Realis ITS

Version 05.03.2020

DatexII 2.3 profile realisweather-1.0

DatexII 2.3 Profile realisweather 1.0

Table of Contents

- Simple Type: **KilometresPerHour**
- Simple Type: **LaneEnum**
- Simple Type: **Language**
- Simple Type: **LinearReferencingDirectionEnum**
- Simple Type: **LocationDescriptorEnum**
- Simple Type: **MetresAsFloat**
- Simple Type: **MetresAsNonNegativeInteger**
- Simple Type: **MultilingualStringValueType**
- Simple Type: **NonNegativeInteger**
- Simple Type: **OpenIrFormOfWayEnum**
- Simple Type: **OpenIrFunctionalRoadClassEnum**
- Simple Type: **OpenIrOrientationEnum**
- Simple Type: **OpenIrSideOfRoadEnum**
- Simple Type: **Percentage**
- Simple Type: **PollutantTypeEnum**
- Simple Type: **PrecipitationTypeEnum**
- Simple Type: **Seconds**
- Simple Type: **SourceTypeEnum**
- Simple Type: **String**
- Simple Type: **TemperatureCelsius**
- Simple Type: **TimePrecisionEnum**
- Simple Type: **TpegLoc03AreaDescriptorSubtypeEnum**
- Simple Type: **UrgencyEnum**
- Simple Type: **WeatherRelatedRoadConditionTypeEnum**

top

Schema Document Properties

Target Namespace	**http://datex2.eu/schema/2/2_0**
Version	2.3
Element and Attribute Namespaces	• Global element and attribute declarations belong to this schema's target namespace. • By default, local element declarations belong to this schema's target namespace. • By default, local attribute declarations have no namespace.

Declared Namespaces

Prefix	Namespace
xml	http://www.w3.org/XML/1998/namespace
xs	http://www.w3.org/2001/XMLSchema
D2LogicalModel	**http://datex2.eu/schema/2/2_0**

Schema Component Representation

```
<xs:schema elementFormDefault="qualified" attributeFormDefault="unqualified" version="2.3"
targetNamespace="http://datex2.eu/schema/2/2_0">
   ...
</xs:schema>
```

top

Global Declarations

Element: d2LogicalModel

Name	d2LogicalModel
Type	D2LogicalModel:D2LogicalModel
Nillable	no
Abstract	no

XML Instance Representation

```
<D2LogicalModel:d2LogicalModel
 modelBaseVersion="2 [1]">
   <D2LogicalModel:exchange> D2LogicalModel:Exchange </D2LogicalModel:exchange> [1]
   <D2LogicalModel:payloadPublication> D2LogicalModel:PayloadPublication </D2LogicalModel:payloadPublication> [0..1]
   <D2LogicalModel:d2LogicalModelExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:d2LogicalModelExtension>
   [0..1]
</D2LogicalModel:d2LogicalModel>
```

Schema Component Representation

```
<xs:element name="d2LogicalModel" type="D2LogicalModel:D2LogicalModel"/>
```

top

Global Definitions

Complex Type: AffectedCarriagewayAndLanes

Super-types:	None
Sub-types:	None

Name	AffectedCarriagewayAndLanes
Abstract	no
Documentation	Supplementary positional information which details carriageway and lane locations. Several instances may exist where the element being described extends over more than one carriageway.

XML Instance Representation

```
<...>
```

```
   <D2LogicalModel:carriageway> D2LogicalModel:CarriagewayEnum </D2LogicalModel:carriageway> [1] ?
   <D2LogicalModel:lane> D2LogicalModel:LaneEnum </D2LogicalModel:lane> [0..*] ?
   <D2LogicalModel:footpath> D2LogicalModel:Boolean </D2LogicalModel:footpath> [0..1] ?
   <D2LogicalModel:lengthAffected> D2LogicalModel:MetresAsFloat </D2LogicalModel:lengthAffected> [0..1] ?
   <D2LogicalModel:affectedCarriagewayAndLanesExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:affectedCarriagewayAndLanesExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="AffectedCarriagewayAndLanes">
   <xs:sequence>
      <xs:element name="carriageway" type="D2LogicalModel:CarriagewayEnum" minOccurs="1" maxOccurs="1"/>
      <xs:element name="lane" type="D2LogicalModel:LaneEnum" minOccurs="0" maxOccurs="unbounded"/>
      <xs:element name="footpath" type="D2LogicalModel:Boolean" minOccurs="0" maxOccurs="1"/>
      <xs:element name="lengthAffected" type="D2LogicalModel:MetresAsFloat" minOccurs="0" maxOccurs="1"/>
      <xs:element name="affectedCarriagewayAndLanesExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
   </xs:sequence>
</xs:complexType>
```

top

Complex Type: AlertCDirection

Super-types:	None
Sub-types:	None

Name	AlertCDirection
Abstract	no
Documentation	The direction of traffic flow along the road to which the information relates.

XML Instance Representation

```
<...>
   <D2LogicalModel:alertCDirectionCoded> D2LogicalModel:AlertCDirectionEnum </D2LogicalModel:alertCDirectionCoded>
   [1] ?
   <D2LogicalModel:alertCDirectionNamed> D2LogicalModel:MultilingualString </D2LogicalModel:alertCDirectionNamed>
   [0..1] ?
   <D2LogicalModel:alertCDirectionSense> D2LogicalModel:Boolean </D2LogicalModel:alertCDirectionSense> [0..1] ?
   <D2LogicalModel:alertCDirectionExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:alertCDirectionExtension>
   [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="AlertCDirection">
   <xs:sequence>
      <xs:element name="alertCDirectionCoded" type="D2LogicalModel:AlertCDirectionEnum" minOccurs="1" maxOccurs="1"/>
      <xs:element name="alertCDirectionNamed" type="D2LogicalModel:MultilingualString" minOccurs="0" maxOccurs="1"/>
      <xs:element name="alertCDirectionSense" type="D2LogicalModel:Boolean" minOccurs="0" maxOccurs="1"/>
      <xs:element name="alertCDirectionExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
   </xs:sequence>
</xs:complexType>
```

top

Complex Type: AlertCLocation

Super-types:	None
Sub-types:	None

Name	AlertCLocation
Abstract	no
Documentation	Identification of a specific point, linear or area location in an ALERT-C location table.

XML Instance Representation

```
<...>
   <D2LogicalModel:alertCLocationName> D2LogicalModel:MultilingualString </D2LogicalModel:alertCLocationName> [0..1]
   ?
   <D2LogicalModel:specificLocation> D2LogicalModel:AlertCLocationCode </D2LogicalModel:specificLocation> [1] ?
   <D2LogicalModel:alertCLocationExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:alertCLocationExtension>
   [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="AlertCLocation">
   <xs:sequence>
      <xs:element name="alertCLocationName" type="D2LogicalModel:MultilingualString" minOccurs="0" maxOccurs="1"/>
      <xs:element name="specificLocation" type="D2LogicalModel:AlertCLocationCode" minOccurs="1" maxOccurs="1"/>
      <xs:element name="alertCLocationExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
   </xs:sequence>
</xs:complexType>
```

top

Complex Type: AlertCMethod4Point

Super-types:	AlertCPoint < **AlertCMethod4Point** (by extension)
Sub-types:	None

Name	AlertCMethod4Point
Abstract	no
Documentation	A single point on the road network defined by reference to a point in a pre-defined ALERT-C location table plus an offset distance and which has an associated direction of traffic flow.

XML Instance Representation

```
<...>
   <D2LogicalModel:alertCLocationCountryCode> D2LogicalModel:String </D2LogicalModel:alertCLocationCountryCode> [1] ?
   <D2LogicalModel:alertCLocationTableNumber> D2LogicalModel:String </D2LogicalModel:alertCLocationTableNumber> [1] ?
   <D2LogicalModel:alertCLocationTableVersion> D2LogicalModel:String </D2LogicalModel:alertCLocationTableVersion> [1]
   ?
   <D2LogicalModel:alertCPointExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:alertCPointExtension> [0..1]
   <D2LogicalModel:alertCDirection> D2LogicalModel:AlertCDirection </D2LogicalModel:alertCDirection> [1]
   <D2LogicalModel:alertCMethod4PrimaryPointLocation> D2LogicalModel:AlertCMethod4PrimaryPointLocation
   </D2LogicalModel:alertCMethod4PrimaryPointLocation> [1]
   <D2LogicalModel:alertCMethod4PointExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:alertCMethod4PointExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="AlertCMethod4Point">
   <xs:complexContent>
      <xs:extension base="D2LogicalModel:AlertCPoint">
         <xs:sequence>
            <xs:element name="alertCDirection" type="D2LogicalModel:AlertCDirection"/>
            <xs:element name="alertCMethod4PrimaryPointLocation"
            type="D2LogicalModel:AlertCMethod4PrimaryPointLocation"/>
            <xs:element name="alertCMethod4PointExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

top

Complex Type: AlertCMethod4PrimaryPointLocation

Super-types:	None
Sub-types:	None

Name	AlertCMethod4PrimaryPointLocation
Abstract	no
Documentation	The point (called Primary point) which is either a single point or at the downstream end of a linear road section. The point is specified by a reference to a point in a pre-defined ALERT-C location table plus a non-negative offset distance.

XML Instance Representation

```
<...>
   <D2LogicalModel:alertCLocation> D2LogicalModel:AlertCLocation </D2LogicalModel:alertCLocation> [1]
   <D2LogicalModel:offsetDistance> D2LogicalModel:OffsetDistance </D2LogicalModel:offsetDistance> [1]
   <D2LogicalModel:alertCMethod4PrimaryPointLocationExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:alertCMethod4PrimaryPointLocationExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="AlertCMethod4PrimaryPointLocation">
   <xs:sequence>
      <xs:element name="alertCLocation" type="D2LogicalModel:AlertCLocation"/>
      <xs:element name="offsetDistance" type="D2LogicalModel:OffsetDistance"/>
      <xs:element name="alertCMethod4PrimaryPointLocationExtension" type="D2LogicalModel:_ExtensionType"
      minOccurs="0"/>
   </xs:sequence>
</xs:complexType>
```

top

Complex Type: AlertCPoint

Super-types:	None
Sub-types:	• AlertCMethod4Point (by extension)

Name	AlertCPoint
Abstract	yes
Documentation	A single point on the road network defined by reference to a pre-defined ALERT-C location table and which has an associated direction of traffic flow.

XML Instance Representation

```
<...>
   <D2LogicalModel:alertCLocationCountryCode> D2LogicalModel:String </D2LogicalModel:alertCLocationCountryCode> [1] ?
   <D2LogicalModel:alertCLocationTableNumber> D2LogicalModel:String </D2LogicalModel:alertCLocationTableNumber> [1] ?
   <D2LogicalModel:alertCLocationTableVersion> D2LogicalModel:String </D2LogicalModel:alertCLocationTableVersion> [1]
   ?
   <D2LogicalModel:alertCPointExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:alertCPointExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="AlertCPoint" abstract="true">
```

```
  <xs:sequence>
    <xs:element name="alertCLocationCountryCode" type="D2LogicalModel:String" minOccurs="1" maxOccurs="1"/>
    <xs:element name="alertCLocationTableNumber" type="D2LogicalModel:String" minOccurs="1" maxOccurs="1"/>
    <xs:element name="alertCLocationTableVersion" type="D2LogicalModel:String" minOccurs="1" maxOccurs="1"/>
    <xs:element name="alertCPointExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

top

Complex Type: ApplicationRateValue

Super-types:	DataValue < **ApplicationRateValue** (by extension)
Sub-types:	None

Name	ApplicationRateValue
Abstract	no
Documentation	A measured or calculated value of the application rate of a substance.

XML Instance Representation

```
<...
 accuracy="D2LogicalModel:Percentage [0..1] ?"
 computationalMethod="D2LogicalModel:ComputationMethodEnum [0..1] ?"
 numberOfIncompleteInputs="D2LogicalModel:NonNegativeInteger [0..1] ?"
 numberOfInputValuesUsed="D2LogicalModel:NonNegativeInteger [0..1] ?"
 smoothingFactor="D2LogicalModel:Float [0..1] ?"
 standardDeviation="D2LogicalModel:Float [0..1] ?"
 supplierCalculatedDataQuality="D2LogicalModel:Percentage [0..1] ?">
   <D2LogicalModel:dataError> D2LogicalModel:Boolean </D2LogicalModel:dataError> [0..1] ?
   <D2LogicalModel:reasonForDataError> D2LogicalModel:MultilingualString </D2LogicalModel:reasonForDataError> [0..1]
   ?
   <D2LogicalModel:dataValueExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:dataValueExtension> [0..1]
   <D2LogicalModel:applicationRate> D2LogicalModel:IntensityKilogramsPerSquareMetre </D2LogicalModel:applicationRate>
   [1] ?
   <D2LogicalModel:applicationRateValueExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:applicationRateValueExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="ApplicationRateValue">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:DataValue">
      <xs:sequence>
        <xs:element name="applicationRate" type="D2LogicalModel:IntensityKilogramsPerSquareMetre" minOccurs="1"
        maxOccurs="1"/>
        <xs:element name="applicationRateValueExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

top

Complex Type: BasicData

Super-types:	None

Sub-types:	• WeatherData (by extension)
	  ◦ HumidityInformation (by extension)
	  ◦ PollutionInformation (by extension)
	  ◦ PrecipitationInformation (by extension)
	  ◦ RoadSurfaceConditionInformation (by extension)
	  ◦ TemperatureInformation (by extension)
	  ◦ VisibilityInformation (by extension)
	  ◦ WindInformation (by extension)

Name	BasicData
Abstract	yes
Documentation	Data that is either measured or calculated (elaborated) at the same time or over the same time period.

XML Instance Representation

```
<...
 measurementOrCalculatedTimePrecision="D2LogicalModel:TimePrecisionEnum [0..1] ?">
   <D2LogicalModel:measurementOrCalculationPeriod> D2LogicalModel:Seconds
   </D2LogicalModel:measurementOrCalculationPeriod> [0..1] ?
   <D2LogicalModel:measurementOrCalculationTime> D2LogicalModel:DateTime
   </D2LogicalModel:measurementOrCalculationTime> [0..1] ?
   <D2LogicalModel:pertinentLocation> D2LogicalModel:GroupOfLocations </D2LogicalModel:pertinentLocation> [0..1] ?
   <D2LogicalModel:basicDataExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:basicDataExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="BasicData" abstract="true">
  <xs:sequence>
    <xs:element name="measurementOrCalculationPeriod" type="D2LogicalModel:Seconds" minOccurs="0" maxOccurs="1"/>
    <xs:element name="measurementOrCalculationTime" type="D2LogicalModel:DateTime" minOccurs="0" maxOccurs="1"/>
    <xs:element name="pertinentLocation" type="D2LogicalModel:GroupOfLocations" minOccurs="0"/>
    <xs:element name="basicDataExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
  </xs:sequence>
  <xs:attribute name="measurementOrCalculatedTimePrecision" type="D2LogicalModel:TimePrecisionEnum" use="optional"/>
</xs:complexType>
```

top

Complex Type: D2LogicalModel

Super-types:	None
Sub-types:	None

Name	D2LogicalModel
Abstract	no
Documentation	The DATEX II logical model comprising exchange, content payload and management sub-models.

XML Instance Representation

```
<...
 modelBaseVersion="2 [1]">
   <D2LogicalModel:exchange> D2LogicalModel:Exchange </D2LogicalModel:exchange> [1]
   <D2LogicalModel:payloadPublication> D2LogicalModel:PayloadPublication </D2LogicalModel:payloadPublication> [0..1]
   <D2LogicalModel:d2LogicalModelExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:d2LogicalModelExtension>
   [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="D2LogicalModel">
   <xs:sequence>
      <xs:element name="exchange" type="D2LogicalModel:Exchange"/>
      <xs:element name="payloadPublication" type="D2LogicalModel:PayloadPublication" minOccurs="0"/>
      <xs:element name="d2LogicalModelExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
   </xs:sequence>
   <xs:attribute name="modelBaseVersion" use="required" fixed="2"/>
</xs:complexType>
```

top

Complex Type: DataValue

Super-types:	None
Sub-types:	• ApplicationRateValue (by extension) • DirectionBearingValue (by extension) • DirectionCompassValue (by extension) • FloatingPointMetreDistanceValue (by extension) • IntegerMetreDistanceValue (by extension) • KilogramsConcentrationValue (by extension) • MicrogramsConcentrationValue (by extension) • PercentageValue (by extension) • PrecipitationIntensityValue (by extension) • SpeedValue (by extension) • TemperatureValue (by extension)

Name	DataValue
Abstract	yes
Documentation	A data value of something that can be measured or calculated. Any provided meta-data values specified in the attributes override any specified generic characteristics such as defined for a specific measurement in the MeasurementSiteTable.

XML Instance Representation

```
<...
 accuracy="D2LogicalModel:Percentage [0..1] ?"
 computationalMethod="D2LogicalModel:ComputationMethodEnum [0..1] ?"
 numberOfIncompleteInputs="D2LogicalModel:NonNegativeInteger [0..1] ?"
 numberOfInputValuesUsed="D2LogicalModel:NonNegativeInteger [0..1] ?"
 smoothingFactor="D2LogicalModel:Float [0..1] ?"
 standardDeviation="D2LogicalModel:Float [0..1] ?"
 supplierCalculatedDataQuality="D2LogicalModel:Percentage [0..1] ?">
   <D2LogicalModel:dataError> D2LogicalModel:Boolean </D2LogicalModel:dataError> [0..1] ?
   <D2LogicalModel:reasonForDataError> D2LogicalModel:MultilingualString </D2LogicalModel:reasonForDataError> [0..1]
   ?
   <D2LogicalModel:dataValueExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:dataValueExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="DataValue" abstract="true">
   <xs:sequence>
      <xs:element name="dataError" type="D2LogicalModel:Boolean" minOccurs="0" maxOccurs="1"/>
      <xs:element name="reasonForDataError" type="D2LogicalModel:MultilingualString" minOccurs="0" maxOccurs="1"/>
      <xs:element name="dataValueExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
   </xs:sequence>
   <xs:attribute name="accuracy" type="D2LogicalModel:Percentage" use="optional"/>
   <xs:attribute name="computationalMethod" type="D2LogicalModel:ComputationMethodEnum" use="optional"/>
   <xs:attribute name="numberOfIncompleteInputs" type="D2LogicalModel:NonNegativeInteger" use="optional"/>
   <xs:attribute name="numberOfInputValuesUsed" type="D2LogicalModel:NonNegativeInteger" use="optional"/>
   <xs:attribute name="smoothingFactor" type="D2LogicalModel:Float" use="optional"/>
   <xs:attribute name="standardDeviation" type="D2LogicalModel:Float" use="optional"/>
   <xs:attribute name="supplierCalculatedDataQuality" type="D2LogicalModel:Percentage" use="optional"/>
</xs:complexType>
```

top

Complex Type: DirectionBearingValue

Super-types:	DataValue < **DirectionBearingValue** (by extension)
Sub-types:	None

Name	DirectionBearingValue
Abstract	no
Documentation	A measured or calculated value of direction as a bearing.

XML Instance Representation

```
<...
 accuracy="D2LogicalModel:Percentage [0..1] ?"
 computationalMethod="D2LogicalModel:ComputationMethodEnum [0..1] ?"
 numberOfIncompleteInputs="D2LogicalModel:NonNegativeInteger [0..1] ?"
 numberOfInputValuesUsed="D2LogicalModel:NonNegativeInteger [0..1] ?"
 smoothingFactor="D2LogicalModel:Float [0..1] ?"
 standardDeviation="D2LogicalModel:Float [0..1] ?"
 supplierCalculatedDataQuality="D2LogicalModel:Percentage [0..1] ?">
   <D2LogicalModel:dataError> D2LogicalModel:Boolean </D2LogicalModel:dataError> [0..1] ?
   <D2LogicalModel:reasonForDataError> D2LogicalModel:MultilingualString </D2LogicalModel:reasonForDataError> [0..1]
   ?
   <D2LogicalModel:dataValueExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:dataValueExtension> [0..1]
   <D2LogicalModel:directionBearing> D2LogicalModel:AngleInDegrees </D2LogicalModel:directionBearing> [1] ?
   <D2LogicalModel:directionBearingValueExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:directionBearingValueExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="DirectionBearingValue">
   <xs:complexContent>
      <xs:extension base="D2LogicalModel:DataValue">
         <xs:sequence>
            <xs:element name="directionBearing" type="D2LogicalModel:AngleInDegrees" minOccurs="1" maxOccurs="1"/>
            <xs:element name="directionBearingValueExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

top

Complex Type: DirectionCompassValue

Super-types:	DataValue < **DirectionCompassValue** (by extension)
Sub-types:	None

Name	DirectionCompassValue
Abstract	no
Documentation	A measured or calculated value of direction as a point of the compass.

XML Instance Representation

```
<...
 accuracy="D2LogicalModel:Percentage [0..1] ?"
 computationalMethod="D2LogicalModel:ComputationMethodEnum [0..1] ?"
 numberOfIncompleteInputs="D2LogicalModel:NonNegativeInteger [0..1] ?"
 numberOfInputValuesUsed="D2LogicalModel:NonNegativeInteger [0..1] ?"
 smoothingFactor="D2LogicalModel:Float [0..1] ?"
 standardDeviation="D2LogicalModel:Float [0..1] ?"
 supplierCalculatedDataQuality="D2LogicalModel:Percentage [0..1] ?">
   <D2LogicalModel:dataError> D2LogicalModel:Boolean </D2LogicalModel:dataError> [0..1] ?
   <D2LogicalModel:reasonForDataError> D2LogicalModel:MultilingualString </D2LogicalModel:reasonForDataError> [0..1]
   ?
   <D2LogicalModel:dataValueExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:dataValueExtension> [0..1]
   <D2LogicalModel:directionCompass> D2LogicalModel:DirectionCompassEnum </D2LogicalModel:directionCompass> [1] ?
   <D2LogicalModel:directionCompassValueExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:directionCompassValueExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="DirectionCompassValue">
   <xs:complexContent>
      <xs:extension base="D2LogicalModel:DataValue">
         <xs:sequence>
            <xs:element name="directionCompass" type="D2LogicalModel:DirectionCompassEnum" minOccurs="1"
            maxOccurs="1"/>
            <xs:element name="directionCompassValueExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

top

Complex Type: DistanceAlongLinearElement

Super-types:	None
Sub-types:	• DistanceFromLinearElementStart (by extension)

Name	DistanceAlongLinearElement

Abstract	yes
Documentation	Distance of a point along a linear element either measured from the start node or a defined referent on that linear element, where the start node is relative to the element definition rather than the direction of traffic flow.

XML Instance Representation

```
<...>
   <D2LogicalModel:distanceAlongLinearElementExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:distanceAlongLinearElementExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="DistanceAlongLinearElement" abstract="true">
   <xs:sequence>
      <xs:element name="distanceAlongLinearElementExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
   </xs:sequence>
</xs:complexType>
```

top

Complex Type: DistanceFromLinearElementStart

Super-types:	DistanceAlongLinearElement < **DistanceFromLinearElementStart** (by extension)
Sub-types:	None

Name	DistanceFromLinearElementStart
Abstract	no
Documentation	Distance of a point along a linear element measured from the start node of the linear element, where start node is relative to the element definition rather than the direction of traffic flow.

XML Instance Representation

```
<...>
   <D2LogicalModel:distanceAlongLinearElementExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:distanceAlongLinearElementExtension> [0..1]
   <D2LogicalModel:distanceAlong> D2LogicalModel:MetresAsFloat </D2LogicalModel:distanceAlong> [1] ?
   <D2LogicalModel:distanceFromLinearElementStartExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:distanceFromLinearElementStartExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="DistanceFromLinearElementStart">
   <xs:complexContent>
      <xs:extension base="D2LogicalModel:DistanceAlongLinearElement">
         <xs:sequence>
            <xs:element name="distanceAlong" type="D2LogicalModel:MetresAsFloat" minOccurs="1" maxOccurs="1"/>
            <xs:element name="distanceFromLinearElementStartExtension" type="D2LogicalModel:_ExtensionType"
            minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

top

Complex Type: ElaboratedData

Super-types:	None
Sub-types:	None

Name	ElaboratedData
Abstract	no
Documentation	An instance of data which is derived/computed from one or more measurements over a period of time. It may be a current value or a forecast value predicted from historical measurements.

XML Instance Representation

```
<...>
   <D2LogicalModel:source> D2LogicalModel:Source </D2LogicalModel:source> [0..1]
   <D2LogicalModel:elaboratedDataFault> D2LogicalModel:ElaboratedDataFault </D2LogicalModel:elaboratedDataFault>
   [0..*]
   <D2LogicalModel:basicData> D2LogicalModel:BasicData </D2LogicalModel:basicData> [0..1]
   <D2LogicalModel:elaboratedDataExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:elaboratedDataExtension>
   [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="ElaboratedData">
   <xs:sequence>
      <xs:element name="source" type="D2LogicalModel:Source" minOccurs="0"/>
      <xs:element name="elaboratedDataFault" type="D2LogicalModel:ElaboratedDataFault" minOccurs="0"
      maxOccurs="unbounded"/>
      <xs:element name="basicData" type="D2LogicalModel:BasicData" minOccurs="0"/>
      <xs:element name="elaboratedDataExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
   </xs:sequence>
</xs:complexType>
```

top

Complex Type: ElaboratedDataFault

Super-types:	Fault < **ElaboratedDataFault** (by extension)
Sub-types:	None

Name	ElaboratedDataFault
Abstract	no
Documentation	Details of a fault which is being reported for the related elaborated data.

XML Instance Representation

```
<...>
   <D2LogicalModel:faultIdentifier> D2LogicalModel:String </D2LogicalModel:faultIdentifier> [0..1] ?
   <D2LogicalModel:faultDescription> D2LogicalModel:String </D2LogicalModel:faultDescription> [0..1] ?
   <D2LogicalModel:faultCreationTime> D2LogicalModel:DateTime </D2LogicalModel:faultCreationTime> [0..1] ?
   <D2LogicalModel:faultLastUpdateTime> D2LogicalModel:DateTime </D2LogicalModel:faultLastUpdateTime> [1] ?
   <D2LogicalModel:faultSeverity> D2LogicalModel:FaultSeverityEnum </D2LogicalModel:faultSeverity> [0..1] ?
   <D2LogicalModel:faultExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:faultExtension> [0..1]
   <D2LogicalModel:elaboratedDataFault> D2LogicalModel:ElaboratedDataFaultEnum </D2LogicalModel:elaboratedDataFault>
   [1] ?
   <D2LogicalModel:elaboratedDataFaultExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:elaboratedDataFaultExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="ElaboratedDataFault">
   <xs:complexContent>
      <xs:extension base="D2LogicalModel:Fault">
         <xs:sequence>
            <xs:element name="elaboratedDataFault" type="D2LogicalModel:ElaboratedDataFaultEnum" minOccurs="1"
            maxOccurs="1"/>
            <xs:element name="elaboratedDataFaultExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

top

Complex Type: ElaboratedDataPublication

Super-types:	PayloadPublication < **ElaboratedDataPublication** (by extension)
Sub-types:	None

Name	ElaboratedDataPublication
Abstract	no
Documentation	A publication containing one or more elaborated data sets.

XML Instance Representation

```
<...
 lang="D2LogicalModel:Language [1] ?">
   <D2LogicalModel:publicationTime> D2LogicalModel:DateTime </D2LogicalModel:publicationTime> [1] ?
   <D2LogicalModel:publicationCreator> D2LogicalModel:InternationalIdentifier </D2LogicalModel:publicationCreator>
   [1]
   <D2LogicalModel:payloadPublicationExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:payloadPublicationExtension> [0..1]
   <D2LogicalModel:headerInformation> D2LogicalModel:HeaderInformation </D2LogicalModel:headerInformation> [1]
   <D2LogicalModel:elaboratedData> D2LogicalModel:ElaboratedData </D2LogicalModel:elaboratedData> [1..*]
   <D2LogicalModel:elaboratedDataPublicationExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:elaboratedDataPublicationExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="ElaboratedDataPublication">
   <xs:complexContent>
      <xs:extension base="D2LogicalModel:PayloadPublication">
         <xs:sequence>
            <xs:element name="headerInformation" type="D2LogicalModel:HeaderInformation"/>
            <xs:element name="elaboratedData" type="D2LogicalModel:ElaboratedData" maxOccurs="unbounded"/>
            <xs:element name="elaboratedDataPublicationExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

top

Complex Type: Exchange

Super-types:	None
Sub-types:	None

Name	Exchange
Abstract	no
Documentation	Details associated with the management of the exchange between the supplier and the client.

XML Instance Representation

```
<...>
   <D2LogicalModel:supplierIdentification> D2LogicalModel:InternationalIdentifier
   </D2LogicalModel:supplierIdentification> [1]
```

```
   <D2LogicalModel:exchangeExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:exchangeExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="Exchange">
   <xs:sequence>
      <xs:element name="supplierIdentification" type="D2LogicalModel:InternationalIdentifier"/>
      <xs:element name="exchangeExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
   </xs:sequence>
</xs:complexType>
```

top

Complex Type: Fault

Super-types:	None
Sub-types:	• ElaboratedDataFault (by extension)

Name	Fault
Abstract	no
Documentation	Information about a fault relating to a specific piece of equipment or process.

XML Instance Representation

```
<...>
   <D2LogicalModel:faultIdentifier> D2LogicalModel:String </D2LogicalModel:faultIdentifier> [0..1] ?
   <D2LogicalModel:faultDescription> D2LogicalModel:String </D2LogicalModel:faultDescription> [0..1] ?
   <D2LogicalModel:faultCreationTime> D2LogicalModel:DateTime </D2LogicalModel:faultCreationTime> [0..1] ?
   <D2LogicalModel:faultLastUpdateTime> D2LogicalModel:DateTime </D2LogicalModel:faultLastUpdateTime> [1] ?
   <D2LogicalModel:faultSeverity> D2LogicalModel:FaultSeverityEnum </D2LogicalModel:faultSeverity> [0..1] ?
   <D2LogicalModel:faultExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:faultExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="Fault">
   <xs:sequence>
      <xs:element name="faultIdentifier" type="D2LogicalModel:String" minOccurs="0" maxOccurs="1"/>
      <xs:element name="faultDescription" type="D2LogicalModel:String" minOccurs="0" maxOccurs="1"/>
      <xs:element name="faultCreationTime" type="D2LogicalModel:DateTime" minOccurs="0" maxOccurs="1"/>
      <xs:element name="faultLastUpdateTime" type="D2LogicalModel:DateTime" minOccurs="1" maxOccurs="1"/>
      <xs:element name="faultSeverity" type="D2LogicalModel:FaultSeverityEnum" minOccurs="0" maxOccurs="1"/>
      <xs:element name="faultExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
   </xs:sequence>
</xs:complexType>
```

top

Complex Type: FloatingPointMetreDistanceValue

Super-types:	DataValue < **FloatingPointMetreDistanceValue** (by extension)
Sub-types:	None

Name	FloatingPointMetreDistanceValue
Abstract	no
Documentation	A measured or calculated value of distance in metres in a floating point format.

XML Instance Representation

```
<...
 accuracy="D2LogicalModel:Percentage [0..1] ?"
 computationalMethod="D2LogicalModel:ComputationMethodEnum [0..1] ?"
 numberOfIncompleteInputs="D2LogicalModel:NonNegativeInteger [0..1] ?"
 numberOfInputValuesUsed="D2LogicalModel:NonNegativeInteger [0..1] ?"
 smoothingFactor="D2LogicalModel:Float [0..1] ?"
 standardDeviation="D2LogicalModel:Float [0..1] ?"
 supplierCalculatedDataQuality="D2LogicalModel:Percentage [0..1] ?">
   <D2LogicalModel:dataError> D2LogicalModel:Boolean </D2LogicalModel:dataError> [0..1] ?
   <D2LogicalModel:reasonForDataError> D2LogicalModel:MultilingualString </D2LogicalModel:reasonForDataError> [0..1]
   ?
   <D2LogicalModel:dataValueExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:dataValueExtension> [0..1]
   <D2LogicalModel:floatingPointMetreDistance> D2LogicalModel:MetresAsFloat
   </D2LogicalModel:floatingPointMetreDistance> [1] ?
   <D2LogicalModel:floatingPointMetreDistanceValueExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:floatingPointMetreDistanceValueExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="FloatingPointMetreDistanceValue">
   <xs:complexContent>
      <xs:extension base="D2LogicalModel:DataValue">
         <xs:sequence>
            <xs:element name="floatingPointMetreDistance" type="D2LogicalModel:MetresAsFloat" minOccurs="1"
            maxOccurs="1"/>
            <xs:element name="floatingPointMetreDistanceValueExtension" type="D2LogicalModel:_ExtensionType"
            minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

top

Complex Type: GroupOfLocations

Super-types:	None

Sub-types:	• Location (by extension)
	  ◦ NetworkLocation (by extension)
	  ▪ Point (by extension)

Name	GroupOfLocations
Abstract	yes
Documentation	One or more physically separate locations. Multiple locations may be related, as in an itinerary (or route), or may be unrelated. It is not for identifying the same physical location using different Location objects for different referencing systems.

XML Instance Representation

```
<...>
   <D2LogicalModel:groupOfLocationsExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:groupOfLocationsExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="GroupOfLocations" abstract="true">
   <xs:sequence>
      <xs:element name="groupOfLocationsExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
   </xs:sequence>
</xs:complexType>
```

top

Complex Type: HeaderInformation

Super-types:	None
Sub-types:	None

Name	HeaderInformation
Abstract	no
Documentation	Management information relating to the data contained within a publication.

XML Instance Representation

```
<...>
   <D2LogicalModel:areaOfInterest> D2LogicalModel:AreaOfInterestEnum </D2LogicalModel:areaOfInterest> [0..1] ?
   <D2LogicalModel:confidentiality> D2LogicalModel:ConfidentialityValueEnum </D2LogicalModel:confidentiality> [1] ?
   <D2LogicalModel:informationStatus> D2LogicalModel:InformationStatusEnum </D2LogicalModel:informationStatus> [1] ?
   <D2LogicalModel:urgency> D2LogicalModel:UrgencyEnum </D2LogicalModel:urgency> [0..1] ?
   <D2LogicalModel:headerInformationExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:headerInformationExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="HeaderInformation">
   <xs:sequence>
      <xs:element name="areaOfInterest" type="D2LogicalModel:AreaOfInterestEnum" minOccurs="0" maxOccurs="1"/>
      <xs:element name="confidentiality" type="D2LogicalModel:ConfidentialityValueEnum" minOccurs="1" maxOccurs="1"/>
      <xs:element name="informationStatus" type="D2LogicalModel:InformationStatusEnum" minOccurs="1" maxOccurs="1"/>
      <xs:element name="urgency" type="D2LogicalModel:UrgencyEnum" minOccurs="0" maxOccurs="1"/>
      <xs:element name="headerInformationExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
   </xs:sequence>
</xs:complexType>
```

top

Complex Type: Humidity

Super-types:	None
Sub-types:	None

Name	Humidity
Abstract	no
Documentation	Details of atmospheric humidity.

XML Instance Representation

```
<...>
   <D2LogicalModel:relativeHumidity> D2LogicalModel:PercentageValue </D2LogicalModel:relativeHumidity> [1] ?
   <D2LogicalModel:humidityExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:humidityExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="Humidity">
   <xs:sequence>
      <xs:element name="relativeHumidity" type="D2LogicalModel:PercentageValue"/>
      <xs:element name="humidityExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
   </xs:sequence>
</xs:complexType>
```

top

Complex Type: HumidityInformation

Super-types:	BasicData < WeatherData (by extension) < **HumidityInformation** (by extension)
Sub-types:	None

Name	HumidityInformation
Abstract	no
Documentation	Measurements of atmospheric humidity.

XML Instance Representation

```
<...
 measurementOrCalculatedTimePrecision="D2LogicalModel:TimePrecisionEnum [0..1] ?">
   <D2LogicalModel:measurementOrCalculationPeriod> D2LogicalModel:Seconds
   </D2LogicalModel:measurementOrCalculationPeriod> [0..1] ?
   <D2LogicalModel:measurementOrCalculationTime> D2LogicalModel:DateTime
   </D2LogicalModel:measurementOrCalculationTime> [0..1] ?
   <D2LogicalModel:pertinentLocation> D2LogicalModel:GroupOfLocations </D2LogicalModel:pertinentLocation> [0..1] ?
   <D2LogicalModel:basicDataExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:basicDataExtension> [0..1]
   <D2LogicalModel:weatherDataExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:weatherDataExtension> [0..1]
   <D2LogicalModel:humidity> D2LogicalModel:Humidity </D2LogicalModel:humidity> [1]
   <D2LogicalModel:humidityInformationExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:humidityInformationExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="HumidityInformation">
   <xs:complexContent>
      <xs:extension base="D2LogicalModel:WeatherData">
         <xs:sequence>
            <xs:element name="humidity" type="D2LogicalModel:Humidity"/>
            <xs:element name="humidityInformationExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

top

Complex Type: IntegerMetreDistanceValue

Super-types:	DataValue < **IntegerMetreDistanceValue** (by extension)
Sub-types:	None

Name	IntegerMetreDistanceValue
Abstract	no
Documentation	A measured or calculated value of distance in whole metres.

XML Instance Representation

```
<...
 accuracy="D2LogicalModel:Percentage [0..1] ?"
 computationalMethod="D2LogicalModel:ComputationMethodEnum [0..1] ?"
 numberOfIncompleteInputs="D2LogicalModel:NonNegativeInteger [0..1] ?"
 numberOfInputValuesUsed="D2LogicalModel:NonNegativeInteger [0..1] ?"
 smoothingFactor="D2LogicalModel:Float [0..1] ?"
 standardDeviation="D2LogicalModel:Float [0..1] ?"
 supplierCalculatedDataQuality="D2LogicalModel:Percentage [0..1] ?">
   <D2LogicalModel:dataError> D2LogicalModel:Boolean </D2LogicalModel:dataError> [0..1] ?
   <D2LogicalModel:reasonForDataError> D2LogicalModel:MultilingualString </D2LogicalModel:reasonForDataError> [0..1]
   ?
   <D2LogicalModel:dataValueExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:dataValueExtension> [0..1]
   <D2LogicalModel:integerMetreDistance> D2LogicalModel:MetresAsNonNegativeInteger
   </D2LogicalModel:integerMetreDistance> [1] ?
   <D2LogicalModel:integerMetreDistanceValueExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:integerMetreDistanceValueExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="IntegerMetreDistanceValue">
   <xs:complexContent>
      <xs:extension base="D2LogicalModel:DataValue">
         <xs:sequence>
            <xs:element name="integerMetreDistance" type="D2LogicalModel:MetresAsNonNegativeInteger" minOccurs="1"
            maxOccurs="1"/>
            <xs:element name="integerMetreDistanceValueExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

top

Complex Type: InternationalIdentifier

Super-types:	None
Sub-types:	None

Name	InternationalIdentifier
Abstract	no
Documentation	An identifier/name whose range is specific to the particular country.

XML Instance Representation

```
<...>
   <D2LogicalModel:country> D2LogicalModel:CountryEnum </D2LogicalModel:country> [1] ?
   <D2LogicalModel:nationalIdentifier> D2LogicalModel:String </D2LogicalModel:nationalIdentifier> [1] ?
   <D2LogicalModel:internationalIdentifierExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:internationalIdentifierExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="InternationalIdentifier">
   <xs:sequence>
      <xs:element name="country" type="D2LogicalModel:CountryEnum" minOccurs="1" maxOccurs="1"/>
      <xs:element name="nationalIdentifier" type="D2LogicalModel:String" minOccurs="1" maxOccurs="1"/>
      <xs:element name="internationalIdentifierExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
   </xs:sequence>
</xs:complexType>
```

top

Complex Type: KilogramsConcentrationValue

Super-types:	DataValue < **KilogramsConcentrationValue** (by extension)
Sub-types:	None

Name	KilogramsConcentrationValue
Abstract	no
Documentation	A measured or calculated value of concentration of a substance in grams per unit volume.

XML Instance Representation

```
<...
 accuracy="D2LogicalModel:Percentage [0..1] ?"
 computationalMethod="D2LogicalModel:ComputationMethodEnum [0..1] ?"
 numberOfIncompleteInputs="D2LogicalModel:NonNegativeInteger [0..1] ?"
 numberOfInputValuesUsed="D2LogicalModel:NonNegativeInteger [0..1] ?"
 smoothingFactor="D2LogicalModel:Float [0..1] ?"
 standardDeviation="D2LogicalModel:Float [0..1] ?"
 supplierCalculatedDataQuality="D2LogicalModel:Percentage [0..1] ?">
   <D2LogicalModel:dataError> D2LogicalModel:Boolean </D2LogicalModel:dataError> [0..1] ?
   <D2LogicalModel:reasonForDataError> D2LogicalModel:MultilingualString </D2LogicalModel:reasonForDataError> [0..1]
   ?
   <D2LogicalModel:dataValueExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:dataValueExtension> [0..1]
   <D2LogicalModel:kilogramsConcentration> D2LogicalModel:ConcentrationKilogramsPerCubicMetre
   </D2LogicalModel:kilogramsConcentration> [1] ?
   <D2LogicalModel:kilogramsConcentrationValueExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:kilogramsConcentrationValueExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="KilogramsConcentrationValue">
   <xs:complexContent>
      <xs:extension base="D2LogicalModel:DataValue">
         <xs:sequence>
            <xs:element name="kilogramsConcentration" type="D2LogicalModel:ConcentrationKilogramsPerCubicMetre"
            minOccurs="1" maxOccurs="1"/>
            <xs:element name="kilogramsConcentrationValueExtension" type="D2LogicalModel:_ExtensionType"
            minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

top

Complex Type: LinearElement

Super-types:	None
Sub-types:	• LinearElementByCode (by extension)

Name	LinearElement
Abstract	no
Documentation	A linear element along a single linear object, consistent with ISO 19148 definitions.

XML Instance Representation

```
<...>
   <D2LogicalModel:roadName> D2LogicalModel:MultilingualString </D2LogicalModel:roadName> [0..1] ?
   <D2LogicalModel:linearElementExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:linearElementExtension>
   [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="LinearElement">
   <xs:sequence>
      <xs:element name="roadName" type="D2LogicalModel:MultilingualString" minOccurs="0" maxOccurs="1"/>
```

```
    <xs:element name="linearElementExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

top

Complex Type: LinearElementByCode

Super-types:	LinearElement < **LinearElementByCode** (by extension)
Sub-types:	None

Name	LinearElementByCode
Abstract	no
Documentation	A linear element along a single linear object defined by its identifier or code in a road network reference model (specified in LinearElement class) which segments the road network according to specific business rules.

XML Instance Representation

```
<...>
  <D2LogicalModel:roadName> D2LogicalModel:MultilingualString </D2LogicalModel:roadName> [0..1] ?
  <D2LogicalModel:linearElementExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:linearElementExtension>
  [0..1]
  <D2LogicalModel:linearElementIdentifier> D2LogicalModel:String </D2LogicalModel:linearElementIdentifier> [1] ?
  <D2LogicalModel:linearElementByCodeExtension> D2LogicalModel:_ExtensionType
  </D2LogicalModel:linearElementByCodeExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="LinearElementByCode">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:LinearElement">
      <xs:sequence>
        <xs:element name="linearElementIdentifier" type="D2LogicalModel:String" minOccurs="1" maxOccurs="1"/>
        <xs:element name="linearElementByCodeExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

top

Complex Type: Location

Super-types:	GroupOfLocations < **Location** (by extension)
Sub-types:	• NetworkLocation (by extension) ◦ Point (by extension)

Name	Location
Abstract	yes
Documentation	The specification of a location either on a network (as a point or a linear location) or as an area. This may be provided in one or more referencing systems.

XML Instance Representation

```
<...>
  <D2LogicalModel:groupOfLocationsExtension> D2LogicalModel:_ExtensionType
  </D2LogicalModel:groupOfLocationsExtension> [0..1]
  <D2LogicalModel:locationForDisplay> D2LogicalModel:PointCoordinates </D2LogicalModel:locationForDisplay> [0..1] ?
  <D2LogicalModel:locationExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:locationExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="Location" abstract="true">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:GroupOfLocations">
      <xs:sequence>
        <xs:element name="locationForDisplay" type="D2LogicalModel:PointCoordinates" minOccurs="0"/>
        <xs:element name="locationExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

top

Complex Type: MicrogramsConcentrationValue

Super-types:	DataValue < **MicrogramsConcentrationValue** (by extension)
Sub-types:	None

Name	MicrogramsConcentrationValue
Abstract	no
Documentation	A measured or calculated value of concentration of a substance in micrograms per unit volume.

XML Instance Representation

```
<...
 accuracy="D2LogicalModel:Percentage [0..1] ?"
 computationalMethod="D2LogicalModel:ComputationMethodEnum [0..1] ?"
 numberOfIncompleteInputs="D2LogicalModel:NonNegativeInteger [0..1] ?"
 numberOfInputValuesUsed="D2LogicalModel:NonNegativeInteger [0..1] ?"
 smoothingFactor="D2LogicalModel:Float [0..1] ?"
 standardDeviation="D2LogicalModel:Float [0..1] ?"
 supplierCalculatedDataQuality="D2LogicalModel:Percentage [0..1] ?">
   <D2LogicalModel:dataError> D2LogicalModel:Boolean </D2LogicalModel:dataError> [0..1] ?
   <D2LogicalModel:reasonForDataError> D2LogicalModel:MultilingualString </D2LogicalModel:reasonForDataError> [0..1]
   ?
   <D2LogicalModel:dataValueExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:dataValueExtension> [0..1]
   <D2LogicalModel:microgramsConcentration> D2LogicalModel:ConcentrationMicrogramsPerCubicMetre
   </D2LogicalModel:microgramsConcentration> [1] ?
   <D2LogicalModel:microgramsConcentrationValueExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:microgramsConcentrationValueExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="MicrogramsConcentrationValue">
   <xs:complexContent>
      <xs:extension base="D2LogicalModel:DataValue">
         <xs:sequence>
            <xs:element name="microgramsConcentration" type="D2LogicalModel:ConcentrationMicrogramsPerCubicMetre"
            minOccurs="1" maxOccurs="1"/>
            <xs:element name="microgramsConcentrationValueExtension" type="D2LogicalModel:_ExtensionType"
            minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

top

Complex Type: MultilingualString

Super-types:	None
Sub-types:	None

Name	MultilingualString
Abstract	no

XML Instance Representation

```
<...>
   <D2LogicalModel:values> [1]
      <D2LogicalModel:value> D2LogicalModel:MultilingualStringValue </D2LogicalModel:value> [1..*]
   </D2LogicalModel:values>
</...>
```

Schema Component Representation

```
<xs:complexType name="MultilingualString">
   <xs:sequence>
      <xs:element name="values">
         <xs:complexType>
            <xs:sequence>
               <xs:element name="value" type="D2LogicalModel:MultilingualStringValue" maxOccurs="unbounded"/>
            </xs:sequence>
         </xs:complexType>
      </xs:element>
   </xs:sequence>
</xs:complexType>
```

top

Complex Type: MultilingualStringValue

Super-types:	xs:string < MultilingualStringValueType (by restriction) < **MultilingualStringValue** (by extension)
Sub-types:	None

Name	MultilingualStringValue
Abstract	no

XML Instance Representation

```
<...
 lang="xs:language [0..1]">
   D2LogicalModel:MultilingualStringValueType
</...>
```

Schema Component Representation

```
<xs:complexType name="MultilingualStringValue">
   <xs:simpleContent>
      <xs:extension base="D2LogicalModel:MultilingualStringValueType">
         <xs:attribute name="lang" type="xs:language"/>
      </xs:extension>
   </xs:simpleContent>
</xs:complexType>
```

top

Complex Type: NetworkLocation

Super-types:	GroupOfLocations < Location (by extension) < **NetworkLocation** (by extension)
Sub-types:	• Point (by extension)

Name	NetworkLocation
Abstract	yes
Documentation	The specification of a location on a network (as a point or a linear location).

XML Instance Representation

```
<...>
   <D2LogicalModel:groupOfLocationsExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:groupOfLocationsExtension> [0..1]
   <D2LogicalModel:locationForDisplay> D2LogicalModel:PointCoordinates </D2LogicalModel:locationForDisplay> [0..1] ?
   <D2LogicalModel:locationExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:locationExtension> [0..1]
   <D2LogicalModel:supplementaryPositionalDescription> D2LogicalModel:SupplementaryPositionalDescription
   </D2LogicalModel:supplementaryPositionalDescription> [0..1]
   <D2LogicalModel:networkLocationExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:networkLocationExtension>
   [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="NetworkLocation" abstract="true">
   <xs:complexContent>
      <xs:extension base="D2LogicalModel:Location">
         <xs:sequence>
            <xs:element name="supplementaryPositionalDescription"
            type="D2LogicalModel:SupplementaryPositionalDescription" minOccurs="0"/>
            <xs:element name="networkLocationExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

top

Complex Type: OffsetDistance

Super-types:	None
Sub-types:	None

Name	OffsetDistance
Abstract	no
Documentation	The non negative offset distance from the ALERT-C referenced point to the actual point.

XML Instance Representation

```
<...>
   <D2LogicalModel:offsetDistance> D2LogicalModel:MetresAsNonNegativeInteger </D2LogicalModel:offsetDistance> [1] ?
   <D2LogicalModel:offsetDistanceExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:offsetDistanceExtension>
   [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="OffsetDistance">
   <xs:sequence>
      <xs:element name="offsetDistance" type="D2LogicalModel:MetresAsNonNegativeInteger" minOccurs="1" maxOccurs="1"/>
      <xs:element name="offsetDistanceExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
   </xs:sequence>
</xs:complexType>
```

top

Complex Type: OpenlrBaseLocationReferencePoint

Super-types:	None
Sub-types:	• OpenlrLastLocationReferencePoint (by extension) • OpenlrLocationReferencePoint (by extension)

Name	OpenlrBaseLocationReferencePoint
Abstract	yes
Documentation	Base class used to hold data about a reference point.

XML Instance Representation

```
<...>
   <D2LogicalModel:openlrCoordinate> D2LogicalModel:PointCoordinates </D2LogicalModel:openlrCoordinate> [1]
   <D2LogicalModel:openlrLineAttributes> D2LogicalModel:OpenlrLineAttributes </D2LogicalModel:openlrLineAttributes>
   [1]
   <D2LogicalModel:openlrBaseLocationReferencePointExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:openlrBaseLocationReferencePointExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="OpenlrBaseLocationReferencePoint" abstract="true">
   <xs:sequence>
```

```
    <xs:element name="openlrCoordinate" type="D2LogicalModel:PointCoordinates"/>
    <xs:element name="openlrLineAttributes" type="D2LogicalModel:OpenlrLineAttributes"/>
    <xs:element name="openlrBaseLocationReferencePointExtension" type="D2LogicalModel:_ExtensionType"
    minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

top

Complex Type: OpenlrBasePointLocation

Super-types:	None
Sub-types:	• OpenlrPointAlongLine (by extension) • OpenlrPoiWithAccessPoint (by extension)

Name	OpenlrBasePointLocation
Abstract	yes
Documentation	Holds common data that are used both in OpenlrPointAccessPoint and OpenlrPointAlongLine.

XML Instance Representation

```
<...>
  <D2LogicalModel:openlrSideOfRoad> D2LogicalModel:OpenlrSideOfRoadEnum </D2LogicalModel:openlrSideOfRoad> [1] ?
  <D2LogicalModel:openlrOrientation> D2LogicalModel:OpenlrOrientationEnum </D2LogicalModel:openlrOrientation> [1] ?
  <D2LogicalModel:openlrPositiveOffset> D2LogicalModel:MetresAsNonNegativeInteger
  </D2LogicalModel:openlrPositiveOffset> [0..1] ?
  <D2LogicalModel:openlrLocationReferencePoint> D2LogicalModel:OpenlrLocationReferencePoint
  </D2LogicalModel:openlrLocationReferencePoint> [1]
  <D2LogicalModel:openlrLastLocationReferencePoint> D2LogicalModel:OpenlrLastLocationReferencePoint
  </D2LogicalModel:openlrLastLocationReferencePoint> [1]
  <D2LogicalModel:openlrBasePointLocationExtension> D2LogicalModel:_ExtensionType
  </D2LogicalModel:openlrBasePointLocationExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="OpenlrBasePointLocation" abstract="true">
  <xs:sequence>
    <xs:element name="openlrSideOfRoad" type="D2LogicalModel:OpenlrSideOfRoadEnum" minOccurs="1" maxOccurs="1"/>
    <xs:element name="openlrOrientation" type="D2LogicalModel:OpenlrOrientationEnum" minOccurs="1" maxOccurs="1"/>
    <xs:element name="openlrPositiveOffset" type="D2LogicalModel:MetresAsNonNegativeInteger" minOccurs="0"
    maxOccurs="1"/>
    <xs:element name="openlrLocationReferencePoint" type="D2LogicalModel:OpenlrLocationReferencePoint"/>
    <xs:element name="openlrLastLocationReferencePoint" type="D2LogicalModel:OpenlrLastLocationReferencePoint"/>
    <xs:element name="openlrBasePointLocationExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

top

Complex Type: OpenlrExtendedPoint

Super-types:	None
Sub-types:	None

Name	OpenlrExtendedPoint
Abstract	no
Documentation	Extension class for OpenLR point.

XML Instance Representation

```
<...>
  <D2LogicalModel:openlrPointLocationReference> D2LogicalModel:OpenlrPointLocationReference
  </D2LogicalModel:openlrPointLocationReference> [1]
</...>
```

Schema Component Representation

```
<xs:complexType name="OpenlrExtendedPoint">
  <xs:sequence>
    <xs:element name="openlrPointLocationReference" type="D2LogicalModel:OpenlrPointLocationReference"/>
  </xs:sequence>
</xs:complexType>
```

top

Complex Type: OpenlrGeoCoordinate

Super-types:	None
Sub-types:	None

Name	OpenlrGeoCoordinate
Abstract	no
Documentation	A geo-coordinate pair is a position in a map defined by its longitude and latitude coordinate values.

XML Instance Representation

```
<...>
  <D2LogicalModel:openlrCoordinate> D2LogicalModel:PointCoordinates </D2LogicalModel:openlrCoordinate> [1]
```

```
   <D2LogicalModel:openlrGeoCoordinateExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:openlrGeoCoordinateExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="OpenlrGeoCoordinate">
   <xs:sequence>
      <xs:element name="openlrCoordinate" type="D2LogicalModel:PointCoordinates"/>
      <xs:element name="openlrGeoCoordinateExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
   </xs:sequence>
</xs:complexType>
```

top

Complex Type: OpenlrLastLocationReferencePoint

Super-types:	OpenlrBaseLocationReferencePoint < **OpenlrLastLocationReferencePoint** (by extension)
Sub-types:	None

Name	OpenlrLastLocationReferencePoint
Abstract	no
Documentation	The sequence of location reference points is terminated by a last location reference point.

XML Instance Representation

```
<...>
   <D2LogicalModel:openlrCoordinate> D2LogicalModel:PointCoordinates </D2LogicalModel:openlrCoordinate> [1]
   <D2LogicalModel:openlrLineAttributes> D2LogicalModel:OpenlrLineAttributes </D2LogicalModel:openlrLineAttributes>
   [1]
   <D2LogicalModel:openlrBaseLocationReferencePointExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:openlrBaseLocationReferencePointExtension> [0..1]
   <D2LogicalModel:openlrLastLocationReferencePointExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:openlrLastLocationReferencePointExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="OpenlrLastLocationReferencePoint">
   <xs:complexContent>
      <xs:extension base="D2LogicalModel:OpenlrBaseLocationReferencePoint">
         <xs:sequence>
            <xs:element name="openlrLastLocationReferencePointExtension" type="D2LogicalModel:_ExtensionType"
            minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

top

Complex Type: OpenlrLineAttributes

Super-types:	None
Sub-types:	None

Name	OpenlrLineAttributes
Abstract	no
Documentation	Line attributes are part of a location reference point and consists of functional road class (FRC),form of way (FOW) and bearing (BEAR) data.

XML Instance Representation

```
<...>
   <D2LogicalModel:openlrFunctionalRoadClass> D2LogicalModel:OpenlrFunctionalRoadClassEnum
   </D2LogicalModel:openlrFunctionalRoadClass> [1] ?
   <D2LogicalModel:openlrFormOfWay> D2LogicalModel:OpenlrFormOfWayEnum </D2LogicalModel:openlrFormOfWay> [1] ?
   <D2LogicalModel:openlrBearing> D2LogicalModel:AngleInDegrees </D2LogicalModel:openlrBearing> [1] ?
   <D2LogicalModel:openlrLineAttributesExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:openlrLineAttributesExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="OpenlrLineAttributes">
   <xs:sequence>
      <xs:element name="openlrFunctionalRoadClass" type="D2LogicalModel:OpenlrFunctionalRoadClassEnum" minOccurs="1"
      maxOccurs="1"/>
      <xs:element name="openlrFormOfWay" type="D2LogicalModel:OpenlrFormOfWayEnum" minOccurs="1" maxOccurs="1"/>
      <xs:element name="openlrBearing" type="D2LogicalModel:AngleInDegrees" minOccurs="1" maxOccurs="1"/>
      <xs:element name="openlrLineAttributesExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
   </xs:sequence>
</xs:complexType>
```

top

Complex Type: OpenlrLocationReferencePoint

Super-types:	OpenlrBaseLocationReferencePoint < **OpenlrLocationReferencePoint** (by extension)
Sub-types:	None

Name	OpenlrLocationReferencePoint

Abstract	no
Documentation	The basis of a location reference is a sequence of location reference points (LRPs).

XML Instance Representation

```
<...>
   <D2LogicalModel:openlrCoordinate> D2LogicalModel:PointCoordinates </D2LogicalModel:openlrCoordinate> [1]
   <D2LogicalModel:openlrLineAttributes> D2LogicalModel:OpenlrLineAttributes </D2LogicalModel:openlrLineAttributes>
   [1]
   <D2LogicalModel:openlrBaseLocationReferencePointExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:openlrBaseLocationReferencePointExtension> [0..1]
   <D2LogicalModel:openlrPathAttributes> D2LogicalModel:OpenlrPathAttributes </D2LogicalModel:openlrPathAttributes>
   [1]
   <D2LogicalModel:openlrLocationReferencePointExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:openlrLocationReferencePointExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="OpenlrLocationReferencePoint">
   <xs:complexContent>
      <xs:extension base="D2LogicalModel:OpenlrBaseLocationReferencePoint">
         <xs:sequence>
            <xs:element name="openlrPathAttributes" type="D2LogicalModel:OpenlrPathAttributes"/>
            <xs:element name="openlrLocationReferencePointExtension" type="D2LogicalModel:_ExtensionType"
            minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

top

Complex Type: OpenlrPathAttributes

Super-types:	None
Sub-types:	None

Name	OpenlrPathAttributes
Abstract	no
Documentation	The field path attributes is part of a location reference point (except for the last location reference point) and consists of lowest functional road class (LFRCNP) and distance to next point (DNP) data.

XML Instance Representation

```
<...>
   <D2LogicalModel:openlrLowestFRCToNextLRPoint> D2LogicalModel:OpenlrFunctionalRoadClassEnum
   </D2LogicalModel:openlrLowestFRCToNextLRPoint> [1] ?
   <D2LogicalModel:openlrDistanceToNextLRPoint> D2LogicalModel:NonNegativeInteger
   </D2LogicalModel:openlrDistanceToNextLRPoint> [1] ?
   <D2LogicalModel:openlrPathAttributesExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:openlrPathAttributesExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="OpenlrPathAttributes">
   <xs:sequence>
      <xs:element name="openlrLowestFRCToNextLRPoint" type="D2LogicalModel:OpenlrFunctionalRoadClassEnum"
      minOccurs="1" maxOccurs="1"/>
      <xs:element name="openlrDistanceToNextLRPoint" type="D2LogicalModel:NonNegativeInteger" minOccurs="1"
      maxOccurs="1"/>
      <xs:element name="openlrPathAttributesExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
   </xs:sequence>
</xs:complexType>
```

top

Complex Type: OpenlrPoiWithAccessPoint

Super-types:	OpenlrBasePointLocation < **OpenlrPoiWithAccessPoint** (by extension)
Sub-types:	None

Name	OpenlrPoiWithAccessPoint
Abstract	no
Documentation	Point along line with access is a point location which is defined by a line,an offset value and a coordinate.

XML Instance Representation

```
<...>
   <D2LogicalModel:openlrSideOfRoad> D2LogicalModel:OpenlrSideOfRoadEnum </D2LogicalModel:openlrSideOfRoad> [1] ?
   <D2LogicalModel:openlrOrientation> D2LogicalModel:OpenlrOrientationEnum </D2LogicalModel:openlrOrientation> [1] ?
   <D2LogicalModel:openlrPositiveOffset> D2LogicalModel:MetresAsNonNegativeInteger
   </D2LogicalModel:openlrPositiveOffset> [0..1] ?
   <D2LogicalModel:openlrLocationReferencePoint> D2LogicalModel:OpenlrLocationReferencePoint
   </D2LogicalModel:openlrLocationReferencePoint> [1]
   <D2LogicalModel:openlrLastLocationReferencePoint> D2LogicalModel:OpenlrLastLocationReferencePoint
   </D2LogicalModel:openlrLastLocationReferencePoint> [1]
   <D2LogicalModel:openlrBasePointLocationExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:openlrBasePointLocationExtension> [0..1]
   <D2LogicalModel:openlrCoordinate> D2LogicalModel:PointCoordinates </D2LogicalModel:openlrCoordinate> [1] ?
   <D2LogicalModel:openlrPoiWithAccessPointExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:openlrPoiWithAccessPointExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="OpenlrPoiWithAccessPoint">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:OpenlrBasePointLocation">
      <xs:sequence>
        <xs:element name="openlrCoordinate" type="D2LogicalModel:PointCoordinates"/>
        <xs:element name="openlrPoiWithAccessPointExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

top

Complex Type: OpenlrPointAlongLine

Super-types:	OpenlrBasePointLocation < **OpenlrPointAlongLine** (by extension)
Sub-types:	None

Name	OpenlrPointAlongLine
Abstract	no
Documentation	Point along a line

XML Instance Representation

```
<...>
  <D2LogicalModel:openlrSideOfRoad> D2LogicalModel:OpenlrSideOfRoadEnum </D2LogicalModel:openlrSideOfRoad> [1] ?
  <D2LogicalModel:openlrOrientation> D2LogicalModel:OpenlrOrientationEnum </D2LogicalModel:openlrOrientation> [1] ?
  <D2LogicalModel:openlrPositiveOffset> D2LogicalModel:MetresAsNonNegativeInteger
  </D2LogicalModel:openlrPositiveOffset> [0..1] ?
  <D2LogicalModel:openlrLocationReferencePoint> D2LogicalModel:OpenlrLocationReferencePoint
  </D2LogicalModel:openlrLocationReferencePoint> [1]
  <D2LogicalModel:openlrLastLocationReferencePoint> D2LogicalModel:OpenlrLastLocationReferencePoint
  </D2LogicalModel:openlrLastLocationReferencePoint> [1]
  <D2LogicalModel:openlrBasePointLocationExtension> D2LogicalModel:_ExtensionType
  </D2LogicalModel:openlrBasePointLocationExtension> [0..1]
  <D2LogicalModel:openlrPointAlongLineExtension> D2LogicalModel:_ExtensionType
  </D2LogicalModel:openlrPointAlongLineExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="OpenlrPointAlongLine">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:OpenlrBasePointLocation">
      <xs:sequence>
        <xs:element name="openlrPointAlongLineExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

top

Complex Type: OpenlrPointLocationReference

Super-types:	None
Sub-types:	None

Name	OpenlrPointLocationReference
Abstract	no
Documentation	A point location is a zero-dimensional element in a map that specifies a geometric location.

XML Instance Representation

```
<...>
  <D2LogicalModel:openlrGeoCoordinate> D2LogicalModel:OpenlrGeoCoordinate </D2LogicalModel:openlrGeoCoordinate>
  [0..1]
  <D2LogicalModel:openlrPoiWithAccessPoint> D2LogicalModel:OpenlrPoiWithAccessPoint
  </D2LogicalModel:openlrPoiWithAccessPoint> [0..1]
  <D2LogicalModel:openlrPointAlongLine> D2LogicalModel:OpenlrPointAlongLine </D2LogicalModel:openlrPointAlongLine>
  [0..1]
  <D2LogicalModel:openlrPointLocationReferenceExtension> D2LogicalModel:_ExtensionType
  </D2LogicalModel:openlrPointLocationReferenceExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="OpenlrPointLocationReference">
  <xs:sequence>
    <xs:element name="openlrGeoCoordinate" type="D2LogicalModel:OpenlrGeoCoordinate" minOccurs="0"/>
    <xs:element name="openlrPoiWithAccessPoint" type="D2LogicalModel:OpenlrPoiWithAccessPoint" minOccurs="0"/>
    <xs:element name="openlrPointAlongLine" type="D2LogicalModel:OpenlrPointAlongLine" minOccurs="0"/>
    <xs:element name="openlrPointLocationReferenceExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

top

Complex Type: PayloadPublication

Super-types:	None

Sub-types:	• ElaboratedDataPublication (by extension)

Name	PayloadPublication
Abstract	yes
Documentation	A payload publication of traffic related information or associated management information created at a specific point in time that can be exchanged via a DATEX II interface.

XML Instance Representation

```
<...
 lang="D2LogicalModel:Language [1] ?">
   <D2LogicalModel:publicationTime> D2LogicalModel:DateTime </D2LogicalModel:publicationTime> [1] ?
   <D2LogicalModel:publicationCreator> D2LogicalModel:InternationalIdentifier </D2LogicalModel:publicationCreator>
   [1]
   <D2LogicalModel:payloadPublicationExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:payloadPublicationExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="PayloadPublication" abstract="true">
   <xs:sequence>
      <xs:element name="publicationTime" type="D2LogicalModel:DateTime" minOccurs="1" maxOccurs="1"/>
      <xs:element name="publicationCreator" type="D2LogicalModel:InternationalIdentifier"/>
      <xs:element name="payloadPublicationExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
   </xs:sequence>
   <xs:attribute name="lang" type="D2LogicalModel:Language" use="required"/>
</xs:complexType>
```

top

Complex Type: PercentageValue

Super-types:	DataValue < **PercentageValue** (by extension)
Sub-types:	None

Name	PercentageValue
Abstract	no
Documentation	A measured or calculated value expressed as a percentage.

XML Instance Representation

```
<...
 accuracy="D2LogicalModel:Percentage [0..1] ?"
 computationalMethod="D2LogicalModel:ComputationMethodEnum [0..1] ?"
 numberOfIncompleteInputs="D2LogicalModel:NonNegativeInteger [0..1] ?"
 numberOfInputValuesUsed="D2LogicalModel:NonNegativeInteger [0..1] ?"
 smoothingFactor="D2LogicalModel:Float [0..1] ?"
 standardDeviation="D2LogicalModel:Float [0..1] ?"
 supplierCalculatedDataQuality="D2LogicalModel:Percentage [0..1] ?">
   <D2LogicalModel:dataError> D2LogicalModel:Boolean </D2LogicalModel:dataError> [0..1] ?
   <D2LogicalModel:reasonForDataError> D2LogicalModel:MultilingualString </D2LogicalModel:reasonForDataError> [0..1]
   ?
   <D2LogicalModel:dataValueExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:dataValueExtension> [0..1]
   <D2LogicalModel:percentage> D2LogicalModel:Percentage </D2LogicalModel:percentage> [1] ?
   <D2LogicalModel:percentageValueExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:percentageValueExtension>
   [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="PercentageValue">
   <xs:complexContent>
      <xs:extension base="D2LogicalModel:DataValue">
         <xs:sequence>
            <xs:element name="percentage" type="D2LogicalModel:Percentage" minOccurs="1" maxOccurs="1"/>
            <xs:element name="percentageValueExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

top

Complex Type: Point

Super-types:	GroupOfLocations < Location (by extension) < NetworkLocation (by extension) < **Point** (by extension)
Sub-types:	None

Name	Point
Abstract	no
Documentation	A single geospatial point.

XML Instance Representation

```
<...>
   <D2LogicalModel:groupOfLocationsExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:groupOfLocationsExtension> [0..1]
   <D2LogicalModel:locationForDisplay> D2LogicalModel:PointCoordinates </D2LogicalModel:locationForDisplay> [0..1] ?
   <D2LogicalModel:locationExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:locationExtension> [0..1]
   <D2LogicalModel:supplementaryPositionalDescription> D2LogicalModel:SupplementaryPositionalDescription
   </D2LogicalModel:supplementaryPositionalDescription> [0..1]
```

```
<D2LogicalModel:networkLocationExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:networkLocationExtension>
[0..1]
<D2LogicalModel:alertCPoint> D2LogicalModel:AlertCPoint </D2LogicalModel:alertCPoint> [0..1]
<D2LogicalModel:pointAlongLinearElement> D2LogicalModel:PointAlongLinearElement
</D2LogicalModel:pointAlongLinearElement> [0..1]
<D2LogicalModel:pointByCoordinates> D2LogicalModel:PointByCoordinates </D2LogicalModel:pointByCoordinates> [0..1]
<D2LogicalModel:pointExtension> D2LogicalModel:_PointExtensionType </D2LogicalModel:pointExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="Point">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:NetworkLocation">
      <xs:sequence>
        <xs:element name="alertCPoint" type="D2LogicalModel:AlertCPoint" minOccurs="0"/>
        <xs:element name="pointAlongLinearElement" type="D2LogicalModel:PointAlongLinearElement" minOccurs="0"/>
        <xs:element name="pointByCoordinates" type="D2LogicalModel:PointByCoordinates" minOccurs="0"/>
        <xs:element name="pointExtension" type="D2LogicalModel:_PointExtensionType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

top

Complex Type: PointAlongLinearElement

Super-types:	None
Sub-types:	None

Name	PointAlongLinearElement
Abstract	no
Documentation	A point on a linear element where the linear element is either a part of or the whole of a linear object (i.e. a road), consistent with ISO 19148 definitions.

XML Instance Representation

```
<...>
  <D2LogicalModel:directionRelativeAtPoint> D2LogicalModel:LinearReferencingDirectionEnum
  </D2LogicalModel:directionRelativeAtPoint> [0..1] ?
  <D2LogicalModel:linearElement> D2LogicalModel:LinearElement </D2LogicalModel:linearElement> [1]
  <D2LogicalModel:distanceAlongLinearElement> D2LogicalModel:DistanceAlongLinearElement
  </D2LogicalModel:distanceAlongLinearElement> [1]
  <D2LogicalModel:pointAlongLinearElementExtension> D2LogicalModel:_ExtensionType
  </D2LogicalModel:pointAlongLinearElementExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="PointAlongLinearElement">
  <xs:sequence>
    <xs:element name="directionRelativeAtPoint" type="D2LogicalModel:LinearReferencingDirectionEnum" minOccurs="0"
    maxOccurs="1"/>
    <xs:element name="linearElement" type="D2LogicalModel:LinearElement"/>
    <xs:element name="distanceAlongLinearElement" type="D2LogicalModel:DistanceAlongLinearElement"/>
    <xs:element name="pointAlongLinearElementExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

top

Complex Type: PointByCoordinates

Super-types:	None
Sub-types:	None

Name	PointByCoordinates
Abstract	no
Documentation	A single point defined only by a coordinate set with an optional bearing direction.

XML Instance Representation

```
<...>
  <D2LogicalModel:pointCoordinates> D2LogicalModel:PointCoordinates </D2LogicalModel:pointCoordinates> [1]
  <D2LogicalModel:pointByCoordinatesExtension> D2LogicalModel:_ExtensionType
  </D2LogicalModel:pointByCoordinatesExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="PointByCoordinates">
  <xs:sequence>
    <xs:element name="pointCoordinates" type="D2LogicalModel:PointCoordinates"/>
    <xs:element name="pointByCoordinatesExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

top

Complex Type: PointCoordinates

Super-types:	None

Sub-types:	None

Name	PointCoordinates
Abstract	no
Documentation	A pair of coordinates defining the geodetic position of a single point using the European Terrestrial Reference System 1989 (ETRS89).

XML Instance Representation

```
<...>
   <D2LogicalModel:latitude> D2LogicalModel:Float </D2LogicalModel:latitude> [1] ?
   <D2LogicalModel:longitude> D2LogicalModel:Float </D2LogicalModel:longitude> [1] ?
   <D2LogicalModel:pointCoordinatesExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:pointCoordinatesExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="PointCoordinates">
   <xs:sequence>
      <xs:element name="latitude" type="D2LogicalModel:Float" minOccurs="1" maxOccurs="1"/>
      <xs:element name="longitude" type="D2LogicalModel:Float" minOccurs="1" maxOccurs="1"/>
      <xs:element name="pointCoordinatesExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
   </xs:sequence>
</xs:complexType>
```

top

Complex Type: Pollution

Super-types:	None
Sub-types:	None

Name	Pollution
Abstract	no
Documentation	Details of atmospheric pollution.

XML Instance Representation

```
<...>
   <D2LogicalModel:pollutantType> D2LogicalModel:PollutantTypeEnum </D2LogicalModel:pollutantType> [1] ?
   <D2LogicalModel:pollutantConcentration> D2LogicalModel:MicrogramsConcentrationValue
   </D2LogicalModel:pollutantConcentration> [0..1] ?
   <D2LogicalModel:pollutionExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:pollutionExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="Pollution">
   <xs:sequence>
      <xs:element name="pollutantType" type="D2LogicalModel:PollutantTypeEnum" minOccurs="1" maxOccurs="1"/>
      <xs:element name="pollutantConcentration" type="D2LogicalModel:MicrogramsConcentrationValue" minOccurs="0"/>
      <xs:element name="pollutionExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
   </xs:sequence>
</xs:complexType>
```

top

Complex Type: PollutionInformation

Super-types:	BasicData < WeatherData (by extension) < **PollutionInformation** (by extension)
Sub-types:	None

Name	PollutionInformation
Abstract	no
Documentation	Measurements of atmospheric pollution.

XML Instance Representation

```
<...
 measurementOrCalculatedTimePrecision="D2LogicalModel:TimePrecisionEnum [0..1] ?">
   <D2LogicalModel:measurementOrCalculationPeriod> D2LogicalModel:Seconds
   </D2LogicalModel:measurementOrCalculationPeriod> [0..1] ?
   <D2LogicalModel:measurementOrCalculationTime> D2LogicalModel:DateTime
   </D2LogicalModel:measurementOrCalculationTime> [0..1] ?
   <D2LogicalModel:pertinentLocation> D2LogicalModel:GroupOfLocations </D2LogicalModel:pertinentLocation> [0..1] ?
   <D2LogicalModel:basicDataExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:basicDataExtension> [0..1]
   <D2LogicalModel:weatherDataExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:weatherDataExtension> [0..1]
   <D2LogicalModel:pollution> D2LogicalModel:Pollution </D2LogicalModel:pollution> [1..*]
   <D2LogicalModel:pollutionInformationExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:pollutionInformationExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="PollutionInformation">
   <xs:complexContent>
      <xs:extension base="D2LogicalModel:WeatherData">
         <xs:sequence>
            <xs:element name="pollution" type="D2LogicalModel:Pollution" maxOccurs="unbounded"/>
            <xs:element name="pollutionInformationExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
```

```
  </xs:complexContent>
</xs:complexType>
```

top

Complex Type: PrecipitationDetail

Super-types:	None
Sub-types:	None

Name	PrecipitationDetail
Abstract	no
Documentation	Details of precipitation (rain, snow etc.).

XML Instance Representation

```
<...>
   <D2LogicalModel:precipitationType> D2LogicalModel:PrecipitationTypeEnum </D2LogicalModel:precipitationType> [0..1]
   ?
   <D2LogicalModel:precipitationIntensity> D2LogicalModel:PrecipitationIntensityValue
   </D2LogicalModel:precipitationIntensity> [0..1] ?
   <D2LogicalModel:depositionDepth> D2LogicalModel:FloatingPointMetreDistanceValue </D2LogicalModel:depositionDepth>
   [0..1] ?
   <D2LogicalModel:precipitationDetailExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:precipitationDetailExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="PrecipitationDetail">
   <xs:sequence>
      <xs:element name="precipitationType" type="D2LogicalModel:PrecipitationTypeEnum" minOccurs="0" maxOccurs="1"/>
      <xs:element name="precipitationIntensity" type="D2LogicalModel:PrecipitationIntensityValue" minOccurs="0"/>
      <xs:element name="depositionDepth" type="D2LogicalModel:FloatingPointMetreDistanceValue" minOccurs="0"/>
      <xs:element name="precipitationDetailExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
   </xs:sequence>
</xs:complexType>
```

top

Complex Type: PrecipitationInformation

Super-types:	BasicData < WeatherData (by extension) < **PrecipitationInformation** (by extension)
Sub-types:	None

Name	PrecipitationInformation
Abstract	no
Documentation	Measurements of precipitation.

XML Instance Representation

```
<...
 measurementOrCalculatedTimePrecision="D2LogicalModel:TimePrecisionEnum [0..1] ?">
   <D2LogicalModel:measurementOrCalculationPeriod> D2LogicalModel:Seconds
   </D2LogicalModel:measurementOrCalculationPeriod> [0..1] ?
   <D2LogicalModel:measurementOrCalculationTime> D2LogicalModel:DateTime
   </D2LogicalModel:measurementOrCalculationTime> [0..1] ?
   <D2LogicalModel:pertinentLocation> D2LogicalModel:GroupOfLocations </D2LogicalModel:pertinentLocation> [0..1] ?
   <D2LogicalModel:basicDataExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:basicDataExtension> [0..1]
   <D2LogicalModel:weatherDataExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:weatherDataExtension> [0..1]
   <D2LogicalModel:noPrecipitation> D2LogicalModel:Boolean </D2LogicalModel:noPrecipitation> [0..1] ?
   <D2LogicalModel:precipitationDetail> D2LogicalModel:PrecipitationDetail </D2LogicalModel:precipitationDetail>
   [0..1]
   <D2LogicalModel:precipitationInformationExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:precipitationInformationExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="PrecipitationInformation">
   <xs:complexContent>
      <xs:extension base="D2LogicalModel:WeatherData">
         <xs:sequence>
            <xs:element name="noPrecipitation" type="D2LogicalModel:Boolean" minOccurs="0" maxOccurs="1"/>
            <xs:element name="precipitationDetail" type="D2LogicalModel:PrecipitationDetail" minOccurs="0"/>
            <xs:element name="precipitationInformationExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

top

Complex Type: PrecipitationIntensityValue

Super-types:	DataValue < **PrecipitationIntensityValue** (by extension)
Sub-types:	None

Name	PrecipitationIntensityValue
Abstract	no
Documentation	A measured or calculated value of the accumulation rate of precipitation.

XML Instance Representation

```
<...
 accuracy="D2LogicalModel:Percentage [0..1] ?"
 computationalMethod="D2LogicalModel:ComputationMethodEnum [0..1] ?"
 numberOfIncompleteInputs="D2LogicalModel:NonNegativeInteger [0..1] ?"
 numberOfInputValuesUsed="D2LogicalModel:NonNegativeInteger [0..1] ?"
 smoothingFactor="D2LogicalModel:Float [0..1] ?"
 standardDeviation="D2LogicalModel:Float [0..1] ?"
 supplierCalculatedDataQuality="D2LogicalModel:Percentage [0..1] ?">
   <D2LogicalModel:dataError> D2LogicalModel:Boolean </D2LogicalModel:dataError> [0..1] ?
   <D2LogicalModel:reasonForDataError> D2LogicalModel:MultilingualString </D2LogicalModel:reasonForDataError> [0..1]
   ?
   <D2LogicalModel:dataValueExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:dataValueExtension> [0..1]
   <D2LogicalModel:millimetresPerHourIntensity> D2LogicalModel:IntensityMillimetresPerHour
   </D2LogicalModel:millimetresPerHourIntensity> [1] ?
   <D2LogicalModel:precipitationIntensityValueExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:precipitationIntensityValueExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="PrecipitationIntensityValue">
   <xs:complexContent>
      <xs:extension base="D2LogicalModel:DataValue">
         <xs:sequence>
            <xs:element name="millimetresPerHourIntensity" type="D2LogicalModel:IntensityMillimetresPerHour"
            minOccurs="1" maxOccurs="1"/>
            <xs:element name="precipitationIntensityValueExtension" type="D2LogicalModel:_ExtensionType"
            minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

top

Complex Type: RoadSurfaceConditionInformation

Super-types:	BasicData < WeatherData (by extension) < **RoadSurfaceConditionInformation** (by extension)
Sub-types:	None

Name	RoadSurfaceConditionInformation
Abstract	no
Documentation	Measurements of road surface conditions which are related to the weather.

XML Instance Representation

```
<...
 measurementOrCalculatedTimePrecision="D2LogicalModel:TimePrecisionEnum [0..1] ?">
   <D2LogicalModel:measurementOrCalculationPeriod> D2LogicalModel:Seconds
   </D2LogicalModel:measurementOrCalculationPeriod> [0..1] ?
   <D2LogicalModel:measurementOrCalculationTime> D2LogicalModel:DateTime
   </D2LogicalModel:measurementOrCalculationTime> [0..1] ?
   <D2LogicalModel:pertinentLocation> D2LogicalModel:GroupOfLocations </D2LogicalModel:pertinentLocation> [0..1] ?
   <D2LogicalModel:basicDataExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:basicDataExtension> [0..1]
   <D2LogicalModel:weatherDataExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:weatherDataExtension> [0..1]
   <D2LogicalModel:weatherRelatedRoadConditionType> D2LogicalModel:WeatherRelatedRoadConditionTypeEnum
   </D2LogicalModel:weatherRelatedRoadConditionType> [0..*] ?
   <D2LogicalModel:roadSurfaceConditionMeasurements> D2LogicalModel:RoadSurfaceConditionMeasurements
   </D2LogicalModel:roadSurfaceConditionMeasurements> [1]
   <D2LogicalModel:roadSurfaceConditionInformationExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:roadSurfaceConditionInformationExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="RoadSurfaceConditionInformation">
   <xs:complexContent>
      <xs:extension base="D2LogicalModel:WeatherData">
         <xs:sequence>
            <xs:element name="weatherRelatedRoadConditionType"
            type="D2LogicalModel:WeatherRelatedRoadConditionTypeEnum" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="roadSurfaceConditionMeasurements"
            type="D2LogicalModel:RoadSurfaceConditionMeasurements"/>
            <xs:element name="roadSurfaceConditionInformationExtension" type="D2LogicalModel:_ExtensionType"
            minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

top

Complex Type: RoadSurfaceConditionMeasurements

Super-types:	None
Sub-types:	None

Name	RoadSurfaceConditionMeasurements
Abstract	no
Documentation	Measurements of the road surface condition which relate specifically to the weather.

XML Instance Representation

```
<...>
   <D2LogicalModel:roadSurfaceTemperature> D2LogicalModel:TemperatureValue </D2LogicalModel:roadSurfaceTemperature>
   [0..1] ?
   <D2LogicalModel:protectionTemperature> D2LogicalModel:TemperatureValue </D2LogicalModel:protectionTemperature>
   [0..1] ?
   <D2LogicalModel:deIcingApplicationRate> D2LogicalModel:ApplicationRateValue
   </D2LogicalModel:deIcingApplicationRate> [0..1] ?
   <D2LogicalModel:deIcingConcentration> D2LogicalModel:KilogramsConcentrationValue
   </D2LogicalModel:deIcingConcentration> [0..1] ?
   <D2LogicalModel:depthOfSnow> D2LogicalModel:FloatingPointMetreDistanceValue </D2LogicalModel:depthOfSnow> [0..1] ?
   <D2LogicalModel:waterFilmThickness> D2LogicalModel:FloatingPointMetreDistanceValue
   </D2LogicalModel:waterFilmThickness> [0..1] ?
   <D2LogicalModel:roadSurfaceConditionMeasurementsExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:roadSurfaceConditionMeasurementsExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="RoadSurfaceConditionMeasurements">
   <xs:sequence>
      <xs:element name="roadSurfaceTemperature" type="D2LogicalModel:TemperatureValue" minOccurs="0"/>
      <xs:element name="protectionTemperature" type="D2LogicalModel:TemperatureValue" minOccurs="0"/>
      <xs:element name="deIcingApplicationRate" type="D2LogicalModel:ApplicationRateValue" minOccurs="0"/>
      <xs:element name="deIcingConcentration" type="D2LogicalModel:KilogramsConcentrationValue" minOccurs="0"/>
      <xs:element name="depthOfSnow" type="D2LogicalModel:FloatingPointMetreDistanceValue" minOccurs="0"/>
      <xs:element name="waterFilmThickness" type="D2LogicalModel:FloatingPointMetreDistanceValue" minOccurs="0"/>
      <xs:element name="roadSurfaceConditionMeasurementsExtension" type="D2LogicalModel:_ExtensionType"
      minOccurs="0"/>
   </xs:sequence>
</xs:complexType>
```

top

Complex Type: Source

Super-types:	None
Sub-types:	None

Name	Source
Abstract	no
Documentation	Details of the source from which the information was obtained.

XML Instance Representation

```
<...>
   <D2LogicalModel:sourceCountry> D2LogicalModel:CountryEnum </D2LogicalModel:sourceCountry> [0..1] ?
   <D2LogicalModel:sourceIdentification> D2LogicalModel:String </D2LogicalModel:sourceIdentification> [0..1] ?
   <D2LogicalModel:sourceName> D2LogicalModel:MultilingualString </D2LogicalModel:sourceName> [0..1] ?
   <D2LogicalModel:sourceType> D2LogicalModel:SourceTypeEnum </D2LogicalModel:sourceType> [0..1] ?
   <D2LogicalModel:sourceExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:sourceExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="Source">
   <xs:sequence>
      <xs:element name="sourceCountry" type="D2LogicalModel:CountryEnum" minOccurs="0" maxOccurs="1"/>
      <xs:element name="sourceIdentification" type="D2LogicalModel:String" minOccurs="0" maxOccurs="1"/>
      <xs:element name="sourceName" type="D2LogicalModel:MultilingualString" minOccurs="0" maxOccurs="1"/>
      <xs:element name="sourceType" type="D2LogicalModel:SourceTypeEnum" minOccurs="0" maxOccurs="1"/>
      <xs:element name="sourceExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
   </xs:sequence>
</xs:complexType>
```

top

Complex Type: SpeedValue

Super-types:	DataValue < **SpeedValue** (by extension)
Sub-types:	None

Name	SpeedValue
Abstract	no
Documentation	A measured or calculated value of speed.

XML Instance Representation

```
<...
 accuracy="D2LogicalModel:Percentage [0..1] ?"
 computationalMethod="D2LogicalModel:ComputationMethodEnum [0..1] ?"
 numberOfIncompleteInputs="D2LogicalModel:NonNegativeInteger [0..1] ?"
 numberOfInputValuesUsed="D2LogicalModel:NonNegativeInteger [0..1] ?"
 smoothingFactor="D2LogicalModel:Float [0..1] ?"
 standardDeviation="D2LogicalModel:Float [0..1] ?"
 supplierCalculatedDataQuality="D2LogicalModel:Percentage [0..1] ?">
   <D2LogicalModel:dataError> D2LogicalModel:Boolean </D2LogicalModel:dataError> [0..1] ?
   <D2LogicalModel:reasonForDataError> D2LogicalModel:MultilingualString </D2LogicalModel:reasonForDataError> [0..1]
   ?
   <D2LogicalModel:dataValueExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:dataValueExtension> [0..1]
   <D2LogicalModel:speed> D2LogicalModel:KilometresPerHour </D2LogicalModel:speed> [1] ?
   <D2LogicalModel:speedValueExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:speedValueExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="SpeedValue">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:DataValue">
      <xs:sequence>
        <xs:element name="speed" type="D2LogicalModel:KilometresPerHour" minOccurs="1" maxOccurs="1"/>
        <xs:element name="speedValueExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

top

Complex Type: SupplementaryPositionalDescription

Super-types:	None
Sub-types:	None

Name	SupplementaryPositionalDescription
Abstract	no
Documentation	A collection of supplementary positional information which improves the precision of the location.

XML Instance Representation

```
<...
 locationPrecision="D2LogicalModel:MetresAsNonNegativeInteger [0..1] ?">
   <D2LogicalModel:locationDescriptor> D2LogicalModel:LocationDescriptorEnum </D2LogicalModel:locationDescriptor>
   [0..*] ?
   <D2LogicalModel:sequentialRampNumber> D2LogicalModel:NonNegativeInteger </D2LogicalModel:sequentialRampNumber>
   [0..1] ?
   <D2LogicalModel:affectedCarriagewayAndLanes> D2LogicalModel:AffectedCarriagewayAndLanes
   </D2LogicalModel:affectedCarriagewayAndLanes> [0..*]
   <D2LogicalModel:supplementaryPositionalDescriptionExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:supplementaryPositionalDescriptionExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="SupplementaryPositionalDescription">
  <xs:sequence>
    <xs:element name="locationDescriptor" type="D2LogicalModel:LocationDescriptorEnum" minOccurs="0"
    maxOccurs="unbounded"/>
    <xs:element name="sequentialRampNumber" type="D2LogicalModel:NonNegativeInteger" minOccurs="0" maxOccurs="1"/>
    <xs:element name="affectedCarriagewayAndLanes" type="D2LogicalModel:AffectedCarriagewayAndLanes" minOccurs="0"
    maxOccurs="unbounded"/>
    <xs:element name="supplementaryPositionalDescriptionExtension" type="D2LogicalModel:_ExtensionType"
    minOccurs="0"/>
  </xs:sequence>
  <xs:attribute name="locationPrecision" type="D2LogicalModel:MetresAsNonNegativeInteger" use="optional"/>
</xs:complexType>
```

top

Complex Type: Temperature

Super-types:	None
Sub-types:	None

Name	Temperature
Abstract	no
Documentation	Details of atmospheric temperature.

XML Instance Representation

```
<...>
   <D2LogicalModel:airTemperature> D2LogicalModel:TemperatureValue </D2LogicalModel:airTemperature> [0..1] ?
   <D2LogicalModel:dewPointTemperature> D2LogicalModel:TemperatureValue </D2LogicalModel:dewPointTemperature> [0..1]
   ?
   <D2LogicalModel:maximumTemperature> D2LogicalModel:TemperatureValue </D2LogicalModel:maximumTemperature> [0..1] ?
   <D2LogicalModel:minimumTemperature> D2LogicalModel:TemperatureValue </D2LogicalModel:minimumTemperature> [0..1] ?
   <D2LogicalModel:temperatureExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:temperatureExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="Temperature">
  <xs:sequence>
    <xs:element name="airTemperature" type="D2LogicalModel:TemperatureValue" minOccurs="0"/>
    <xs:element name="dewPointTemperature" type="D2LogicalModel:TemperatureValue" minOccurs="0"/>
    <xs:element name="maximumTemperature" type="D2LogicalModel:TemperatureValue" minOccurs="0"/>
    <xs:element name="minimumTemperature" type="D2LogicalModel:TemperatureValue" minOccurs="0"/>
    <xs:element name="temperatureExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

top

Complex Type: TemperatureInformation

Super-types:	BasicData < WeatherData (by extension) < **TemperatureInformation** (by extension)
Sub-types:	None

Name	TemperatureInformation
Abstract	no
Documentation	Measurements of atmospheric temperature.

XML Instance Representation

```
<...
 measurementOrCalculatedTimePrecision="D2LogicalModel:TimePrecisionEnum [0..1] ?">
   <D2LogicalModel:measurementOrCalculationPeriod> D2LogicalModel:Seconds
   </D2LogicalModel:measurementOrCalculationPeriod> [0..1] ?
   <D2LogicalModel:measurementOrCalculationTime> D2LogicalModel:DateTime
   </D2LogicalModel:measurementOrCalculationTime> [0..1] ?
   <D2LogicalModel:pertinentLocation> D2LogicalModel:GroupOfLocations </D2LogicalModel:pertinentLocation> [0..1] ?
   <D2LogicalModel:basicDataExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:basicDataExtension> [0..1]
   <D2LogicalModel:weatherDataExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:weatherDataExtension> [0..1]
   <D2LogicalModel:temperature> D2LogicalModel:Temperature </D2LogicalModel:temperature> [1]
   <D2LogicalModel:temperatureInformationExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:temperatureInformationExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="TemperatureInformation">
   <xs:complexContent>
      <xs:extension base="D2LogicalModel:WeatherData">
         <xs:sequence>
            <xs:element name="temperature" type="D2LogicalModel:Temperature"/>
            <xs:element name="temperatureInformationExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

top

Complex Type: TemperatureValue

Super-types:	DataValue < **TemperatureValue** (by extension)
Sub-types:	None

Name	TemperatureValue
Abstract	no
Documentation	A measured or calculated value of temperature.

XML Instance Representation

```
<...
 accuracy="D2LogicalModel:Percentage [0..1] ?"
 computationalMethod="D2LogicalModel:ComputationMethodEnum [0..1] ?"
 numberOfIncompleteInputs="D2LogicalModel:NonNegativeInteger [0..1] ?"
 numberOfInputValuesUsed="D2LogicalModel:NonNegativeInteger [0..1] ?"
 smoothingFactor="D2LogicalModel:Float [0..1] ?"
 standardDeviation="D2LogicalModel:Float [0..1] ?"
 supplierCalculatedDataQuality="D2LogicalModel:Percentage [0..1] ?">
   <D2LogicalModel:dataError> D2LogicalModel:Boolean </D2LogicalModel:dataError> [0..1] ?
   <D2LogicalModel:reasonForDataError> D2LogicalModel:MultilingualString </D2LogicalModel:reasonForDataError> [0..1]
   ?
   <D2LogicalModel:dataValueExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:dataValueExtension> [0..1]
   <D2LogicalModel:temperature> D2LogicalModel:TemperatureCelsius </D2LogicalModel:temperature> [1] ?
   <D2LogicalModel:temperatureValueExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:temperatureValueExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="TemperatureValue">
   <xs:complexContent>
      <xs:extension base="D2LogicalModel:DataValue">
         <xs:sequence>
            <xs:element name="temperature" type="D2LogicalModel:TemperatureCelsius" minOccurs="1" maxOccurs="1"/>
            <xs:element name="temperatureValueExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

top

Complex Type: TpegAreaDescriptor

Super-types:	TpegDescriptor < **TpegAreaDescriptor** (by extension)
Sub-types:	None

Name	TpegAreaDescriptor
Abstract	no
Documentation	A descriptor for describing an area location.

XML Instance Representation

```
<...>
   <D2LogicalModel:descriptor> D2LogicalModel:MultilingualString </D2LogicalModel:descriptor> [1] ?
```

```
   <D2LogicalModel:tpegDescriptorExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:tpegDescriptorExtension>
   [0..1]
   <D2LogicalModel:tpegAreaDescriptorType> D2LogicalModel:TpegLoc03AreaDescriptorSubtypeEnum
   </D2LogicalModel:tpegAreaDescriptorType> [1] ?
   <D2LogicalModel:tpegAreaDescriptorExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:tpegAreaDescriptorExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="TpegAreaDescriptor">
   <xs:complexContent>
      <xs:extension base="D2LogicalModel:TpegDescriptor">
         <xs:sequence>
            <xs:element name="tpegAreaDescriptorType" type="D2LogicalModel:TpegLoc03AreaDescriptorSubtypeEnum"
            minOccurs="1" maxOccurs="1"/>
            <xs:element name="tpegAreaDescriptorExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

top

Complex Type: TpegDescriptor

Super-types:	None
Sub-types:	• TpegAreaDescriptor (by extension)

Name	TpegDescriptor
Abstract	yes
Documentation	A collection of information providing descriptive references to locations using the TPEG-Loc location referencing approach.

XML Instance Representation

```
<...>
   <D2LogicalModel:descriptor> D2LogicalModel:MultilingualString </D2LogicalModel:descriptor> [1] ?
   <D2LogicalModel:tpegDescriptorExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:tpegDescriptorExtension>
   [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="TpegDescriptor" abstract="true">
   <xs:sequence>
      <xs:element name="descriptor" type="D2LogicalModel:MultilingualString" minOccurs="1" maxOccurs="1"/>
      <xs:element name="tpegDescriptorExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
   </xs:sequence>
</xs:complexType>
```

top

Complex Type: Visibility

Super-types:	None
Sub-types:	None

Name	Visibility
Abstract	no
Documentation	Details of atmospheric visibility.

XML Instance Representation

```
<...>
   <D2LogicalModel:minimumVisibilityDistance> D2LogicalModel:IntegerMetreDistanceValue
   </D2LogicalModel:minimumVisibilityDistance> [1] ?
   <D2LogicalModel:visibilityExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:visibilityExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="Visibility">
   <xs:sequence>
      <xs:element name="minimumVisibilityDistance" type="D2LogicalModel:IntegerMetreDistanceValue"/>
      <xs:element name="visibilityExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
   </xs:sequence>
</xs:complexType>
```

top

Complex Type: VisibilityInformation

Super-types:	BasicData < WeatherData (by extension) < **VisibilityInformation** (by extension)
Sub-types:	None

Name	VisibilityInformation
Abstract	no
Documentation	Measurements of atmospheric visibility.

XML Instance Representation

```
<...
 measurementOrCalculatedTimePrecision="D2LogicalModel:TimePrecisionEnum [0..1] ?">
   <D2LogicalModel:measurementOrCalculationPeriod> D2LogicalModel:Seconds
   </D2LogicalModel:measurementOrCalculationPeriod> [0..1] ?
   <D2LogicalModel:measurementOrCalculationTime> D2LogicalModel:DateTime
   </D2LogicalModel:measurementOrCalculationTime> [0..1] ?
   <D2LogicalModel:pertinentLocation> D2LogicalModel:GroupOfLocations </D2LogicalModel:pertinentLocation> [0..1] ?
   <D2LogicalModel:basicDataExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:basicDataExtension> [0..1]
   <D2LogicalModel:weatherDataExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:weatherDataExtension> [0..1]
   <D2LogicalModel:visibility> D2LogicalModel:Visibility </D2LogicalModel:visibility> [1]
   <D2LogicalModel:visibilityInformationExtension> D2LogicalModel:_ExtensionType
   </D2LogicalModel:visibilityInformationExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="VisibilityInformation">
   <xs:complexContent>
      <xs:extension base="D2LogicalModel:WeatherData">
         <xs:sequence>
            <xs:element name="visibility" type="D2LogicalModel:Visibility"/>
            <xs:element name="visibilityInformationExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

top

Complex Type: WeatherData

Super-types:	BasicData < **WeatherData** (by extension)
Sub-types:	• HumidityInformation (by extension) • PollutionInformation (by extension) • PrecipitationInformation (by extension) • RoadSurfaceConditionInformation (by extension) • TemperatureInformation (by extension) • VisibilityInformation (by extension) • WindInformation (by extension)

Name	WeatherData
Abstract	yes
Documentation	Measured or derived values relating to the weather at a specific location or locations.

XML Instance Representation

```
<...
 measurementOrCalculatedTimePrecision="D2LogicalModel:TimePrecisionEnum [0..1] ?">
   <D2LogicalModel:measurementOrCalculationPeriod> D2LogicalModel:Seconds
   </D2LogicalModel:measurementOrCalculationPeriod> [0..1] ?
   <D2LogicalModel:measurementOrCalculationTime> D2LogicalModel:DateTime
   </D2LogicalModel:measurementOrCalculationTime> [0..1] ?
   <D2LogicalModel:pertinentLocation> D2LogicalModel:GroupOfLocations </D2LogicalModel:pertinentLocation> [0..1] ?
   <D2LogicalModel:basicDataExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:basicDataExtension> [0..1]
   <D2LogicalModel:weatherDataExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:weatherDataExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="WeatherData" abstract="true">
   <xs:complexContent>
      <xs:extension base="D2LogicalModel:BasicData">
         <xs:sequence>
            <xs:element name="weatherDataExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
   </xs:complexContent>
</xs:complexType>
```

top

Complex Type: Wind

Super-types:	None
Sub-types:	None

Name	Wind
Abstract	no
Documentation	Wind conditions on the road.

XML Instance Representation

```
<...>
   <D2LogicalModel:windMeasurementHeight> D2LogicalModel:MetresAsNonNegativeInteger
   </D2LogicalModel:windMeasurementHeight> [0..1] ?
   <D2LogicalModel:windSpeed> D2LogicalModel:SpeedValue </D2LogicalModel:windSpeed> [0..1] ?
   <D2LogicalModel:maximumWindSpeed> D2LogicalModel:SpeedValue </D2LogicalModel:maximumWindSpeed> [0..1] ?
   <D2LogicalModel:windDirectionBearing> D2LogicalModel:DirectionBearingValue </D2LogicalModel:windDirectionBearing>
   [0..1] ?
   <D2LogicalModel:windDirectionCompass> D2LogicalModel:DirectionCompassValue </D2LogicalModel:windDirectionCompass>
   [0..1] ?
   <D2LogicalModel:windExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:windExtension> [0..1]
```

```
</...>
```

Schema Component Representation

```
<xs:complexType name="Wind">
  <xs:sequence>
    <xs:element name="windMeasurementHeight" type="D2LogicalModel:MetresAsNonNegativeInteger" minOccurs="0"
    maxOccurs="1"/>
    <xs:element name="windSpeed" type="D2LogicalModel:SpeedValue" minOccurs="0"/>
    <xs:element name="maximumWindSpeed" type="D2LogicalModel:SpeedValue" minOccurs="0"/>
    <xs:element name="windDirectionBearing" type="D2LogicalModel:DirectionBearingValue" minOccurs="0"/>
    <xs:element name="windDirectionCompass" type="D2LogicalModel:DirectionCompassValue" minOccurs="0"/>
    <xs:element name="windExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

top

Complex Type: WindInformation

Super-types:	BasicData < WeatherData (by extension) < **WindInformation** (by extension)
Sub-types:	None

Name	WindInformation
Abstract	no
Documentation	Measurements of wind conditions.

XML Instance Representation

```
<...
 measurementOrCalculatedTimePrecision="D2LogicalModel:TimePrecisionEnum [0..1] ?">
   <D2LogicalModel:measurementOrCalculationPeriod> D2LogicalModel:Seconds
   </D2LogicalModel:measurementOrCalculationPeriod> [0..1] ?
   <D2LogicalModel:measurementOrCalculationTime> D2LogicalModel:DateTime
   </D2LogicalModel:measurementOrCalculationTime> [0..1] ?
   <D2LogicalModel:pertinentLocation> D2LogicalModel:GroupOfLocations </D2LogicalModel:pertinentLocation> [0..1] ?
   <D2LogicalModel:basicDataExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:basicDataExtension> [0..1]
   <D2LogicalModel:weatherDataExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:weatherDataExtension> [0..1]
   <D2LogicalModel:wind> D2LogicalModel:Wind </D2LogicalModel:wind> [1]
   <D2LogicalModel:windInformationExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:windInformationExtension>
   [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="WindInformation">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:WeatherData">
      <xs:sequence>
        <xs:element name="wind" type="D2LogicalModel:Wind"/>
        <xs:element name="windInformationExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

top

Complex Type: _ExtensionType

Super-types:	None
Sub-types:	None

Name	_ExtensionType
Abstract	no

XML Instance Representation

```
<...>
   Allow any elements from any namespace (lax validation). [0..*]
</...>
```

Schema Component Representation

```
<xs:complexType name="_ExtensionType">
  <xs:sequence>
    <xs:any namespace="##any" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
  </xs:sequence>
</xs:complexType>
```

top

Complex Type: _PointExtensionType

Super-types:	None
Sub-types:	None

Name	_PointExtensionType
Abstract	no

XML Instance Representation

```
<...>
   <D2LogicalModel:openlrExtendedPoint> D2LogicalModel:OpenlrExtendedPoint </D2LogicalModel:openlrExtendedPoint>
   [0..1]
   Allow any elements from a namespace other than this schema's namespace (lax validation). [0..*]
</...>
```

Schema Component Representation

```
<xs:complexType name="_PointExtensionType">
   <xs:sequence>
      <xs:element name="openlrExtendedPoint" type="D2LogicalModel:OpenlrExtendedPoint" minOccurs="0"/>
      <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
   </xs:sequence>
</xs:complexType>
```

top

Simple Type: AlertCDirectionEnum

Super-types:	xs:string < **AlertCDirectionEnum** (by restriction)
Sub-types:	None

Name AlertCDirectionEnum

Content

- Base XSD Type: string
- *value* comes from list: {'both'|'negative'|'positive'|'unknown'}

Documentation The direction of traffic flow concerned by a situation or traffic data. In ALERT-C the positive (resp. negative) direction corresponds to the positive offset direction within the RDS location table.

Schema Component Representation

```
<xs:simpleType name="AlertCDirectionEnum">
   <xs:restriction base="xs:string">
      <xs:enumeration value="both"/>
      <xs:enumeration value="negative"/>
      <xs:enumeration value="positive"/>
      <xs:enumeration value="unknown"/>
   </xs:restriction>
</xs:simpleType>
```

top

Simple Type: AlertCLocationCode

Super-types:	xs:nonNegativeInteger < NonNegativeInteger (by restriction) < **AlertCLocationCode** (by restriction)
Sub-types:	None

Name AlertCLocationCode

Content

- Base XSD Type: nonNegativeInteger

Documentation A positive integer number (between 1 and 63,487) which uniquely identifies a pre-defined Alert C location defined within an Alert-C table.

Schema Component Representation

```
<xs:simpleType name="AlertCLocationCode">
   <xs:restriction base="D2LogicalModel:NonNegativeInteger"/>
</xs:simpleType>
```

top

Simple Type: AngleInDegrees

Super-types:	xs:nonNegativeInteger < NonNegativeInteger (by restriction) < **AngleInDegrees** (by restriction)
Sub-types:	None

Name AngleInDegrees

Content

- Base XSD Type: nonNegativeInteger

Documentation An integer number representing an angle in whole degrees between 0 and 359.

Schema Component Representation

```
<xs:simpleType name="AngleInDegrees">
   <xs:restriction base="D2LogicalModel:NonNegativeInteger"/>
</xs:simpleType>
```

top

Simple Type: AreaOfInterestEnum

Super-types:	xs:string < **AreaOfInterestEnum** (by restriction)
Sub-types:	None

Name AreaOfInterestEnum

Content

- Base XSD Type: string

- *value* comes from list: {'continentWide'|'national'|'neighbouringCountries'|'notSpecified'|'regional'}

Documentation Types of areas of interest.

Schema Component Representation

```
<xs:simpleType name="AreaOfInterestEnum">
   <xs:restriction base="xs:string">
      <xs:enumeration value="continentWide"/>
      <xs:enumeration value="national"/>
      <xs:enumeration value="neighbouringCountries"/>
      <xs:enumeration value="notSpecified"/>
      <xs:enumeration value="regional"/>
   </xs:restriction>
</xs:simpleType>
```

top

Simple Type: Boolean

Super-types:	xs:boolean < **Boolean** (by restriction)
Sub-types:	None

Name Boolean

Content

- Base XSD Type: boolean

Documentation Boolean has the value space required to support the mathematical concept of binary-valued logic: {true, false}.

Schema Component Representation

```
<xs:simpleType name="Boolean">
   <xs:restriction base="xs:boolean"/>
</xs:simpleType>
```

top

Simple Type: CarriagewayEnum

Super-types:	xs:string < **CarriagewayEnum** (by restriction)
Sub-types:	None

Name CarriagewayEnum

Content

- Base XSD Type: string
- *value* comes from list: {'connectingCarriageway'|'entrySlipRoad'|'exitSlipRoad'|'flyover'|'leftHandFeederRoad'|'leftHandParallelCarriageway'|'mainCarriageway'|'oppositeCar

Documentation List of descriptors identifying specific carriageway details.

Schema Component Representation

```
<xs:simpleType name="CarriagewayEnum">
   <xs:restriction base="xs:string">
      <xs:enumeration value="connectingCarriageway"/>
      <xs:enumeration value="entrySlipRoad"/>
      <xs:enumeration value="exitSlipRoad"/>
      <xs:enumeration value="flyover"/>
      <xs:enumeration value="leftHandFeederRoad"/>
      <xs:enumeration value="leftHandParallelCarriageway"/>
      <xs:enumeration value="mainCarriageway"/>
      <xs:enumeration value="oppositeCarriageway"/>
      <xs:enumeration value="parallelCarriageway"/>
      <xs:enumeration value="rightHandFeederRoad"/>
      <xs:enumeration value="rightHandParallelCarriageway"/>
      <xs:enumeration value="roundabout"/>
      <xs:enumeration value="serviceRoad"/>
      <xs:enumeration value="slipRoads"/>
      <xs:enumeration value="underpass"/>
   </xs:restriction>
</xs:simpleType>
```

top

Simple Type: ComputationMethodEnum

Super-types:	xs:string < **ComputationMethodEnum** (by restriction)
Sub-types:	None

Name ComputationMethodEnum

Content

- Base XSD Type: string
- *value* comes from list: {'arithmeticAverageOfSamplesBasedOnAFixedNumberOfSamples'|'arithmeticAverageOfSamplesInATimePeriod'|'harmonicAverageOfSamplesInATin

Documentation Types of computational methods used in deriving data values for data sets.

Schema Component Representation

```
<xs:simpleType name="ComputationMethodEnum">
   <xs:restriction base="xs:string">
      <xs:enumeration value="arithmeticAverageOfSamplesBasedOnAFixedNumberOfSamples"/>
```

```
      <xs:enumeration value="arithmeticAverageOfSamplesInATimePeriod"/>
      <xs:enumeration value="harmonicAverageOfSamplesInATimePeriod"/>
      <xs:enumeration value="medianOfSamplesInATimePeriod"/>
      <xs:enumeration value="movingAverageOfSamples"/>
    </xs:restriction>
  </xs:simpleType>
```

top

Simple Type: ConcentrationKilogramsPerCubicMetre

Super-types:	xs:float < Float (by restriction) < **ConcentrationKilogramsPerCubicMetre** (by restriction)
Sub-types:	None

Name ConcentrationKilogramsPerCubicMetre

Content

- Base XSD Type: float

Documentation Concentration defined in kilograms per cubic metre (equivalent to grams per litre under standard conditions).

Schema Component Representation

```
<xs:simpleType name="ConcentrationKilogramsPerCubicMetre">
  <xs:restriction base="D2LogicalModel:Float"/>
</xs:simpleType>
```

top

Simple Type: ConcentrationMicrogramsPerCubicMetre

Super-types:	xs:float < Float (by restriction) < **ConcentrationMicrogramsPerCubicMetre** (by restriction)
Sub-types:	None

Name ConcentrationMicrogramsPerCubicMetre

Content

- Base XSD Type: float

Documentation A measure of concentration defined in µg/m3 (micrograms/cubic metre).

Schema Component Representation

```
<xs:simpleType name="ConcentrationMicrogramsPerCubicMetre">
  <xs:restriction base="D2LogicalModel:Float"/>
</xs:simpleType>
```

top

Simple Type: ConfidentialityValueEnum

Super-types:	xs:string < **ConfidentialityValueEnum** (by restriction)
Sub-types:	None

Name ConfidentialityValueEnum

Content

- Base XSD Type: string
- *value* comes from list: {'internalUse'|'noRestriction'|'restrictedToAuthorities'|'restrictedToAuthoritiesAndTrafficOperators'|'restrictedToAuthoritiesTrafficOperatorsAndPublishe

Documentation Values of confidentiality.

Schema Component Representation

```
<xs:simpleType name="ConfidentialityValueEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="internalUse"/>
    <xs:enumeration value="noRestriction"/>
    <xs:enumeration value="restrictedToAuthorities"/>
    <xs:enumeration value="restrictedToAuthoritiesAndTrafficOperators"/>
    <xs:enumeration value="restrictedToAuthoritiesTrafficOperatorsAndPublishers"/>
    <xs:enumeration value="restrictedToAuthoritiesTrafficOperatorsAndVms"/>
  </xs:restriction>
</xs:simpleType>
```

top

Simple Type: CountryEnum

Super-types:	xs:string < **CountryEnum** (by restriction)
Sub-types:	None

Name CountryEnum

Content

- Base XSD Type: string
- *value* comes from list: {'at'|'be'|'bg'|'ch'|'cs'|'cy'|'cz'|'de'|'dk'|'ee'|'es'|'fi'|'fo'|'fr'|'gb'|'gg'|'gi'|'gr'|'hr'|'hu'|'ie'|'im'|'is'|'it'|'je'|'li'|'lt'|'lu'|'lv'|'ma'|'mc'|'mk'|'mt'|'nl'|'no'|'pl'|'pt'|'ro'|'se'|'si'|'sk'|'sr

Documentation List of countries.

Schema Component Representation

```
<xs:simpleType name="CountryEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="at"/>
    <xs:enumeration value="be"/>
    <xs:enumeration value="bg"/>
    <xs:enumeration value="ch"/>
    <xs:enumeration value="cs"/>
    <xs:enumeration value="cy"/>
    <xs:enumeration value="cz"/>
    <xs:enumeration value="de"/>
    <xs:enumeration value="dk"/>
    <xs:enumeration value="ee"/>
    <xs:enumeration value="es"/>
    <xs:enumeration value="fi"/>
    <xs:enumeration value="fo"/>
    <xs:enumeration value="fr"/>
    <xs:enumeration value="gb"/>
    <xs:enumeration value="gg"/>
    <xs:enumeration value="gi"/>
    <xs:enumeration value="gr"/>
    <xs:enumeration value="hr"/>
    <xs:enumeration value="hu"/>
    <xs:enumeration value="ie"/>
    <xs:enumeration value="im"/>
    <xs:enumeration value="is"/>
    <xs:enumeration value="it"/>
    <xs:enumeration value="je"/>
    <xs:enumeration value="li"/>
    <xs:enumeration value="lt"/>
    <xs:enumeration value="lu"/>
    <xs:enumeration value="lv"/>
    <xs:enumeration value="ma"/>
    <xs:enumeration value="mc"/>
    <xs:enumeration value="mk"/>
    <xs:enumeration value="mt"/>
    <xs:enumeration value="nl"/>
    <xs:enumeration value="no"/>
    <xs:enumeration value="pl"/>
    <xs:enumeration value="pt"/>
    <xs:enumeration value="ro"/>
    <xs:enumeration value="se"/>
    <xs:enumeration value="si"/>
    <xs:enumeration value="sk"/>
    <xs:enumeration value="sm"/>
    <xs:enumeration value="tr"/>
    <xs:enumeration value="va"/>
    <xs:enumeration value="other"/>
  </xs:restriction>
</xs:simpleType>
```

top

Simple Type: DateTime

Super-types:	xs:dateTime < **DateTime** (by restriction)
Sub-types:	None

Name DateTime

Content

- Base XSD Type: dateTime

Documentation A combination of integer-valued year, month, day, hour, minute properties, a decimal-valued second property and a time zone property from which it is possible to determine the local time, the equivalent UTC time and the time zone offset from UTC.

Schema Component Representation

```
<xs:simpleType name="DateTime">
  <xs:restriction base="xs:dateTime"/>
</xs:simpleType>
```

top

Simple Type: DirectionCompassEnum

Super-types:	xs:string < **DirectionCompassEnum** (by restriction)
Sub-types:	None

Name DirectionCompassEnum

Content

- Base XSD Type: string
- *value* comes from list: {'east'|'eastNorthEast'|'eastSouthEast'|'north'|'northEast'|'northNorthEast'|'northNorthWest'|'northWest'|'south'|'southEast'|'southSouthEast'|'southSout

Documentation Cardinal direction points of the compass.

Schema Component Representation

```
<xs:simpleType name="DirectionCompassEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="east"/>
    <xs:enumeration value="eastNorthEast"/>
    <xs:enumeration value="eastSouthEast"/>
    <xs:enumeration value="north"/>
    <xs:enumeration value="northEast"/>
    <xs:enumeration value="northNorthEast"/>
```

```
      <xs:enumeration value="northNorthWest"/>
      <xs:enumeration value="northWest"/>
      <xs:enumeration value="south"/>
      <xs:enumeration value="southEast"/>
      <xs:enumeration value="southSouthEast"/>
      <xs:enumeration value="southSouthWest"/>
      <xs:enumeration value="southWest"/>
      <xs:enumeration value="west"/>
      <xs:enumeration value="westNorthWest"/>
      <xs:enumeration value="westSouthWest"/>
    </xs:restriction>
</xs:simpleType>
```

top

Simple Type: ElaboratedDataFaultEnum

Super-types:	xs:string < **ElaboratedDataFaultEnum** (by restriction)
Sub-types:	None

Name ElaboratedDataFaultEnum

Content

- Base XSD Type: string
- *value* comes from list: {'intermittentDataValues'|'noDataValuesAvailable'|'spuriousUnreliableDataValues'|'unspecifiedOrUnknownFault'|'other'}

Documentation Types of elaborated data faults.

Schema Component Representation

```
<xs:simpleType name="ElaboratedDataFaultEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="intermittentDataValues"/>
    <xs:enumeration value="noDataValuesAvailable"/>
    <xs:enumeration value="spuriousUnreliableDataValues"/>
    <xs:enumeration value="unspecifiedOrUnknownFault"/>
    <xs:enumeration value="other"/>
  </xs:restriction>
</xs:simpleType>
```

top

Simple Type: FaultSeverityEnum

Super-types:	xs:string < **FaultSeverityEnum** (by restriction)
Sub-types:	None

Name FaultSeverityEnum

Content

- Base XSD Type: string
- *value* comes from list: {'low'|'medium'|'high'|'unknown'}

Documentation Classification of the severity of faults.

Schema Component Representation

```
<xs:simpleType name="FaultSeverityEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="low"/>
    <xs:enumeration value="medium"/>
    <xs:enumeration value="high"/>
    <xs:enumeration value="unknown"/>
  </xs:restriction>
</xs:simpleType>
```

top

Simple Type: Float

Super-types:	xs:float < **Float** (by restriction)
Sub-types:	• ConcentrationKilogramsPerCubicMetre (by restriction) • ConcentrationMicrogramsPerCubicMetre (by restriction) • IntensityKilogramsPerSquareMetre (by restriction) • IntensityMillimetresPerHour (by restriction) • KilometresPerHour (by restriction) • MetresAsFloat (by restriction) • Percentage (by restriction) • Seconds (by restriction) • TemperatureCelsius (by restriction)

Name Float

Content

- Base XSD Type: float

Documentation A floating point number whose value space consists of the values m × 2^e, where m is an integer whose absolute value is less than 2^24, and e is an integer between -149 and 104, inclusive.

Schema Component Representation

```
<xs:simpleType name="Float">
  <xs:restriction base="xs:float"/>
</xs:simpleType>
```

top

Simple Type: InformationStatusEnum

Super-types:	xs:string < **InformationStatusEnum** (by restriction)
Sub-types:	None

Name InformationStatusEnum

Content

- Base XSD Type: string
- *value* comes from list: {'real'|'securityExercise'|'technicalExercise'|'test'}

Documentation Status of the related information (i.e. real, test or exercise).

Schema Component Representation

```
<xs:simpleType name="InformationStatusEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="real"/>
    <xs:enumeration value="securityExercise"/>
    <xs:enumeration value="technicalExercise"/>
    <xs:enumeration value="test"/>
  </xs:restriction>
</xs:simpleType>
```

top

Simple Type: IntensityKilogramsPerSquareMetre

Super-types:	xs:float < Float (by restriction) < **IntensityKilogramsPerSquareMetre** (by restriction)
Sub-types:	None

Name IntensityKilogramsPerSquareMetre

Content

- Base XSD Type: float

Documentation A measure of the quantity of application of a substance to an area defined in kilograms per square metre.

Schema Component Representation

```
<xs:simpleType name="IntensityKilogramsPerSquareMetre">
  <xs:restriction base="D2LogicalModel:Float"/>
</xs:simpleType>
```

top

Simple Type: IntensityMillimetresPerHour

Super-types:	xs:float < Float (by restriction) < **IntensityMillimetresPerHour** (by restriction)
Sub-types:	None

Name IntensityMillimetresPerHour

Content

- Base XSD Type: float

Documentation A measure of precipitation intensity defined in millimetres per hour.

Schema Component Representation

```
<xs:simpleType name="IntensityMillimetresPerHour">
  <xs:restriction base="D2LogicalModel:Float"/>
</xs:simpleType>
```

top

Simple Type: KilometresPerHour

Super-types:	xs:float < Float (by restriction) < **KilometresPerHour** (by restriction)
Sub-types:	None

Name KilometresPerHour

Content

- Base XSD Type: float

Documentation A measure of speed defined in kilometres per hour.

Schema Component Representation

```
<xs:simpleType name="KilometresPerHour">
  <xs:restriction base="D2LogicalModel:Float"/>
</xs:simpleType>
```

top

Simple Type: LaneEnum

Super-types:	xs:string < **LaneEnum** (by restriction)
Sub-types:	None

Name LaneEnum

Content

- Base XSD Type: string
- *value* comes from list: {'allLanesCompleteCarriageway'|'busLane'|'busStop'|'carPoolLane'|'centralReservation'|'crawlerLane'|'emergencyLane'|'escapeLane'|'expressLane'|'h

Documentation List of descriptors identifying specific lanes.

Schema Component Representation

```
<xs:simpleType name="LaneEnum">
   <xs:restriction base="xs:string">
      <xs:enumeration value="allLanesCompleteCarriageway"/>
      <xs:enumeration value="busLane"/>
      <xs:enumeration value="busStop"/>
      <xs:enumeration value="carPoolLane"/>
      <xs:enumeration value="centralReservation"/>
      <xs:enumeration value="crawlerLane"/>
      <xs:enumeration value="emergencyLane"/>
      <xs:enumeration value="escapeLane"/>
      <xs:enumeration value="expressLane"/>
      <xs:enumeration value="hardShoulder"/>
      <xs:enumeration value="heavyVehicleLane"/>
      <xs:enumeration value="lane1"/>
      <xs:enumeration value="lane2"/>
      <xs:enumeration value="lane3"/>
      <xs:enumeration value="lane4"/>
      <xs:enumeration value="lane5"/>
      <xs:enumeration value="lane6"/>
      <xs:enumeration value="lane7"/>
      <xs:enumeration value="lane8"/>
      <xs:enumeration value="lane9"/>
      <xs:enumeration value="layBy"/>
      <xs:enumeration value="leftHandTurningLane"/>
      <xs:enumeration value="leftLane"/>
      <xs:enumeration value="localTrafficLane"/>
      <xs:enumeration value="middleLane"/>
      <xs:enumeration value="opposingLanes"/>
      <xs:enumeration value="overtakingLane"/>
      <xs:enumeration value="rightHandTurningLane"/>
      <xs:enumeration value="rightLane"/>
      <xs:enumeration value="rushHourLane"/>
      <xs:enumeration value="setDownArea"/>
      <xs:enumeration value="slowVehicleLane"/>
      <xs:enumeration value="throughTrafficLane"/>
      <xs:enumeration value="tidalFlowLane"/>
      <xs:enumeration value="turningLane"/>
      <xs:enumeration value="verge"/>
   </xs:restriction>
</xs:simpleType>
```

top

Simple Type: Language

Super-types:	xs:language < **Language** (by restriction)
Sub-types:	None

Name Language

Content

- Base XSD Type: language

Documentation A language datatype, identifies a specified language by an ISO 639-1 2-alpha / ISO 639-2 3-alpha code.

Schema Component Representation

```
<xs:simpleType name="Language">
   <xs:restriction base="xs:language"/>
</xs:simpleType>
```

top

Simple Type: LinearReferencingDirectionEnum

Super-types:	xs:string < **LinearReferencingDirectionEnum** (by restriction)
Sub-types:	None

Name LinearReferencingDirectionEnum

Content

- Base XSD Type: string
- *value* comes from list: {'both'|'opposite'|'aligned'|'unknown'}

Documentation Directions of traffic flow relative to the direction in which the linear element is defined.

Schema Component Representation

```
<xs:simpleType name="LinearReferencingDirectionEnum">
   <xs:restriction base="xs:string">
      <xs:enumeration value="both"/>
      <xs:enumeration value="opposite"/>
      <xs:enumeration value="aligned"/>
      <xs:enumeration value="unknown"/>
   </xs:restriction>
</xs:simpleType>
```

top

Simple Type: LocationDescriptorEnum

Super-types:	xs:string < **LocationDescriptorEnum** (by restriction)
Sub-types:	None

Name LocationDescriptorEnum

Content

- Base XSD Type: string
- *value* comes from list: {'aroundABendInRoad'|'atMotorwayInterchange'|'atRestArea'|'atServiceArea'|'atTollPlaza'|'atTunnelEntryOrExit'|'inbound'|'inGallery'|'inTheCentre'|'inT

Documentation List of descriptors to help to identify a specific location.

Schema Component Representation

```
<xs:simpleType name="LocationDescriptorEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="aroundABendInRoad"/>
    <xs:enumeration value="atMotorwayInterchange"/>
    <xs:enumeration value="atRestArea"/>
    <xs:enumeration value="atServiceArea"/>
    <xs:enumeration value="atTollPlaza"/>
    <xs:enumeration value="atTunnelEntryOrExit"/>
    <xs:enumeration value="inbound"/>
    <xs:enumeration value="inGallery"/>
    <xs:enumeration value="inTheCentre"/>
    <xs:enumeration value="inTheOppositeDirection"/>
    <xs:enumeration value="inTunnel"/>
    <xs:enumeration value="onBorder"/>
    <xs:enumeration value="onBridge"/>
    <xs:enumeration value="onConnector"/>
    <xs:enumeration value="onElevatedSection"/>
    <xs:enumeration value="onFlyover"/>
    <xs:enumeration value="onIceRoad"/>
    <xs:enumeration value="onLevelCrossing"/>
    <xs:enumeration value="onLinkRoad"/>
    <xs:enumeration value="onPass"/>
    <xs:enumeration value="onRoundabout"/>
    <xs:enumeration value="onTheLeft"/>
    <xs:enumeration value="onTheRight"/>
    <xs:enumeration value="onTheRoadway"/>
    <xs:enumeration value="onUndergroundSection"/>
    <xs:enumeration value="onUnderpass"/>
    <xs:enumeration value="outbound"/>
    <xs:enumeration value="overCrestOfHill"/>
    <xs:enumeration value="withinJunction"/>
  </xs:restriction>
</xs:simpleType>
```

top

Simple Type: MetresAsFloat

Super-types:	xs:float < Float (by restriction) < **MetresAsFloat** (by restriction)
Sub-types:	None

Name MetresAsFloat

Content

- Base XSD Type: float

Documentation A measure of distance defined in metres in a floating point format.

Schema Component Representation

```
<xs:simpleType name="MetresAsFloat">
  <xs:restriction base="D2LogicalModel:Float"/>
</xs:simpleType>
```

top

Simple Type: MetresAsNonNegativeInteger

Super-types:	xs:nonNegativeInteger < NonNegativeInteger (by restriction) < **MetresAsNonNegativeInteger** (by restriction)
Sub-types:	None

Name MetresAsNonNegativeInteger

Content

- Base XSD Type: nonNegativeInteger

Documentation A measure of distance defined in metres in a non negative integer format.

Schema Component Representation

```
<xs:simpleType name="MetresAsNonNegativeInteger">
  <xs:restriction base="D2LogicalModel:NonNegativeInteger"/>
</xs:simpleType>
```

top

Simple Type: MultilingualStringValueType

Super-types: xs:string < **MultilingualStringValueType** (by restriction)

Sub-types:
- MultilingualStringValue (by extension)

Name MultilingualStringValueType

Content
- Base XSD Type: string
- *length* <= 1024

Schema Component Representation

```
<xs:simpleType name="MultilingualStringValueType">
  <xs:restriction base="xs:string">
    <xs:maxLength value="1024"/>
  </xs:restriction>
</xs:simpleType>
```

top

Simple Type: NonNegativeInteger

Super-types: xs:nonNegativeInteger < **NonNegativeInteger** (by restriction)

Sub-types:
- AlertCLocationCode (by restriction)
- AngleInDegrees (by restriction)
- MetresAsNonNegativeInteger (by restriction)

Name NonNegativeInteger

Content
- Base XSD Type: nonNegativeInteger

Documentation An integer number whose value space is the set {0, 1, 2, ..., 2147483645, 2147483646, 2147483647}.

Schema Component Representation

```
<xs:simpleType name="NonNegativeInteger">
  <xs:restriction base="xs:nonNegativeInteger"/>
</xs:simpleType>
```

top

Simple Type: OpenlrFormOfWayEnum

Super-types: xs:string < **OpenlrFormOfWayEnum** (by restriction)

Sub-types: None

Name OpenlrFormOfWayEnum

Content
- Base XSD Type: string
- *value* comes from list: {'undefined'|'motorway'|'multipleCarriageway'|'singleCarriageway'|'roundabout'|'slipRoad'|'trafficSquare'|'other'}

Documentation Enumeration of for of way

Schema Component Representation

```
<xs:simpleType name="OpenlrFormOfWayEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="undefined"/>
    <xs:enumeration value="motorway"/>
    <xs:enumeration value="multipleCarriageway"/>
    <xs:enumeration value="singleCarriageway"/>
    <xs:enumeration value="roundabout"/>
    <xs:enumeration value="slipRoad"/>
    <xs:enumeration value="trafficSquare"/>
    <xs:enumeration value="other"/>
  </xs:restriction>
</xs:simpleType>
```

top

Simple Type: OpenlrFunctionalRoadClassEnum

Super-types: xs:string < **OpenlrFunctionalRoadClassEnum** (by restriction)

Sub-types: None

Name OpenlrFunctionalRoadClassEnum

Content
- Base XSD Type: string
- *value* comes from list: {'FRC0'|'FRC1'|'FRC2'|'FRC3'|'FRC4'|'FRC5'|'FRC6'|'FRC7'}

Documentation Enemuration of functional road class

Schema Component Representation

```
<xs:simpleType name="OpenlrFunctionalRoadClassEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="FRC0"/>
    <xs:enumeration value="FRC1"/>
    <xs:enumeration value="FRC2"/>
```

```
      <xs:enumeration value="FRC3"/>
      <xs:enumeration value="FRC4"/>
      <xs:enumeration value="FRC5"/>
      <xs:enumeration value="FRC6"/>
      <xs:enumeration value="FRC7"/>
   </xs:restriction>
</xs:simpleType>
```

top

Simple Type: OpenlrOrientationEnum

Super-types:	xs:string < **OpenlrOrientationEnum** (by restriction)
Sub-types:	None

Name OpenlrOrientationEnum

Content

- Base XSD Type: string
- *value* comes from list: {'noOrientationOrUnknown'|'withLineDirection'|'againstLineDirection'|'both'}

Documentation Enumeration of side of road

Schema Component Representation

```
<xs:simpleType name="OpenlrOrientationEnum">
   <xs:restriction base="xs:string">
      <xs:enumeration value="noOrientationOrUnknown"/>
      <xs:enumeration value="withLineDirection"/>
      <xs:enumeration value="againstLineDirection"/>
      <xs:enumeration value="both"/>
   </xs:restriction>
</xs:simpleType>
```

top

Simple Type: OpenlrSideOfRoadEnum

Super-types:	xs:string < **OpenlrSideOfRoadEnum** (by restriction)
Sub-types:	None

Name OpenlrSideOfRoadEnum

Content

- Base XSD Type: string
- *value* comes from list: {'onRoadOrUnknown'|'right'|'left'|'both'}

Documentation Enumeration of side of road

Schema Component Representation

```
<xs:simpleType name="OpenlrSideOfRoadEnum">
   <xs:restriction base="xs:string">
      <xs:enumeration value="onRoadOrUnknown"/>
      <xs:enumeration value="right"/>
      <xs:enumeration value="left"/>
      <xs:enumeration value="both"/>
   </xs:restriction>
</xs:simpleType>
```

top

Simple Type: Percentage

Super-types:	xs:float < Float (by restriction) < **Percentage** (by restriction)
Sub-types:	None

Name Percentage

Content

- Base XSD Type: float

Documentation A measure of percentage.

Schema Component Representation

```
<xs:simpleType name="Percentage">
   <xs:restriction base="D2LogicalModel:Float"/>
</xs:simpleType>
```

top

Simple Type: PollutantTypeEnum

Super-types:	xs:string < **PollutantTypeEnum** (by restriction)
Sub-types:	None

Name PollutantTypeEnum

Content

- Base XSD Type: string

- *value* comes from list: {'benzeneTolueneXylene'|'carbonMonoxide'|'lead'|'methane'|'nitricOxide'|'nitrogenDioxide'|'nitrogenMonoxide'|'nitrogenOxides'|'nonMethaneHydrocart

Documentation Types of pollutant that can be measured in the atmosphere.

Schema Component Representation

```
<xs:simpleType name="PollutantTypeEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="benzeneTolueneXylene"/>
    <xs:enumeration value="carbonMonoxide"/>
    <xs:enumeration value="lead"/>
    <xs:enumeration value="methane"/>
    <xs:enumeration value="nitricOxide"/>
    <xs:enumeration value="nitrogenDioxide"/>
    <xs:enumeration value="nitrogenMonoxide"/>
    <xs:enumeration value="nitrogenOxides"/>
    <xs:enumeration value="nonMethaneHydrocarbons"/>
    <xs:enumeration value="ozone"/>
    <xs:enumeration value="particulates10"/>
    <xs:enumeration value="polycyclicAromaticHydrocarbons"/>
    <xs:enumeration value="primaryParticulate"/>
    <xs:enumeration value="sulphurDioxide"/>
    <xs:enumeration value="totalHydrocarbons"/>
  </xs:restriction>
</xs:simpleType>
```

top

Simple Type: PrecipitationTypeEnum

Super-types:	xs:string < **PrecipitationTypeEnum** (by restriction)
Sub-types:	None

Name PrecipitationTypeEnum

Content

- Base XSD Type: string
- *value* comes from list: {'drizzle'|'freezingRain'|'hail'|'rain'|'sleet'|'snow'}

Documentation Types of precipitation.

Schema Component Representation

```
<xs:simpleType name="PrecipitationTypeEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="drizzle"/>
    <xs:enumeration value="freezingRain"/>
    <xs:enumeration value="hail"/>
    <xs:enumeration value="rain"/>
    <xs:enumeration value="sleet"/>
    <xs:enumeration value="snow"/>
  </xs:restriction>
</xs:simpleType>
```

top

Simple Type: Seconds

Super-types:	xs:float < Float (by restriction) < **Seconds** (by restriction)
Sub-types:	None

Name Seconds

Content

- Base XSD Type: float

Documentation Seconds.

Schema Component Representation

```
<xs:simpleType name="Seconds">
  <xs:restriction base="D2LogicalModel:Float"/>
</xs:simpleType>
```

top

Simple Type: SourceTypeEnum

Super-types:	xs:string < **SourceTypeEnum** (by restriction)
Sub-types:	None

Name SourceTypeEnum

Content

- Base XSD Type: string
- *value* comes from list: {'automobileClubPatrol'|'cameraObservation'|'freightVehicleOperator'|'inductionLoopMonitoringStation'|'infraredMonitoringStation'|'microwaveMonitori

Documentation Type of sources from which situation information may be derived.

Schema Component Representation

```
<xs:simpleType name="SourceTypeEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="automobileClubPatrol"/>
```

```
      <xs:enumeration value="cameraObservation"/>
      <xs:enumeration value="freightVehicleOperator"/>
      <xs:enumeration value="inductionLoopMonitoringStation"/>
      <xs:enumeration value="infraredMonitoringStation"/>
      <xs:enumeration value="microwaveMonitoringStation"/>
      <xs:enumeration value="mobileTelephoneCaller"/>
      <xs:enumeration value="nonPoliceEmergencyServicePatrol"/>
      <xs:enumeration value="otherInformation"/>
      <xs:enumeration value="otherOfficialVehicle"/>
      <xs:enumeration value="policePatrol"/>
      <xs:enumeration value="privateBreakdownService"/>
      <xs:enumeration value="publicAndPrivateUtilities"/>
      <xs:enumeration value="registeredMotoristObserver"/>
      <xs:enumeration value="roadAuthorities"/>
      <xs:enumeration value="roadOperatorPatrol"/>
      <xs:enumeration value="roadsideTelephoneCaller"/>
      <xs:enumeration value="spotterAircraft"/>
      <xs:enumeration value="trafficMonitoringStation"/>
      <xs:enumeration value="transitOperator"/>
      <xs:enumeration value="vehicleProbeMeasurement"/>
      <xs:enumeration value="videoProcessingMonitoringStation"/>
   </xs:restriction>
</xs:simpleType>
```

top

Simple Type: String

Super-types:	xs:string < **String** (by restriction)
Sub-types:	None

Name String

Content

- Base XSD Type: string
- *length* <= 1024

Documentation A character string whose value space is the set of finite-length sequences of characters. Every character has a corresponding Universal Character Set code point (as defined in ISO/IEC 10646), which is an integer.

Schema Component Representation

```
<xs:simpleType name="String">
   <xs:restriction base="xs:string">
      <xs:maxLength value="1024"/>
   </xs:restriction>
</xs:simpleType>
```

top

Simple Type: TemperatureCelsius

Super-types:	xs:float < Float (by restriction) < **TemperatureCelsius** (by restriction)
Sub-types:	None

Name TemperatureCelsius

Content

- Base XSD Type: float

Documentation A measure of temperature defined in degrees Celsius.

Schema Component Representation

```
<xs:simpleType name="TemperatureCelsius">
   <xs:restriction base="D2LogicalModel:Float"/>
</xs:simpleType>
```

top

Simple Type: TimePrecisionEnum

Super-types:	xs:string < **TimePrecisionEnum** (by restriction)
Sub-types:	None

Name TimePrecisionEnum

Content

- Base XSD Type: string
- *value* comes from list: {'tenthsOfSecond'|'second'|'minute'|'quarterHour'|'halfHour'|'hour'}

Documentation List of precisions to which times can be given.

Schema Component Representation

```
<xs:simpleType name="TimePrecisionEnum">
   <xs:restriction base="xs:string">
      <xs:enumeration value="tenthsOfSecond"/>
      <xs:enumeration value="second"/>
      <xs:enumeration value="minute"/>
      <xs:enumeration value="quarterHour"/>
      <xs:enumeration value="halfHour"/>
      <xs:enumeration value="hour"/>
   </xs:restriction>
</xs:simpleType>
```

top

Simple Type: TpegLoc03AreaDescriptorSubtypeEnum

Super-types:	xs:string < **TpegLoc03AreaDescriptorSubtypeEnum** (by restriction)
Sub-types:	None

Name TpegLoc03AreaDescriptorSubtypeEnum

Content

- Base XSD Type: string
- *value* comes from list: {'administrativeAreaName'|'administrativeReferenceName'|'areaName'|'countyName'|'lakeName'|'nationName'|'policeForceControlAreaName'|'region

Documentation Descriptors for describing area locations.

Schema Component Representation

```
<xs:simpleType name="TpegLoc03AreaDescriptorSubtypeEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="administrativeAreaName"/>
    <xs:enumeration value="administrativeReferenceName"/>
    <xs:enumeration value="areaName"/>
    <xs:enumeration value="countyName"/>
    <xs:enumeration value="lakeName"/>
    <xs:enumeration value="nationName"/>
    <xs:enumeration value="policeForceControlAreaName"/>
    <xs:enumeration value="regionName"/>
    <xs:enumeration value="seaName"/>
    <xs:enumeration value="townName"/>
    <xs:enumeration value="other"/>
  </xs:restriction>
</xs:simpleType>
```

top

Simple Type: UrgencyEnum

Super-types:	xs:string < **UrgencyEnum** (by restriction)
Sub-types:	None

Name UrgencyEnum

Content

- Base XSD Type: string
- *value* comes from list: {'extremelyUrgent'|'urgent'|'normalUrgency'}

Documentation Degrees of urgency that a receiving client should associate with the disseminate of the information contained in the publication.

Schema Component Representation

```
<xs:simpleType name="UrgencyEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="extremelyUrgent"/>
    <xs:enumeration value="urgent"/>
    <xs:enumeration value="normalUrgency"/>
  </xs:restriction>
</xs:simpleType>
```

top

Simple Type: WeatherRelatedRoadConditionTypeEnum

Super-types:	xs:string < **WeatherRelatedRoadConditionTypeEnum** (by restriction)
Sub-types:	None

Name WeatherRelatedRoadConditionTypeEnum

Content

- Base XSD Type: string
- *value* comes from list: {'blackIce'|'deepSnow'|'dry'|'freezingOfWetRoads'|'freezingPavements'|'freezingRain'|'freshSnow'|'ice'|'iceBuildUp'|'iceWithWheelBarTracks'|'icyPatch

Documentation Types of road surface conditions which are related to the weather.

Schema Component Representation

```
<xs:simpleType name="WeatherRelatedRoadConditionTypeEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="blackIce"/>
    <xs:enumeration value="deepSnow"/>
    <xs:enumeration value="dry"/>
    <xs:enumeration value="freezingOfWetRoads"/>
    <xs:enumeration value="freezingPavements"/>
    <xs:enumeration value="freezingRain"/>
    <xs:enumeration value="freshSnow"/>
    <xs:enumeration value="ice"/>
    <xs:enumeration value="iceBuildUp"/>
    <xs:enumeration value="iceWithWheelBarTracks"/>
    <xs:enumeration value="icyPatches"/>
    <xs:enumeration value="looseSnow"/>
    <xs:enumeration value="normalWinterConditionsForPedestrians"/>
    <xs:enumeration value="packedSnow"/>
    <xs:enumeration value="roadSurfaceMelting"/>
```

```
      <xs:enumeration value="slipperyRoad"/>
      <xs:enumeration value="slushOnRoad"/>
      <xs:enumeration value="slushStrings"/>
      <xs:enumeration value="snowDrifts"/>
      <xs:enumeration value="snowOnPavement"/>
      <xs:enumeration value="snowOnTheRoad"/>
      <xs:enumeration value="surfaceWater"/>
      <xs:enumeration value="wet"/>
      <xs:enumeration value="wetAndIcyRoad"/>
      <xs:enumeration value="wetIcyPavement"/>
      <xs:enumeration value="other"/>
    </xs:restriction>
</xs:simpleType>
```

top