

Realis ITS

Version 29.10.2020

DatexII 2.3 profile realisTraveltimes-1.0

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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>
```

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Global Declarations

Element: **d2LogicalModel**

Name	d2LogicalModel
Type	D2LogicalModel:D2LogicalModel
Nullable	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"/>
```

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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: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="affectedCarriagewayAndLanesExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

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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>
```

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Complex Type: **AlertCLinear**

Super-types:	None
Sub-types:	<ul style="list-style-type: none">AlertCMethod4Linear (by extension)

Name	AlertCLinear
Abstract	yes
Documentation	A linear section along a road defined between two points on the road by reference to a pre-defined ALERT-C location table.

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

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

Schema Component Representation

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

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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>
```

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Complex Type: AlertCMethod2Point

Super-types:	AlertCPoint < AlertCMethod2Point (by extension)
Sub-types:	None

Name	AlertCMethod2Point
Abstract	no
Documentation	A single point on the road network defined by reference to a point in 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]
  <D2LogicalModel:alertCDirection> D2LogicalModel:AlertCDirection </D2LogicalModel:alertCDirection> [1]
  <D2LogicalModel:alertCMethod2PrimaryPointLocation> D2LogicalModel:AlertCMethod2PrimaryPointLocation
  </D2LogicalModel:alertCMethod2PrimaryPointLocation> [1]
  <D2LogicalModel:alertCMethod2PointExtension> D2LogicalModel:_ExtensionType
  </D2LogicalModel:alertCMethod2PointExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="AlertCMethod2Point">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:AlertCPoint">
      <xs:sequence>
        <xs:element name="alertCDirection" type="D2LogicalModel:AlertCDirection"/>
        <xs:element name="alertCMethod2PrimaryPointLocation"
          type="D2LogicalModel:AlertCMethod2PrimaryPointLocation"/>
        <xs:element name="alertCMethod2PointExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

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Complex Type: AlertCMethod2PrimaryPointLocation

Super-types:	None
Sub-types:	None

Name	AlertCMethod2PrimaryPointLocation
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.

XML Instance Representation

```
<...>
  <D2LogicalModel:alertCLocation> D2LogicalModel:AlertCLocation </D2LogicalModel:alertCLocation> [1]
  <D2LogicalModel:alertCMethod2PrimaryPointLocationExtension> D2LogicalModel:_ExtensionType
</D2LogicalModel:alertCMethod2PrimaryPointLocationExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="AlertCMethod2PrimaryPointLocation">
  <xs:sequence>
    <xs:element name="alertCLocation" type="D2LogicalModel:AlertCLocation"/>
    <xs:element name="alertCMethod2PrimaryPointLocationExtension" type="D2LogicalModel:_ExtensionType"
      minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

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Complex Type: AlertCMethod4Linear

Super-types: [AlertCLinear](#) < AlertCMethod4Linear (by extension)

Sub-types: None

Name	AlertCMethod4Linear
Abstract	no
Documentation	A linear section along a road between two points, Primary and Secondary, which are pre-defined ALERT-C locations plus offset distance. Direction is FROM the Secondary point TO the Primary point, i.e. the Primary point is downstream of the Secondary point.

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:alertCLinearExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:alertCLinearExtension>
[0..1]
  <D2LogicalModel:alertCDirection> D2LogicalModel:AlertCDirection </D2LogicalModel:alertCDirection> [1]
  <D2LogicalModel:alertCMethod4PrimaryPointLocation> D2LogicalModel:AlertCMethod4PrimaryPointLocation
</D2LogicalModel:alertCMethod4PrimaryPointLocation> [1]
  <D2LogicalModel:alertCMethod4SecondaryPointLocation> D2LogicalModel:AlertCMethod4SecondaryPointLocation
</D2LogicalModel:alertCMethod4SecondaryPointLocation> [1]
  <D2LogicalModel:alertCMethod4LinearExtension> D2LogicalModel:_ExtensionType
</D2LogicalModel:alertCMethod4LinearExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="AlertCMethod4Linear">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:AlertCLinear">
      <xs:sequence>
        <xs:element name="alertCDirection" type="D2LogicalModel:AlertCDirection"/>
        <xs:element name="alertCMethod4PrimaryPointLocation"
          type="D2LogicalModel:AlertCMethod4PrimaryPointLocation"/>
        <xs:element name="alertCMethod4SecondaryPointLocation"
          type="D2LogicalModel:AlertCMethod4SecondaryPointLocation"/>
        <xs:element name="alertCMethod4LinearExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

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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>

```

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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>

```

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Complex Type: AlertCMethod4SecondaryPointLocation

Super-types:	None
Sub-types:	None

Name	AlertCMethod4SecondaryPointLocation
Abstract	no
Documentation	The point (called Secondary point) which is at the upstream 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:alertCMethod4SecondaryPointLocationExtension> D2LogicalModel: _ExtensionType
</D2LogicalModel:alertCMethod4SecondaryPointLocationExtension> [0..1]
</...>

```

Schema Component Representation

```

<xs:complexType name="AlertCMethod4SecondaryPointLocation">
  <xs:sequence>
    <xs:element name="alertCLocation" type="D2LogicalModel:AlertCLocation"/>
    <xs:element name="offsetDistance" type="D2LogicalModel:OffsetDistance"/>
    <xs:element name="alertCMethod4SecondaryPointLocationExtension" type="D2LogicalModel: _ExtensionType"
      minOccurs="0"/>
  </xs:sequence>
</xs:complexType>

```

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Complex Type: AlertCPoint

Super-types:	None
Sub-types:	<ul style="list-style-type: none"> AlertCMethod2Point (by extension) 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>
```

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Complex Type: BasicData

Super-types: None

Sub-types:

- [TravelTimeData](#) (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>
```

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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>
```


Complex Type: **DataValue**

Super-types:	None
Sub-types:	<ul style="list-style-type: none"> • DurationValue (by extension) • OccupancyChangeValue (by extension) • SpeedValue (by extension) • VehicleCountValue (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>
```

Complex Type: **DistanceAlongLinearElement**

Super-types:	None
Sub-types:	<ul style="list-style-type: none"> • DistanceFromLinearElementReferent (by extension) • DistanceFromLinearElementStart (by extension) • PercentageDistanceAlongLinearElement (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>
```

Complex Type: **DistanceFromLinearElementReferent**

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

Name	DistanceFromLinearElementReferent
Abstract	no
Documentation	Distance of a point along a linear element measured from a "from referent" on the linear element, in the

sense relative to the linear element definition rather than the direction of traffic flow or optionally towards a "towards referent".

XML Instance Representation

```
<...>
  <D2LogicalModel:distanceAlongLinearElementExtension> D2LogicalModel:_ExtensionType
</D2LogicalModel:distanceAlongLinearElementExtension> [0..1]
  <D2LogicalModel:distanceAlong> D2LogicalModel:MetresAsFloat </D2LogicalModel:distanceAlong> [1] ?
  <D2LogicalModel:fromReferent> D2LogicalModel:Referent </D2LogicalModel:fromReferent> [1] ?
  <D2LogicalModel:towardsReferent> D2LogicalModel:Referent </D2LogicalModel:towardsReferent> [0..1] ?
  <D2LogicalModel:distanceFromLinearElementReferentExtension> D2LogicalModel:_ExtensionType
</D2LogicalModel:distanceFromLinearElementReferentExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="DistanceFromLinearElementReferent">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:DistanceAlongLinearElement">
      <xs:sequence>
        <xs:element name="distanceAlong" type="D2LogicalModel:MetresAsFloat" minOccurs="1" maxOccurs="1"/>
        <xs:element name="fromReferent" type="D2LogicalModel:Referent"/>
        <xs:element name="towardsReferent" type="D2LogicalModel:Referent" minOccurs="0"/>
        <xs:element name="distanceFromLinearElementReferentExtension" type="D2LogicalModel:_ExtensionType"
          minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

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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>
```

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Complex Type: DurationValue

Super-types: [DataValue](#) < [DurationValue](#) (by extension)

Sub-types: None

Name DurationValue

Abstract no

Documentation A measured or calculated value of a period of time.

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:duration> D2LogicalModel:Seconds </D2LogicalModel:duration> [1] ?
  <D2LogicalModel:durationValueExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:durationValueExtension>
  [0..1]
```

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

Schema Component Representation

```
<xs:complexType name="DurationValue">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:DataValue">
      <xs:sequence>
        <xs:element name="duration" type="D2LogicalModel:Seconds" minOccurs="1" maxOccurs="1"/>
        <xs:element name="durationValueExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

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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:forecast> D2LogicalModel:Boolean </D2LogicalModel:forecast> [0..1] ?
  <D2LogicalModel:source> D2LogicalModel:Source </D2LogicalModel:source> [0..1]
  <D2LogicalModel:validity> D2LogicalModel:Validity </D2LogicalModel:validity> [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="forecast" type="D2LogicalModel:Boolean" minOccurs="0" maxOccurs="1"/>
    <xs:element name="source" type="D2LogicalModel:Source" minOccurs="0"/>
    <xs:element name="validity" type="D2LogicalModel:Validity" 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>
```

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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>
```

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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:forecastDefault> D2LogicalModel:Boolean </D2LogicalModel:forecastDefault> [0..1] ?
  <D2LogicalModel:periodDefault> D2LogicalModel:Seconds </D2LogicalModel:periodDefault> [0..1] ?
  <D2LogicalModel:timeDefault> D2LogicalModel:DateTime </D2LogicalModel:timeDefault> [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="forecastDefault" type="D2LogicalModel:Boolean" minOccurs="0" maxOccurs="1"/>
        <xs:element name="periodDefault" type="D2LogicalModel:Seconds" minOccurs="0" maxOccurs="1"/>
        <xs:element name="timeDefault" type="D2LogicalModel:DateTime" minOccurs="0" maxOccurs="1"/>
        <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>
```

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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>
```

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Complex Type: **Fault**

Super-types: None
Sub-types:

- [ElaboratedDataFault](#) (by extension)
- [MeasurementEquipmentFault](#) (by extension)
- [VmsFault](#) (by extension)
- [VmsUnitFault](#) (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>

```

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Complex Type: GroupOfLocations

Super-types:	None
Sub-types:	<ul style="list-style-type: none"> • Itinerary (by extension) <ul style="list-style-type: none"> ◦ ItineraryByIndexedLocations (by extension) • Location (by extension) <ul style="list-style-type: none"> ◦ NetworkLocation (by extension) <ul style="list-style-type: none"> ▪ Linear (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>

```

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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: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="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>

```

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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>
```

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Complex Type: Itinerary

Super-types: [GroupOfLocations](#) < [Itinerary](#) (by extension)

Sub-types:

- [ItineraryByIndexedLocations](#) (by extension)

Name	Itinerary
Abstract	yes
Documentation	Multiple (i.e. more than one) physically separate locations arranged as an ordered set that defines an itinerary or route.

XML Instance Representation

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

Schema Component Representation

```
<xs:complexType name="Itinerary" abstract="true">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:GroupOfLocations">
      <xs:sequence>
        <xs:element name="itineraryExtension" type="D2LogicalModel:__ExtensionType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

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Complex Type: ItineraryByIndexedLocations

Super-types: [GroupOfLocations](#) < [Itinerary](#) (by extension) < [ItineraryByIndexedLocations](#) (by extension)

Sub-types: None

Name	ItineraryByIndexedLocations
Abstract	no
Documentation	Multiple physically separate locations arranged as an ordered set that defines an itinerary or route. The index qualifier indicates the order.

XML Instance Representation

```
<...>
  <D2LogicalModel:groupOfLocationsExtension> D2LogicalModel:__ExtensionType
</D2LogicalModel:groupOfLocationsExtension> [0..1]
  <D2LogicalModel:itineraryExtension> D2LogicalModel:__ExtensionType </D2LogicalModel:itineraryExtension> [0..1]
  <D2LogicalModel:locationContainedInItinerary> D2LogicalModel:LocationContainedInItinerary
  <D2LogicalModel:locationContainedInItinerary> [0..*] ?
  <D2LogicalModel:itineraryByIndexedLocationsExtension> D2LogicalModel:__ExtensionType
</D2LogicalModel:itineraryByIndexedLocationsExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="ItineraryByIndexedLocations">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:Itinerary">
      <xs:sequence>
        <xs:element name="locationContainedInItinerary" type="D2LogicalModel:LocationContainedInItinerary"
          minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="itineraryByIndexedLocationsExtension" type="D2LogicalModel:__ExtensionType"
          minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type: Junction

Super-types:	None
Sub-types:	None

Name	Junction
Abstract	no
Documentation	Junction (on a highway), can also be an interchange or if applicable also a motorway service station (see junctionClassification).

XML Instance Representation

```

<...>
<D2LogicalModel:junctionClassification> D2LogicalModel:JunctionClassificationEnum
</D2LogicalModel:junctionClassification> [0..1] ?
<D2LogicalModel:junctionName> D2LogicalModel:MultilingualString </D2LogicalModel:junctionName> [1] ?
<D2LogicalModel:junctionNumber> D2LogicalModel:String </D2LogicalModel:junctionNumber> [0..1] ?
<D2LogicalModel:motorway> D2LogicalModel:Road </D2LogicalModel:motorway> [0..1] ?
<D2LogicalModel:destinationMotorway> D2LogicalModel:Road </D2LogicalModel:destinationMotorway> [0..*] ?
<D2LogicalModel:junctionExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:junctionExtension> [0..1]
</...>

```

Schema Component Representation

```

<xs:complexType name="Junction">
  <xs:sequence>
    <xs:element name="junctionClassification" type="D2LogicalModel:JunctionClassificationEnum" minOccurs="0" maxOccurs="1"/>
    <xs:element name="junctionName" type="D2LogicalModel:MultilingualString" minOccurs="1" maxOccurs="1"/>
    <xs:element name="junctionNumber" type="D2LogicalModel:String" minOccurs="0" maxOccurs="1"/>
    <xs:element name="motorway" type="D2LogicalModel:Road" minOccurs="0"/>
    <xs:element name="destinationMotorway" type="D2LogicalModel:Road" minOccurs="0" maxOccurs="unbounded"/>
    <xs:element name="junctionExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>

```

Complex Type: Linear

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

Name	Linear
Abstract	no
Documentation	A linear section along a single road with optional directionality defined between two points on the same road.

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:tppegLinearLocation> D2LogicalModel:TpegLinearLocation </D2LogicalModel:tppegLinearLocation> [0..1]
<D2LogicalModel>alertCLinear> D2LogicalModel:AlertCLinear </D2LogicalModel>alertCLinear> [0..1]
<D2LogicalModel:linearWithinLinearElement> D2LogicalModel:LinearWithinLinearElement
</D2LogicalModel:linearWithinLinearElement> [0..1]
<D2LogicalModel:linearExtension> D2LogicalModel:_LinearExtensionType </D2LogicalModel:linearExtension> [0..1]
</...>

```

Schema Component Representation

```

<xs:complexType name="Linear">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:NetworkLocation">
      <xs:sequence>
        <xs:element name="tppegLinearLocation" type="D2LogicalModel:TpegLinearLocation" minOccurs="0"/>
        <xs:element name="alertCLinear" type="D2LogicalModel:AlertCLinear" minOccurs="0"/>
        <xs:element name="linearWithinLinearElement" type="D2LogicalModel:LinearWithinLinearElement" minOccurs="0"/>
        <xs:element name="linearExtension" type="D2LogicalModel:_LinearExtensionType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

Complex Type: LinearElement

Super-types:	None
Sub-types:	<ul style="list-style-type: none"> LinearElementByCode (by extension) LinearElementByPoints (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:roadNumber> D2LogicalModel:String </D2LogicalModel:roadNumber> [0..1] ?
  <D2LogicalModel:linearElementReferenceModel> D2LogicalModel:String </D2LogicalModel:linearElementReferenceModel>
  [0..1] ?
  <D2LogicalModel:linearElementReferenceModelVersion> D2LogicalModel:String
  </D2LogicalModel:linearElementReferenceModelVersion> [0..1] ?
  <D2LogicalModel:linearElementNature> D2LogicalModel:LinearElementNatureEnum </D2LogicalModel:linearElementNature>
  [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="roadNumber" type="D2LogicalModel:String" minOccurs="0" maxOccurs="1"/>
    <xs:element name="linearElementReferenceModel" type="D2LogicalModel:String" minOccurs="0" maxOccurs="1"/>
    <xs:element name="linearElementReferenceModelVersion" type="D2LogicalModel:String" minOccurs="0" maxOccurs="1"/>
    <xs:element name="linearElementNature" type="D2LogicalModel:LinearElementNatureEnum" 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:roadNumber> D2LogicalModel:String </D2LogicalModel:roadNumber> [0..1] ?
  <D2LogicalModel:linearElementReferenceModel> D2LogicalModel:String </D2LogicalModel:linearElementReferenceModel>
  [0..1] ?
  <D2LogicalModel:linearElementReferenceModelVersion> D2LogicalModel:String
  </D2LogicalModel:linearElementReferenceModelVersion> [0..1] ?
  <D2LogicalModel:linearElementNature> D2LogicalModel:LinearElementNatureEnum </D2LogicalModel:linearElementNature>
  [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: LinearElementByPoints

Super-types: [LinearElement](#) < LinearElementByPoints (by extension)
 Sub-types: None

Name	LinearElementByPoints
Abstract	no
Documentation	A linear element along a single linear object defined by its start and end points.

XML Instance Representation

```
<...>
  <D2LogicalModel:roadName> D2LogicalModel:MultilingualString </D2LogicalModel:roadName> [0..1] ?
  <D2LogicalModel:roadNumber> D2LogicalModel:String </D2LogicalModel:roadNumber> [0..1] ?
```



```

<D2LogicalModel:linearElementReferenceModel> D2LogicalModel:String </D2LogicalModel:linearElementReferenceModel>
[0..1] ?
<D2LogicalModel:linearElementReferenceModelVersion> D2LogicalModel:String
</D2LogicalModel:linearElementReferenceModelVersion> [0..1] ?
<D2LogicalModel:linearElementNature> D2LogicalModel:LinearElementNatureEnum </D2LogicalModel:linearElementNature>
[0..1] ?
<D2LogicalModel:linearElementExtension> D2LogicalModel:ExtensionType </D2LogicalModel:linearElementExtension>
[0..1]
<D2LogicalModel:startPointOfLinearElement> D2LogicalModel:Referent </D2LogicalModel:startPointOfLinearElement> [1]
?
<D2LogicalModel:intermediatePointOnLinearElement> D2LogicalModel:IntermediatePointOnLinearElement
</D2LogicalModel:intermediatePointOnLinearElement> [0..*] ?
<D2LogicalModel:endPointOfLinearElement> D2LogicalModel:Referent </D2LogicalModel:endPointOfLinearElement> [1] ?
<D2LogicalModel:linearElementByPointsExtension> D2LogicalModel:ExtensionType
</D2LogicalModel:linearElementByPointsExtension> [0..1]
</...>

```

Schema Component Representation

```

<xs:complexType name="LinearElementByPoints">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:LinearElement">
      <xs:sequence>
        <xs:element name="startPointOfLinearElement" type="D2LogicalModel:Referent"/>
        <xs:element name="intermediatePointOnLinearElement" type="D2LogicalModel:IntermediatePointOnLinearElement"
          minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="endPointOfLinearElement" type="D2LogicalModel:Referent"/>
        <xs:element name="linearElementByPointsExtension" type="D2LogicalModel:ExtensionType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

[top](#)

Complex Type: LinearWithinLinearElement

Super-types:	None
Sub-types:	None

Name	LinearWithinLinearElement
Abstract	no
Documentation	A linear section along 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:directionRelativeOnLinearSection> D2LogicalModel:LinearReferencingDirectionEnum
</D2LogicalModel:directionRelativeOnLinearSection> [0..1] ?
<D2LogicalModel:linearElement> D2LogicalModel:LinearElement </D2LogicalModel:linearElement> [1]
<D2LogicalModel:fromPoint> D2LogicalModel:DistanceAlongLinearElement </D2LogicalModel:fromPoint> [1] ?
<D2LogicalModel:toPoint> D2LogicalModel:DistanceAlongLinearElement </D2LogicalModel:toPoint> [1] ?
<D2LogicalModel:linearWithinLinearElementExtension> D2LogicalModel:ExtensionType
</D2LogicalModel:linearWithinLinearElementExtension> [0..1]
</...>

```

Schema Component Representation

```

<xs:complexType name="LinearWithinLinearElement">
  <xs:sequence>
    <xs:element name="directionRelativeOnLinearSection" type="D2LogicalModel:LinearReferencingDirectionEnum"
      minOccurs="0" maxOccurs="1"/>
    <xs:element name="linearElement" type="D2LogicalModel:LinearElement"/>
    <xs:element name="fromPoint" type="D2LogicalModel:DistanceAlongLinearElement"/>
    <xs:element name="toPoint" type="D2LogicalModel:DistanceAlongLinearElement"/>
    <xs:element name="linearWithinLinearElementExtension" type="D2LogicalModel:ExtensionType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>

```

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Complex Type: Location

Super-types:	GroupOfLocations < Location (by extension)
Sub-types:	<ul style="list-style-type: none"> • NetworkLocation (by extension) <ul style="list-style-type: none"> ◦ Linear (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>

```

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Complex Type: MeasurementEquipmentFault

Super-types: [Fault](#) < MeasurementEquipmentFault (by extension)
 Sub-types: None

Name	MeasurementEquipmentFault
Abstract	no
Documentation	Details of a fault which is being reported for the related measurement equipment.

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:measurementEquipmentFault> D2LogicalModel:MeasurementEquipmentFaultEnum
</D2LogicalModel:measurementEquipmentFault> [1] ?
  <D2LogicalModel:measurementEquipmentFaultExtension> D2LogicalModel:_ExtensionType
</D2LogicalModel:measurementEquipmentFaultExtension> [0..1]
</...>

```

Schema Component Representation

```

<xs:complexType name="MeasurementEquipmentFault">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:Fault">
      <xs:sequence>
        <xs:element name="measurementEquipmentFault" type="D2LogicalModel:MeasurementEquipmentFaultEnum"
          minOccurs="1" maxOccurs="1"/>
        <xs:element name="measurementEquipmentFaultExtension" 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
-------------	-------------------------

XML Instance Representation

```
<...
  lang="xg:language [0..1]">
    D2LogicalModel:MultilingualStringValue
</...>
```

Schema Component Representation

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

[top](#)

Complex Type: NetworkLocation

Super-types: [GroupOfLocations](#) < [Location](#) (by extension) < [NetworkLocation](#) (by extension)

Sub-types:

- [Linear](#) (by extension)
- [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: OccupancyChangeValue

Super-types: [DataValue](#) < [OccupancyChangeValue](#) (by extension)

Sub-types: None

Name OccupancyChangeValue

Abstract no

Documentation A measured or calculated value of change of occupied parking spaces expressed as integer.

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:occupancyChange> D2LogicalModel:Integer </D2LogicalModel:occupancyChange> [1] ?
  <D2LogicalModel:occupancyChangeValueExtension> D2LogicalModel:_ExtensionType
</D2LogicalModel:occupancyChangeValueExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="OccupancyChangeValue">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:DataValue">
      <xs:sequence>
```

```

    <xs:element name="occupancyChange" type="D2LogicalModel:Integer" minOccurs="1" maxOccurs="1"/>
    <xs:element name="occupancyChangeValueExtension" 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: **OpenlrExtendedLinear**

Super-types:	None
Sub-types:	None

Name	OpenlrExtendedLinear
Abstract	no
Documentation	Extension class for OpenLR Line location reference

XML Instance Representation

```

<...>
  <D2LogicalModel:firstDirection> D2LogicalModel:OpenlrLineLocationReference </D2LogicalModel:firstDirection> [1] ?
  <D2LogicalModel:oppositeDirection> D2LogicalModel:OpenlrLineLocationReference </D2LogicalModel:oppositeDirection>
[0..1] ?
</...>

```

Schema Component Representation

```

<xs:complexType name="OpenlrExtendedLinear">
  <xs:sequence>
    <xs:element name="firstDirection" type="D2LogicalModel:OpenlrLineLocationReference"/>
    <xs:element name="oppositeDirection" type="D2LogicalModel:OpenlrLineLocationReference" 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>
```

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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: OpenlrLineLocationReference

Super-types: None
Sub-types: None

Name OpenlrLineLocationReference
Abstract no

XML Instance Representation

```
<...>
  <D2LogicalModel:openlrLocationReferencePoint> D2LogicalModel:OpenlrLocationReferencePoint
</D2LogicalModel:openlrLocationReferencePoint> [1..*]
  <D2LogicalModel:openlrLastLocationReferencePoint> D2LogicalModel:OpenlrLastLocationReferencePoint
</D2LogicalModel:openlrLastLocationReferencePoint> [1]
  <D2LogicalModel:openlrOffsets> D2LogicalModel:OpenlrOffsets </D2LogicalModel:openlrOffsets> [0..1]
  <D2LogicalModel:openlrLineLocationReferenceExtension> D2LogicalModel: _ExtensionType
</D2LogicalModel:openlrLineLocationReferenceExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="OpenlrLineLocationReference">
  <xs:sequence>
    <xs:element name="openlrLocationReferencePoint" type="D2LogicalModel:OpenlrLocationReferencePoint"
      maxOccurs="unbounded"/>
    <xs:element name="openlrLastLocationReferencePoint" type="D2LogicalModel:OpenlrLastLocationReferencePoint"/>
    <xs:element name="openlrOffsets" type="D2LogicalModel:OpenlrOffsets" minOccurs="0"/>
    <xs:element name="openlrLineLocationReferenceExtension" 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: OpenlrOffsets

Super-types: None

Sub-types: None

Name OpenlrOffsets

Abstract no

Documentation Offsets are used to locate the start and end of a location more precisely than bounding to the nodes in a network.

XML Instance Representation

```
<...>
  <D2LogicalModel:openlrPositiveOffset> D2LogicalModel:MetresAsNonNegativeInteger
</D2LogicalModel:openlrPositiveOffset> [0..1] ?
  <D2LogicalModel:openlrNegativeOffset> D2LogicalModel:MetresAsNonNegativeInteger
</D2LogicalModel:openlrNegativeOffset> [0..1] ?
  <D2LogicalModel:openlrOffsetsExtension> D2LogicalModel: _ExtensionType </D2LogicalModel:openlrOffsetsExtension>
  [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="OpenlrOffsets">
  <xs:sequence>
    <xs:element name="openlrPositiveOffset" type="D2LogicalModel:MetresAsNonNegativeInteger" minOccurs="0"
      maxOccurs="1"/>
  </xs:sequence>
</xs:complexType>
```

```

<xs:element name="openlrNegativeOffset" type="D2LogicalModel:MetresAsNonNegativeInteger" minOccurs="0"
maxOccurs="1"/>
<xs:element name="openlrOffsetsExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
</xs:sequence>
</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>

```

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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>

```

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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>
```

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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>
```

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Complex Type: OverallPeriod

Super-types:	None
Sub-types:	None

Name OverallPeriod
Abstract no
Documentation A continuous or discontinuous period of validity defined by overall bounding start and end times and the possible intersection of valid periods (potentially recurring) with the complement of exception periods (also potentially recurring).

XML Instance Representation

```
<...>
  <D2LogicalModel:overallStartTime> D2LogicalModel:DateTime </D2LogicalModel:overallStartTime> [1] ?
  <D2LogicalModel:overallEndTime> D2LogicalModel:DateTime </D2LogicalModel:overallEndTime> [0..1] ?
  <D2LogicalModel:overallPeriodExtension> D2LogicalModel: _ExtensionType </D2LogicalModel:overallPeriodExtension>
[0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="OverallPeriod">
  <xs:sequence>
    <xs:element name="overallStartTime" type="D2LogicalModel:DateTime" minOccurs="1" maxOccurs="1"/>
    <xs:element name="overallEndTime" type="D2LogicalModel:DateTime" minOccurs="0" maxOccurs="1"/>
  </xs:sequence>
</xs:complexType>
```

```

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

```

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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>

```

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Complex Type: PercentageDistanceAlongLinearElement

Super-types: [DistanceAlongLinearElement](#) < [PercentageDistanceAlongLinearElement](#) (by extension)

Sub-types: None

Name PercentageDistanceAlongLinearElement
Abstract no
Documentation Distance of a point along a linear element measured from the start node expressed as a percentage of the whole length 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:percentageDistanceAlong> D2LogicalModel:Percentage </D2LogicalModel:percentageDistanceAlong> [1] ?
  <D2LogicalModel:percentageDistanceAlongLinearElementExtension> D2LogicalModel:_ExtensionType
  </D2LogicalModel:percentageDistanceAlongLinearElementExtension> [0..1]
</...>

```

Schema Component Representation

```

<xs:complexType name="PercentageDistanceAlongLinearElement">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:DistanceAlongLinearElement">
      <xs:sequence>
        <xs:element name="percentageDistanceAlong" type="D2LogicalModel:Percentage" minOccurs="1" maxOccurs="1"/>
        <xs:element name="percentageDistanceAlongLinearElementExtension" type="D2LogicalModel:_ExtensionType"
          minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

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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:tpegPointLocation> D2LogicalModel:TpegPointLocation </D2LogicalModel:tpegPointLocation> [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="tpegPointLocation" type="D2LogicalModel:TpegPointLocation" minOccurs="0"/>
        <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>

```

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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:administrativeAreaOfPoint> D2LogicalModel:MultilingualString
</D2LogicalModel:administrativeAreaOfPoint> [0..1] ?
<D2LogicalModel:directionBoundAtPoint> D2LogicalModel:DirectionEnum </D2LogicalModel:directionBoundAtPoint> [0..1]
?
<D2LogicalModel:directionRelativeAtPoint> D2LogicalModel:LinearReferencingDirectionEnum
</D2LogicalModel:directionRelativeAtPoint> [0..1] ?
<D2LogicalModel:heightGradeOfPoint> D2LogicalModel:HeightGradeEnum </D2LogicalModel:heightGradeOfPoint> [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="administrativeAreaOfPoint" type="D2LogicalModel:MultilingualString" minOccurs="0"
maxOccurs="1"/>
    <xs:element name="directionBoundAtPoint" type="D2LogicalModel:DirectionEnum" minOccurs="0" maxOccurs="1"/>
    <xs:element name="directionRelativeAtPoint" type="D2LogicalModel:LinearReferencingDirectionEnum" minOccurs="0"
maxOccurs="1"/>
    <xs:element name="heightGradeOfPoint" type="D2LogicalModel:HeightGradeEnum" 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:bearing> D2LogicalModel:NonNegativeInteger </D2LogicalModel:bearing> [0..1] ?
<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="bearing" type="D2LogicalModel:NonNegativeInteger" minOccurs="0" maxOccurs="1"/>
    <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>
```

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Complex Type: PointExtended

Super-types:	None
Sub-types:	None

Name	PointExtended
Abstract	no
Documentation	Extension point for 'Point' to support the description of junctions (and other alternative point descriptions).

XML Instance Representation

```
<...>
  <D2LogicalModel:description> D2LogicalModel:MultilingualString </D2LogicalModel:description> [0..1] ?
  <D2LogicalModel:junction> D2LogicalModel:Junction </D2LogicalModel:junction> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="PointExtended">
  <xs:sequence>
    <xs:element name="description" type="D2LogicalModel:MultilingualString" minOccurs="0" maxOccurs="1"/>
    <xs:element name="junction" type="D2LogicalModel:Junction" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

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Complex Type: Referent

Super-types:	None
Sub-types:	None

Name	Referent
Abstract	no
Documentation	A referent on a linear object that has a known location such as a node, a reference marker (e.g. a markerpost), an intersection etc.

XML Instance Representation

```
<...>
  <D2LogicalModel:referentIdentifier> D2LogicalModel:String </D2LogicalModel:referentIdentifier> [1] ?
  <D2LogicalModel:referentName> D2LogicalModel:String </D2LogicalModel:referentName> [0..1] ?
  <D2LogicalModel:referentType> D2LogicalModel:ReferentTypeEnum </D2LogicalModel:referentType> [1] ?
  <D2LogicalModel:referentDescription> D2LogicalModel:MultilingualString </D2LogicalModel:referentDescription>
[0..1] ?
  <D2LogicalModel:pointCoordinates> D2LogicalModel:PointCoordinates </D2LogicalModel:pointCoordinates> [0..1]
</...>
```

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

Schema Component Representation

```
<xs:complexType name="Referent">
  <xs:sequence>
    <xs:element name="referentIdentifier" type="D2LogicalModel:String" minOccurs="1" maxOccurs="1"/>
    <xs:element name="referentName" type="D2LogicalModel:String" minOccurs="0" maxOccurs="1"/>
    <xs:element name="referentType" type="D2LogicalModel:ReferentTypeEnum" minOccurs="1" maxOccurs="1"/>
    <xs:element name="referentDescription" type="D2LogicalModel:MultilingualString" minOccurs="0" maxOccurs="1"/>
    <xs:element name="pointCoordinates" type="D2LogicalModel:PointCoordinates" minOccurs="0"/>
    <xs:element name="referentExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

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Complex Type: Road

Super-types:	None
Sub-types:	<ul style="list-style-type: none"> • RoadNode (by extension)

Name	Road
Abstract	no
Documentation	Identification of a road by its name, identifier, type ...

XML Instance Representation

```
<...>
  <D2LogicalModel:nameOfRoad> D2LogicalModel:MultilingualString </D2LogicalModel:nameOfRoad> [0..1] ?
  <D2LogicalModel:roadIdentifier> D2LogicalModel:MultilingualString </D2LogicalModel:roadIdentifier> [0..1] ?
  <D2LogicalModel:typeOfRoad> D2LogicalModel:RoadTypeEnum </D2LogicalModel:typeOfRoad> [0..1] ?
  <D2LogicalModel:roadDestination> D2LogicalModel:MultilingualString </D2LogicalModel:roadDestination> [0..*] ?
  <D2LogicalModel:roadOrigination> D2LogicalModel:MultilingualString </D2LogicalModel:roadOrigination> [0..*] ?
  <D2LogicalModel:distanceToThisRoad> D2LogicalModel:MetresAsNonNegativeInteger </D2LogicalModel:distanceToThisRoad>
  [0..1] ?
  <D2LogicalModel:roadExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:roadExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="Road">
  <xs:sequence>
    <xs:element name="nameOfRoad" type="D2LogicalModel:MultilingualString" minOccurs="0" maxOccurs="1"/>
    <xs:element name="roadIdentifier" type="D2LogicalModel:MultilingualString" minOccurs="0" maxOccurs="1"/>
    <xs:element name="typeOfRoad" type="D2LogicalModel:RoadTypeEnum" minOccurs="0" maxOccurs="1"/>
    <xs:element name="roadDestination" type="D2LogicalModel:MultilingualString" minOccurs="0"
    maxOccurs="unbounded"/>
    <xs:element name="roadOrigination" type="D2LogicalModel:MultilingualString" minOccurs="0"
    maxOccurs="unbounded"/>
    <xs:element name="distanceToThisRoad" type="D2LogicalModel:MetresAsNonNegativeInteger" minOccurs="0"
    maxOccurs="1"/>
    <xs:element name="roadExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

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Complex Type: RoadNode

Super-types:	Road < RoadNode (by extension)
Sub-types:	None

Name	RoadNode
Abstract	no
Documentation	A road node as part of the specialised road identified by the name of a junction on this road.

XML Instance Representation

```
<...>
  <D2LogicalModel:nameOfRoad> D2LogicalModel:MultilingualString </D2LogicalModel:nameOfRoad> [0..1] ?
  <D2LogicalModel:roadIdentifier> D2LogicalModel:MultilingualString </D2LogicalModel:roadIdentifier> [0..1] ?
  <D2LogicalModel:typeOfRoad> D2LogicalModel:RoadTypeEnum </D2LogicalModel:typeOfRoad> [0..1] ?
  <D2LogicalModel:roadDestination> D2LogicalModel:MultilingualString </D2LogicalModel:roadDestination> [0..*] ?
  <D2LogicalModel:roadOrigination> D2LogicalModel:MultilingualString </D2LogicalModel:roadOrigination> [0..*] ?
  <D2LogicalModel:distanceToThisRoad> D2LogicalModel:MetresAsNonNegativeInteger </D2LogicalModel:distanceToThisRoad>
  [0..1] ?
  <D2LogicalModel:roadExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:roadExtension> [0..1]
  <D2LogicalModel:junctionName> D2LogicalModel:MultilingualString </D2LogicalModel:junctionName> [1] ?
  <D2LogicalModel:roadNodeExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:roadNodeExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="RoadNode">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:Road">
      <xs:sequence>
        <xs:element name="junctionName" type="D2LogicalModel:MultilingualString" minOccurs="1" maxOccurs="1"/>
        <xs:element name="roadNodeExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
```

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

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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:reliable> D2LogicalModel:Boolean </D2LogicalModel:reliable> [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="reliable" type="D2LogicalModel:Boolean" minOccurs="0" maxOccurs="1"/>  
    <xs:element name="sourceExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>  
  </xs:sequence>  
</xs:complexType>
```

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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>
```

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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

```
<...>
  <D2LogicalModel:locationDescriptor> D2LogicalModel:LocationDescriptorEnum </D2LogicalModel:locationDescriptor>
  [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="1"
      maxOccurs="unbounded"/>
    <xs:element name="affectedCarriagewayAndLanes" type="D2LogicalModel:AffectedCarriagewayAndLanes" minOccurs="0"
      maxOccurs="unbounded"/>
    <xs:element name="supplementaryPositionalDescriptionExtension" type="D2LogicalModel:_ExtensionType"
      minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

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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>
```

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Complex Type: TpegDescriptor

Super-types: None
Sub-types:

- [TpegAreaDescriptor](#) (by extension)
- [TpegPointDescriptor](#) (by extension)
 - [TpegIlcPointDescriptor](#) (by extension)
 - [TpegJunctionPointDescriptor](#) (by extension)
 - [TpegOtherPointDescriptor](#) (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>
```

Complex Type: TpegFramedPoint

Super-types: [TpegPointLocation](#) < TpegFramedPoint (by extension)
 Sub-types: None

Name TpegFramedPoint
 Abstract no
 Documentation A point on the road network which is framed between two other points on the same road.

XML Instance Representation

```
<...>
  <D2LogicalModel:tepegDirection> D2LogicalModel:DirectionEnum </D2LogicalModel:tepegDirection> [1] ?
  <D2LogicalModel:tepegPointLocationExtension> D2LogicalModel:_ExtensionType
  </D2LogicalModel:tepegPointLocationExtension> [0..1]
  <D2LogicalModel:tepegFramedPointLocationType> D2LogicalModel:TpegLoc01FramedPointLocationSubtypeEnum
  </D2LogicalModel:tepegFramedPointLocationType> [1] ?
  <D2LogicalModel:framedPoint> D2LogicalModel:TpegNonJunctionPoint </D2LogicalModel:framedPoint> [1] ?
  <D2LogicalModel:to> D2LogicalModel:TpegPoint </D2LogicalModel:to> [1] ?
  <D2LogicalModel:from> D2LogicalModel:TpegPoint </D2LogicalModel:from> [1] ?
  <D2LogicalModel:tepegFramedPointExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:tepegFramedPointExtension>
  [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="TpegFramedPoint">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:TpegPointLocation">
      <xs:sequence>
        <xs:element name="tepegFramedPointLocationType"
          type="D2LogicalModel:TpegLoc01FramedPointLocationSubtypeEnum" minOccurs="1" maxOccurs="1"/>
        <xs:element name="framedPoint" type="D2LogicalModel:TpegNonJunctionPoint"/>
        <xs:element name="to" type="D2LogicalModel:TpegPoint"/>
        <xs:element name="from" type="D2LogicalModel:TpegPoint"/>
        <xs:element name="tepegFramedPointExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type: TpegIlcPointDescriptor

Super-types: [TpegDescriptor](#) < [TpegPointDescriptor](#) (by extension) < TpegIlcPointDescriptor (by extension)
 Sub-types: None

Name TpegIlcPointDescriptor
 Abstract no
 Documentation A descriptor for describing a junction by defining the intersecting roads.

XML Instance Representation

```
<...>
  <D2LogicalModel:descriptor> D2LogicalModel:MultilingualString </D2LogicalModel:descriptor> [1] ?
  <D2LogicalModel:tepegDescriptorExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:tepegDescriptorExtension>
  [0..1]
  <D2LogicalModel:tepegPointDescriptorExtension> D2LogicalModel:_ExtensionType
  </D2LogicalModel:tepegPointDescriptorExtension> [0..1]
  <D2LogicalModel:tepegIlcPointDescriptorType> D2LogicalModel:TpegLoc03IlcPointDescriptorSubtypeEnum
  </D2LogicalModel:tepegIlcPointDescriptorType> [1] ?
  <D2LogicalModel:tepegIlcPointDescriptorExtension> D2LogicalModel:_ExtensionType
  </D2LogicalModel:tepegIlcPointDescriptorExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="TpegIlcPointDescriptor">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:TpegPointDescriptor">
      <xs:sequence>
        <xs:element name="tepegIlcPointDescriptorType" type="D2LogicalModel:TpegLoc03IlcPointDescriptorSubtypeEnum"
          minOccurs="1" maxOccurs="1"/>
        <xs:element name="tepegIlcPointDescriptorExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type: TpegJunction

Super-types: [TpegPoint](#) < TpegJunction (by extension)
 Sub-types: None

Name TpegJunction
 Abstract no

XML Instance Representation

```

<...>
  <D2LogicalModel:tpegPointExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:tpegPointExtension> [0..1]
  <D2LogicalModel:pointCoordinates> D2LogicalModel:PointCoordinates </D2LogicalModel:pointCoordinates> [1]
  <D2LogicalModel:name> D2LogicalModel:TpegJunctionPointDescriptor </D2LogicalModel:name> [0..1] ?
  <D2LogicalModel:ilc> D2LogicalModel:TpegIlcPointDescriptor </D2LogicalModel:ilc> [1..3] ?
  <D2LogicalModel:otherName> D2LogicalModel:TpegOtherPointDescriptor </D2LogicalModel:otherName> [0..*] ?
  <D2LogicalModel:tpegJunctionExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:tpegJunctionExtension>
  [0..1]
</...>

```

Schema Component Representation

```

<xs:complexType name="TpegJunction">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:TpegPoint">
      <xs:sequence>
        <xs:element name="pointCoordinates" type="D2LogicalModel:PointCoordinates"/>
        <xs:element name="name" type="D2LogicalModel:TpegJunctionPointDescriptor" minOccurs="0"/>
        <xs:element name="ilc" type="D2LogicalModel:TpegIlcPointDescriptor" maxOccurs="3"/>
        <xs:element name="otherName" type="D2LogicalModel:TpegOtherPointDescriptor" minOccurs="0"
          maxOccurs="unbounded"/>
        <xs:element name="tpegJunctionExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

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Complex Type: TpegJunctionPointDescriptor

Super-types: [TpegDescriptor](#) < [TpegPointDescriptor](#) (by extension) < [TpegJunctionPointDescriptor](#) (by extension)

Sub-types: None

Name TpegJunctionPointDescriptor
Abstract no
Documentation A descriptor for describing a point at a junction on a road network.

XML Instance Representation

```

<...>
  <D2LogicalModel:descriptor> D2LogicalModel:MultilingualString </D2LogicalModel:descriptor> [1] ?
  <D2LogicalModel:tpegDescriptorExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:tpegDescriptorExtension>
  [0..1]
  <D2LogicalModel:tpegPointDescriptorExtension> D2LogicalModel:_ExtensionType
  </D2LogicalModel:tpegPointDescriptorExtension> [0..1]
  <D2LogicalModel:tpegJunctionPointDescriptorType> D2LogicalModel:TpegLoc03JunctionPointDescriptorSubTypeEnum
  </D2LogicalModel:tpegJunctionPointDescriptorType> [1] ?
  <D2LogicalModel:tpegJunctionPointDescriptorExtension> D2LogicalModel:_ExtensionType
  </D2LogicalModel:tpegJunctionPointDescriptorExtension> [0..1]
</...>

```

Schema Component Representation

```

<xs:complexType name="TpegJunctionPointDescriptor">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:TpegPointDescriptor">
      <xs:sequence>
        <xs:element name="tpegJunctionPointDescriptorType"
          type="D2LogicalModel:TpegLoc03JunctionPointDescriptorSubTypeEnum" minOccurs="1" maxOccurs="1"/>
        <xs:element name="tpegJunctionPointDescriptorExtension" type="D2LogicalModel:_ExtensionType"
          minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

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Complex Type: TpegLinearLocation

Super-types: None

Sub-types: None

Name TpegLinearLocation
Abstract no
Documentation A linear section along a single road defined between two points on the same road by a TPEG-Loc structure.

XML Instance Representation

```

<...>
  <D2LogicalModel:tpegDirection> D2LogicalModel:DirectionEnum </D2LogicalModel:tpegDirection> [1] ?
  <D2LogicalModel:tpegLinearLocationType> D2LogicalModel:TpegLoc01LinearLocationSubTypeEnum
  </D2LogicalModel:tpegLinearLocationType> [1] ?
  <D2LogicalModel:to> D2LogicalModel:TpegPoint </D2LogicalModel:to> [1] ?
  <D2LogicalModel:from> D2LogicalModel:TpegPoint </D2LogicalModel:from> [1] ?
  <D2LogicalModel:tpegLinearLocationExtension> D2LogicalModel:_ExtensionType
  </D2LogicalModel:tpegLinearLocationExtension> [0..1]
</...>

```

Schema Component Representation

```

<xs:complexType name="TpegLinearLocation">
  <xs:sequence>
    <xs:element name="tpegDirection" type="D2LogicalModel:DirectionEnum" minOccurs="1" maxOccurs="1"/>
    <xs:element name="tpegLinearLocationType" type="D2LogicalModel:TpegLoc01LinearLocationSubTypeEnum" minOccurs="1" maxOccurs="1"/>
    <xs:element name="to" type="D2LogicalModel:TpegPoint"/>
    <xs:element name="from" type="D2LogicalModel:TpegPoint"/>
    <xs:element name="tpegLinearLocationExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>

```

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Complex Type: TpegNonJunctionPoint

Super-types: [TpegPoint](#) < TpegNonJunctionPoint (by extension)
 Sub-types: None

Name TpegNonJunctionPoint
Abstract no
Documentation A point on the road network which is not a road junction point.

XML Instance Representation

```

<...>
  <D2LogicalModel:tpegPointExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:tpegPointExtension> [0..1]
  <D2LogicalModel:pointCoordinates> D2LogicalModel:PointCoordinates </D2LogicalModel:pointCoordinates> [1]
  <D2LogicalModel:name> D2LogicalModel:TpegOtherPointDescriptor </D2LogicalModel:name> [1..*] ?
  <D2LogicalModel:tpegNonJunctionPointExtension> D2LogicalModel:_ExtensionType
</D2LogicalModel:tpegNonJunctionPointExtension> [0..1]
</...>

```

Schema Component Representation

```

<xs:complexType name="TpegNonJunctionPoint">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:TpegPoint">
      <xs:sequence>
        <xs:element name="pointCoordinates" type="D2LogicalModel:PointCoordinates"/>
        <xs:element name="name" type="D2LogicalModel:TpegOtherPointDescriptor" maxOccurs="unbounded"/>
        <xs:element name="tpegNonJunctionPointExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

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Complex Type: TpegOtherPointDescriptor

Super-types: [TpegDescriptor](#) < [TpegPointDescriptor](#) (by extension) < TpegOtherPointDescriptor (by extension)
 Sub-types: None

Name TpegOtherPointDescriptor
Abstract no
Documentation General descriptor for describing a point.

XML Instance Representation

```

<...>
  <D2LogicalModel:descriptor> D2LogicalModel:MultilingualString </D2LogicalModel:descriptor> [1] ?
  <D2LogicalModel:tpegDescriptorExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:tpegDescriptorExtension> [0..1]
  <D2LogicalModel:tpegPointDescriptorExtension> D2LogicalModel:_ExtensionType
</D2LogicalModel:tpegPointDescriptorExtension> [0..1]
  <D2LogicalModel:tpegOtherPointDescriptorType> D2LogicalModel:TpegLoc03OtherPointDescriptorSubTypeEnum
</D2LogicalModel:tpegOtherPointDescriptorType> [1] ?
  <D2LogicalModel:tpegOtherPointDescriptorExtension> D2LogicalModel:_ExtensionType
</D2LogicalModel:tpegOtherPointDescriptorExtension> [0..1]
</...>

```

Schema Component Representation

```

<xs:complexType name="TpegOtherPointDescriptor">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:TpegPointDescriptor">
      <xs:sequence>
        <xs:element name="tpegOtherPointDescriptorType" type="D2LogicalModel:TpegLoc03OtherPointDescriptorSubTypeEnum" minOccurs="1" maxOccurs="1"/>
        <xs:element name="tpegOtherPointDescriptorExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

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Complex Type: TpegPoint

Super-types: None
 Sub-types:

- [TpegJunction](#) (by extension)

- [TpegNonJunctionPoint](#) (by extension)

Name	TpegPoint
Abstract	yes
Documentation	A point on the road network which is either a junction point or a non junction point.

XML Instance Representation

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

Schema Component Representation

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

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Complex Type: TpegPointDescriptor

Super-types: [TpegDescriptor](#) < TpegPointDescriptor (by extension)

Sub-types:

- [TpegJlcPointDescriptor](#) (by extension)
- [TpegJunctionPointDescriptor](#) (by extension)
- [TpegOtherPointDescriptor](#) (by extension)

Name	TpegPointDescriptor
Abstract	yes
Documentation	A descriptor for describing a point location.

XML Instance Representation

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

Schema Component Representation

```
<xs:complexType name="TpegPointDescriptor" abstract="true">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:TpegDescriptor">
      <xs:sequence>
        <xs:element name="tpegPointDescriptorExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

[top](#)

Complex Type: TpegPointLocation

Super-types: None

Sub-types:

- [TpegFramedPoint](#) (by extension)
- [TpegSimplePoint](#) (by extension)

Name	TpegPointLocation
Abstract	yes
Documentation	A single point on the road network defined by a TPEG-Loc structure and which has an associated direction of traffic flow.

XML Instance Representation

```
<...>
  <D2LogicalModel:tpegDirection> D2LogicalModel:DirectionEnum </D2LogicalModel:tpegDirection> [1] ?
  <D2LogicalModel:tpegPointLocationExtension> D2LogicalModel:_ExtensionType
</D2LogicalModel:tpegPointLocationExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="TpegPointLocation" abstract="true">
  <xs:sequence>
    <xs:element name="tpegDirection" type="D2LogicalModel:DirectionEnum" minOccurs="1" maxOccurs="1"/>
    <xs:element name="tpegPointLocationExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

[top](#)

Complex Type: TpegSimplePoint

Super-types: [TpegPointLocation](#) < TpegSimplePoint (by extension)

Sub-types: None

Name TpegSimplePoint
Abstract no
Documentation A point on the road network which is not bounded by any other points on the road network.

XML Instance Representation

```
<...>
<D2LogicalModel:tepegDirection> D2LogicalModel:DirectionEnum </D2LogicalModel:tepegDirection> [1] ?
<D2LogicalModel:tepegPointLocationExtension> D2LogicalModel:_ExtensionType
</D2LogicalModel:tepegPointLocationExtension> [0..1]
<D2LogicalModel:tepegSimplePointLocationType> D2LogicalModel:TpegLoc01SimplePointLocationSubtypeEnum
</D2LogicalModel:tepegSimplePointLocationType> [1] ?
<D2LogicalModel:point> D2LogicalModel:TpegPoint </D2LogicalModel:point> [1] ?
<D2LogicalModel:tepegSimplePointExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:tepegSimplePointExtension>
[0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="TpegSimplePoint">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:TpegPointLocation">
      <xs:sequence>
        <xs:element name="tepegSimplePointLocationType"
          type="D2LogicalModel:TpegLoc01SimplePointLocationSubtypeEnum" minOccurs="1" maxOccurs="1"/>
        <xs:element name="point" type="D2LogicalModel:TpegPoint"/>
        <xs:element name="tepegSimplePointExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

[top](#)

Complex Type: **TravelTimeData**

Super-types: [BasicData](#) < TravelTimeData (by extension)
Sub-types: None

Name TravelTimeData
Abstract no
Documentation Derived/computed travel time information relating to a linear section of the road network; forecast = true means a forecast for a vehicle at the start of the specified location, forecast = false means calculation/measurement at the end.

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:travelTimeTrendType> D2LogicalModel:TravelTimeTrendTypeEnum </D2LogicalModel:travelTimeTrendType>
[0..1] ?
<D2LogicalModel:travelTimeType> D2LogicalModel:TravelTimeTypeEnum </D2LogicalModel:travelTimeType> [0..1] ?
<D2LogicalModel:vehicleType> D2LogicalModel:VehicleTypeEnum </D2LogicalModel:vehicleType> [0..*] ?
<D2LogicalModel:travelTime> D2LogicalModel:DurationValue </D2LogicalModel:travelTime> [0..1] ?
<D2LogicalModel:freeFlowTravelTime> D2LogicalModel:DurationValue </D2LogicalModel:freeFlowTravelTime> [0..1] ?
<D2LogicalModel:normallyExpectedTravelTime> D2LogicalModel:DurationValue
</D2LogicalModel:normallyExpectedTravelTime> [0..1] ?
<D2LogicalModel:freeFlowSpeed> D2LogicalModel:SpeedValue </D2LogicalModel:freeFlowSpeed> [0..1] ?
<D2LogicalModel:travelTimeDataExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:travelTimeDataExtension>
[0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="TravelTimeData">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:BasicData">
      <xs:sequence>
        <xs:element name="travelTimeTrendType" type="D2LogicalModel:TravelTimeTrendTypeEnum" minOccurs="0"
          maxOccurs="1"/>
        <xs:element name="travelTimeType" type="D2LogicalModel:TravelTimeTypeEnum" minOccurs="0" maxOccurs="1"/>
        <xs:element name="vehicleType" type="D2LogicalModel:VehicleTypeEnum" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="travelTime" type="D2LogicalModel:DurationValue" minOccurs="0"/>
        <xs:element name="freeFlowTravelTime" type="D2LogicalModel:DurationValue" minOccurs="0"/>
        <xs:element name="normallyExpectedTravelTime" type="D2LogicalModel:DurationValue" minOccurs="0"/>
        <xs:element name="freeFlowSpeed" type="D2LogicalModel:SpeedValue" minOccurs="0"/>
        <xs:element name="travelTimeDataExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

[top](#)

Complex Type: **Validity**

Super-types: None

Sub-types:	None
------------	------

Name	Validity
Abstract	no
Documentation	Specification of validity, either explicitly or by a validity time period specification which may be discontinuous.

XML Instance Representation

```
<...>
  <D2LogicalModel:validityStatus> D2LogicalModel:ValidityStatusEnum </D2LogicalModel:validityStatus> [1] ?
  <D2LogicalModel:validityTimeSpecification> D2LogicalModel:OverallPeriod
</D2LogicalModel:validityTimeSpecification> [1] ?
  <D2LogicalModel:validityExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:validityExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="Validity">
  <xs:sequence>
    <xs:element name="validityStatus" type="D2LogicalModel:ValidityStatusEnum" minOccurs="1" maxOccurs="1"/>
    <xs:element name="validityTimeSpecification" type="D2LogicalModel:OverallPeriod"/>
    <xs:element name="validityExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

[top](#)

Complex Type: VehicleCountValue

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

Name	VehicleCountValue
Abstract	no
Documentation	A measured or calculated value of absolute count of vehicles within a specified period of time expressed as non negative integer.

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:vehicleCount> D2LogicalModel:NonNegativeInteger </D2LogicalModel:vehicleCount> [1] ?
  <D2LogicalModel:vehicleCountValueExtension> D2LogicalModel:_ExtensionType
</D2LogicalModel:vehicleCountValueExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="VehicleCountValue">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:DataValue">
      <xs:sequence>
        <xs:element name="vehicleCount" type="D2LogicalModel:NonNegativeInteger" minOccurs="1" maxOccurs="1"/>
        <xs:element name="vehicleCountValueExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

[top](#)

Complex Type: VmsFault

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

Name	VmsFault
Abstract	no
Documentation	Details of the fault which is being reported for the specified variable message sign panel.

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:vmsFault> D2LogicalModel:VmsFaultEnum </D2LogicalModel:vmsFault> [1] ?
  <D2LogicalModel:vmsFaultExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:vmsFaultExtension> [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="VmsFault">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:Fault">
      <xs:sequence>
        <xs:element name="vmsFault" type="D2LogicalModel:VmsFaultEnum" minOccurs="1" maxOccurs="1"/>
        <xs:element name="vmsFaultExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

[top](#)

Complex Type: VmsUnitFault

Super-types: [Fault](#) < VmsUnitFault (by extension)
Sub-types: None

Name	VmsUnitFault
Abstract	no
Documentation	Details of the fault which is being reported for the specified variable message sign control unit.

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:vmsUnitFault> D2LogicalModel:VmsFaultEnum </D2LogicalModel:vmsUnitFault> [1] ?
  <D2LogicalModel:vmsUnitFaultExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:vmsUnitFaultExtension>
  [0..1]
</...>
```

Schema Component Representation

```
<xs:complexType name="VmsUnitFault">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:Fault">
      <xs:sequence>
        <xs:element name="vmsUnitFault" type="D2LogicalModel:VmsFaultEnum" minOccurs="1" maxOccurs="1"/>
        <xs:element name="vmsUnitFaultExtension" 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: _IntermediatePointOnLinearElement

Super-types: None
Sub-types: None

Name	_IntermediatePointOnLinearElement
Abstract	no

XML Instance Representation

```
<...
  index="xs:int [1]">
  <D2LogicalModel:referent> D2LogicalModel:Referent </D2LogicalModel:referent> [1]
</...>
```

Schema Component Representation

```
<xs:complexType name="_IntermediatePointOnLinearElement">
  <xs:sequence>
    <xs:element name="referent" type="D2LogicalModel:Referent" minOccurs="1" maxOccurs="1"/>
  </xs:sequence>
  <xs:attribute name="index" type="xs:int" use="required"/>
</xs:complexType>
```

[top](#)

Complex Type: _LinearExtensionType

Super-types: None
Sub-types: None

Name _LinearExtensionType
Abstract no

XML Instance Representation

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

Schema Component Representation

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

[top](#)

Complex Type: _LocationContainedInItinerary

Super-types: None
Sub-types: None

Name _LocationContainedInItinerary
Abstract no

XML Instance Representation

```
<...
  index="xs:int [1]">
  <D2LogicalModel:location> D2LogicalModel:Location </D2LogicalModel:location> [1]
</...>
```

Schema Component Representation

```
<xs:complexType name="_LocationContainedInItinerary">
  <xs:sequence>
    <xs:element name="location" type="D2LogicalModel:Location" minOccurs="1" maxOccurs="1"/>
  </xs:sequence>
  <xs:attribute name="index" type="xs:int" use="required"/>
</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]
  <D2LogicalModel:pointExtended> D2LogicalModel:PointExtended </D2LogicalModel:pointExtended> [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:element name="pointExtended" type="D2LogicalModel:PointExtended" 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: 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	<ul style="list-style-type: none"> • Base XSD Type: string • <i>value</i> comes from list: {'entrySlipRoad' 'exitSlipRoad' 'mainCarriageway'}
Documentation	List of descriptors identifying specific carriageway details.

Schema Component Representation

```
<xs:simpleType name="CarriagewayEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="entrySlipRoad"/>
    <xs:enumeration value="exitSlipRoad"/>
    <xs:enumeration value="mainCarriageway"/>
  </xs:restriction>
</xs:simpleType>
```

[top](#)

Simple Type: ComputationMethodEnum

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

Name	ComputationMethodEnum
Content	<ul style="list-style-type: none"> • Base XSD Type: string • <i>value</i> comes from list: {'arithmeticAverageOfSamplesBasedOnAFixedNumberOfSamples' 'arithmeticAverageOfSamplesInATimePeriod' 'harmonicAverageOfSamplesInATimePeriod' 'medianOfSamplesInATimePeriod' 'movingAverageOfSamples'}
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: ConfidentialityValueEnum

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

Name	ConfidentialityValueEnum
Content	<ul style="list-style-type: none"> • Base XSD Type: string • <i>value</i> comes from list: {'internalUse' 'noRestriction' 'restrictedToAuthorities' 'restrictedToAuthoritiesAndTrafficOperators' 'restrictedToAuthoritiesTrafficOperatorsAndPublishers' 'restrictedToAuthoritiesTrafficOperatorsAndVms'}
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	<ul style="list-style-type: none"> • Base XSD Type: string • <i>value</i> 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="tx"/>
  <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: **DirectionEnum**

Super-types: [xs:string](#) < **DirectionEnum** (by restriction)
Sub-types: None

Name DirectionEnum

Content

- Base XSD Type: string
- *value* comes from list:
 - {allDirections|bothWays|clockwise|anticlockwise|innerRing|outerRing|northBound|northEastBound|eastBound|southEastBound|southBound}

Documentation List of directions of travel.

Schema Component Representation

```

<xs:simpleType name="DirectionEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="allDirections"/>
    <xs:enumeration value="bothWays"/>
    <xs:enumeration value="clockwise"/>
    <xs:enumeration value="anticlockwise"/>
    <xs:enumeration value="innerRing"/>
    <xs:enumeration value="outerRing"/>
    <xs:enumeration value="northBound"/>
    <xs:enumeration value="northEastBound"/>
  </xs:restriction>
</xs:simpleType>

```

```

<xs:enumeration value="eastBound"/>
<xs:enumeration value="southEastBound"/>
<xs:enumeration value="southBound"/>
<xs:enumeration value="southWestBound"/>
<xs:enumeration value="westBound"/>
<xs:enumeration value="northWestBound"/>
<xs:enumeration value="inboundTowardsTown"/>
<xs:enumeration value="outboundFromTown"/>
<xs:enumeration value="unknown"/>
<xs:enumeration value="opposite"/>
<xs:enumeration value="other"/>
</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:

- [KilometresPerHour](#) (by restriction)
- [MetresAsFloat](#) (by restriction)
- [Percentage](#) (by restriction)
- [Seconds](#) (by restriction)

Name Float

Content

- Base XSD Type: float

Documentation A floating point number whose value space consists of the values $m \times 2^e$, 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: HeightGradeEnum

Super-types: [xs:string](#) < **HeightGradeEnum** (by restriction)

Sub-types: None

Name HeightGradeEnum

Content

- Base XSD Type: string
- *value* comes from list: {'aboveGrade','atGrade','belowGrade'}

Documentation List of height or vertical gradings of road sections.

Schema Component Representation

```
<xs:simpleType name="HeightGradeEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="aboveGrade"/>
    <xs:enumeration value="atGrade"/>
    <xs:enumeration value="belowGrade"/>
  </xs:restriction>
</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: Integer

Super-types: [xs:integer](#) < **Integer** (by restriction)

Sub-types: None

Name Integer

Content

- Base XSD Type: integer

Documentation An integer number whose value space is the set {-2147483648, -2147483647, -2147483646, ..., -2, -1, 0, 1, 2, ..., 2147483645, 2147483646, 2147483647}.

Schema Component Representation

```
<xs:simpleType name="Integer">
  <xs:restriction base="xs:integer"/>
</xs:simpleType>
```

[top](#)

Simple Type: JunctionClassificationEnum

Super-types: [xs:string](#) < **JunctionClassificationEnum** (by restriction)

Sub-types: None

Name JunctionClassificationEnum

Content

- Base XSD Type: string
- *value* comes from list: {'threeWayInterchange','interchange','motorwayConnection','junction','temporaryJunction','borderCrossing','junctionInOneDirection','operationalService'}

Documentation Explicit type of a junction.

Schema Component Representation

```
<xs:simpleType name="JunctionClassificationEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="threeWayInterchange"/>
    <xs:enumeration value="interchange"/>
    <xs:enumeration value="motorwayConnection"/>
    <xs:enumeration value="junction"/>
  </xs:restriction>
</xs:simpleType>
```

```
<xs:enumeration value="temporaryJunction"/>
<xs:enumeration value="borderCrossing"/>
<xs:enumeration value="junctionInOneDirection"/>
<xs:enumeration value="operationalServiceJunction"/>
<xs:enumeration value="other"/>
</xs:restriction>
</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: 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: LinearElementNatureEnum

Super-types: [xs:string](#) < **LinearElementNatureEnum** (by restriction)
Sub-types: None

Name LinearElementNatureEnum
Content

- Base XSD Type: string
- *value* comes from list: {'road'|'roadSection'|'slipRoad'|'other'}

Documentation List of indicative natures of linear elements.

Schema Component Representation

```
<xs:simpleType name="LinearElementNatureEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="road"/>
    <xs:enumeration value="roadSection"/>
    <xs:enumeration value="slipRoad"/>
    <xs:enumeration value="other"/>
  </xs:restriction>
</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:restriction>
</xs:simpleType>
```

```
<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: {'inTunnel'|'onBridge'|'onConnector'}

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="inTunnel"/>
    <xs:enumeration value="onBridge"/>
    <xs:enumeration value="onConnector"/>
  </xs:restriction>
</xs:simpleType>
```

[top](#)

Simple Type: **MeasurementEquipmentFaultEnum**

Super-types: [xs:string](#) < **MeasurementEquipmentFaultEnum** (by restriction)
Sub-types: None

Name MeasurementEquipmentFaultEnum

Content

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

Documentation Types of measurement equipment faults.

Schema Component Representation

```
<xs:simpleType name="MeasurementEquipmentFaultEnum">
  <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: **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: MultilingualStringValue

Super-types: [xs:string](#) < **MultilingualStringValue** (by restriction)

Sub-types:

- [MultilingualStringValue](#) (by extension)

Name MultilingualStringValue

Content

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

Schema Component Representation

```
<xs:simpleType name="MultilingualStringValue">
  <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: OpenIrFormOfWayEnum

Super-types: [xs:string](#) < **OpenIrFormOfWayEnum** (by restriction)

Sub-types: None

Name OpenIrFormOfWayEnum

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="OpenIrFormOfWayEnum">
  <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: OpenIrFunctionalRoadClassEnum

Super-types: [xs:string](#) < **OpenIrFunctionalRoadClassEnum** (by restriction)

Sub-types: None

Name OpenIrFunctionalRoadClassEnum

Content

- Base XSD Type: string

- *value* comes from list: {'FRC0'|'FRC1'|'FRC2'|'FRC3'|'FRC4'|'FRC5'|'FRC6'|'FRC7'}

Documentation

Enumeration 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: ReferentTypeEnum

Super-types: [xs:string](#) < **ReferentTypeEnum** (by restriction)
Sub-types: None

Name ReferentTypeEnum

Content

- Base XSD Type: string
- *value* comes from list: {'boundary'|'intersection'|'referenceMarker'|'landmark'|'roadNode'}

Documentation A set of types of known points along a linear object such as a road.

Schema Component Representation

```
<xs:simpleType name="ReferentTypeEnum">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="boundary"/>  
    <xs:enumeration value="intersection"/>  
    <xs:enumeration value="referenceMarker"/>  
    <xs:enumeration value="landmark"/>  
    <xs:enumeration value="roadNode"/>  
  </xs:restriction>  
</xs:simpleType>
```

[top](#)

Simple Type: RoadTypeEnum

Super-types: [xs:string](#) < **RoadTypeEnum** (by restriction)
Sub-types: None

Name RoadTypeEnum

Content

- Base XSD Type: string
- *value* comes from list: {'motorway'|'trunkRoad'|'mainRoad'|'other'}

Documentation Categorisation of the road type (motorway, main road, ...).

Schema Component Representation

```
<xs:simpleType name="RoadTypeEnum">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="motorway"/>  
    <xs:enumeration value="trunkRoad"/>  
    <xs:enumeration value="mainRoad"/>  
    <xs:enumeration value="other"/>  
  </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'|'microwaveMonitoringStation'}

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:restriction>  
</xs:simpleType>
```

```

<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: 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: TpegLoc01FramedPointLocationSubtypeEnum

Super-types: [xs:string](#) < **TpegLoc01FramedPointLocationSubtypeEnum** (by restriction)

Sub-types: None

Name TpegLoc01FramedPointLocationSubtypeEnum

Content

- Base XSD Type: string
- *value* comes from list: {'framedPoint'}

Documentation

Types of points on the road network framed by two other points on the same road.

Schema Component Representation

```

<xs:simpleType name="TpegLoc01FramedPointLocationSubtypeEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="framedPoint"/>
  </xs:restriction>
</xs:simpleType>

```

[top](#)

Simple Type: TpegLoc01LinearLocationSubtypeEnum

Super-types: [xs:string](#) < **TpegLoc01LinearLocationSubtypeEnum** (by restriction)
Sub-types: None

Name TpegLoc01LinearLocationSubtypeEnum

Content

- Base XSD Type: string
- *value* comes from list: {'segment'}

Documentation Types of linear location.

Schema Component Representation

```
<xs:simpleType name="TpegLoc01LinearLocationSubtypeEnum">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="segment"/>  
  </xs:restriction>  
</xs:simpleType>
```

[top](#)

Simple Type: TpegLoc01SimplePointLocationSubtypeEnum

Super-types: [xs:string](#) < **TpegLoc01SimplePointLocationSubtypeEnum** (by restriction)
Sub-types: None

Name TpegLoc01SimplePointLocationSubtypeEnum

Content

- Base XSD Type: string
- *value* comes from list: {'intersection'|'nonLinkedPoint'}

Documentation Types of simple point.

Schema Component Representation

```
<xs:simpleType name="TpegLoc01SimplePointLocationSubtypeEnum">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="intersection"/>  
    <xs:enumeration value="nonLinkedPoint"/>  
  </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'|'regionName'}

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: TpegLoc03IlcPointDescriptorSubtypeEnum

Super-types: [xs:string](#) < **TpegLoc03IlcPointDescriptorSubtypeEnum** (by restriction)
Sub-types: None

Name TpegLoc03IlcPointDescriptorSubtypeEnum

Content

- Base XSD Type: string
- *value* comes from list: {'tpegIlcName1'|'tpegIlcName2'|'tpegIlcName3'}

Schema Component Representation

```
<xs:simpleType name="TpegLoc03IlcPointDescriptorSubtypeEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="tpegIlcName1"/>
    <xs:enumeration value="tpegIlcName2"/>
    <xs:enumeration value="tpegIlcName3"/>
  </xs:restriction>
</xs:simpleType>
```

[top](#)

Simple Type: TpegLoc03JunctionPointDescriptorSubtypeEnum

Super-types: [xs:string](#) < TpegLoc03JunctionPointDescriptorSubtypeEnum (by restriction)
 Sub-types: None

Name TpegLoc03JunctionPointDescriptorSubtypeEnum

Content

- Base XSD Type: string
- *value* comes from list: {'junctionName'}

Documentation Descriptors for describing a point at a road junction.

Schema Component Representation

```
<xs:simpleType name="TpegLoc03JunctionPointDescriptorSubtypeEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="junctionName"/>
  </xs:restriction>
</xs:simpleType>
```

[top](#)

Simple Type: TpegLoc03OtherPointDescriptorSubtypeEnum

Super-types: [xs:string](#) < TpegLoc03OtherPointDescriptorSubtypeEnum (by restriction)
 Sub-types: None

Name TpegLoc03OtherPointDescriptorSubtypeEnum

Content

- Base XSD Type: string
- *value* comes from list: {'administrativeAreaName'|'administrativeReferenceName'|'airportName'|'areaName'|'buildingName'|'busStopIdentifier'|'busStopName'|'canalName'|'countyName'|'ferryPortName'|'intersectionName'|'lakeName'|'linkName'|'localLinkName'|'metroStationName'|'nationName'|'nonLinkedPointName'|'parkingFacilityName'|'pointName'|'pointOfInterestName'|'railwayStation'|'regionName'|'riverName'|'seaName'|'serviceAreaName'|'tidalRiverName'|'townName'|'other'}

Documentation Descriptors other than junction names and road descriptors which can help to identify the location of points on the road network.

Schema Component Representation

```
<xs:simpleType name="TpegLoc03OtherPointDescriptorSubtypeEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="administrativeAreaName"/>
    <xs:enumeration value="administrativeReferenceName"/>
    <xs:enumeration value="airportName"/>
    <xs:enumeration value="areaName"/>
    <xs:enumeration value="buildingName"/>
    <xs:enumeration value="busStopIdentifier"/>
    <xs:enumeration value="busStopName"/>
    <xs:enumeration value="canalName"/>
    <xs:enumeration value="countyName"/>
    <xs:enumeration value="ferryPortName"/>
    <xs:enumeration value="intersectionName"/>
    <xs:enumeration value="lakeName"/>
    <xs:enumeration value="linkName"/>
    <xs:enumeration value="localLinkName"/>
    <xs:enumeration value="metroStationName"/>
    <xs:enumeration value="nationName"/>
    <xs:enumeration value="nonLinkedPointName"/>
    <xs:enumeration value="parkingFacilityName"/>
    <xs:enumeration value="pointName"/>
    <xs:enumeration value="pointOfInterestName"/>
    <xs:enumeration value="railwayStation"/>
    <xs:enumeration value="regionName"/>
    <xs:enumeration value="riverName"/>
    <xs:enumeration value="seaName"/>
    <xs:enumeration value="serviceAreaName"/>
    <xs:enumeration value="tidalRiverName"/>
    <xs:enumeration value="townName"/>
    <xs:enumeration value="other"/>
  </xs:restriction>
</xs:simpleType>
```

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Simple Type: TravelTimeTrendTypeEnum

Super-types: [xs:string](#) < TravelTimeTrendTypeEnum (by restriction)
 Sub-types: None

Name TravelTimeTrendTypeEnum

- Content**
- Base XSD Type: string
 - *value* comes from list: {'decreasing'|'increasing'|'stable'}
- Documentation** List of terms used to describe the trend in travel times.

Schema Component Representation

```
<xs:simpleType name="TravelTimeTrendTypeEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="decreasing"/>
    <xs:enumeration value="increasing"/>
    <xs:enumeration value="stable"/>
  </xs:restriction>
</xs:simpleType>
```

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Simple Type: TravelTimeTypeEnum

- Super-types:** [xs:string](#) < **TravelTimeTypeEnum** (by restriction)
- Sub-types:** None

- Name** TravelTimeTypeEnum
- Content**
- Base XSD Type: string
 - *value* comes from list: {'best'|'estimated'|'instantaneous'|'reconstituted'}
- Documentation** List of ways in which travel times are derived.

Schema Component Representation

```
<xs:simpleType name="TravelTimeTypeEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="best"/>
    <xs:enumeration value="estimated"/>
    <xs:enumeration value="instantaneous"/>
    <xs:enumeration value="reconstituted"/>
  </xs:restriction>
</xs:simpleType>
```

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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>
```

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Simple Type: ValidityStatusEnum

- Super-types:** [xs:string](#) < **ValidityStatusEnum** (by restriction)
- Sub-types:** None

- Name** ValidityStatusEnum
- Content**
- Base XSD Type: string
 - *value* comes from list: {'active'|'definedByValidityTimeSpec'}
- Documentation** Values of validity status that can be assigned to a described event, action or item.

Schema Component Representation

```
<xs:simpleType name="ValidityStatusEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="active"/>
    <xs:enumeration value="definedByValidityTimeSpec"/>
  </xs:restriction>
</xs:simpleType>
```

[top](#)

Simple Type: VehicleTypeEnum

Super-types: [xs:string](#) < **VehicleTypeEnum** (by restriction)
Sub-types: None

Name VehicleTypeEnum

Content

- Base XSD Type: string
- *value* comes from list:
{agriculturalVehicle|anyVehicle|articulatedVehicle|bicycle|bus|car|caravan|carOrLightVehicle|carWithCaravan|carWithTrailer|constructionOr

Documentation Types of vehicle.

Schema Component Representation

```
<xs:simpleType name="VehicleTypeEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="agriculturalVehicle"/>
    <xs:enumeration value="anyVehicle"/>
    <xs:enumeration value="articulatedVehicle"/>
    <xs:enumeration value="bicycle"/>
    <xs:enumeration value="bus"/>
    <xs:enumeration value="car"/>
    <xs:enumeration value="caravan"/>
    <xs:enumeration value="carOrLightVehicle"/>
    <xs:enumeration value="carWithCaravan"/>
    <xs:enumeration value="carWithTrailer"/>
    <xs:enumeration value="constructionOrMaintenanceVehicle"/>
    <xs:enumeration value="fourWheelDrive"/>
    <xs:enumeration value="highSidedVehicle"/>
    <xs:enumeration value="lorry"/>
    <xs:enumeration value="moped"/>
    <xs:enumeration value="motorcycle"/>
    <xs:enumeration value="motorcycleWithSideCar"/>
    <xs:enumeration value="motorscooter"/>
    <xs:enumeration value="tanker"/>
    <xs:enumeration value="threeWheeledVehicle"/>
    <xs:enumeration value="trailer"/>
    <xs:enumeration value="tram"/>
    <xs:enumeration value="twoWheeledVehicle"/>
    <xs:enumeration value="van"/>
    <xs:enumeration value="vehicleWithCatalyticConverter"/>
    <xs:enumeration value="vehicleWithoutCatalyticConverter"/>
    <xs:enumeration value="vehicleWithCaravan"/>
    <xs:enumeration value="vehicleWithTrailer"/>
    <xs:enumeration value="withEvenNumberedRegistrationPlates"/>
    <xs:enumeration value="withOddNumberedRegistrationPlates"/>
    <xs:enumeration value="other"/>
  </xs:restriction>
</xs:simpleType>
```

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Simple Type: VmsFaultEnum

Super-types: [xs:string](#) < **VmsFaultEnum** (by restriction)
Sub-types: None

Name VmsFaultEnum

Content

- Base XSD Type: string
- *value* comes from list:
{communicationsFailure|incorrectMessageDisplayed|incorrectPictogramDisplayed|outOfService|powerFailure|unableToClearDown|unknown|o

Documentation Types of variable message sign faults.

Schema Component Representation

```
<xs:simpleType name="VmsFaultEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="communicationsFailure"/>
    <xs:enumeration value="incorrectMessageDisplayed"/>
    <xs:enumeration value="incorrectPictogramDisplayed"/>
    <xs:enumeration value="outOfService"/>
    <xs:enumeration value="powerFailure"/>
    <xs:enumeration value="unableToClearDown"/>
    <xs:enumeration value="unknown"/>
    <xs:enumeration value="other"/>
  </xs:restriction>
</xs:simpleType>
```

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