCoordGroup/utmN**

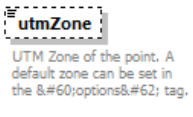
diagram	
type	**xs:double**
properties	content simple
annotation	documentation

	UTM Northing of the point in decimal meters north of the equator.

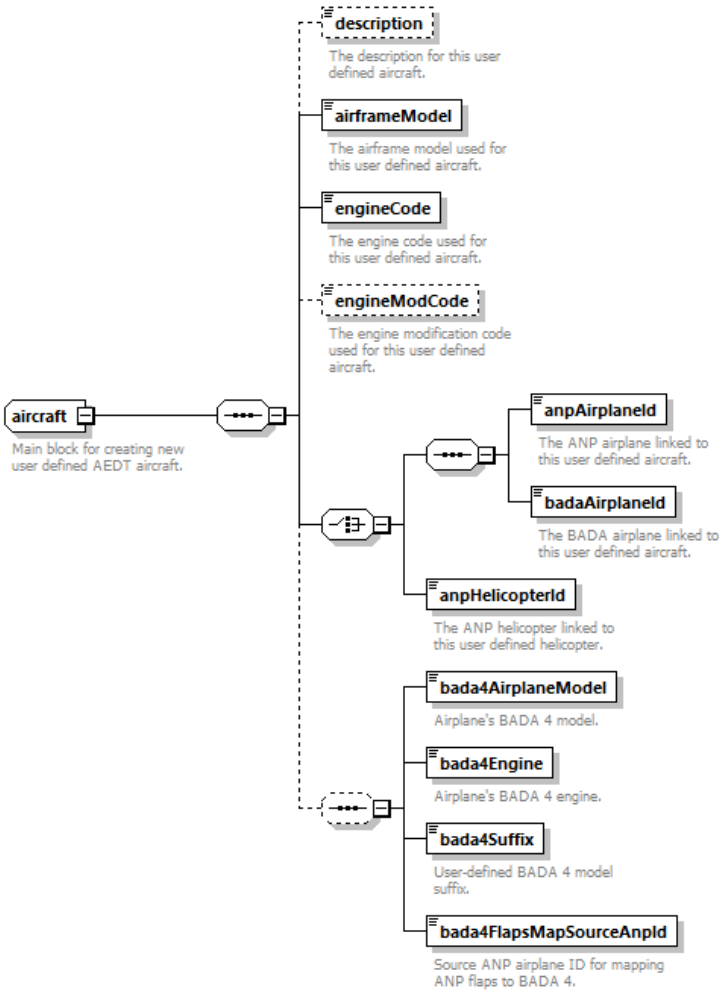
element **utmCoordGroup/utmE**

diagram	
type	**xs:double**
properties	content simple
annotation	documentation UTM Easting of the point in decimal meters east from a central meridian.

element **utmCoordGroup/utmZone**

diagram	
type	**xs:int**
properties	minOcc 0 maxOcc 1 content simple default -1
annotation	documentation UTM Zone of the point. A default zone can be set in the <options> tag.

complexType **aircraft**

diagram	
children	**description airframeModel engineCode engineModCode anpAirplaneId badaAirplaneId anpHelicopterId bada4AirplaneModel bada4Engine bada4Suffix bada4FlapsMapSourceAnpId**

used by	element **fleet/aircraft**
annotation	documentation Main block for creating new user defined AEDT aircraft.

element **aircraft/description**

diagram	description The description for this user defined aircraft.
type	**string255**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation The description for this user defined aircraft.

element **aircraft/airframeModel**

diagram	airframeModel The airframe model used for this user defined aircraft.
type	**airframeModel**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation The airframe model used for this user defined aircraft.

element **aircraft/engineCode**

diagram	engineCode The engine code used for this user defined aircraft.
type	**engineCode**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation The engine code used for this user defined aircraft.

element **aircraft/engineModCode**

diagram	engineModCode The engine modification code used for this user defined aircraft.
type	**engineModCode**
properties	minOcc 0 maxOcc 1 content simple default NONE
facets	Kind Value Annotation minLength 0 maxLength 50
annotation	documentation The engine modification code used for this user defined aircraft.

element **aircraft/anpAirplaneId**

diagram	 The ANP airplane linked to this user defined aircraft.
type	**anpAirplaneId**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation The ANP airplane linked to this user defined aircraft.

element **aircraft/badaAirplaneId**

diagram	 The BADA airplane linked to this user defined aircraft.
type	**badaAirplaneId**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation The BADA airplane linked to this user defined aircraft.

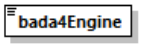
element **aircraft/anpHelicopterId**

diagram	 The ANP helicopter linked to this user defined helicopter.
type	**anpHeloId**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation The ANP helicopter linked to this user defined helicopter.

element **aircraft/bada4AirplaneModel**

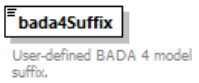
diagram	 Airplane's BADA 4 model.
type	**bada4AirplaneModel**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Airplane's BADA 4 model.

element **aircraft/bada4Engine**

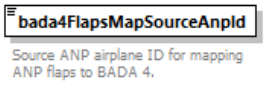
diagram	 Airplane's BADA 4 engine.
type	**bada4Engine**
properties	content simple
facets	Kind Value Annotation

	minLength 0 maxLength 255
annotation	documentation Airplane's BADA 4 engine.

element **aircraft/bada4Suffix**

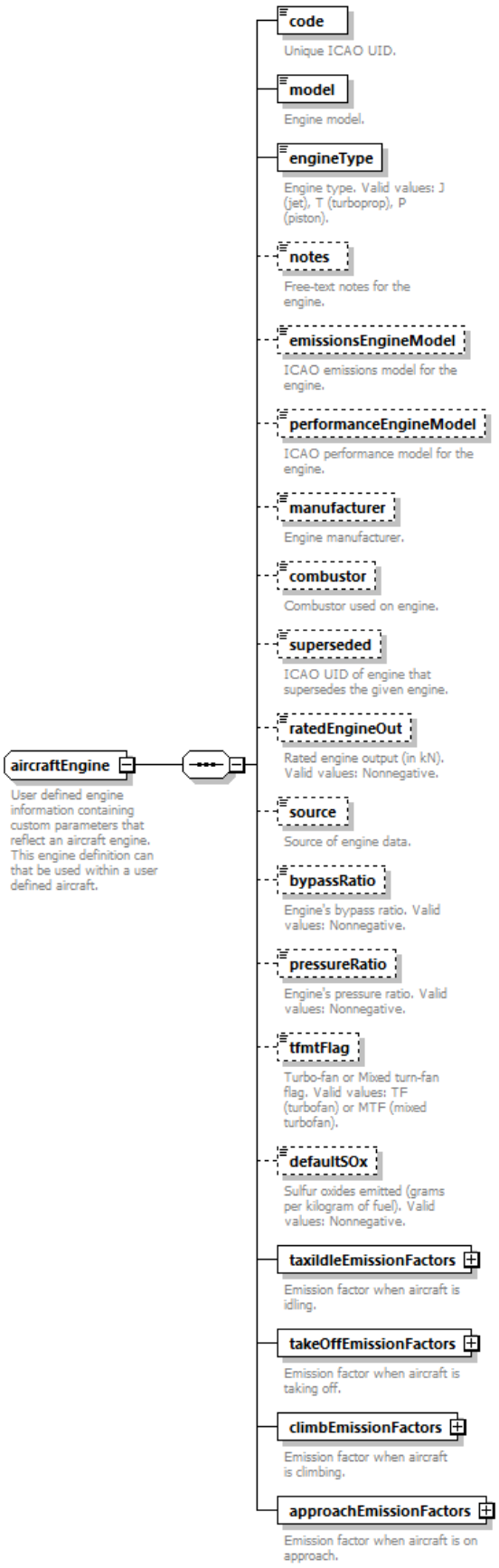
diagram	
type	**bada4Suffix**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation User-defined BADA 4 model suffix.

element **aircraft/bada4FlapsMapSourceAnpId**

diagram	
type	**anpAirplaneId**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Source ANP airplane ID for mapping ANP flaps to BADA 4.

complexType **aircraftEngine**

diagram	



children	**code** **model** **engineType** **notes** **emissionsEngineModel** **performanceEngineModel** **manufacturer** **combustor** **superseded** **ratedEngineOut** **source** **bypassRatio** **pressureRatio** **tfmtFlag** **defaultSOx** **taxiIdleEmissionFactors** **takeOffEmissionFactors** **climbEmissionFactors** **approachEmissionFactors**
used by	element **fleet/engine**
annotation	documentation User defined engine information containing custom parameters that reflect an aircraft engine. This engine definition can that be used within a user defined aircraft.

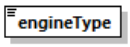
element **aircraftEngine/code**

diagram	 Unique ICAO UID.
type	**engineCode**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Unique ICAO UID.

element **aircraftEngine/model**

diagram	 Engine model.
type	**engineModel**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Engine model.

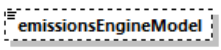
element **aircraftEngine/engineType**

diagram	 Engine type. Valid values: J (jet), T (turboprop), P (piston).
type	**engineType**
properties	content simple
facets	Kind Value Annotation pattern Jet|J|Turbo|Turboprop|T|Prop|Piston|P
annotation	documentation Engine type. Valid values: J (jet), T (turboprop), P (piston).

element **aircraftEngine/notes**

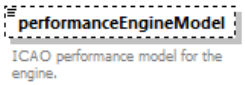
diagram	 Free-text notes for the engine.
type	**string200**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 200
annotation	documentation Free-text notes for the engine.

element **aircraftEngine/emissionsEngineModel**

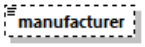
diagram	 ICAO emissions model for the engine.
type	**string25**
properties	minOcc 0

	maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 25
annotation	documentation ICAO emissions model for the engine.

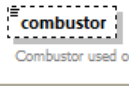
element **aircraftEngine/performanceEngineModel**

diagram	
type	**string25**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 25
annotation	documentation ICAO performance model for the engine.

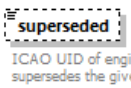
element **aircraftEngine/manufacturer**

diagram	
type	**string100**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 100
annotation	documentation Engine manufacturer.

element **aircraftEngine/combustor**

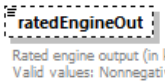
diagram	
type	**string50**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 50
annotation	documentation Combustor used on engine.

element **aircraftEngine/superseded**

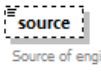
diagram	
type	**string10**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation

	minLength 0 maxLength 10
annotation	documentation ICAO UID of engine that supersedes the given engine.

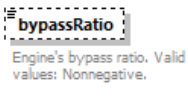
element **aircraftEngine/ratedEngineOut**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Rated engine output (in kN). Valid values: Nonnegative.

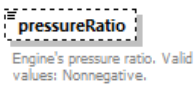
element **aircraftEngine/source**

diagram	
type	**string100**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 100
annotation	documentation Source of engine data.

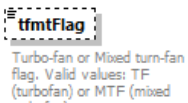
element **aircraftEngine/bypassRatio**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Engine's bypass ratio. Valid values: Nonnegative.

element **aircraftEngine/pressureRatio**

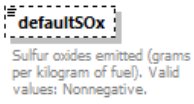
diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Engine's pressure ratio. Valid values: Nonnegative.

element **aircraftEngine/tfmtFlag**

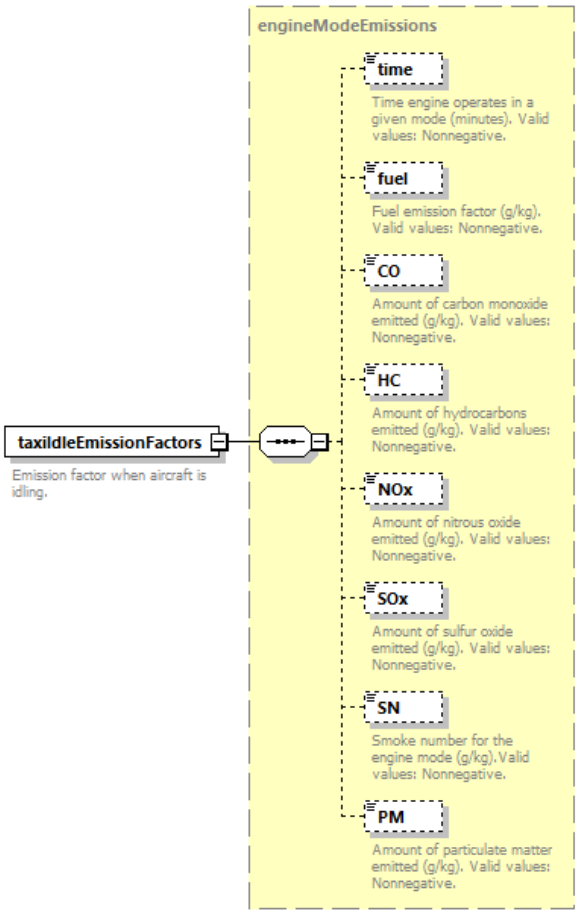
diagram	

type	**string50**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 50
annotation	documentation Turbo-fan or Mixed turn-fan flag. Valid values: TF (turbofan) or MTF (mixed turbofan).

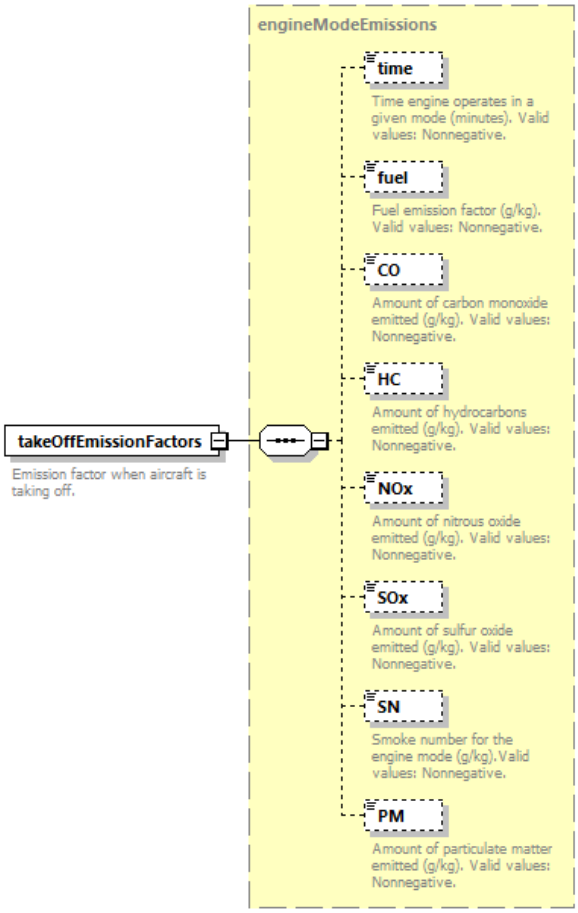
element **aircraftEngine/defaultSOx**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Sulfur oxides emitted (grams per kilogram of fuel). Valid values: Nonnegative.

element **aircraftEngine/taxiIdleEmissionFactors**

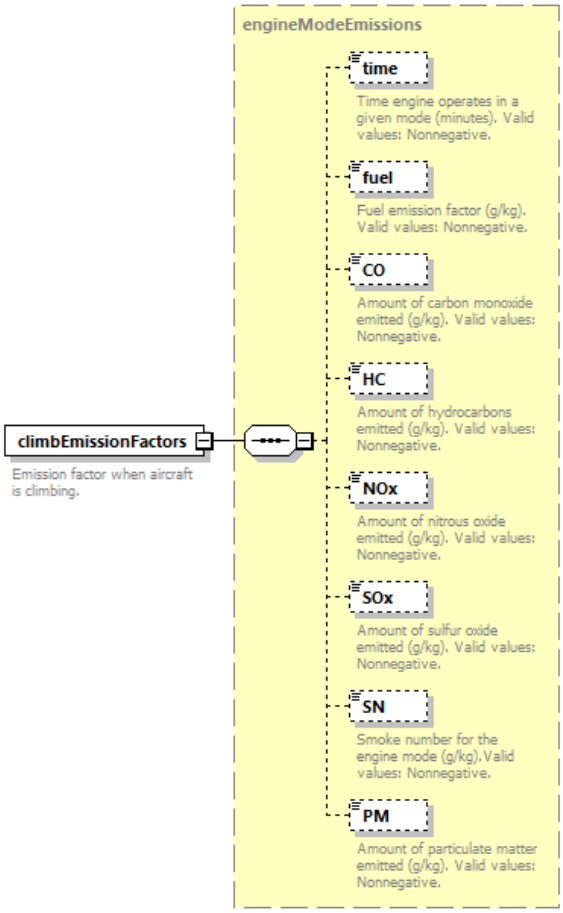
diagram	
type	**engineModeEmissions**
properties	content complex
children	**time fuel CO HC NOx SOx SN PM**
annotation	documentation Emission factor when aircraft is idling.

element **aircraftEngine/takeOffEmissionFactors**

diagram	
type	**engineModeEmissions**
properties	content complex
children	**time fuel CO HC NOx SOx SN PM**
annotation	documentation Emission factor when aircraft is taking off.

element **aircraftEngine/climbEmissionFactors**

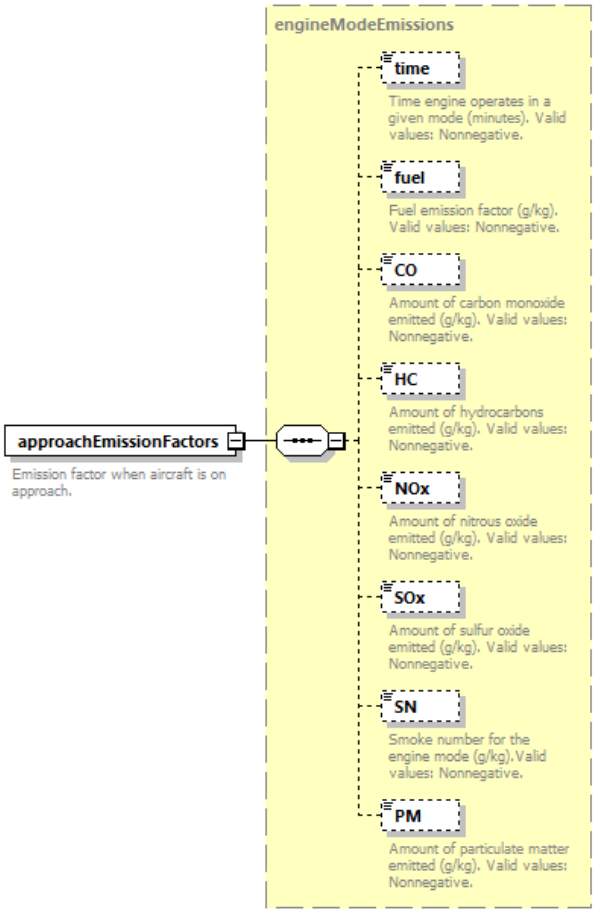
diagram	



type	**engineModeEmissions**
properties	content complex
children	**time fuel CO HC NOx SOx SN PM**
annotation	documentation Emission factor when aircraft is climbing.

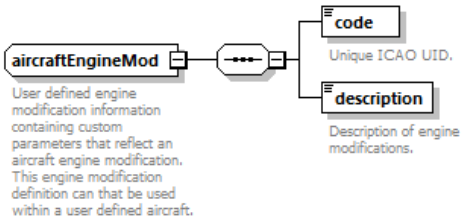
element **aircraftEngine/approachEmissionFactors**

diagram	



type	**engineModeEmissions**
properties	content complex
children	**time fuel CO HC NOx SOx SN PM**
annotation	documentation Emission factor when aircraft is on approach.

complexType **aircraftEngineMod**

diagram	
children	**code description**
used by	element **fleet/engineMod**
annotation	documentation User defined engine modification information containing custom parameters that reflect an aircraft engine modification. This engine modification definition can that be used within a user defined aircraft.

element **aircraftEngineMod/code**

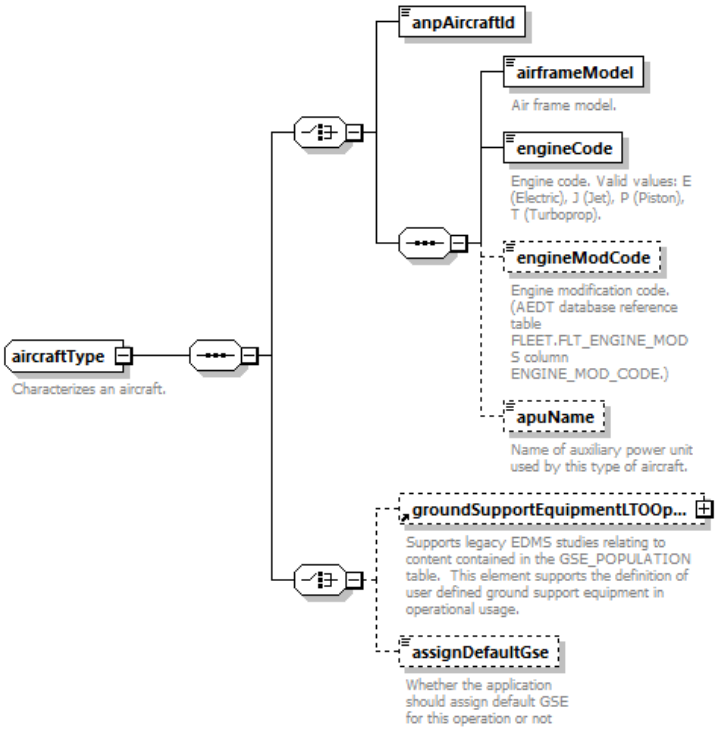
diagram	
type	**engineModCode**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 50

annotation	documentation Unique ICAO UID.

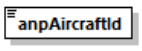
element **aircraftEngineMod/description**

diagram	
type	**string255**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Description of engine modifications.

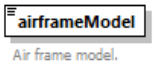
complexType **aircraftType**

diagram	
children	**anpAircraftId airframeModel engineCode engineModCode apuName groundSupportEquipmentLTOOperationSet assignDefaultGse**
used by	elements **operation/aircraftType runup/aircraftType**
annotation	documentation Characterizes an aircraft.

element **aircraftType/anpAircraftId**

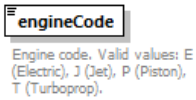
diagram	
type	**anpAirplaneId**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255

element **aircraftType/airframeModel**

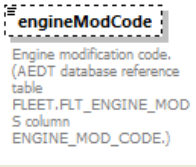
diagram	

type	**string50**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 50
annotation	documentation Air frame model.

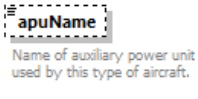
element **aircraftType/engineCode**

diagram	
type	**string25**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 25
annotation	documentation Engine code. Valid values: E (Electric), J (Jet), P (Piston), T (Turboprop).

element **aircraftType/engineModCode**

diagram	
type	**engineModCode**
properties	minOcc 0 maxOcc 1 content simple default NONE
facets	Kind Value Annotation minLength 0 maxLength 50
annotation	documentation Engine modification code. (AEDT database reference table FLEET.FLT_ENGINE_MODS column ENGINE_MOD_CODE.)

element **aircraftType/apuName**

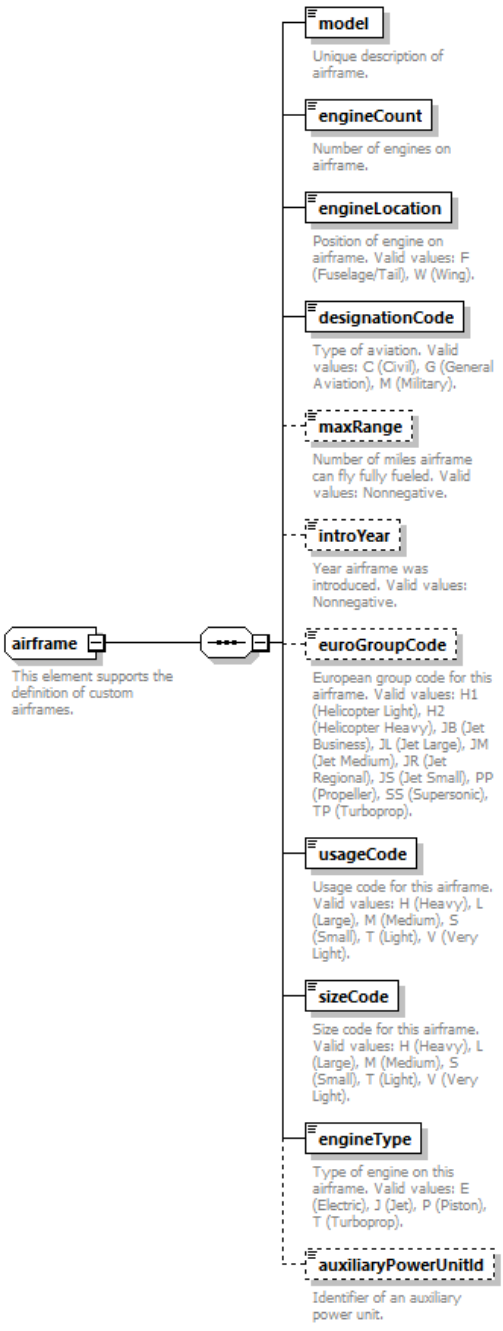
diagram	
type	**xs:string**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Name of auxiliary power unit used by this type of aircraft.

element **aircraftType/assignDefaultGse**

diagram	
type	**xs:boolean**
properties	minOcc 0 maxOcc 1 content simple

	default false
annotation	documentation Whether the application should assign default GSE for this operation or not

complexType **airframe**

diagram	
children	**model engineCount engineLocation designationCode maxRange introYear euroGroupCode usageCode sizeCode engineType auxiliaryPowerUnitId**
used by	element **fleet/airframe**
annotation	documentation This element supports the definition of custom airframes.

element **airframe/model**

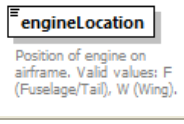
diagram	
type	**airframeModel**
properties	content simple

facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Unique description of airframe.

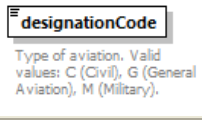
element **airframe/engineCount**

diagram	
type	**xs:int**
properties	content simple
annotation	documentation Number of engines on airframe.

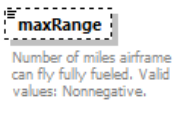
element **airframe/engineLocation**

diagram	
type	**string1**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 1
annotation	documentation Position of engine on airframe. Valid values: F (Fuselage/Tail), W (Wing).

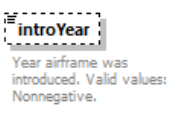
element **airframe/designationCode**

diagram	
type	**string1**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 1
annotation	documentation Type of aviation. Valid values: C (Civil), G (General Aviation), M (Military).

element **airframe/maxRange**

diagram	
type	**xs:int**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Number of miles airframe can fly fully fueled. Valid values: Nonnegative.

element **airframe/introYear**

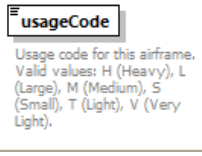
diagram	

type	**xs:int**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Year airframe was introduced. Valid values: Nonnegative.

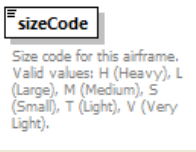
element **airframe/euroGroupCode**

diagram	
type	**string2**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 2
annotation	documentation European group code for this airframe. Valid values: H1 (Helicopter Light), H2 (Helicopter Heavy), JB (Jet Business), JL (Jet Large), JM (Jet Medium), JR (Jet Regional), JS (Jet Small), PP (Propeller), SS (Supersonic), TP (Turboprop).

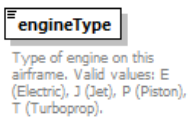
element **airframe/usageCode**

diagram	
type	**string1**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 1
annotation	documentation Usage code for this airframe. Valid values: H (Heavy), L (Large), M (Medium), S (Small), T (Light), V (Very Light).

element **airframe/sizeCode**

diagram	
type	**string1**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 1
annotation	documentation Size code for this airframe. Valid values: H (Heavy), L (Large), M (Medium), S (Small), T (Light), V (Very Light).

element **airframe/engineType**

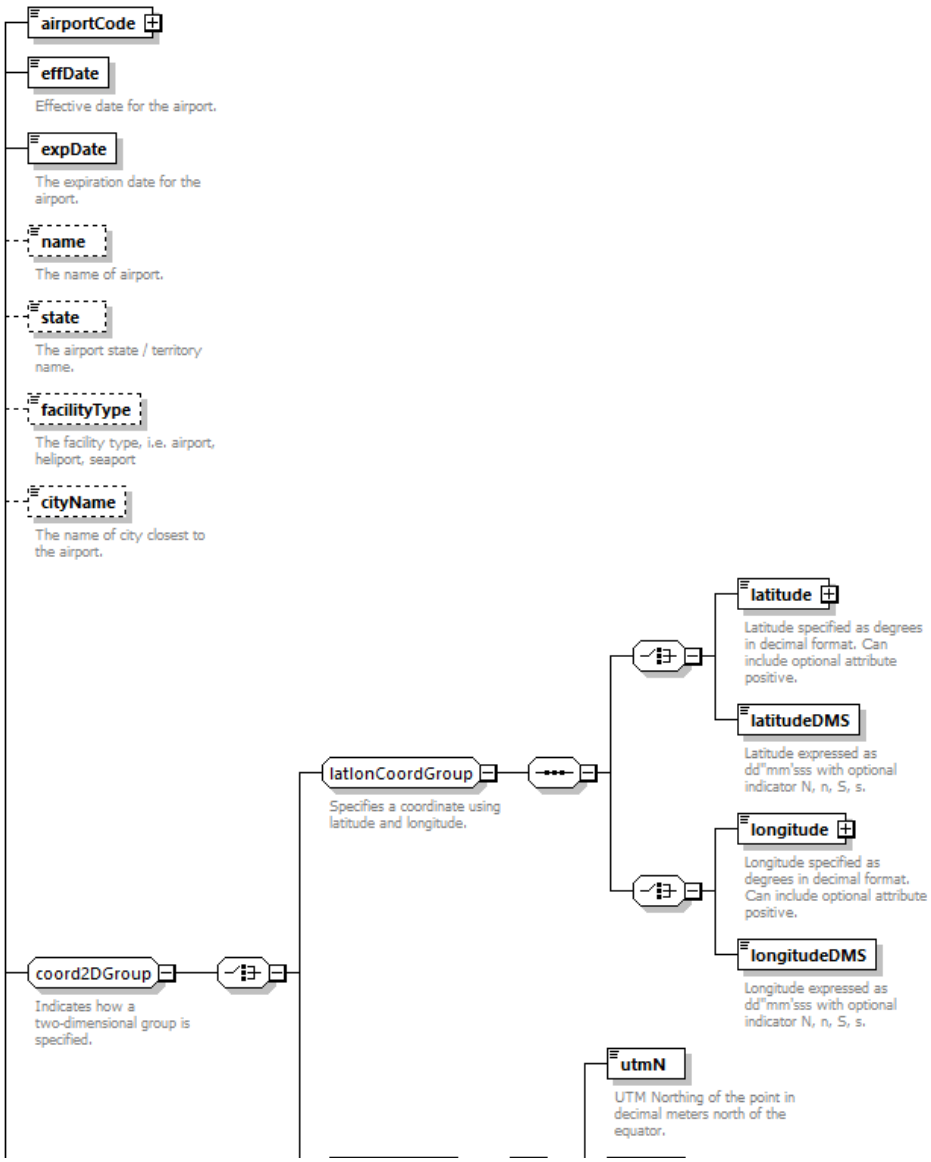
diagram	

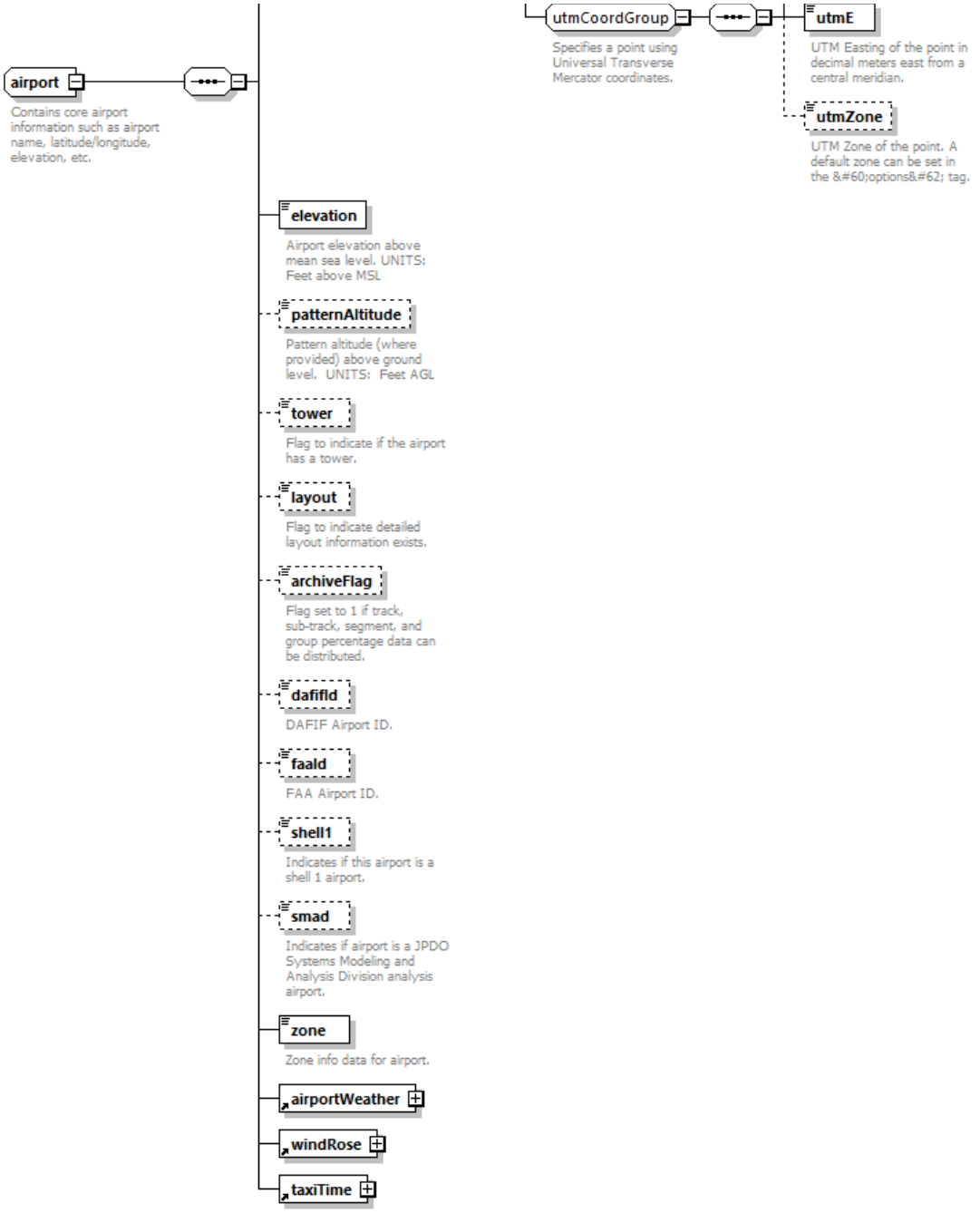
type	**string1**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 1
annotation	documentation Type of engine on this airframe. Valid values: E (Electric), J (Jet), P (Piston), T (Turboprop).

element **airframe/auxiliaryPowerUnitId**

diagram	**auxiliaryPowerUnitId** Identifier of an auxiliary power unit.
type	**apuName**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 30
annotation	documentation Identifier of an auxiliary power unit.

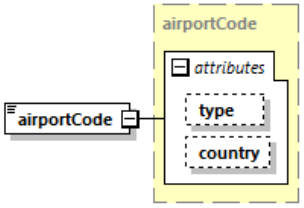
complexType **airport**

diagram	



children	**airportCode effDate expDate name state facilityType cityName latitude latitudeDMS longitude longitudeDMS utmN utmE utmZone elevation patternAltitude tower layout archiveFlag dafifId faaId shell1 smad zone airportWeather windRose taxiTime**
used by	element **userDefinedAirportSet/userDefinedAirport**
annotation	documentation Contains core airport information such as airport name, latitude/longitude, elevation, etc.

element **airport/airportCode**

diagram	
type	**airportCode**
properties	content complex

facets	Kind	Value	Annotation			
	minLength	0				
	maxLength	4				
attributes	Name	Type	Use	Default	Fixed	Annotation
	type	**airportCodeType**	optional	ANY		
	country	**string3**	optional	ANY		

element **airport/effDate**

diagram	
type	**xs:date**
properties	content simple
annotation	documentation Effective date for the airport.

element **airport/expDate**

diagram	
type	**xs:date**
properties	content simple
annotation	documentation The expiration date for the airport.

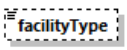
element **airport/name**

diagram	
type	**string100**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 100
annotation	documentation The name of airport.

element **airport/state**

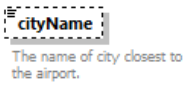
diagram	
type	**string50**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 50
annotation	documentation The airport state / territory name.

element **airport/facilityType**

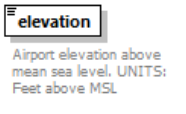
diagram	
type	**string25**

properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 25
annotation	documentation The facility type, i.e. airport, heliport, seaport

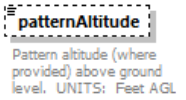
element **airport/cityName**

diagram	
type	**string50**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 50
annotation	documentation The name of city closest to the airport.

element **airport/elevation**

diagram	
type	**xs:double**
properties	content simple
annotation	documentation Airport elevation above mean sea level. UNITS: Feet above MSL

element **airport/patternAltitude**

diagram	
type	**xs:int**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Pattern altitude (where provided) above ground level. UNITS: Feet AGL

element **airport/tower**

diagram	
type	**xs:boolean**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Flag to indicate if the airport has a tower.

element **airport/layout**

diagram	

	layout Flag to indicate detailed layout information exists.
type	**xs:boolean**
properties	minOcc 0 maxOcc 1 content simple default false
annotation	documentation Flag to indicate detailed layout information exists.

element **airport/archiveFlag**

diagram	archiveFlag Flag set to 1 if track, sub-track, segment, and group percentage data can be distributed.
type	**xs:boolean**
properties	minOcc 0 maxOcc 1 content simple default false
annotation	documentation Flag set to 1 if track, sub-track, segment, and group percentage data can be distributed.

element **airport/dafifId**

diagram	dafifId DAFIF Airport ID.
type	**string7**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 7
annotation	documentation DAFIF Airport ID.

element **airport/faaId**

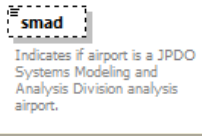
diagram	faaId FAA Airport ID.
type	**string15**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 15
annotation	documentation FAA Airport ID.

element **airport/shell1**

diagram	shell1 Indicates if this airport is a shell 1 airport.
type	**xs:boolean**
properties	minOcc 0

	maxOcc 1 content simple default false
annotation	documentation Indicates if this airport is a shell 1 airport.

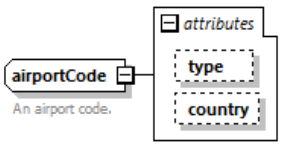
element **airport/smad**

diagram	
type	**xs:boolean**
properties	minOcc 0 maxOcc 1 content simple default false
annotation	documentation Indicates if airport is a JPDO Systems Modeling and Analysis Division analysis airport.

element **airport/zone**

diagram	
type	**string100**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 100
annotation	documentation Zone info data for airport.

complexType **airportCode**

diagram	
type	extension of **string4**
properties	base string4
used by	elements **track/airport** **runup/airport** **airport/airportCode** **airportLayoutType/airportCode** **operation/arrivalAirport** **operation/departureAirport**
facets	Kind Value Annotation minLength 0 maxLength 4
attributes	Name Type Use Default Fixed Annotation type **airportCodeType** optional ANY country **string3** optional ANY
annotation	documentation An airport code.

attribute **airportCode/@type**

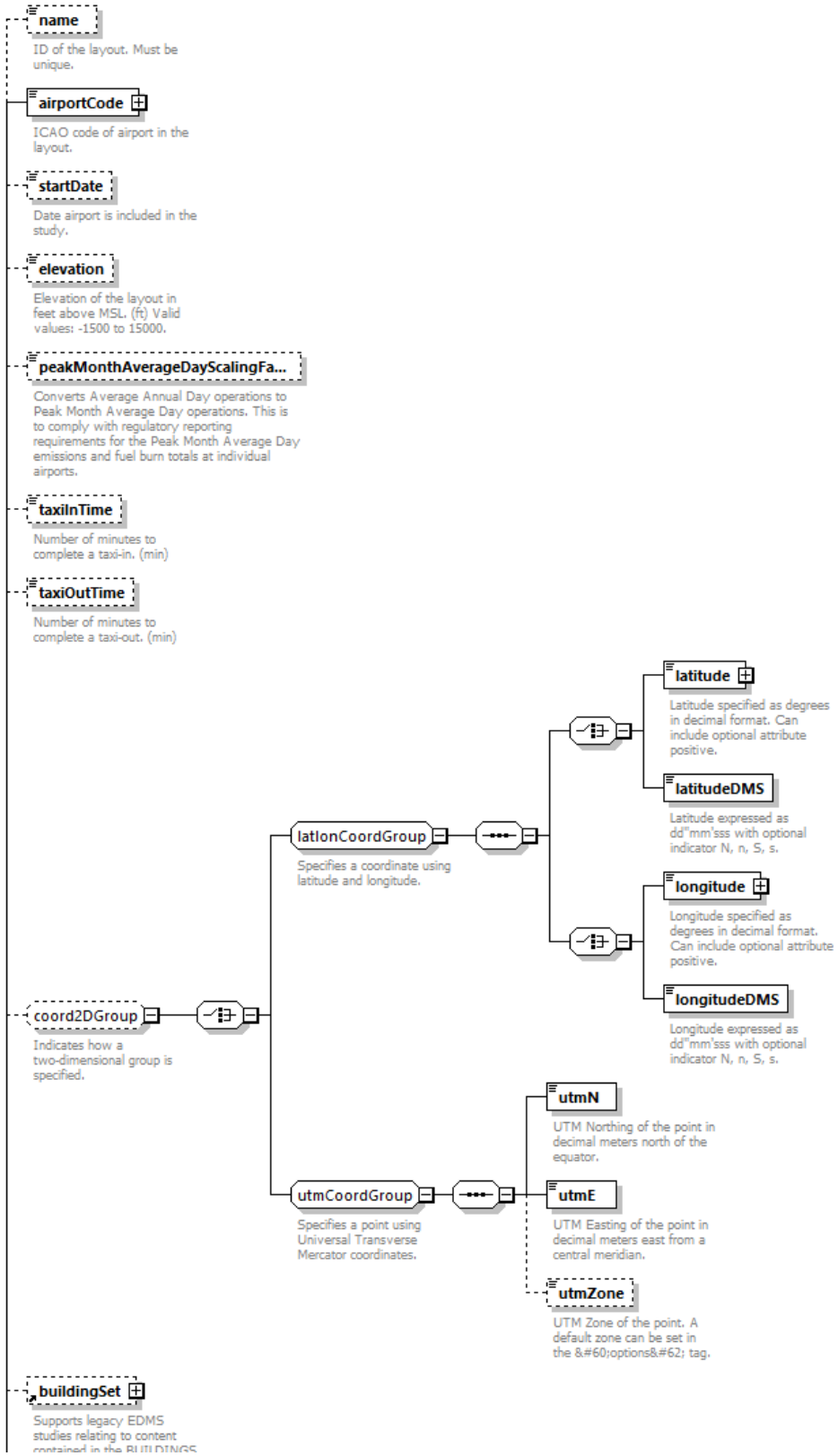
type	**airportCodeType**
properties	use optional default ANY
facets	Kind Value Annotation enumeration ICAO enumeration IATA enumeration FAA enumeration OTHER enumeration ANY

attribute **airportCode/@country**

type	**string3**
properties	use optional default ANY
facets	Kind Value Annotation minLength 0 maxLength 3

complexType **airportLayoutType**

diagram



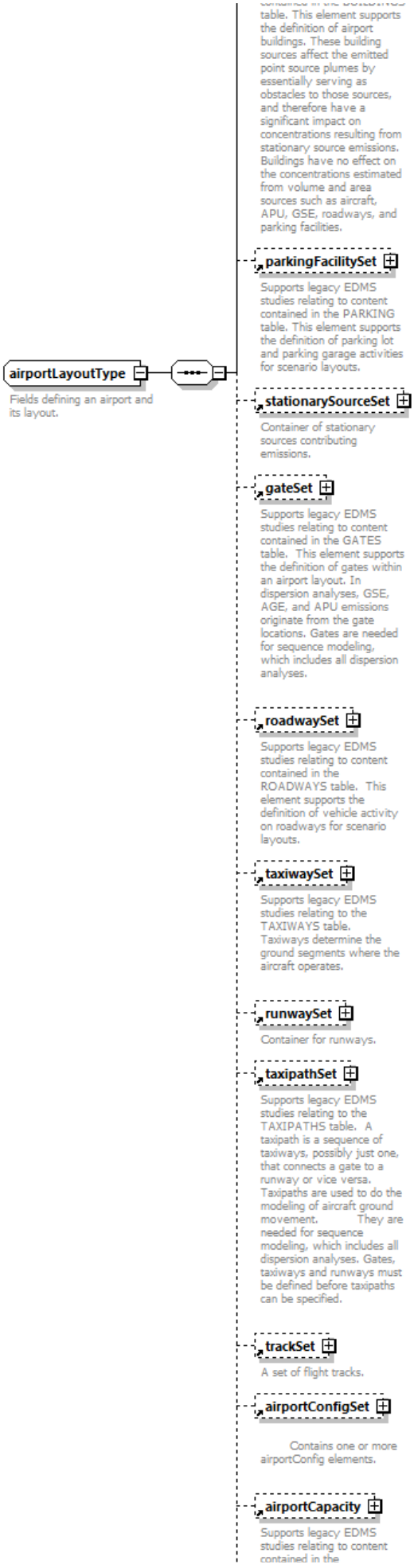
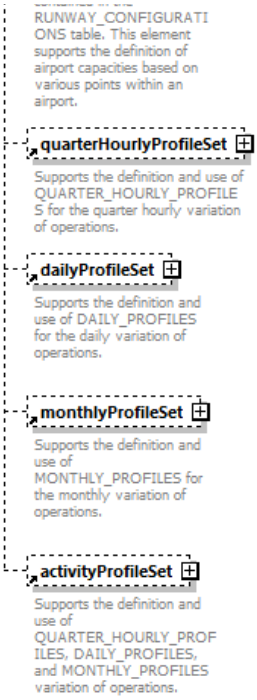


table. This element supports the definition of airport buildings. These building sources affect the emitted point source plumes by essentially serving as obstacles to those sources, and therefore have a significant impact on concentrations resulting from stationary source emissions. Buildings have no effect on the concentrations estimated from volume and area sources such as aircraft, APU, GSE, roadways, and parking facilities.
parkingFacilitySet
Supports legacy EDMS studies relating to content contained in the PARKING table. This element supports the definition of parking lot and parking garage activities for scenario layouts.
airportLayoutType
Fields defining an airport and its layout.
stationarySourceSet
Container of stationary sources contributing emissions.
gateSet
Supports legacy EDMS studies relating to content contained in the GATES table. This element supports the definition of gates within an airport layout. In dispersion analyses, GSE, AGE, and APU emissions originate from the gate locations. Gates are needed for sequence modeling, which includes all dispersion analyses.
roadwaySet
Supports legacy EDMS studies relating to content contained in the ROADWAYS table. This element supports the definition of vehicle activity on roadways for scenario layouts.
taxiwaySet
Supports legacy EDMS studies relating to the TAXIWAYS table. Taxiways determine the ground segments where the aircraft operates.
runwaySet
Container for runways.
taxipathSet
Supports legacy EDMS studies relating to the TAXIPATHS table. A taxipath is a sequence of taxiways, possibly just one, that connects a gate to a runway or vice versa. Taxipaths are used to do the modeling of aircraft ground movement. They are needed for sequence modeling, which includes all dispersion analyses. Gates, taxiways and runways must be defined before taxipaths can be specified.
trackSet
A set of flight tracks.
airportConfigSet
Contains one or more airportConfig elements.
airportCapacity
Supports legacy EDMS studies relating to content contained in the

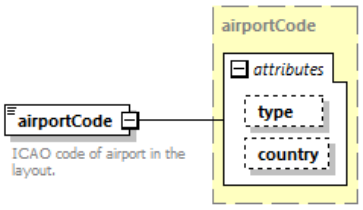


children	**name** **airportCode** **startDate** **elevation** **peakMonthAverageDayScalingFactor** **taxiInTime** **taxiOutTime** **latitude** **latitudeDMS** **longitude** **longitudeDMS** **utmN** **utmE** **utmZone** **buildingSet** **parkingFacilitySet** **stationarySourceSet** **gateSet** **roadwaySet** **taxiwaySet** **runwaySet** **taxipathSet** **trackSet** **airportConfigSet** **airportCapacity** **quarterHourlyProfileSet** **dailyProfileSet** **monthlyProfileSet** **activityProfileSet**
used by	element **airportLayoutSet/airportLayout**
annotation	documentation Fields defining an airport and its layout.

element **airportLayoutType/name**

diagram	
type	**string255**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation ID of the layout. Must be unique.

element **airportLayoutType/airportCode**

diagram	
type	**airportCode**
properties	content complex
facets	Kind Value Annotation minLength 0 maxLength 4
attributes	Name Type Use Default Fixed Annotation type **airportCodeType** optional ANY

	country	**string3**	optional	ANY
annotation	documentation ICAO code of airport in the layout.			

element **airportLayoutType/startDate**

diagram	**startDate** Date airport is included in the study.
type	**xs:date**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Date airport is included in the study.

element **airportLayoutType/elevation**

diagram	**elevation** Elevation of the layout in feet above MSL. (ft) Valid values: -1500 to 15000.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Elevation of the layout in feet above MSL. (ft) Valid values: -1500 to 15000.

element **airportLayoutType/peakMonthAverageDayScalingFactor**

diagram	**peakMonthAverageDayScalingFa...** Converts Average Annual Day operations to Peak Month Average Day operations. This is to comply with regulatory reporting requirements for the Peak Month Average Day emissions and fuel burn totals at individual airports.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple default 1.0
annotation	documentation Converts Average Annual Day operations to Peak Month Average Day operations. This is to comply with regulatory reporting requirements for the Peak Month Average Day emissions and fuel burn totals at individual airports.

element **airportLayoutType/taxiInTime**

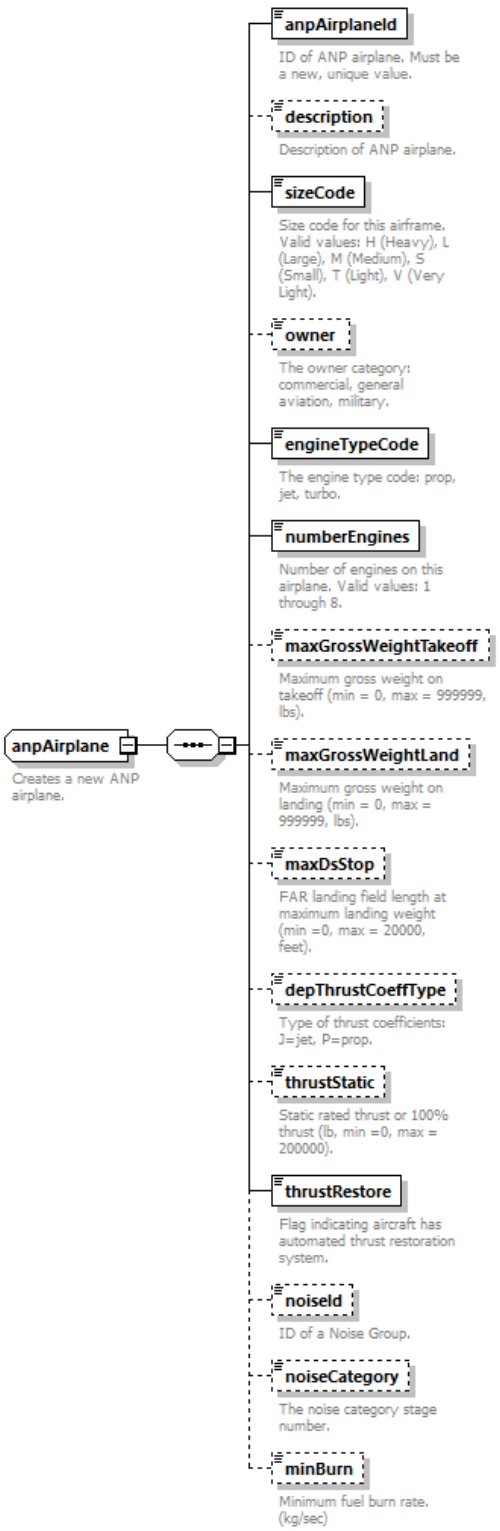
diagram	**taxiInTime** Number of minutes to complete a taxi-in. (min)
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Number of minutes to complete a taxi-in. (min)

element **airportLayoutType/taxiOutTime**

diagram	**taxiOutTime** Number of minutes to complete a taxi-out. (min)
type	**xs:double**

properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Number of minutes to complete a taxi-out. (min)

complexType **anpAirplane**

diagram	
children	**anpAirplaneId** **description** **sizeCode** **owner** **engineTypeCode** **numberEngines** **maxGrossWeightTakeoff** **maxGrossWeightLand** **maxDsStop** **depThrustCoeffType** **thrustStatic** **thrustRestore** **noiseId** **noiseCategory** **minBurn**
used by	element **fleet/anpAirplane**
annotation	documentation

	Creates a new ANP airplane.

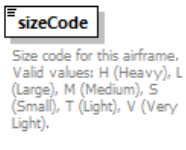
element **anpAirplane/anpAirplaneId**

diagram	
type	**anpAirplaneId**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation ID of ANP airplane. Must be a new, unique value.

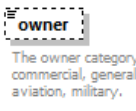
element **anpAirplane/description**

diagram	
type	**string255**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Description of ANP airplane.

element **anpAirplane/sizeCode**

diagram	
type	**anpSizeCode**
properties	content simple
facets	Kind Value Annotation pattern Heavy|H|Large|L|Small|S
annotation	documentation Size code for this airframe. Valid values: H (Heavy), L (Large), M (Medium), S (Small), T (Light), V (Very Light).

element **anpAirplane/owner**

diagram	
type	**anpOwnerType**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation pattern Commercial|C|Military|M|General|G
annotation	documentation The owner category: commercial, general aviation, military.

element **anpAirplane/engineTypeCode**

diagram	

	engineTypeCode The engine type code: prop, jet, turbo.
type	**engineType**
properties	content simple
facets	Kind Value Annotation pattern Jet|J|Turbo|Turboprop|T|Prop|Piston|P
annotation	documentation The engine type code: prop, jet, turbo.

element **anpAirplane/numberEngines**

diagram	**numberEngines** Number of engines on this airplane. Valid values: 1 through 8.
type	**xs:int**
properties	content simple
annotation	documentation Number of engines on this airplane. Valid values: 1 through 8.

element **anpAirplane/maxGrossWeightTakeoff**

diagram	**maxGrossWeightTakeoff** Maximum gross weight on takeoff (min = 0, max = 999999, lbs).
type	**xs:int**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Maximum gross weight on takeoff (min = 0, max = 999999, lbs).

element **anpAirplane/maxGrossWeightLand**

diagram	**maxGrossWeightLand** Maximum gross weight on landing (min = 0, max = 999999, lbs).
type	**xs:int**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Maximum gross weight on landing (min = 0, max = 999999, lbs).

element **anpAirplane/maxDsStop**

diagram	**maxDsStop** FAR landing field length at maximum landing weight (min =0, max = 20000, feet).
type	**xs:int**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation FAR landing field length at maximum landing weight (min =0, max = 20000, feet).

element **anpAirplane/depThrustCoeffType**

diagram	**depThrustCoeffType** Type of thrust coefficients: J=jet, P=prop.
type	**anpCoeffType**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation pattern Jet|J|Prop|P
annotation	documentation Type of thrust coefficients: J=jet, P=prop.

element **anpAirplane/thrustStatic**

diagram	**thrustStatic** Static rated thrust or 100% thrust (lb, min =0, max = 200000).
type	**xs:int**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Static rated thrust or 100% thrust (lb, min =0, max = 200000).

element **anpAirplane/thrustRestore**

diagram	**thrustRestore** Flag indicating aircraft has automated thrust restoration system.
type	**yesNoType**
properties	content simple default N
facets	Kind Value Annotation pattern Yes|Y|No|N
annotation	documentation Flag indicating aircraft has automated thrust restoration system.

element **anpAirplane/noiseId**

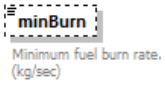
diagram	**noiseId** ID of a Noise Group.
type	**anpNoiseId**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation ID of a Noise Group.

element **anpAirplane/noiseCategory**

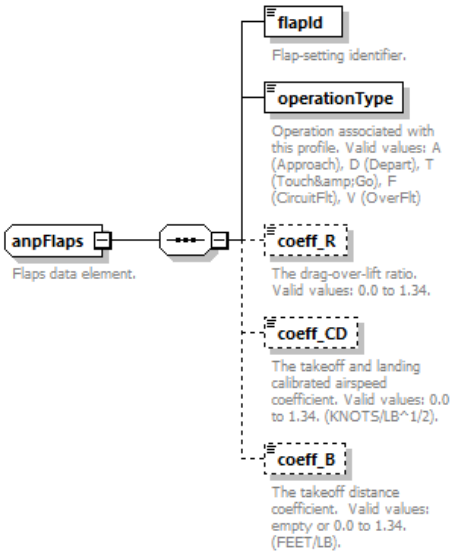
diagram	**noiseCategory** The noise category stage number.
type	**xs:int**
properties	minOcc 0 maxOcc 1

	content simple
annotation	documentation The noise category stage number.

element **anpAirplane/minBurn**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Minimum fuel burn rate. (kg/sec)

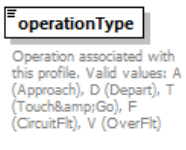
complexType **anpFlaps**

diagram	
children	**flapId operationType coeff_R coeff_CD coeff_B**
used by	element **anpFlapsSet/flaps**
annotation	documentation Flaps data element.

element **anpFlaps/flapId**

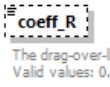
diagram	
type	**anpFlapId**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 6
annotation	documentation Flap-setting identifier.

element **anpFlaps/operationType**

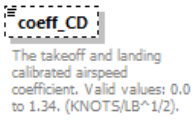
diagram	
type	**string1**

properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 1
annotation	documentation Operation associated with this profile. Valid values: A (Approach), D (Depart), T (Touch&Go), F (CircuitFlt), V (OverFlt)

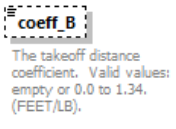
element **anpFlaps/coeff_R**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation The drag-over-lift ratio. Valid values: 0.0 to 1.34.

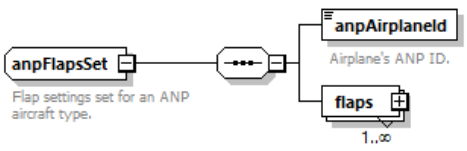
element **anpFlaps/coeff_CD**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation The takeoff and landing calibrated airspeed coefficient. Valid values: 0.0 to 1.34. (KNOTS/LB^1/2).

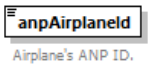
element **anpFlaps/coeff_B**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation The takeoff distance coefficient. Valid values: empty or 0.0 to 1.34. (FEET/LB).

complexType **anpFlapsSet**

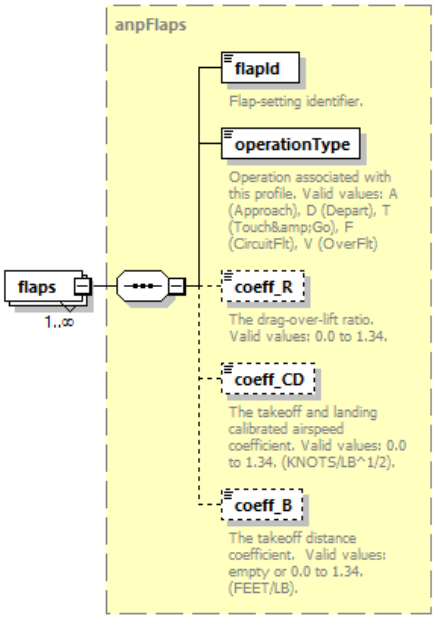
diagram	
children	**anpAirplaneId** **flaps**
used by	element **fleet/anpFlapsSet**
annotation	documentation Flap settings set for an ANP aircraft type.

element **anpFlapsSet/anpAirplaneId**

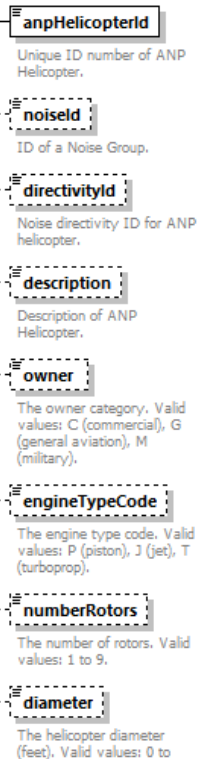
diagram	

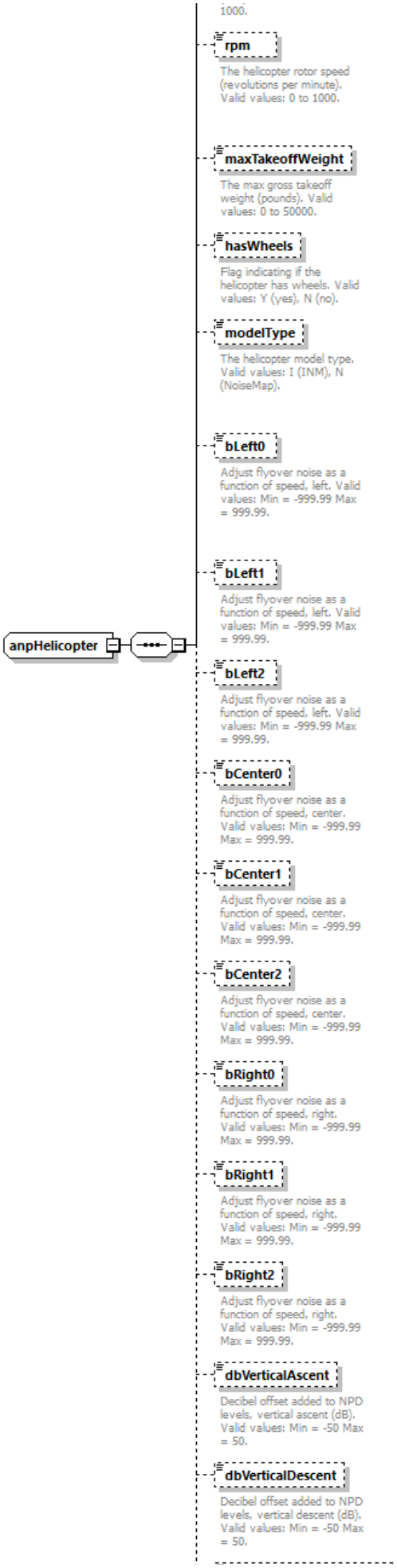
type	**anpAirplaneId**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Airplane's ANP ID.

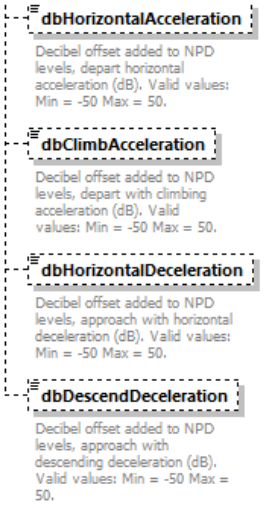
element **anpFlapsSet/flaps**

diagram	
type	**anpFlaps**
properties	minOcc 1 maxOcc unbounded content complex
children	**flapId operationType coeff_R coeff_CD coeff_B**

complexType **anpHelicopter**

diagram	


1000.
rpm
The helicopter rotor speed (revolutions per minute). Valid values: 0 to 1000.
maxTakeoffWeight
The max gross takeoff weight (pounds). Valid values: 0 to 50000.
hasWheels
Flag indicating if the helicopter has wheels. Valid values: Y (yes), N (no).
modelType
The helicopter model type. Valid values: I (INM), N (NoiseMap).
bLeft0
Adjust flyover noise as a function of speed, left. Valid values: Min = -999.99 Max = 999.99.
bLeft1
Adjust flyover noise as a function of speed, left. Valid values: Min = -999.99 Max = 999.99.
anpHelicopter
bLeft2
Adjust flyover noise as a function of speed, left. Valid values: Min = -999.99 Max = 999.99.
bCenter0
Adjust flyover noise as a function of speed, center. Valid values: Min = -999.99 Max = 999.99.
bCenter1
Adjust flyover noise as a function of speed, center. Valid values: Min = -999.99 Max = 999.99.
bCenter2
Adjust flyover noise as a function of speed, center. Valid values: Min = -999.99 Max = 999.99.
bRight0
Adjust flyover noise as a function of speed, right. Valid values: Min = -999.99 Max = 999.99.
bRight1
Adjust flyover noise as a function of speed, right. Valid values: Min = -999.99 Max = 999.99.
bRight2
Adjust flyover noise as a function of speed, right. Valid values: Min = -999.99 Max = 999.99.
dbVerticalAscent
Decibel offset added to NPD levels, vertical ascent (dB). Valid values: Min = -50 Max = 50.
dbVerticalDescent
Decibel offset added to NPD levels, vertical descent (dB). Valid values: Min = -50 Max = 50.



children	**anpHelicopterId noiseId directivityId description owner engineTypeCode numberRotors diameter rpm maxTakeoffWeight hasWheels modelType bLeft0 bLeft1 bLeft2 bCenter0 bCenter1 bCenter2 bRight0 bRight1 bRight2 dbVerticalAscent dbVerticalDescent dbHorizontalAcceleration dbClimbAcceleration dbHorizontalDeceleration dbDescendDeceleration**
used by	element **fleet/anpHelicopter**

element **anpHelicopter/anpHelicopterId**

diagram	**anpHelicopterId** Unique ID number of ANP Helicopter.
type	**anpHeloId**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Unique ID number of ANP Helicopter.

element **anpHelicopter/noiseId**

diagram	**noiseId** ID of a Noise Group.
type	**anpHeloNoiseId**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation ID of a Noise Group.

element **anpHelicopter/directivityId**

diagram	**directivityId** Noise directivity ID for ANP helicopter.
type	**anpHeloDirectivityId**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 12

annotation	documentation Noise directivity ID for ANP helicopter.

element **anpHelicopter/description**

diagram	description Description of ANP Helicopter.
type	**string255**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Description of ANP Helicopter.

element **anpHelicopter/owner**

diagram	owner The owner category. Valid values: C (commercial), G (general aviation), M (military).
type	**anpOwnerType**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation pattern Commercial|C|Military|M|General|G
annotation	documentation The owner category. Valid values: C (commercial), G (general aviation), M (military).

element **anpHelicopter/engineTypeCode**

diagram	engineTypeCode The engine type code. Valid values: P (piston), J (jet), T (turboprop).
type	**engineType**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation pattern Jet|J|Turbo|Turboprop|T|Prop|Piston|P
annotation	documentation The engine type code. Valid values: P (piston), J (jet), T (turboprop).

element **anpHelicopter/numberRotors**

diagram	numberRotors The number of rotors. Valid values: 1 to 9.
type	**xs:int**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation The number of rotors. Valid values: 1 to 9.

element **anpHelicopter/diameter**

diagram	

	diameter The helicopter diameter (feet). Valid values: 0 to 1000.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation The helicopter diameter (feet). Valid values: 0 to 1000.

element **anpHelicopter/rpm**

diagram	rpm The helicopter rotor speed (revolutions per minute). Valid values: 0 to 1000.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation The helicopter rotor speed (revolutions per minute). Valid values: 0 to 1000.

element **anpHelicopter/maxTakeoffWeight**

diagram	maxTakeoffWeight The max gross takeoff weight (pounds). Valid values: 0 to 50000.
type	**xs:int**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation The max gross takeoff weight (pounds). Valid values: 0 to 50000.

element **anpHelicopter/hasWheels**

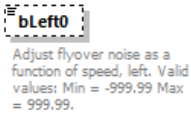
diagram	hasWheels Flag indicating if the helicopter has wheels. Valid values: Y (yes), N (no).
type	**yesNoType**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation pattern Yes|Y|No|N
annotation	documentation Flag indicating if the helicopter has wheels. Valid values: Y (yes), N (no).

element **anpHelicopter/modelType**

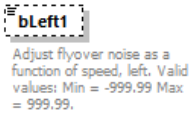
diagram	modelType The helicopter model type. Valid values: I (INM), N (NoiseMap).
type	**string1**
properties	minOcc 0 maxOcc 1

	content simple
facets	Kind Value Annotation minLength 0 maxLength 1
annotation	documentation The helicopter model type. Valid values: I (INM), N (NoiseMap).

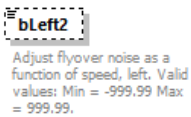
element **anpHelicopter/bLeft0**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Adjust flyover noise as a function of speed, left. Valid values: Min = -999.99 Max = 999.99.

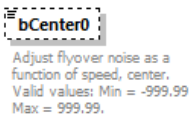
element **anpHelicopter/bLeft1**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Adjust flyover noise as a function of speed, left. Valid values: Min = -999.99 Max = 999.99.

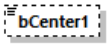
element **anpHelicopter/bLeft2**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Adjust flyover noise as a function of speed, left. Valid values: Min = -999.99 Max = 999.99.

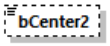
element **anpHelicopter/bCenter0**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Adjust flyover noise as a function of speed, center. Valid values: Min = -999.99 Max = 999.99.

element **anpHelicopter/bCenter1**

diagram	 Adjust flyover noise as a function of speed, center. Valid values: Min = -999.99 Max = 999.99.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Adjust flyover noise as a function of speed, center. Valid values: Min = -999.99 Max = 999.99.

element **anpHelicopter/bCenter2**

diagram	 Adjust flyover noise as a function of speed, center. Valid values: Min = -999.99 Max = 999.99.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Adjust flyover noise as a function of speed, center. Valid values: Min = -999.99 Max = 999.99.

element **anpHelicopter/bRight0**

diagram	 Adjust flyover noise as a function of speed, right. Valid values: Min = -999.99 Max = 999.99.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Adjust flyover noise as a function of speed, right. Valid values: Min = -999.99 Max = 999.99.

element **anpHelicopter/bRight1**

diagram	 Adjust flyover noise as a function of speed, right. Valid values: Min = -999.99 Max = 999.99.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Adjust flyover noise as a function of speed, right. Valid values: Min = -999.99 Max = 999.99.

element **anpHelicopter/bRight2**

diagram	 Adjust flyover noise as a function of speed, right. Valid values: Min = -999.99 Max = 999.99.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation

	Adjust flyover noise as a function of speed, right. Valid values: Min = -999.99 Max = 999.99.

element **anpHelicopter/dbVerticalAscent**

diagram	**dbVerticalAscent** Decibel offset added to NPD levels, vertical ascent (dB). Valid values: Min = -50 Max = 50.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel offset added to NPD levels, vertical ascent (dB). Valid values: Min = -50 Max = 50.

element **anpHelicopter/dbVerticalDescent**

diagram	**dbVerticalDescent** Decibel offset added to NPD levels, vertical descent (dB). Valid values: Min = -50 Max = 50.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel offset added to NPD levels, vertical descent (dB). Valid values: Min = -50 Max = 50.

element **anpHelicopter/dbHorizontalAcceleration**

diagram	**dbHorizontalAcceleration** Decibel offset added to NPD levels, depart horizontal acceleration (dB). Valid values: Min = -50 Max = 50.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel offset added to NPD levels, depart horizontal acceleration (dB). Valid values: Min = -50 Max = 50.

element **anpHelicopter/dbClimbAcceleration**

diagram	**dbClimbAcceleration** Decibel offset added to NPD levels, depart with climbing acceleration (dB). Valid values: Min = -50 Max = 50.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel offset added to NPD levels, depart with climbing acceleration (dB). Valid values: Min = -50 Max = 50.

element **anpHelicopter/dbHorizontalDeceleration**

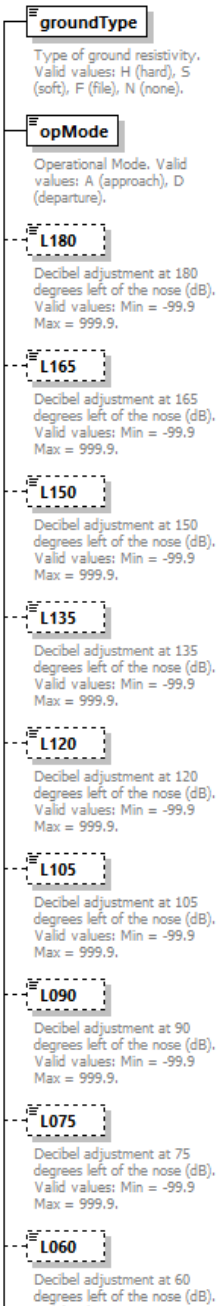
diagram	**dbHorizontalDeceleration** Decibel offset added to NPD levels, approach with horizontal deceleration (dB). Valid values: Min = -50 Max = 50.
type	**xs:double**

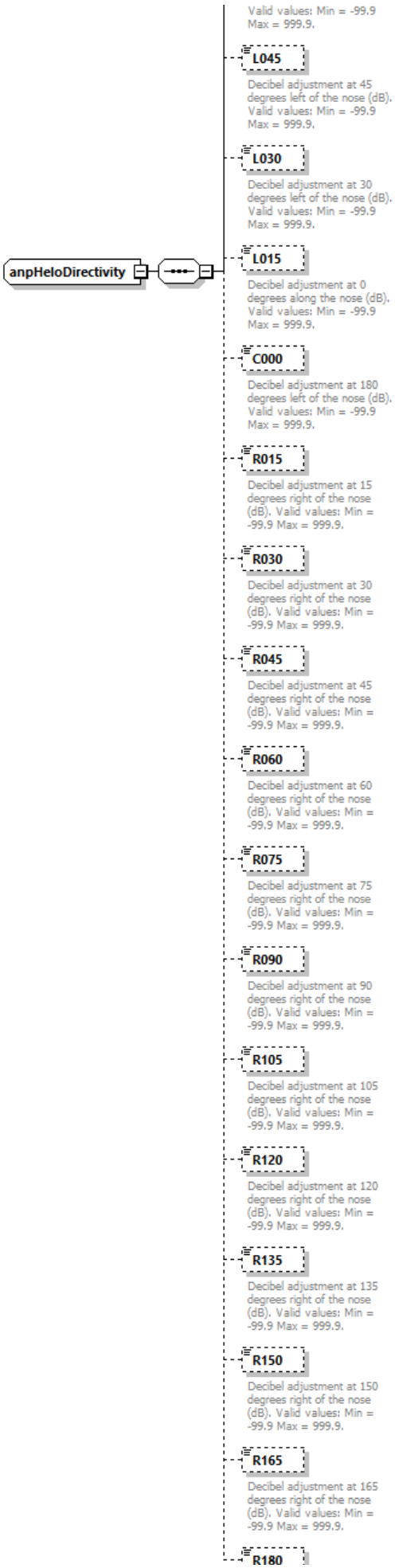
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel offset added to NPD levels, approach with horizontal deceleration (dB). Valid values: Min = -50 Max = 50.

element **anpHelicopter/dbDescendDeceleration**

diagram	**dbDescendDeceleration** Decibel offset added to NPD levels, approach with descending deceleration (dB). Valid values: Min = -50 Max = 50.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel offset added to NPD levels, approach with descending deceleration (dB). Valid values: Min = -50 Max = 50.

complexType **anpHeloDirectivity**

diagram	


anpHeloDirectivity
Valid values: Min = -99.9 Max = 999.9.
L045
Decibel adjustment at 45 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
L030
Decibel adjustment at 30 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
L015
Decibel adjustment at 0 degrees along the nose (dB). Valid values: Min = -99.9 Max = 999.9.
C000
Decibel adjustment at 180 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
R015
Decibel adjustment at 15 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
R030
Decibel adjustment at 30 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
R045
Decibel adjustment at 45 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
R060
Decibel adjustment at 60 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
R075
Decibel adjustment at 75 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
R090
Decibel adjustment at 90 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
R105
Decibel adjustment at 105 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
R120
Decibel adjustment at 120 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
R135
Decibel adjustment at 135 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
R150
Decibel adjustment at 150 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
R165
Decibel adjustment at 165 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
R180

	Decibel adjustment at 180 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
children	**groundType opMode L180 L165 L150 L135 L120 L105 L090 L075 L060 L045 L030 L015 C000 R015 R030 R045 R060 R075 R090 R105 R120 R135 R150 R165 R180**
used by	element **anpHeloDirectivitySet/anpHeloDirectivity**

element **anpHeloDirectivity/groundType**

diagram	**groundType** Type of ground resistivity. Valid values: H (hard), S (soft), F (file), N (none).
type	**anpHeloGroundType**
properties	content simple
facets	Kind Value Annotation pattern Hard|H|Software|S|File|F|None|N
annotation	documentation Type of ground resistivity. Valid values: H (hard), S (soft), F (file), N (none).

element **anpHeloDirectivity/opMode**

diagram	**opMode** Operational Mode. Valid values: A (approach), D (departure).
type	**string1**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 1
annotation	documentation Operational Mode. Valid values: A (approach), D (departure).

element **anpHeloDirectivity/L180**

diagram	**L180** Decibel adjustment at 180 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel adjustment at 180 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.

element **anpHeloDirectivity/L165**

diagram	**L165** Decibel adjustment at 165 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel adjustment at 165 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.

element **anpHeloDirectivity/L150**

diagram	 Decibel adjustment at 150 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel adjustment at 150 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.

element **anpHeloDirectivity/L135**

diagram	 Decibel adjustment at 135 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel adjustment at 135 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.

element **anpHeloDirectivity/L120**

diagram	 Decibel adjustment at 120 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel adjustment at 120 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.

element **anpHeloDirectivity/L105**

diagram	 Decibel adjustment at 105 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel adjustment at 105 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.

element **anpHeloDirectivity/L090**

diagram	 Decibel adjustment at 90 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation

	Decibel adjustment at 90 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.

element **anpHeloDirectivity/L075**

diagram	 Decibel adjustment at 75 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel adjustment at 75 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.

element **anpHeloDirectivity/L060**

diagram	 Decibel adjustment at 60 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel adjustment at 60 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.

element **anpHeloDirectivity/L045**

diagram	 Decibel adjustment at 45 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel adjustment at 45 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.

element **anpHeloDirectivity/L030**

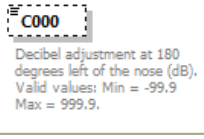
diagram	 Decibel adjustment at 30 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel adjustment at 30 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.

element **anpHeloDirectivity/L015**

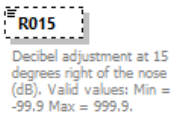
diagram	 Decibel adjustment at 0 degrees along the nose (dB). Valid values: Min = -99.9 Max = 999.9.
type	**xs:double**

properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel adjustment at 0 degrees along the nose (dB). Valid values: Min = -99.9 Max = 999.9.

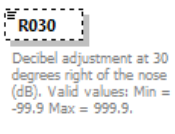
element **anpHeloDirectivity/C000**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel adjustment at 180 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.

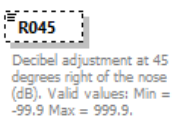
element **anpHeloDirectivity/R015**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel adjustment at 15 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.

element **anpHeloDirectivity/R030**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel adjustment at 30 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.

element **anpHeloDirectivity/R045**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel adjustment at 45 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.

element **anpHeloDirectivity/R060**

diagram	

	 Decibel adjustment at 60 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel adjustment at 60 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.

element **anpHeloDirectivity/R075**

diagram	 Decibel adjustment at 75 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel adjustment at 75 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.

element **anpHeloDirectivity/R090**

diagram	 Decibel adjustment at 90 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel adjustment at 90 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.

element **anpHeloDirectivity/R105**

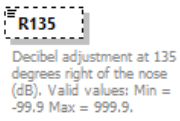
diagram	 Decibel adjustment at 105 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel adjustment at 105 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.

element **anpHeloDirectivity/R120**

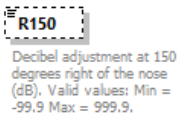
diagram	 Decibel adjustment at 120 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation

	Decibel adjustment at 120 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.

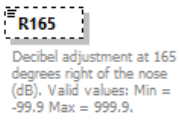
element **anpHeloDirectivity/R135**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel adjustment at 135 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.

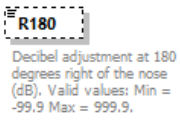
element **anpHeloDirectivity/R150**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel adjustment at 150 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.

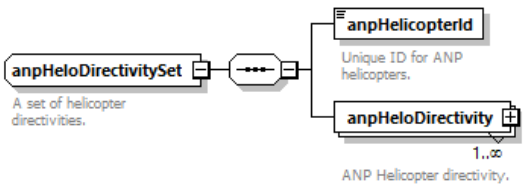
element **anpHeloDirectivity/R165**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel adjustment at 165 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.

element **anpHeloDirectivity/R180**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel adjustment at 180 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.

complexType **anpHeloDirectivitySet**

diagram	

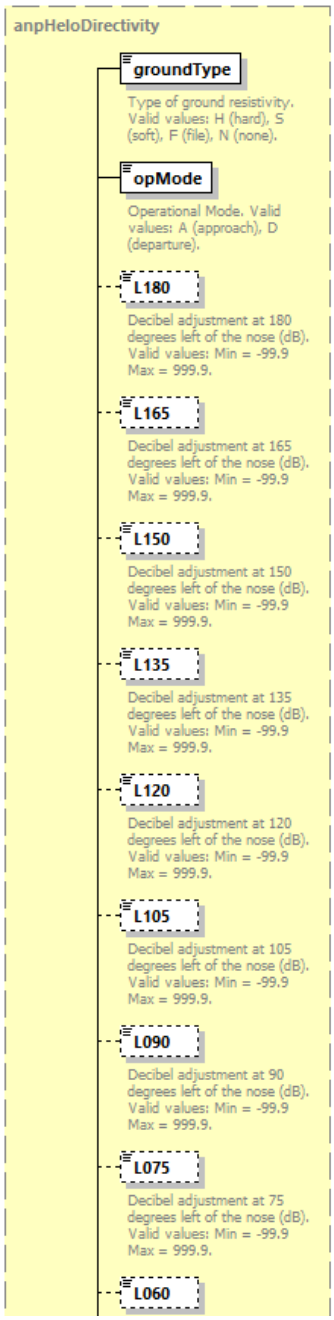
children	**anpHelicopterId** **anpHeloDirectivity**
used by	element **fleet/anpHeloDirectivitySet**
annotation	documentation A set of helicopter directivities.

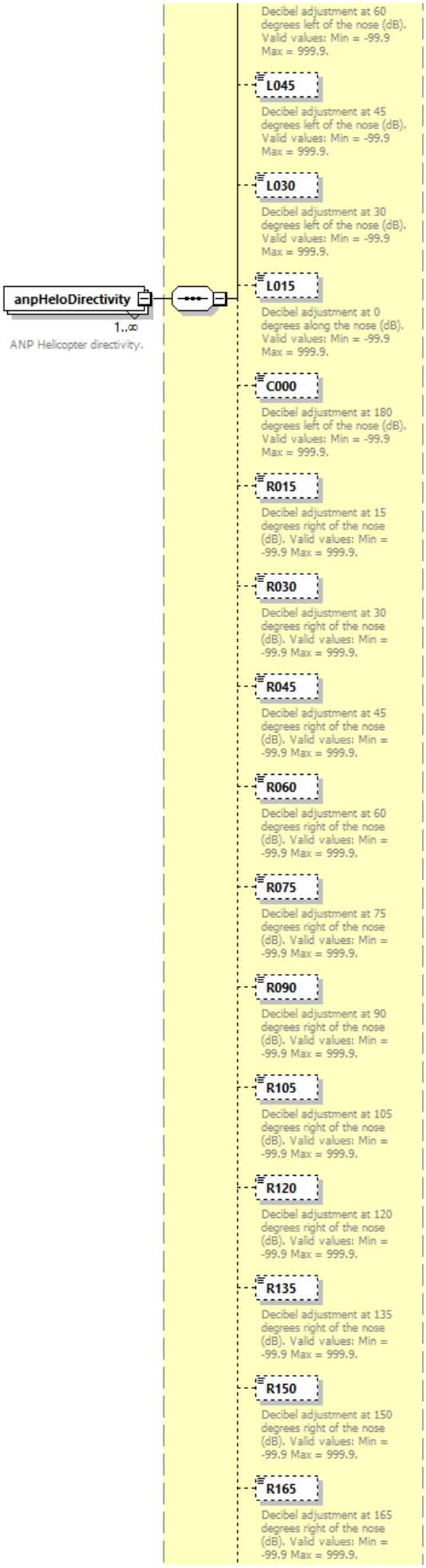
element **anpHeloDirectivitySet/anpHelicopterId**

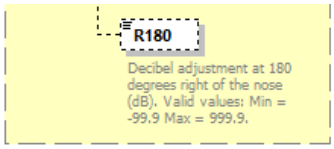
diagram	**anpHelicopterId** Unique ID for ANP helicopters.
type	**anpHeloDirectId**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 12
annotation	documentation Unique ID for ANP helicopters.

element **anpHeloDirectivitySet/anpHeloDirectivity**

diagram

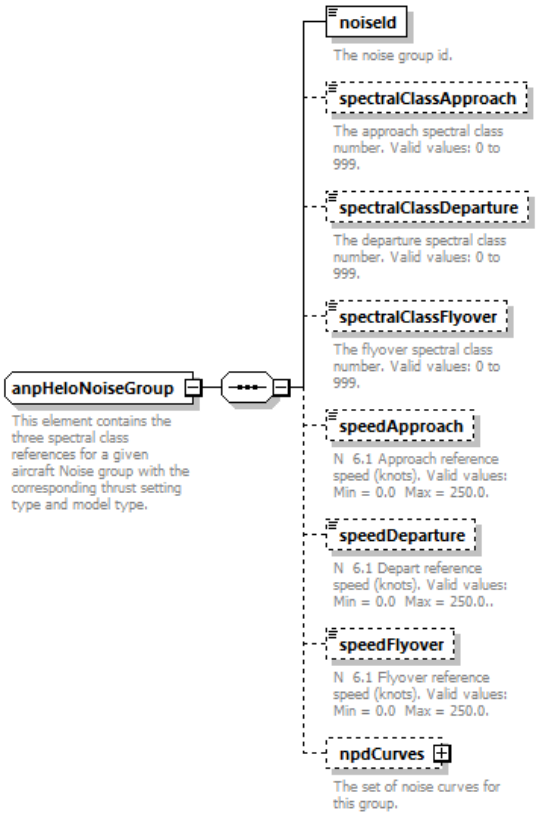



anpHeloDirectivity
1..∞
ANP Helicopter directivity.
Decibel adjustment at 60 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
L045
Decibel adjustment at 45 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
L030
Decibel adjustment at 30 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
L015
Decibel adjustment at 0 degrees along the nose (dB). Valid values: Min = -99.9 Max = 999.9.
C000
Decibel adjustment at 180 degrees left of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
R015
Decibel adjustment at 15 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
R030
Decibel adjustment at 30 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
R045
Decibel adjustment at 45 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
R060
Decibel adjustment at 60 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
R075
Decibel adjustment at 75 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
R090
Decibel adjustment at 90 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
R105
Decibel adjustment at 105 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
R120
Decibel adjustment at 120 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
R135
Decibel adjustment at 135 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
R150
Decibel adjustment at 150 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.
R165
Decibel adjustment at 165 degrees right of the nose (dB). Valid values: Min = -99.9 Max = 999.9.

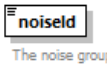


type	**anpHeloDirectivity**
properties	minOcc 1 maxOcc unbounded content complex
children	**groundType opMode L180 L165 L150 L135 L120 L105 L090 L075 L060 L045 L030 L015 C000 R015 R030 R045 R060 R075 R090 R105 R120 R135 R150 R165 R180**
annotation	documentation ANP Helicopter directivity.

complexType **anpHeloNoiseGroup**

diagram	
children	**noiseId spectralClassApproach spectralClassDeparture spectralClassFlyover speedApproach speedDeparture speedFlyover npdCurves**
used by	element **fleet/anpHeloNoiseGroup**
annotation	documentation This element contains the three spectral class references for a given aircraft Noise group with the corresponding thrust setting type and model type.

element **anpHeloNoiseGroup/noiseId**

diagram	
type	**anpHeloNoiseId**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation The noise group id.

element **anpHeloNoiseGroup/spectralClassApproach**

diagram	**spectralClassApproach** The approach spectral class number. Valid values: 0 to 999.
type	**xs:short**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation The approach spectral class number. Valid values: 0 to 999.

element **anpHeloNoiseGroup/spectralClassDeparture**

diagram	**spectralClassDeparture** The departure spectral class number. Valid values: 0 to 999.
type	**xs:short**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation The departure spectral class number. Valid values: 0 to 999.

element **anpHeloNoiseGroup/spectralClassFlyover**

diagram	**spectralClassFlyover** The flyover spectral class number. Valid values: 0 to 999.
type	**xs:short**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation The flyover spectral class number. Valid values: 0 to 999.

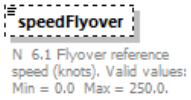
element **anpHeloNoiseGroup/speedApproach**

diagram	**speedApproach** N 6.1 Approach reference speed (knots). Valid values: Min = 0.0 Max = 250.0.
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation N 6.1 Approach reference speed (knots). Valid values: Min = 0.0 Max = 250.0.

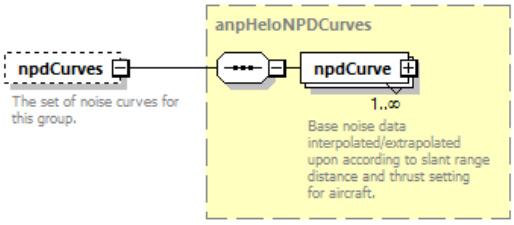
element **anpHeloNoiseGroup/speedDeparture**

diagram	**speedDeparture** N 6.1 Depart reference speed (knots). Valid values: Min = 0.0 Max = 250.0..
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation N 6.1 Depart reference speed (knots). Valid values: Min = 0.0 Max = 250.0..

element **anpHeloNoiseGroup/speedFlyover**

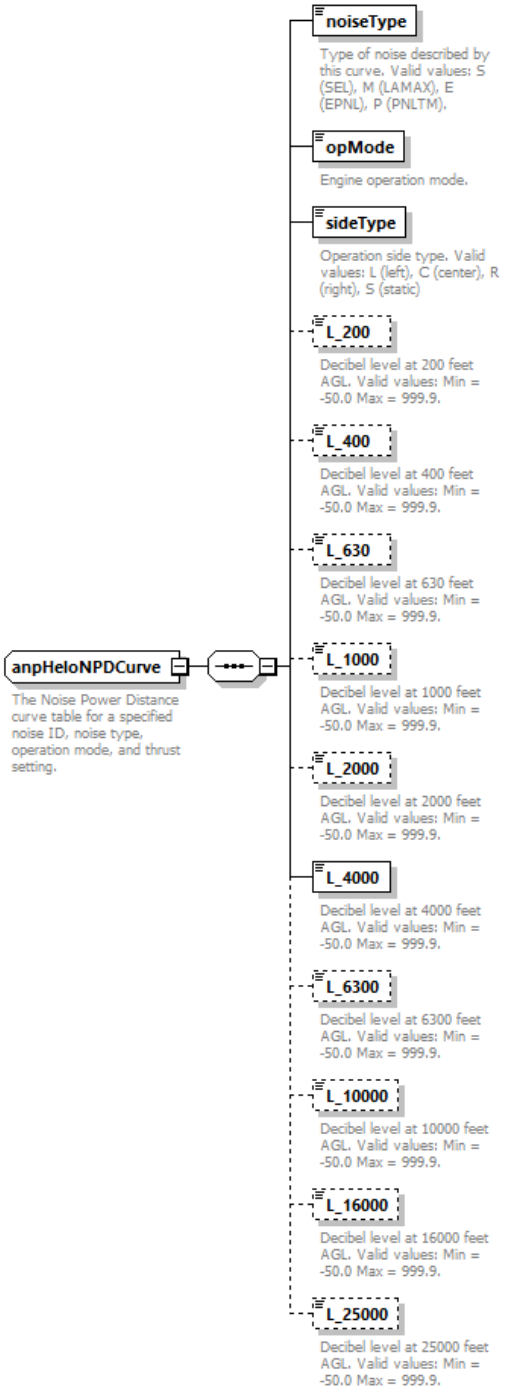
diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation N 6.1 Flyover reference speed (knots). Valid values: Min = 0.0 Max = 250.0.

element **anpHeloNoiseGroup/npdCurves**

diagram	
type	**anpHeloNPDCurves**
properties	minOcc 0 maxOcc 1 content complex
children	**npdCurve**
annotation	documentation The set of noise curves for this group.

complexType **anpHeloNPDCurve**

diagram	



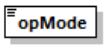
children	**noiseType opMode sideType L_200 L_400 L_630 L_1000 L_2000 L_4000 L_6300 L_10000 L_16000 L_25000**
used by	element **anpHeloNPDCurves/npdCurve**
annotation	documentation The Noise Power Distance curve table for a specified noise ID, noise type, operation mode, and thrust setting.

element **anpHeloNPDCurve/noiseType**

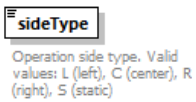
diagram	**noiseType** Type of noise described by this curve. Valid values: S (SEL), M (LAMAX), E (EPNL), P (PNLTM).
type	**anpNpdNoiseType**
properties	content simple
facets	Kind Value Annotation pattern S|M|E|P

annotation	documentation Type of noise described by this curve. Valid values: S (SEL), M (LAMAX), E (EPNL), P (PNLTM).

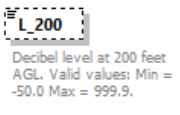
element **anpHeloNPDCurve/opMode**

diagram	
type	**anpNpdOpMode**
properties	content simple
facets	Kind Value Annotation pattern A|D|L|G|H|I|J|V|W|Y|Z|B|C|E|F|X|S
annotation	documentation Engine operation mode.

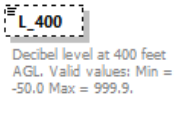
element **anpHeloNPDCurve/sideType**

diagram	
type	**anpHeloSideType**
properties	content simple
facets	Kind Value Annotation pattern Left|L|Center|C|Right|R|Static|S
annotation	documentation Operation side type. Valid values: L (left), C (center), R (right), S (static)

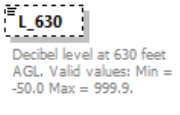
element **anpHeloNPDCurve/L_200**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel level at 200 feet AGL. Valid values: Min = -50.0 Max = 999.9.

element **anpHeloNPDCurve/L_400**

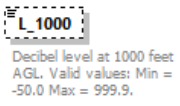
diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel level at 400 feet AGL. Valid values: Min = -50.0 Max = 999.9.

element **anpHeloNPDCurve/L_630**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1

	content simple
annotation	documentation Decibel level at 630 feet AGL. Valid values: Min = -50.0 Max = 999.9.

element **anpHeloNPDCurve/L_1000**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel level at 1000 feet AGL. Valid values: Min = -50.0 Max = 999.9.

element **anpHeloNPDCurve/L_2000**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel level at 2000 feet AGL. Valid values: Min = -50.0 Max = 999.9.

element **anpHeloNPDCurve/L_4000**

diagram	
type	**xs:double**
properties	content simple
annotation	documentation Decibel level at 4000 feet AGL. Valid values: Min = -50.0 Max = 999.9.

element **anpHeloNPDCurve/L_6300**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel level at 6300 feet AGL. Valid values: Min = -50.0 Max = 999.9.

element **anpHeloNPDCurve/L_10000**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel level at 10000 feet AGL. Valid values: Min = -50.0 Max = 999.9.

element **anpHeloNPDCurve/L_16000**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple

annotation	documentation Decibel level at 16000 feet AGL. Valid values: Min = -50.0 Max = 999.9.

element **anpHeloNPDCurve/L_25000**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Decibel level at 25000 feet AGL. Valid values: Min = -50.0 Max = 999.9.

complexType **anpHeloNPDCurves**

diagram	
children	**npdCurve**
used by	element **anpHeloNoiseGroup/npdCurves**
annotation	documentation The set of noise curves.

element **anpHeloNPDCurves/npdCurve**

diagram	
type	**anpHeloNPDCurve**
properties	minOcc 1 maxOcc unbounded content complex
children	**noiseType opMode sideType L_200 L_400 L_630 L_1000 L_2000 L_4000 L_6300 L_10000 L_16000 L_25000**
annotation	documentation Base noise data interpolated/extrapolated upon according to slant range distance and thrust setting for aircraft.

complexType **anpHeloProcedureStep**

diagram	
children	**stepNum operationType profileGroupId profileStageLength stepType duration distance altitude speed**
used by	element **anpHeloProfile/step**
annotation	documentation Procedure data element.

element **anpHeloProcedureStep/stepNum**

diagram	
type	**xs:int**
properties	content simple
annotation	documentation Step number of the procedure. Must be unique in a sequence.

element **anpHeloProcedureStep/operationType**

diagram	
type	**string1**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 1
annotation	documentation Operation associated with this profile. Valid values: A (Approach), D (Depart), T (Touch&Go), F (CircuitFlt), V (OverFlt)

element **anpHeloProcedureStep/profileGroupId**

diagram	

type	**string255**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Profile group identifier. Valid values: STANDARD, NOISEMAP (INM standard data).

element **anpHeloProcedureStep/profileStageLength**

diagram	
type	**string1**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 1
annotation	documentation Profile stage number (min = 1, max = 9). Approach stage numbers are not related to trip distance. There is only one standard approach profile for most standard aircraft and its stage number is set to 1. Approach stage numbers are used to distinguish members of a group. For example, approach stage can mean different kinds of approaches (e.g. 1 = 3 degree approach, 2 = 5 degree approach).

element **anpHeloProcedureStep/stepType**

diagram	
type	**string1**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation minLength 0 maxLength 1
annotation	documentation Type of step. (A) Approach at constant speed, (D) Depart at constant speed, (L) Level flyover at constant speed, (G) Ground idle, (H) Flight idle, (I) Hover in ground effect, (J) Hover out of ground effect, (V) Vertical ascent in ground effect, (W) Vertical ascent out of ground effect, (Y) Vertical descent in ground effect, (Z) Vertical descent out of ground effect, (B) Approach with horizontal deceleration, (C) Approach with descending deceleration, (E) Depart with horizontal acceleration, (F) Depart with climbing acceleration, (X) Taxi at constant speed, (S) Start altitude at constant speed

element **anpHeloProcedureStep/duration**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Procedure's duration (hours).

element **anpHeloProcedureStep/distance**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Distance along the ground relative to start (min = ?9999999.9, max = 9999999.9, feet).

element **anpHeloProcedureStep/altitude**

diagram	
type	**xs:double**
properties	minOcc 0

	maxOcc 1 content simple
annotation	documentation Altitude of aircraft (min = -9999, max = 60000, feet).

element **anpHeloProcedureStep/speed**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Ground speed at this point (min = 0, max = 600, knots).

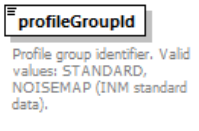
complexType **anpHeloProfile**

diagram	
children	**operationType profileGroupId profileStageLength weight useDirectivity useTrack headingTakeoffGround headingTakeoffHover headingLandGround headingLandHover step**
used by	element **anpHeloProfileSet/profile**
annotation	documentation Profile data element.

element **anpHeloProfile/operationType**

diagram	
type	**string1**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 1
annotation	documentation Operation associated with this profile. Valid values: A (Approach), D (Depart), T (Touch&Go), F (CircuitFlt), V (OverFlt)

element **anpHeloProfile/profileGroupId**

diagram	
type	**string255**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Profile group identifier. Valid values: STANDARD, NOISEMAP (INM standard data).

element **anpHeloProfile/profileStageLength**

diagram	
type	**string1**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 1
annotation	documentation Profile stage number (min = 1, max = 9). Approach stage numbers are not related to trip distance. There is only one standard approach profile for most standard aircraft and its stage number is set to 1. Approach stage numbers are used to distinguish members of a group. For example, approach stage can mean different kinds of approaches (e.g. 1 = 3 degree approach, 2 = 5 degree approach).

element **anpHeloProfile/weight**

diagram	
type	**xs:int**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Aircraft weight during this operation type. Valid values: 0 through 999999. (lb)

element **anpHeloProfile/useDirectivity**

diagram	
type	**yesNoType**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation pattern Yes|Y|No|N
annotation	documentation Use directivity? Y=Yes N=No.

element **anpHeloProfile/useTrack**

diagram	
type	**yesNoType**
properties	minOcc 0 maxOcc 1 content simple
facets	Kind Value Annotation pattern Yes|Y|No|N
annotation	documentation Use track (static heading is relative to track)? Y=Yes N=No.

element **anpHeloProfile/headingTakeoffGround**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Takeoff ground heading. Valid values: -180 through 360. (degrees)

element **anpHeloProfile/headingTakeoffHover**

diagram	
type	**xs:double**
properties	content simple
annotation	documentation Takeoff hover heading. Valid values: -180 through 360. (degrees)

element **anpHeloProfile/headingLandGround**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Landing ground heading. Valid values: -180 through 360. (degrees)

element **anpHeloProfile/headingLandHover**

diagram	
type	**xs:double**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Landing hover heading. Valid values: -180 through 360. (degrees)

element **anpHeloProfile/step**

diagram	
type	**anpHeloProcedureStep**
properties	minOcc 0 maxOcc unbounded content complex
children	**stepNum operationType profileGroupId profileStageLength stepType duration distance altitude speed**
annotation	documentation The procedure steps.

complexType **anpHeloProfileSet**

diagram	
children	**anpHelicopterId profile**
used by	element **fleet/anpHeloProfileSet**
annotation	documentation A profile set for an ANP helicopter.

element **anpHeloProfileSet/anpHelicopterId**

diagram	
type	**anpHeloId**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation The anp helicopter id.

element **anpHeloProfileSet/profile**

diagram	
type	**anpHeloProfile**
properties	minOcc 1 maxOcc unbounded content complex
children	**operationType profileGroupId profileStageLength weight useDirectivity useTrack headingTakeoffGround headingTakeoffHover headingLandGround headingLandHover step**
annotation	documentation One or more ANP profiles.

complexType **anpNoiseGroup**

diagram	
children	**noiseId spectralClassApproach spectralClassDeparture spectralClassAfterburner thrustSetType modelType npdCurves**
used by	element **fleet/anpNoiseGroup**
annotation	documentation This element contains the three spectral class references for a given aircraft Noise group with the corresponding thrust setting type and model type.

element **anpNoiseGroup/noiseId**

diagram	
type	**anpNoiseId**
properties	content simple
facets	Kind Value Annotation minLength 0 maxLength 255
annotation	documentation Noise group's ID.

element **anpNoiseGroup/spectralClassApproach**

diagram	
type	**xs:short**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Spectral class number for approach (min = 0, max = 999).

element **anpNoiseGroup/spectralClassDeparture**

diagram	
type	**xs:short**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Spectral class number for departure (min = 0, max = 999).

element **anpNoiseGroup/spectralClassAfterburner**

diagram	
type	**xs:short**
properties	minOcc 0 maxOcc 1 content simple
annotation	documentation Spectral class number for afterburner (min = 0, max = 999).

element **anpNoiseGroup/thrustSetType**

diagram	
type	**string1**
properties	content simple
facets	Kind Value Annotation minLength