# Realis ITS

Version 29.10.2020

# DatexII 2.3 profile realisVmsTable-1.0



© 2007-2020 Realis ITS

## DatexII 2.3 Profile realisVmsTable-1.0

#### **Table of Contents**

- Schema Document Properties
- Element: d2LogicalModel
- Global Definitions
  - Complex Type: AffectedCarriagewayAndLanes
  - Complex Type: AlertCDirection
     Complex Type: AlertCLinear
  - Complex Type: AlertCLinearByCode

  - Complex Type: AlertCLocation
    Complex Type: AlertCMethod2Linear

  - Complex Type: AlertCMethod2Point
    Complex Type: AlertCMethod2PrimaryPointLocation
    Complex Type: AlertCMethod2SecondaryPointLocation

  - Complex Type: AlertCMethod4Linear
    Complex Type: AlertCMethod4Point
    Complex Type: AlertCMethod4PrimaryPointLocation
  - Complex Type: AlertCMethod4SecondaryPointLocation

  - Complex Type: AlertCPoint
    Complex Type: AxleFlowValue
  - Complex Type: ConcentrationOfVehiclesValue
  - Complex Type: D2LogicalModel
    Complex Type: DataValue

  - Complex Type: DateTimeValue
  - Complex Type: DistanceAlongLinearElement
    Complex Type: DistanceFromLinearElementReferent
    Complex Type: DistanceFromLinearElementStart

  - Complex Type: DurationValue Complex Type: ElaboratedDataFault Complex Type: Exchange

  - Complex Type: Fault

  - Complex Type: GroupOfLocations
    Complex Type: HeaderInformation
  - Complex Type: InternationalIdentifier
  - Complex Type: Junction Complex Type: Linear

  - Complex Type: Linear
    Complex Type: LinearElement
    Complex Type: LinearElementByCode
    Complex Type: LinearElementByPoints
    Complex Type: LinearWithinLinearElement
    Complex Type: Location
    Complex Type: MeasurementEquipmentFault

  - Complex Type: MultilingualString Complex Type: MultilingualStringValue Complex Type: NetworkLocation

  - Complex Type: OccupancyChangeValue
    Complex Type: OffsetDistance
    Complex Type: OpenIrBaseLocationReferencePoint

  - Complex Type: OpenIrBasePointLocation
    Complex Type: OpenIrExtendedLinear
    Complex Type: OpenIrExtendedPoint
  - Complex Type: OpenIrGeoCoordinate
  - Complex Type: OpenIrLastLocationReferencePoint Complex Type: OpenIrLineAttributes

  - Complex Type: OpenIrLineLocationReference
  - Complex Type: OpenIrLocationReferencePoint Complex Type: OpenIrOffsets

  - Complex Type: OpenIrPathAttributes

  - Complex Type: OpenIrPoiWithAccessPoint
    Complex Type: OpenIrPointAlongLine
  - Complex Type: OpenIrPointLocationReference
  - Complex Type: PayloadPublication
    Complex Type: PcuFlowValue
  - Complex Type: PercentageDistanceAlongLinearElement

  - Complex Type: Point
    Complex Type: PointAlongLinearElement
  - Complex Type: PointByCoordinates
    Complex Type: PointCoordinates

  - Complex Type: PointExtended Complex Type: Referent

  - Complex Type: Road Complex Type: RoadNode

  - Complex Type: SupplementaryPositionalDescription
  - Complex Type: TpegDescriptor

  - Complex Type: TpegFramedPoint
    Complex Type: TpegIcPointDescriptor
    Complex Type: TpegJunction
    Complex Type: TpegJunctionPointDescriptor
    Complex Type: TpegJunctionPointDescriptor
    Complex Type: TpegLinearLocation
    Complex Type: TpegConJunctionPoint
    Complex Type: TpegConJunctionPoint
    Complex Type: TpegOborPointDescriptor
  - Complex Type: TpegOtherPointDescriptor Complex Type: TpegPoint
  - Complex Type: TpegPointDescriptor

  - Complex Type: TpegPointLocation Complex Type: TpegSimplePoint
  - Complex Type: TrafficStatusValue
  - Complex Type: UrlLink
    Complex Type: VehicleCountValue
    Complex Type: VehicleFlowValue

  - Complex Type: VmsManagedLogicalLocation
    Complex Type: VmsPictogramDisplayCharacteristics
  - Complex Type: VmsRecord
  - Complex Type: VmsSupplementaryPanelCharacteristics Complex Type: VmsTablePublication Complex Type: VmsTextDisplayCharacteristics
  - Complex Type: VmsUnitRecord Complex Type: VmsUnitTable

  - Complex Type: ExtensionType

```
• Complex Type: _IntermediatePointOnLinearElement
   Complex Type: LinearExtensionType
   Complex Type: PointExtensionType
   Complex Type: VmsRecordPictogramDisplayAreaIndexVmsPictogramDisplayCharacteristics
Complex Type: VmsUnitRecordVmsIndexVmsRecord
   Simple Type: AlertCDirectionEnum
   Simple Type: AlertCLocationCode
Simple Type: AngleInDegrees
Simple Type: AreaOfInterestEnum
Simple Type: AxlesPerHour
    Simple Type: Boolean
   Simple Type: Boolean
Simple Type: CarriagewayEnum
Simple Type: ComputationMethodEnum
Simple Type: ConcentrationVehiclesPerKilometre
Simple Type: ConfidentialityValueEnum
    Simple Type: CountryEnum
   Simple Type: DateTime
Simple Type: DirectionEnum
Simple Type: ElaboratedDataFaultEnum
    Simple Type: FaultSeverityEnum
    Simple Type: Float
    Simple Type: HeightGradeEnum
    <u>Simple Type: InformationStatusEnum</u>
    Simple Type: Integer
    Simple Type: JunctionClassificationEnum
    Simple Type: LaneEnum
    Simple Type: Language
   Simple Type: LinearElementNatureEnum
Simple Type: LinearReferencingDirectionEnum
Simple Type: LocationDescriptorEnum
    Simple Type: MeasurementEquipmentFaultEnum
   Simple Type: MetresAsFloat
Simple Type: MetresAsNonNegativeInteger
Simple Type: MultilingualStringValueType
   Simple Type: NonNegativeInteger
Simple Type: OpenIrFormOfWayEnum
Simple Type: OpenIrFunctionalRoadClassEnum
   Simple Type: OpenIrOrientationEnum
Simple Type: OpenIrSideOfRoadEnum
    Simple Type: PassengerCarUnitsPerHour
   Simple Type: Percentage
Simple Type: PhysicalMountingEnum
Simple Type: PositionAbsoluteEnum
   Simple Type: PositionRelativeEnum
   Simple Type: ReferentTypeEnum
Simple Type: RoadTypeEnum
   Simple Type: Seconds
   <u>Simple Type: String</u>
<u>Simple Type: TpegLoc01FramedPointLocationSubtypeEnum</u>
   Simple Type: TpegLoc01LinearLocationSubtypeEnum
   Simple Type: TpegLoc01SimplePointLocationSubtypeEnum
Simple Type: TpegLoc03llcPointDescriptorSubtypeEnum
    Simple Type: TpegLoc03JunctionPointDescriptorSubtypeEnum
   <u>Simple Type: TpegLoc03OtherPointDescriptorSubtypeEnum Simple Type: TrafficStatusEnum</u>
    Simple Type: UrgencyEnum
   Simple Type: Url
Simple Type: UrlLinkTypeEnum
    Simple Type: VehiclesPerHour
   Simple Type: VmsTypeEnum
```

## **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.

  Productive the schema 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>
```

#### **Global Declarations**

Element: d2LogicalModel

Name d2LogicalModel

Type <u>D2LogicalModel:D2LogicalModel</u>

Nillable no
Abstract no

top

#### XML Instance Representation

#### Schema Component Representation

**Global Definitions** 

#### Complex Type: AffectedCarriagewayAndLanes

Super-types: None
Sub-types: None

Name AffectedCarriagewayAndLanes

<u>Abstract</u> 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

#### Schema Component Representation

**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]
```

<u>top</u>

#### Schema Component Representation

```
<xs:complexType name="AlertCDirection">
  <xs:sequence>
      <xs:element name="alertCDirectionCoded" type="p2LogicalModel: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="<u>D2LogicalModel:_ExtensionType</u>" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

top

top

#### Complex Type: AlertCLinear

Super-types: None Sub-types. <u>AlertCLinearByCode</u> (by extension)
 <u>AlertCMethod2Linear</u> (by extension) AlertCMethod4Linear (by extension)

AlertCLinear

**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

```
<<u>D2LogicalModel</u>:alertCLocationCountryCode> <u>D2LogicalModel:String</u> </<u>D2LogicalModel</u>:alertCLocationCountryCode> [1]
< \underline{D2LogicalModel}: alertCLocationTableNumber > \underline{D2LogicalModel}: \underline{String} < / \underline{D2LogicalModel}: alertCLocationTableNumber > [1]
< \frac{D2LogicalModel}{D2LogicalModel}: alertCLocationTableVersion > \frac{D2LogicalModel}{D2LogicalModel}: alertCLocationTableVersion > [1]
<<u>D2LogicalModel</u>:alertCLinearExtension> <u>D2LogicalModel</u>:_<u>ExtensionType</u> </<u>D2LogicalModel</u>:alertCLinearExtension>
[0..1]
```

#### Schema Component Representation

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

## Complex Type: AlertCLinearByCode

```
Super-types:
                                <u>AlertCLinear</u> < AlertCLinearByCode (by extension)
Sub-types.
                                None
```

Name AlertCLinearByCode

**Abstract** 

**Documentation** A linear section along a road defined by reference to a linear section in a pre-defined ALERT-C location

table

## XML Instance Representation

```
<<u>D2LogicalModel</u>:alertCLocationCountryCode> <u>D2LogicalModel</u>:<u>String</u> </<u>D2LogicalModel</u>:alertCLocationCountryCode> [1] ?
< \underline{D2LogicalModel}: alertCLocationTableNumber > \underline{D2LogicalModel}: \underline{String} < / \underline{D2LogicalModel}: alertCLocationTableNumber > [1]
<D2LogicalModel:alertCLocationTableVersion> D2LogicalModel:String </D2LogicalModel:alertCLocationTableVersion> [1]
<<u>D2LogicalModel</u>:alertCLinearExtension> <u>D2LogicalModel</u>: <u>ExtensionType</u> </<u>D2LogicalModel</u>:alertCLinearExtension>
[0..1]
<D2LogicalModel:alertCDirection> D2LogicalModel:AlertCDirection </D2LogicalModel:alertCDirection> [1]
<D2LogicalModel:locationCodeForLinearLocation> D2LogicalModel:AlertCLocation
</D2LogicalModel:locationCodeForLinearLocation> [1] ?
<<u>D2LogicalModel</u>:alertCLinearByCodeExtension> <u>D2LogicalModel</u>:_ExtensionType
</<u>D2LogicalModel</u>:alertCLinearByCodeExtension> [0..1]
```

## Schema Component Representation

```
<xs:complexType name="AlertCLinearByCode">
  <xs:complexContent>
    <xs:extension base="D2LogicalModel:AlertCLinear">
       <xs:sequence>
          <xs:element name="alertCDirection" type="D2LogicalModel:AlertCDirection",</pre>
         <xs:element name="locationCodeForLinearLocation" type="D2LogicalModel:AlertCLocation"/>
         <xs:element name="alertCLinearByCodeExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
       </xs:sequence>
    </xs:extension>
  </xs:complexContent>
/xs:complexType>
```

Super-types: None
Sub-types: None

Name AlertCLocation

<u>Abstract</u> no

**Documentation** Identification of a specific point, linear or area location in an ALERT-C location table.

## XML Instance Representation

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

#### **Schema Component Representation**

Complex Type: AlertCMethod2Linear

Super-types: AlertCLinear < AlertCMethod2Linear (by extension)

Sub-types: None

Name AlertCMethod2Linear

Abstract no

**Documentation**A linear section along a road between two points, Primary and Secondary, which are pre-defined in an

ALERT-C location table. Direction is FROM the Secondary point TO the Primary point, i.e. the Primary point

is downstream of the Secondary point.

## XML Instance Representation

#### Schema Component Representation

<u>top</u>

top

### Complex Type: AlertCMethod2Point

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

Name AlertCMethod2Point

<u>Abstract</u> 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

```
<...>
    <<u>D2LogicalModel</u>:alertCLocationCountryCode> <u>D2LogicalModel</u>:String </<u>D2LogicalModel</u>:alertCLocationCountryCode> [1] ?
    <<u>D2LogicalModel</u>:alertCLocationTableNumber> <u>D2LogicalModel</u>:String </<u>D2LogicalModel</u>:alertCLocationTableNumber> [1] ?
```

```
< \underline{D2LogicalModel}: \texttt{alertCLocationTableVersion} > \underline{D2LogicalModel}: \underline{String} < / \underline{D2LogicalModel}: \texttt{alertCLocationTableVersion} > [1]

/D2LogicalModel:alertCPointExtension> D2LogicalModel:_ExtensionType 
/D2LogicalModel:alertCDirection> D2LogicalModel:alertCDirection 
/D2LogicalModel:alertCDirection> [1]
<<u>D2LogicalModel</u>:alertCMethod2PrimaryPointLocation> <u>D2LogicalModel</u>:AlertCMethod2PrimaryPointLocation

</p
<<u>D2LogicalModel</u>: alertCMethod2PointExtension> <u>D2LogicalModel</u>: <u>ExtensionType</u>
D2LogicalModel:alertCMethod2PointExtension> [0..1]
```

#### Schema Component Representation

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

top

#### Complex Type: AlertCMethod2PrimaryPointLocation

Super-types. None None Sub-types.

Name AlertCMethod2PrimaryPointLocation

**Abstract** no

The point (called Primary point) which is either a single point or at the downstream end of a linear road **Documentation** 

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]
<u>P2LogicalModel</u>:alertCMethod2PrimaryPointLocationExtension> <u>D2LogicalModel</u>: <u>ExtensionType</u>
</\underline{\texttt{D2LogicalModel}} : \texttt{alertCMethod2PrimaryPointLocationExtension} > \texttt{[0..1]}
```

#### Schema Component Representation

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

top

## Complex Type: AlertCMethod2SecondaryPointLocation

Super-types: None Sub-types None

AlertCMethod2SecondaryPointLocation Name

Abstract

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.

## XML Instance Representation

```
<<u>D2LogicalModel</u>:alertCLocation> <u>D2LogicalModel:AlertCLocation</u> </<u>D2LogicalModel</u>:alertCLocation> [1]
< \underline{\texttt{D2LogicalModel}} : \texttt{alertCMethod2SecondaryPointLocationExtension} > \underline{\texttt{D2LogicalModel}} : \underline{\texttt{ExtensionType}}
CondaryPointLocationExtension> [0..1]
```

## **Schema Component Representation**

```
<xs:complexType name="AlertCMethod2SecondaryPointLocation">
  <xs:sequence>
     <xs:element name="alertCLocation" type="D2LogicalModel:AlertCLocation"/>
    <xs:element name="alertCMethod2SecondaryPointLocationExtension" type="D2LogicalModel:_ExtensionType"</pre>
    minOccurs="0"/>
</xs:complexType>
```

<u>top</u>

## Complex Type: AlertCMethod4Linear

```
Super-types.
                                <u>AlertCLinear</u> < AlertCMethod4Linear (by extension)
Sub-types.
                                None
```

Name AlertCMethod4Linear

**Abstract** 

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

```
<<u>D2LogicalModel</u>:alertCLocationCountryCode> <u>D2LogicalModel</u>:<u>String</u> </<u>D2LogicalModel</u>:alertCLocationCountryCode> [1]
< \underline{\text{D2LogicalModel}}: \texttt{alertCLocationTableNumber} > \underline{\text{D2LogicalModel}}: \underline{\texttt{String}} < / \underline{\text{D2LogicalModel}}: \texttt{alertCLocationTableNumber} > [1]
<Pl>2LogicalModel:alertCLocationTableVersion> D2LogicalModel:String </Pl>LogicalModel:alertCLocationTableVersion> [1]
<D2LogicalModel:alertCLinearExtension> D2LogicalModel: ExtensionType </D2LogicalModel:alertCLinearExtension>
< \underline{D2LogicalModel}: alertCDirection> \underline{D2LogicalModel}: \underline{AlertCDirection} < / \underline{D2LogicalModel}: alertCDirection> [1]
<<u>D2LogicalModel</u>:alertCMethod4PrimaryPointLocation> <u>D2LogicalModel</u>:AlertCMethod4PrimaryPointLocation

</pr
<<u>D2LogicalModel</u>:alertCMethod4SecondaryPointLocation> <u>D2LogicalModel:AlertCMethod4SecondaryPointLocation</u>

</pr
<D2LogicalModel:alertCMethod4LinearExtension> D2LogicalModel:_ExtensionType
<pr
```

#### 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"</pre>
         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>
```

Complex Type: AlertCMethod4Point

Super-types. AlertCPoint < AlertCMethod4Point (by extension) Sub-types.

AlertCMethod4Point

**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

```
< \underline{D2LogicalModel}: alertCLocationCountryCode > \underline{D2LogicalModel}: \underline{String} < / \underline{D2LogicalModel}: alertCLocationCountryCode > \underline{[1]}
<D2LogicalModel:alertCLocationTableNumber> D2LogicalModel:String </D2LogicalModel:alertCLocationTableNumber> [1]
<<u>D2LogicalModel</u>:alertCLocationTableVersion> <u>D2LogicalModel</u>:<u>String</u> </<u>D2LogicalModel</u>:alertCLocationTableVersion> [1]
.
-(<u>p2LogicalModel</u>:alertCPointExtension> <u>p2LogicalModel</u>:<u>ExtensionType</u> </<u>p2LogicalModel</u>:alertCPointExtension> [0..1]
-(<u>p2LogicalModel</u>:alertCDirection> <u>p2LogicalModel</u>:<u>AlertCDirection</u> </<u>p2LogicalModel</u>:alertCDirection> [1]
<<u>D2LogicalModel</u>:alertCMethod4PrimaryPointLocation> D2LogicalModel:AlertCMethod4PrimaryPointLocation
</<u>D2LogicalModel</u>:alertCMethod4PrimaryPointLocation> [1]
<<u>D2LogicalModel</u>: alertCMethod4PointExtension> <u>D2LogicalModel</u>: <u>ExtensionType</u>
</
```

#### Schema Component Representation

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

<u>top</u>

top

#### Complex Type: AlertCMethod4PrimaryPointLocation

```
Super-types:
                             None
                             None
Sub-types.
```

AlertCMethod4PrimaryPointLocation

Abstract nο

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-

#### XML Instance Representation

```
 \begin{array}{ll} < \underline{D2LogicalModel}: alertCLocation > \underline{D2LogicalModel}: \underline{AlertCLocation} & </\underline{D2LogicalModel}: alertCLocation > [1] \\ < \underline{D2LogicalModel}: offsetDistance > \underline{D2LogicalModel}: \underline{OffsetDistance} & </\underline{D2LogicalModel}: alertCMethod4PrimaryPointLocationExtension > \underline{D2LogicalModel}: \underline{ExtensionType} \\ \end{array} 

Colored to the content of the content o
```

#### Schema Component Representation

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

Complex Type: AlertCMethod4SecondaryPointLocation

Super-types: Sub-types. None

Name AlertCMethod4SecondaryPointLocation

**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

```
 \begin{array}{ll} < \underline{D2LogicalModel}: alertCLocation > \underline{D2LogicalModel}: \underline{AlertCLocation} & </\underline{D2LogicalModel}: alertCLocation > [1] \\ < \underline{D2LogicalModel}: offsetDistance > \underline{D2LogicalModel}: \underline{OffsetDistance} & </\underline{D2LogicalModel}: alertCMethod4SecondaryPointLocationExtension > \underline{D2LogicalModel}: \underline{ExtensionType} \\ \end{array} 
/D2LogicalModel:alertCMethod4SecondaryPointLocationExtension>
```

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

**Complex Type: AlertCPoint** 

Super-types: Sub-types:

AlertCMethod2Point (by extension) AlertCMethod4Point (by extension)

Name AlertCPoint **Abstract** 

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

```
< \underline{D2LogicalModel}: alertCLocationCountryCode > \underline{D2LogicalModel}: \underline{String} < / \underline{D2LogicalModel}: alertCLocationCountryCode > [1]
< \underline{D2LogicalModel}: alertCLocationTableNumber > \underline{D2LogicalModel}: \underline{String} < / \underline{D2LogicalModel}: alertCLocationTableNumber > \underline{[1]}
<<u>P2LogicalModel</u>:alertCLocationTableVersion> <u>D2LogicalModel</u>:<u>String</u> </<u>D2LogicalModel</u>:alertCLocationTableVersion> [1]
<<u>D2LogicalModel</u>:alertCPointExtension> <u>D2LogicalModel:_ExtensionType</u> </<u>D2LogicalModel</u>:alertCPointExtension> [0..1]
```

Schema Component Representation

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

top

top

top

## Complex Type: AxleFlowValue

Sub-types: None

Name AxleFlowValue

<u>Abstract</u> no

**Documentation** A measured or calculated value of the flow rate of vehicle axles.

#### XML Instance Representation

#### Schema Component Representation

Complex Type: ConcentrationOfVehiclesValue

Super-types: DataValue < ConcentrationOfVehiclesValue (by extension)

Sub-types: None

Name ConcentrationOfVehiclesValue

<u>Abstract</u> no

**Documentation** A measured or calculated value of the concentration of vehicles on a unit stretch of road in a given direction.

### XML Instance Representation

```
c...
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] ?"
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]
CD2LogicalModel:concentrationOfVehicles> D2LogicalModel:ConcentrationVehiclesPerKilometre

CD2LogicalModel:concentrationOfVehiclesValueExtension> D2LogicalModel: ExtensionType

CD2LogicalModel:concentrationOfVehiclesValueExtension> D2LogicalModel: ExtensionType
```

#### Schema Component Representation

<u>top</u>

<u>top</u>

#### Complex Type: D2LogicalModel

Super-types: None
Sub-types: None

Name D2LogicalModel

<u>Abstract</u>

no

Documentation

The DATEX II logical model comprising exchange, content payload and management sub-models.

```
XML Instance Representation
```

```
<...
color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color="color=
```

#### Schema Component Representation

Complex Type: DataValue

```
Sub-types:

- AxleFlowValue (by extension)
- ConcentrationOfVehiclesValue (by extension)
- DateTimeValue (by extension)
- DurationValue (by extension)
- DurationValue (by extension)
- OccupancyChangeValue (by extension)
- PcuFlowValue (by extension)
- TrafficStatusValue (by extension)
- VehicleFlowValue (by extension)
- VehicleFlowValue (by extension)
- VehicleFlowValue (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:dataValueExtension> D2LogicalModel:_ExtensionType 

(D2LogicalModel:dataValueExtension> D2LogicalModel:_ExtensionType 

(D2LogicalModel:dataValueExtension> [0..1]
```

#### Schema Component Representation

<u>top</u>

top

### Complex Type: DateTimeValue

```
    Super-types:
    DataValue < DateTimeValue (by extension)</th>

    Sub-types:
    None
```

Name DateTimeValue
Abstract no

**Documentation** A measured or calculated value of an instance in time.

## XML Instance Representation

```
<...
accuracy="D2LogicalModel:Percentage [0..1] ?"
computationalMethod="D2LogicalModel:ComputationMethodEnum [0..1] ?"
```

```
numberOfIncompleteInputs="D2LogicalModel:NonNegativeInteger [0..1] ?"
\verb|numberOfInputValuesUsed="\underline{D2LogicalModel:} \underline{NonNegativeInteger} \ [0..1] \ \textbf{?"}
smoothingFactor="D2LogicalModel:Float [0..1] ?"
standardDeviation="D2LogicalModel:Float [0..1] ?"
supplierCalculatedDataQuality="D2LogicalModel:Percentage [0..1] ?">
          <D2LogicalModel:dataError> D2LogicalModel:Boolean /D2LogicalModel:dataError> [0..1] ?
          <D2LogicalModel:dataValueExtension> D2LogicalModel: ExtensionType  /D2LogicalModel:dateTime> D2LogicalModel:dateTime> D2LogicalModel:dateTime> [1]
                                                                                                                                                                                                                                                                             ExtensionType </D2LogicalModel:dataValueExtension> [0..1]
          < \underline{D2LogicalMode1}: 	ext{dateTimeValueExtension} > \underline{D2LogicalMode1}: \underline{ExtensionType} < /\underline{D2LogicalMode1}: 	ext{dateTimeValueExtension} > \underline{D2LogicalMode1}: \underline{D2LogicalMode1} > \underline{D2
         FO..11
```

#### Schema Component Representation

```
<xs:complexType name="DateTimeValue">
  <xs:complexContent>
      <xs:extension base="D2LogicalModel:DataValue">
            <xs:element name="dateTime" type="D2LogicalModel:DateTime" minOccurs="1" maxOccurs="1"/>
<xs:element name="dateTimeValueExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

top

#### Complex Type: DistanceAlongLinearElement

Super-types:

Sub-types.

- DistanceFromLinearElementReferent (by extension)
- <u>DistanceFromLinearElementStart</u> (by extension)
- PercentageDistanceAlongLinearElement (by extension)

DistanceAlongLinearElement Name

<u>Abstract</u>

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

## XML Instance Representation

```
<<u>D2LogicalModel</u>:distanceAlongLinearElementExtension> <u>D2LogicalModel</u>: <u>ExtensionType</u>

LogicalModel:distanceAlongLinearElementExtension> [0..1]
      ______
```

### Schema Component Representation

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

top

#### Complex Type: DistanceFromLinearElementReferent

Super-types. <u>DistanceAlongLinearElement</u> < **DistanceFromLinearElementReferent** (by extension) Sub-types. None

Name DistanceFromLinearElementReferent

Abstract

Distance of a point along a linear element measured from a "from referent" on the linear element, in the Documentation 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
<<u>D2LogicalModel</u>:distanceAlong> <u>D2LogicalModel</u>:MetresAsFloat </<u>D2LogicalModel</u>:distanceAlong> [1] ?
<<u>D2LogicalModel</u>:fromReferent> <u>D2LogicalModel</u>:Referent </<u>D2LogicalModel</u>:fromReferent> [1]
 $$\frac{D2LogicalModel}{D2LogicalModel}: towardsReferent > $$D2LogicalModel: towardsReferent > $$[0..1] ? $$$\frac{D2LogicalModel}{D2LogicalModel}: $$$distanceFromLinearElementReferentExtension > $$$$$$D2LogicalModel: $$$$ExtensionType $$$$$
</\underline{D2LogicalModel}: distanceFromLinearElementReferentExtension> [0..1]
```

```
<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</pre>
                  name="distanceFromLinearElementReferentExtension"
                                                             type="D2LogicalModel:_ExtensionType"
        minOccurs="0"/>
      </xs:sequence>
```

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

#### Complex Type: DistanceFromLinearElementStart

Name DistanceFromLinearElementStart

<u>Abstract</u> 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

#### Schema Component Representation

top

## Complex Type: DurationValue

Super-types: DataValue (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] ?"
standardDeviation="D2LogicalModel:Float [0..1] ?"
supplierCalculatedDataQuality="D2LogicalModel:Percentage [0..1] ?">
<D2LogicalModel:dataError> D2LogicalModel:Boolean </D2LogicalModel:dataError> [0..1] ?

<D2LogicalModel:reasonForDataError> D2LogicalModel:MultilingualString 
/D2LogicalModel:dataValueExtension> D2LogicalModel: ExtensionType 
/D2LogicalModel:dataValueExtension> [0..1]

<D2LogicalModel:duration> D2LogicalModel:Seconds 
/D2LogicalModel:duration> [1] ?

<D2LogicalModel:durationValueExtension> D2LogicalModel: ExtensionType 
/D2LogicalModel:durationValueExtension>
D2LogicalModel: ExtensionType 
/D2LogicalModel:durationValueExtension>
D2LogicalModel: ExtensionType 
/D2LogicalModel:durationValueExtension>
D2LogicalModel: ExtensionType 
/D2LogicalModel:durationValueExtension>
D2LogicalModel: ExtensionType
```

#### Schema Component Representation

<u>top</u>

## Complex Type: ElaboratedDataFault

```
    Super-types:
    Fault < ElaboratedDataFault (by extension)</th>

    Sub-types:
    None
```

Name ElaboratedDataFault

<u>Abstract</u>

no

Documentation

Details of a fault which is being reported for the related elaborated data.

#### XML Instance Representation

#### Schema Component Representation

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

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

### Schema Component Representation

Complex Type: Fault

Super-types: None
Sub-types:

• ElaboratedDataFault (by extension)
• MeasurementEquipmentFault (by extension)

Name Fault
Abstract no

**Documentation** Information about a fault relating to a specific piece of equipment or process.

XML Instance Representation

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

#### Schema Component Representation

<u>top</u>

top

top

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

#### Complex Type: GroupOfLocations

Super-types: None

Sub-types:

• Location (by extension)

• NetworkLocation (by extension)

• Linear (by extension)

• Point (by extension)

Name GroupOfLocations

<u>Abstract</u> 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

#### Schema Component Representation

**Complex Type: HeaderInformation** 

Super-types: None
Sub-types: None

Name HeaderInformation

<u>Abstract</u> no

**Documentation** Management information relating to the data contained within a publication.

XML Instance Representation

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

Schema Component Representation

**Complex Type: InternationalIdentifier** 

```
Super-types: None
Sub-types: None
```

Name InternationalIdentifier

<u>Abstract</u> no

**Documentation** An identifier/name whose range is specific to the particular country.

XML Instance Representation

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

top

#### **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

top

## **Complex Type: Linear**

Super-types:	<u>GroupOfLocations</u> < <u>Location</u> (by extension) < <u>NetworkLocation</u> (by extension) < <u>Linear</u> (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

#### **Complex Type: LinearElement**

Super-types: None Sub-types. <u>LinearElementByCode</u> (by extension)
 <u>LinearElementByPoints</u> (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] ?
| CollogicalModel:roadNumber> | D2LogicalModel:String | CollogicalModel:String | CollogicalModel
< \underline{\texttt{D2LogicalModel}}: \texttt{linearElementReferenceModelVersion} > \underline{\texttt{D2LogicalModel}}: \underline{\texttt{String}}
</D2LogicalModel:linearElementReferenceModelVersion> [0..1]
  <<u>D2LogicalModel</u>:linearElementNature> <u>D2LogicalModel:LinearElementNatureEnum</u> </<u>D2LogicalModel</u>:linearElementNature>
 < \underline{D2LogicalModel}: linearElementExtension> \underline{D2LogicalModel}: \underline{ExtensionType} < D2LogicalModel: linearElementExtension>
[0..1]
```

#### Schema Component Representation

```
<xs:complexType name="LinearElement">
             <xs:sequence>

<a href="cst://www.name" cst.
<a href="cst.
<a hre
                           <xs:element name="linearElementNature" type="D2LogicalModel:LinearElementNatureEnum" minOccurs="0"</pre>
                          maxOccurs="1"/>
                            <xs:element name="linearElementExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
             </xs:sequence>
</xs:complexType>
```

Complex Type: LinearElementByCode

Super-types. <u>LinearElement</u> < **LinearElementByCode** (by extension) Sub-types: None

LinearElementBvCode Name

**Abstract** 

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

```
XML Instance Representation
   <<u>D2LogicalModel</u>:roadName> <u>D2LogicalModel</u>:<u>MultilingualString</u> </<u>D2LogicalModel</u>:roadName> [0..1] ?
    <D2LogicalModel:roadNumber> D2LogicalModel:String </D2LogicalModel:roadNumber> [0..1] ?
    < \underline{D2LogicalModel}: linearElementReferenceModel> \underline{D2LogicalModel}: \underline{String}< \underline{D2LogicalModel}: linearElementReferenceModel>
   [0..1] ?
   <D2LogicalModel:linearElementReferenceModelVersion> D2LogicalModel:String

LogicalModel:linearElementReferenceModelVersion> [0..1] ?
    <<u>D2LogicalModel</u>:linearElementNature> <u>D2LogicalModel:LinearElementNatureEnum</u> </<u>D2LogicalModel</u>:linearElementNature>
   [0..1] ?
    <D2LogicalModel:linearElementExtension> D2LogicalModel:_ExtensionType </D2LogicalModel:linearElementExtension>
   <<u>D2LogicalModel</u>:linearElementIdentifier> <u>D2LogicalModel</u>:String </<u>D2LogicalModel</u>:linearElementIdentifier> [1] ?
   \verb| < \underline{\texttt{D2LogicalModel}}: \\ \texttt{linearElementByCodeExtension} > \underline{\texttt{D2LogicalModel}}: \underline{\texttt{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

<u>top</u>

#### Complex Type: LinearElementByPoints

```
Super-types.
                                <u>LinearElement</u> < LinearElementByPoints (by extension)
Sub-types
                                None
```

Name

<u>Abstract</u> no

Documentation

A linear element along a single linear object defined by its start and end points.

#### XML Instance Representation

```
<<u>D2LogicalModel</u>:roadName> <u>D2LogicalModel:MultilingualString</u> </<u>D2LogicalModel</u>:roadName> [0..1] ?
 <<u>D2LogicalModel</u>:roadNumber> <u>D2LogicalModel</u>:<u>String</u> </<u>D2LogicalModel</u>:roadNumber> [0..1] ?
< \underline{D2LogicalModel}: linear Element Reference Model> \underline{D2LogicalModel}: \underline{String} < / \underline{D2LogicalModel}: linear Element Reference Model> \underline{D2LogicalModel}: \underline{D2Log
<D2LogicalModel:linearElementReferenceModelVersion> D2LogicalModel:String
 /D2LogicalModel:linearElementReferenceModelVersion>
<D2LogicalModel:linearElementNature> D2LogicalModel:I
                                                                                                                                                                                                                                               entNatureEnum 
[0..1] ?
 <<u>D2LogicalModel</u>:linearElementExtension> <u>D2LogicalModel</u>: <u>ExtensionType</u> </<u>D2LogicalModel</u>:linearElementExtension>
 [0..1]
<<u>D2LogicalModel</u>:startPointOfLinearElement> <u>D2LogicalModel</u>:Referent </<u>D2LogicalModel</u>:startPointOfLinearElement> [1]
<<u>D2LogicalModel</u>:intermediatePointOnLinearElement> <u>D2LogicalModel</u>: <u>IntermediatePointOnLinearElement</u>

<pre
 <D2LogicalModel:endPointOfLinearElement> D2LogicalModel:Referent /D2LogicalModel:endPointOfLinearElement> [1] ?
<<u>D2LogicalModel: linearElementByPointsExtension> D2LogicalModel: _ExtensionType</u>

/D2LogicalModel:linearElementByPointsExtension> [0..1]
```

#### Schema Component Representation

Complex Type: LinearWithinLinearElement

Super-types: None
Sub-types: None

Name LinearWithinLinearElement

<u>Abstract</u> 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

#### Schema Component Representation

top

top

## **Complex Type: Location**

```
    NetworkLocation (by extension)
    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

#### Schema Component Representation

Complex Type: MeasurementEquipmentFault

Super-types: Fault < MeasurementEquipmentFault (by extension)

Sub-types: None

Name MeasurementEquipmentFault

<u>Abstract</u> no

**Documentation** Details of a fault which is being reported for the related measurement equipment.

#### XML Instance Representation

```
CDLogicalModel:faultIdentifier> D2LogicalModel:String 
CD2LogicalModel:faultDescription> D2LogicalModel:String 
CD2LogicalModel:faultCreationTime> D2LogicalModel:DateTime 
CD2LogicalModel:faultCreationTime> D2LogicalModel:DateTime 
D2LogicalModel:faultCreationTime> D2LogicalModel:DateTime 
CD2LogicalModel:faultLastUpdateTime> D2LogicalModel:DateTime 
CD2LogicalModel:faultLastUpdateTime> D2LogicalModel:DateTime 
CD2LogicalModel:faultSeverity> D2LogicalModel:FaultSeverityEnum 
CD2LogicalModel:faultExtension> D2LogicalModel:ExtensionType 
CD2LogicalModel:measurementEquipmentFault> D2LogicalModel:MeasurementEquipmentFaultEnum
CD2LogicalModel:measurementEquipmentFaultExtension> D2LogicalModel:_ExtensionType

CD2LogicalModel:measurementEquipmentFaultExtension> D2LogicalModel:_ExtensionType

CD2LogicalModel:measurementEquipmentFaultExtension> D2LogicalModel:_ExtensionType

CD2LogicalModel:measurementEquipmentFaultExtension> D2LogicalModel:_ExtensionType

CD2LogicalModel:measurementEquipmentFaultExtension> D2LogicalModel:_ExtensionType

CD2LogicalModel:measurementEquipmentFaultExtension> D2LogicalModel:_ExtensionType

D2LogicalModel:measurementEquipmentFaultExtension> D2LogicalModel:_ExtensionType

D2LogicalModel:measurementEquipmentFaultExtension> D2LogicalModel:_ExtensionType

D2LogicalModel:measurementEquipmentFaultExtension> D2LogicalModel:_ExtensionType

D2LogicalModel:measurementEquipmentFaultExtension> D2LogicalModel:_ExtensionType

D2LogicalModel:measurementEquipmentFaultEx
```

#### Schema Component Representation

Complex Type: MultilingualString

```
Super-types: None
Sub-types: None
```

Name MultilingualString

<u>Abstract</u> no

## XML Instance Representation

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

#### Schema Component Representation

<u>top</u>

<u>top</u>

## Complex Type: MultilingualStringValue

```
      Super-types:
      xs:string < MultilingualStringValueType (by restriction) < MultilingualStringValue (by extension)</td>

      Sub-types:
      None
```

Name MultilingualStringValue

<u>Abstract</u> no

## XML Instance Representation

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

#### Schema Component Representation

<u>top</u>

## Complex Type: NetworkLocation

```
Super-types: GroupOfLocations < Location (by extension) < NetworkLocation (by extension)

Sub-types:

Linear (by extension)

Point (by extension)
```

Name NetworkLocation

<u>Abstract</u> yes

**Documentation** The specification of a location on a network (as a point or a linear location).

## XML Instance Representation

#### Schema Component Representation

top

#### Complex Type: OccupancyChangeValue

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

Name OccupancyChangeValue

<u>Abstract</u> no

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

## XML Instance Representation

```
<...
accuracy="<u>D2LogicalModel</u>:<u>Percentage</u> [0..1] ?"
computationalMethod="<u>D2LogicalModel</u>:<u>ComputationMethodEnum</u> [0..1] ?"
```

#### Schema Component Representation

<u>top</u>

#### 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

#### Schema Component Representation

top

## Complex Type: OpenIrBaseLocationReferencePoint

```
Super-types: None

Sub-types:

OpenIrLastLocationReferencePoint (by extension)
OpenIrLocationReferencePoint (by extension)
```

Name OpenIrBaseLocationReferencePoint

<u>Abstract</u> yes

**Documentation** Base class used to hold data about a reference point.

## XML Instance Representation

```
<...>
    <<u>D2LogicalModel</u>:openlrCoordinate> <u>D2LogicalModel</u>:PointCoordinates </<u>D2LogicalModel</u>:openlrCoordinate> [1]
    <<u>D2LogicalModel</u>:openlrLineAttributes> <u>D2LogicalModel</u>:<u>OpenlrLineAttributes</u> </<u>D2LogicalModel</u>:openlrLineAttributes>
[1]
    <<u>P2LogicalModel</u>:openlrBaseLocationReferencePointExtension> <u>D2LogicalModel</u>:_ExtensionType
    </<u>D2LogicalModel</u>:openlrBaseLocationReferencePointExtension> [0..1]
</...>
```

#### Schema Component Representation

<u>top</u>

Super-types: None

Sub-types:

<u>OpenIrPointAlongLine</u> (by extension)
 <u>OpenIrPoiWithAccessPoint</u> (by extension)

Name OpenIrBasePointLocation

<u>Abstract</u> yes

**Documentation**Holds common data that are used both in OpenIrPointAccessPoint and OpenIrPointAlongLine.

#### XML Instance Representation

#### Schema Component Representation

top

## Complex Type: OpenIrExtendedLinear

Super-types: None
Sub-types: None

Name OpenIrExtendedLinear

<u>Abstract</u> no

**Documentation** Extension class for OpenLR Line location reference

#### XML Instance Representation

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

#### Schema Component Representation

top

#### Complex Type: OpenIrExtendedPoint

```
Super-types: None
Sub-types: None
```

Name OpenIrExtendedPoint

<u>Abstract</u> no

**Documentation** Extension class for OpenLR point.

## XML Instance Representation

#### Complex Type: OpenIrGeoCoordinate

Super-types: None
Sub-types: None

Name OpenIrGeoCoordinate

<u>Abstract</u> no

**Documentation** A geo-coordinate pair is a position in a map defined by its longitude and latitude coordinate values.

## XML Instance Representation

```
<...>
    <<u>D2LogicalModel</u>:openlrCoordinate> <u>D2LogicalModel</u>:<u>PointCoordinates</u> </<u>D2LogicalModel</u>:openlrCoordinate> [1]
    <<u>D2LogicalModel</u>:openlrGeoCoordinateExtension> <u>D2LogicalModel</u>:_<u>ExtensionType</u>
    </<u>D2LogicalModel</u>:openlrGeoCoordinateExtension> [0..1]
</...>
```

#### Schema Component Representation

Complex Type: OpenIrLastLocationReferencePoint

Super-types: OpenIrBaseLocationReferencePoint < OpenIrLastLocationReferencePoint (by extension)

Sub-types: None

Name OpenIrLastLocationReferencePoint

<u>Abstract</u> no

**Documentation**The sequence of location reference points is terminated by a last location reference point.

## XML Instance Representation

#### Schema Component Representation

**Complex Type: OpenIrLineAttributes** 

Super-types: None
Sub-types: None

Name OpenIrLineAttributes

<u>Abstract</u> 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

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

## Schema Component Representation

<u>top</u>

<u>top</u>

<u>top</u>

top

#### Complex Type: OpenIrLineLocationReference

```
Super-types: None
Sub-types: None
```

Name OpenIrLineLocationReference

<u>Abstract</u> no

**Documentation**A LineLocationReference is defined by an ordered sequence of location reference points and a terminating

last location reference point.

## XML Instance Representation

#### **Schema Component Representation**

Complex Type: OpenIrLocationReferencePoint

 Super-types:
 OpenIrBaseLocationReferencePoint < OpenIrLocationReferencePoint (by extension)</th>

 Sub-types:
 None

Name OpenIrLocationReferencePoint

<u>Abstract</u> no

**Documentation** The basis of a location reference is a sequence of location reference points (LRPs).

## XML Instance Representation

.\_\_\_\_\_

#### Schema Component Representation

top

## **Complex Type: OpenIrOffsets**

```
Super-types: None
Sub-types: None
```

Name OpenIrOffsets

<u>Abstract</u> no

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

#### XML Instance Representation

#### Schema Component Representation

<u>top</u>

#### Complex Type: OpenIrPathAttributes

Super-types: None
Sub-types: None

Name OpenIrPathAttributes

<u>Abstract</u> 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

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

## Schema Component Representation

top

#### Complex Type: OpenIrPoiWithAccessPoint

 Super-types:
 OpenIrBasePointLocation
 < OpenIrPoiWithAccessPoint (by extension)</th>

 Sub-types:
 None

Name OpenIrPoiWithAccessPoint

<u>Abstract</u> 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

<u>top</u>

## Complex Type: OpenIrPointAlongLine

```
Super-types: OpenIrBasePointLocation < OpenIrPointAlongLine (by extension)
```

Sub-types: None

Name OpenIrPointAlongLine

<u>Abstract</u> no

**Documentation** Point along a line

## XML Instance Representation

#### Schema Component Representation

Complex Type: OpenIrPointLocationReference

Super-types: None
Sub-types: None

Name OpenIrPointLocationReference

<u>Abstract</u> no

**Documentation** A point location is a zero-dimensional element in a map that specifies a geometric location.

## XML Instance Representation

## Schema Component Representation

top

top

#### Complex Type: PayloadPublication

```
Super-types: None
Sub-types:

• VmsTablePublication (by extension)
```

lame PayloadPublication

<u>Abstract</u> yes

## XML Instance Representation

#### Schema Component Representation

## Complex Type: PcuFlowValue

 Super-types:
 DataValue
 PcuFlowValue (by extension)

 Sub-types:
 None

Name PcuFlowValue
Abstract no

**Documentation** A measured or calculated value of the flow rate of passenger car units.

#### XML Instance Representation

#### Schema Component Representation

## Complex Type: PercentageDistanceAlongLinearElement

 Super-types:
 DistanceAlongLinearElement < PercentageDistanceAlongLinearElement (by extension)</th>

 Sub-types:
 None

Name PercentageDistanceAlongLinearElement

<u>Abstract</u> 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

## Schema Component Representation

```
<xs:complexType name="PercentageDistanceAlongLinearElement">
```

top

top

top

#### **Complex Type: Point**

 Super-types:
 GroupOfLocations < Location (by extension) < NetworkLocation (by extension) < Point (by extension)</th>

 Sub-types:
 None

Name Point Abstract no

**Documentation** A single geospatial point.

## XML Instance Representation

#### Schema Component Representation

Complex Type: PointAlongLinearElement

Super-types: None
Sub-types: None

Name PointAlongLinearElement

<u>Abstract</u> 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

```
<
```

Complex Type: PointByCoordinates

Super-types: None
Sub-types: None

Name PointByCoordinates

<u>Abstract</u> no

**Documentation** A single point defined only by a coordinate set with an optional bearing direction.

XML Instance Representation

```
<...>
    <<u>D2LogicalModel</u>:bearing> <u>D2LogicalModel</u>:NonNegativeInteger </<u>D2LogicalModel</u>:bearing> [0..1] ?
    <<u>D2LogicalModel</u>:pointCoordinates> <u>D2LogicalModel</u>:PointCoordinates </<u>D2LogicalModel</u>:pointCoordinates> [1]
    <<u>D2LogicalModel</u>:pointByCoordinatesExtension> <u>D2LogicalModel</u>: <u>ExtensionType</u>
    </<u>D2LogicalModel</u>:pointByCoordinatesExtension> [0..1]
    </...>
```

Schema Component Representation

Complex Type: PointCoordinates

Super-types: None
Sub-types: None

Name PointCoordinates

<u>Abstract</u> 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

Schema Component Representation

Complex Type: PointExtended

Super-types: None
Sub-types: None

Name PointExtended

<u>Abstract</u> no

**Documentation** Extension point for 'Point' to support the description of junctions (and other alternative point descriptions).

XML Instance Representation

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

Schema Component Representation

<u>top</u>

top

<u>top</u>

top

#### **Complex Type: Referent**

Super-types: None
Sub-types: None

NameReferentAbstractno

**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

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

<pre
```

#### Schema Component Representation

Complex Type: Road

```
Super-types: None
Sub-types:

• RoadNode (by extension)
```

Name Road
Abstract no

**Documentation** Identification of a road by its name, identifier, type ..

XML Instance Representation

Schema Component Representation

<u>top</u>

#### Complex Type: RoadNode

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

Name RoadNode

<u>Abstract</u>

nο

**Documentation** 

A road node as part of the specialised road identified by the name of a junctionon on this road.

#### XML Instance Representation

```
<_D2LogicalModel:nameOfRoad> D2LogicalModel:MultilingualString /_D2LogicalModel:nameOfRoad> [0..1] ?
<<u>D2LogicalModel</u>:roadIdentifier> <u>D2LogicalModel:MultilingualString</u> </<u>D2LogicalModel</u>:roadIdentifier> [0..1] ?
<<u>D2LogicalModel</u>:typeOfRoad> <u>D2LogicalModel</u>:RoadTypeEnum </<u>D2LogicalModel</u>:typeOfRoad> [0..1] ?
< \underline{\texttt{D2LogicalModel}}: \texttt{roadDestination} > \underline{\texttt{D2LogicalModel}}: \underline{\texttt{MultilingualString}} < \underline{\texttt{D2LogicalModel}}: \texttt{roadDestination} > \underline{\texttt{[0...]}}
CplogicalModel:distanceToThisRoad>D2LogicalModel:MetresAsNonNegativeInteger
[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>

<as:equence>
<as:element name="junctionName" type="D2LogicalModel:MultilingualString" minOccurs="1" maxOccurs="1"/>
<as:element name="roadNodeExtension" type="D2LogicalModel: ExtensionType" minOccurs="0"/>
           </xs:sequence>
       </xs:extension>
   </xs:complexContent>
 /xs:complexType>
```

top

## Complex Type: SupplementaryPositionalDescription

Super-types: None Sub-types. None

SupplementaryPositionalDescription Name

**Abstract** 

**Documentation** A collection of supplementary positional information which improves the precision of the location.

#### XML Instance Representation

```
locationPrecision="D2LogicalModel:MetresAsNonNegativeInteger [0..1] ?">
           < \underline{D2LogicalModel}: locationDescriptor > \underline{D2LogicalModel}: \underline{LocationDescriptorEnum} < / \underline{D2LogicalModel}: locationDescriptor > \underline{D2LogicalModel}: \underline{D2LogicalModel}: \underline{D3LogicalModel}: \underline{D3LogicalMo
            <\D2LogicalModel:sequentialRampNumber> \(D2LogicalModel:\)NonNegativeInteger <\\D2LogicalModel:sequentialRampNumber>
            <<u>D2LogicalModel</u>:affectedCarriagewayAndLanes> <u>D2LogicalModel:AffectedCarriagewayAndLanes</u>
           /D2LogicalModel:affectedCarriagewayAndLanes> [0..*
            <u>D2LogicalModel</u>:supplementaryPositionalDescriptionExtension> <u>D2LogicalModel</u>: <u>ExtensionType</u>
           </\underline{\texttt{D2LogicalModel}} : \texttt{supplementaryPositionalDescriptionExtension} > \texttt{[0..1]}
```

## Schema Component Representation

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

<u>top</u>

## **Complex Type: TpegDescriptor**

Super-types: None Sub-types: • <u>TpegPointDescriptor</u> (by extension) <u>TpegllcPointDescriptor</u> (by extension)
 <u>TpegJunctionPointDescriptor</u> (by extension) <u>TpegOtherPointDescriptor</u> (by extension)

Name **TpegDescriptor** 

**Documentation** A collection of information providing descriptive references to locations using the TPEG-Loc location

## XML Instance Representation

```
ogicalModel:descriptor> D2LogicalModel:MultilingualString </D2LogicalModel:descriptor> [1] ?
< \underline{D2LogicalModel}: \texttt{tpegDescriptorExtension} \\ \underline{D2LogicalModel}: \underline{ExtensionType} < / \underline{D2LogicalModel}: \texttt{tpegDescriptorExtension} \\
```

#### **Schema Component Representation**

<u>top</u>

#### Complex Type: TpegFramedPoint

```
    Super-types:
    TpegPointLocation
    < TpegFramedPoint (by extension)</th>

    Sub-types:
    None
```

Name TpegFramedPoint

<u>Abstract</u> no

**Documentation** A point on the road network which is framed between two other points on the same road.

#### XML Instance Representation

#### Schema Component Representation

<u>top</u>

## Complex Type: TpegllcPointDescriptor

 Super-types:
 TpegDescriptor < TpegPointDescriptor (by extension)</th>
 TpegIlcPointDescriptor (by extension)

 Sub-types:
 None

Name TpegllcPointDescriptor

Abstract no

**Documentation** A descriptor for describing a junction by defining the intersecting roads.

## XML Instance Representation

Super-types: TpeqPoint < TpegJunction (by extension)

Sub-types: None

Name TpegJunction

<u>Abstract</u> no

**Documentation** A point on the road network which is a road junction point.

## XML Instance Representation

#### Schema Component Representation

## Complex Type: TpegJunctionPointDescriptor

Super-types: <u>TpegDescriptor</u> < <u>TpegPointDescriptor</u> (by extension) < **TpegJunctionPointDescriptor** (by extension)

Sub-types: None

Name TpegJunctionPointDescriptor

<u>Abstract</u> no

**Documentation** A descriptor for describing a point at a junction on a road network.

## XML Instance Representation

#### Schema Component Representation

<u>top</u>

top

## Complex Type: TpegLinearLocation

```
Super-types: None
Sub-types: None
```

Name TpegLinearLocation

<u>Abstract</u> 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

```
<...>
<<u>D2LogicalModel</u>:tpegDirection> <u>D2LogicalModel</u>:DirectionEnum </<u>D2LogicalModel</u>:tpegDirection> [1] ?
```

\_\_\_\_\_\_

#### Schema Component Representation

<u>top</u>

#### Complex Type: TpegNonJunctionPoint

 Super-types:
 TpegPoint
 TpegNonJunctionPoint (by extension)

 Sub-types:
 None

Name TpegNonJunctionPoint

<u>Abstract</u> no

**Documentation** A point on the road network which is not a road junction point.

## XML Instance Representation

#### Schema Component Representation

top

#### Complex Type: TpegOtherPointDescriptor

 Super-types:
 TpegDescriptor < TpegPointDescriptor (by extension)</th>
 TpegOtherPointDescriptor (by extension)

 Sub-types:
 None

Name TpegOtherPointDescriptor

<u>Abstract</u> no

**Documentation** General descriptor for describing a point

## XML Instance Representation

<u>top</u>

#### **Complex Type: TpegPoint**

Super-types: None

Sub-types.

• <u>TpegJunction</u> (by extension)

• TpegNonJunctionPoint (by extension)

NameTpegPointAbstractyes

**Documentation** A point on the road network which is either a junction point or a non junction point.

## XML Instance Representation

#### Schema Component Representation

Complex Type: TpegPointDescriptor

Super-types: <u>TpegDescriptor</u> < **TpegPointDescriptor** (by extension)

Sub-types:

- <u>TpegllcPointDescriptor</u> (by extension)
- <u>TpegJunctionPointDescriptor</u> (by extension)
- <u>TpegOtherPointDescriptor</u> (by extension)

Name TpegPointDescriptor

<u>Abstract</u> 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

Complex Type: TpegPointLocation

Super-types: None

Sub-types:

- TpegFramedPoint (by extension)
- <u>TpegSimplePoint</u> (by extension)

Name TpegPointLocation

<u>Abstract</u> 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

#### Schema Component Representation

<u>top</u>

top

## Complex Type: TpegSimplePoint

Super-types: <u>TpegPointLocation</u> < **TpegSimplePoint** (by extension) Sub-types. None

Name **TpeqSimplePoint** 

<u>Abstract</u>

**Documentation** A point on the road network which is not bounded by any other points on the road network.

#### XML Instance Representation

```
<D2LogicalModel:tpegDirection> D2LogicalModel:DirectionEnum </D2LogicalModel:tpegDirection> [1] ?
 $$\frac{\text{D2LogicalModel}:tpegPointLocationExtension>} $$\underline{\text{D2LogicalModel}:}_{\text{ExtensionType}} $$<\frac{D2LogicalModel}{\text{D2LogicalModel}:tpegPointLocationExtension>} $$[0..1]$
 < \underline{D2LogicalModel}: \texttt{tpegSimplePointLocationType} > \underline{D2LogicalModel}: \underline{TpegLoc01SimplePointLocationSubtypeEnum}
 <pre
 <<u>D2LogicalModel</u>:point> <u>D2LogicalModel</u>:<u>TpegPoint</u> </<u>D2LogicalModel</u>:point> [1] ?
 < \underline{D2LogicalModel}: \texttt{tpegSimplePointExtension} \\ \underline{D2LogicalModel}: \underline{\texttt{ExtensionType}} \\ < |\underline{D2LogicalModel}: \texttt{tpegSimplePointExtension}| \\ \\ \underline{D2LogicalModel}: \underline{\texttt{TorgicalModel}:} \\ \underline{D2LogicalModel}: \underline{D2LogicalModel}: \underline{D2LogicalModel}: \underline{D2LogicalModel}: \underline{D3LogicalModel}: \underline{D3LogicalM
```

#### Schema Component Representation

```
<xs:complexType name="TpegSimplePoint">
  <xs:complexContent</pre>
     <xs:extension base="D2LogicalModel:TpegPointLocation">
        <xs:sequence>
            <xs:element name="tpegSimplePointLocationType</pre>
           type="<u>D2LogicalModel:TpeqLoc01SimplePointLocationSubtypeEnum</u>" minOccurs="1" maxOccurs="1"/>
           <xs:element name="point" type="D2LogicalModel:TpegPoint"/
<xs:element name="tpegSimplePointExtension" type="D2Logic</pre>
                                                                       "D2LogicalModel: ExtensionType" minOccurs="0"/>
        </xs:sequence>
     </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type: TrafficStatusValue

<u>DataValue</u> < **TrafficStatusValue** (by extension) Super-types.

Sub-types. None

Name TrafficStatusValue

**Abstract** 

Documentation A measured or calculated value of the status of traffic conditions on a section of road in a specified direction.

```
XML Instance Representation
    accuracy="D2LogicalModel:Percentage [0..1] ?"
    computationalMethod="D2LogicalModel:ComputationMethodEnum [0..1] ?"
    \verb|numberOfIncompleteInputs="\underline{D2LogicalModel}: \underline{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:MultilingualString </D2LogicalModel:Multilingual
          <D2LogicalModel:dataValueExtension> D2LogicalModel: ExtensionType </D2LogicalModel:dataValueExtension> [0..1]
          <<u>D2LogicalModel</u>:trafficStatusValue> <u>D2LogicalModel</u>:TrafficStatusEnum </<u>D2LogicalModel</u>:trafficStatusValue> [1] ?
           <<u>D2LogicalModel</u>: trafficStatusValueExtension> <u>D2LogicalModel</u>: <u>ExtensionType</u>
          /D2LogicalModel:trafficStatusValueExtension> [0..1]
```

#### Schema Component Representation

```
<xs:complexType name="TrafficStatusValue">
  <xs:complexContent>
      <xs:extension base="D2LogicalModel:DataValue";</pre>
         <xs:sequence>
            <xs:element name="trafficStatusValue" type="D2LogicalModel: TrafficStatusEnum" minOccurs="1" maxOccurs="1"/>
<xs:element name="trafficStatusValueExtension" type="D2LogicalModel: ExtensionType" minOccurs="0"/>
         </xs:sequence>
      </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Complex Type: UrlLink

Super-types: None Sub-types. None

Name UrlLink
Abstract no

**Documentation** Details of a Uniform Resource Locator (URL) address pointing to a resource available on the Internet from

where further relevant information may be obtained.

### XML Instance Representation

```
<...>
    <<u>D2LogicalModel</u>:urlLinkAddress> <u>D2LogicalModel</u>:Url </<u>D2LogicalModel</u>:urlLinkAddress> [1] ?
    <<u>D2LogicalModel</u>:urlLinkDescription> <u>D2LogicalModel</u>:MultilingualString </<u>D2LogicalModel</u>:urlLinkDescription> [0..1]
    ?
    <<u>D2LogicalModel</u>:urlLinkType> <u>D2LogicalModel</u>:UrlLinkTypeEnum </<u>D2LogicalModel</u>:urlLinkType> [0..1] ?
    <<u>D2LogicalModel</u>:urlLinkExtension> <u>D2LogicalModel</u>:_ExtensionType </<u>D2LogicalModel</u>:urlLinkExtension> [0..1]
</...>
```

### Schema Component Representation

Complex Type: VehicleCountValue

 Super-types:
 DataValue > VehicleCountValue (by extension)

 Sub-types:
 None

Name VehicleCountValue

<u>Abstract</u> 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

# Schema Component Representation

Complex Type: VehicleFlowValue

```
Super-types: DataValue (by extension)
Sub-types: None
```

Name VehicleFlowValue

<u>Abstract</u> no

**Documentation** A measured or calculated value of the flow rate of vehicles.

# XML Instance Representation

```
c...
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] ?
```

<u>top</u>

```
< \underline{D2Logical Model}: reason For Data Error > \underline{D2Logical Model}: \underline{Multilingual String} < / \underline{D2Logical Model}: reason For Data Error > [0..1]
<D2LogicalModel:dataValueExtension> D2LogicalModel: ExtensionType </D2LogicalModel:dataValueExtension> [0..1]
<<u>D2LogicalModel</u>:vehicleFlowRate> <u>D2LogicalModel</u>:<u>VehiclesPerHour</u> </<u>D2LogicalModel</u>:vehicleFlowRate> [1] ?
<<u>D2LogicalModel</u>:vehicleFlowValueExtension> <u>D2LogicalModel</u>:_<u>ExtensionType</u>
</D2LogicalModel:vehicleFlowValueExtension> [0..1]
```

#### Schema Component Representation

```
<xs:complexType name="VehicleFlowValue">
  <xs:complexContent>
     <xs:extension base="D2LogicalModel:DataValue">
       <xs:sequence>
         <xs:element name="vehicleFlowRate" type="D2LogicalModel:VehiclesPerHour" minOccurs="1" maxOccurs="1"/>
          <xs:element name="vehicleFlowValueExtension"</pre>
                                                        type="D2LogicalModel: ExtensionType" minOccurs="0"/>
       </xs:sequence>
     </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

### Complex Type: VmsManagedLogicalLocation

Super-types: Sub-types: None

Name VmsManagedLogicalLocation

**Abstract** 

Documentation The logical location (e.g. a car park, a section of road, a junction etc.) which a VMS contributes to the

management of.

### XML Instance Representation

```
<<u>D2LogicalModel</u>:managedLogicalLocation> <u>D2LogicalModel</u>:MultilingualString </<u>D2LogicalModel</u>:managedLogicalLocation>
[0..1] ?
< \underline{\texttt{D2LogicalModel}} : \texttt{distanceFromLogicalLocation} > \underline{\texttt{D2LogicalModel}} : \underline{\texttt{MetresAsNonNegativeInteger}}
</D2LogicalModel:distanceFromLogicalLocation> [0..1]
<<u>D2LogicalModel</u>:managedLocation> <u>D2LogicalModel</u>:<u>Location</u> </<u>D2LogicalModel</u>:managedLocation> [0..1] ?
<D2LogicalModel:vmsManagedLogicalLocationExtension> D2LogicalModel: ExtensionType
```

### Schema Component Representation

```
xs:complexType name="VmsManagedLogicalLocation";
  <xs:sequence>

<as:element name="managedLogicalLocation" type="D2LogicalModel:MultilingualString" minOccurs="0" maxOccurs="1"/>
<as:element name="distanceFromLogicalLocation" type="D2LogicalModel:MetresAsNonNegativeInteger" minOccurs="0"</pre>
     maxOccurs="1"/>
     <xs:element name="managedLocation" type="D2LogicalModel:Location" minOccurs="0"/>
     <xs:element name="wmsManagedLogicalLocationExtension" type="D2LogicalModel:_ExtensionType" minOccurs="0"/>
  </xs:sequence>
/xs:complexType>
```

# Complex Type: VmsPictogramDisplayCharacteristics

Super-types: None Sub-types. None

VmsPictogramDisplayCharacteristics

Documentation Characteristics specific to the pictogram display area(s) on the VMS where pictogramDisplayAreaIndex

indicates which pictogram area it relates to.

### XML Instance Representation

```
<D2LogicalModel:pictogramLanternsPresent> D2LogicalModel:Boolean </D2LogicalModel:pictogramLanternsPresent> [0..1]
< \underline{D2LogicalModel}: pictogramSequencingCapable > \underline{D2LogicalModel}: \underline{Boolean} < / \underline{D2LogicalModel}: pictogramSequencingCapable > \underline{D2LogicalModel}: \underline{D2LogicalModel}: \underline{D3LogicalModel}: \underline{D3LogicalM
 <<u>D2LogicalModel</u>:pictogramPixelsAcross> <u>D2LogicalModel:NonNegativeInteger</u> </<u>D2LogicalModel</u>:pictogramPixelsAcross>
<<u>D2LogicalModel</u>:pictogramPixelsDown> <u>D2LogicalModel</u>:NonNegativeInteger </<u>D2LogicalModel</u>:pictogramPixelsDown>
 <<u>D2LogicalModel</u>:pictogramDisplayHeight> <u>D2LogicalModel:MetresAsFloat</u> </<u>D2LogicalModel</u>:pictogramDisplayHeight>
<<u>D2LogicalModel</u>:pictogramDisplayWidth> <u>D2LogicalModel</u>:<u>MetresAsFloat</u> </<u>D2LogicalModel</u>:pictogramDisplayWidth> [0..1]
 <<u>D2LogicalModel</u>:pictogramCodeListIdentifier> <u>D2LogicalModel:String</u> </<u>D2LogicalModel</u>:pictogramCodeListIdentifier>
<D2LogicalModel:maxPictogramLuminanceLevel> D2LogicalModel:NonNegativeInteger
</D2LogicalModel:maxPictogramLuminanceLevel> [0..1]
<D2LogicalModel:pictogramNumberOfColours> D2LogicalModel:NonNegativeInteger
<<u>D2LogicalModel</u>:maxNumberOfSequentialPictograms> <u>D2LogicalModel</u>:<u>NonNegativeInteger</u>
/p2LogicalModel:maxNumberOfSequentialPictograms> [0..1]
<<u>D2LogicalModel</u>:pictogramPositionAbsolute> <u>D2LogicalModel</u>:<u>PositionAbsoluteEnum</u>
```

top

```
<D2LogicalModel:pictogramPositionX> D2LogicalModel:MetresAsFloat </D2LogicalModel:pictogramPositionX> [0..1] ?
<D2LogicalModel:pictogramPositionY> D2LogicalModel:MetresAsFloat </D2LogicalModel:pictogramPositionY> [0..1] ?
<D2LogicalModel:pictogramPositionRelativeToText> D2LogicalModel:PositionRelativeEnum
</D2LogicalModel:pictogramPositionRelativeToText> [0..1] ?
<D2LogicalModel:wmsSupplementaryPanelCharacteristics> D2LogicalModel:VmsSupplementaryPanelCharacteristics
</D2LogicalModel:wmsSupplementaryPanelCharacteristics> [0..1]
<D2LogicalModel:wmsPictogramDisplayCharacteristicsExtension> D2LogicalModel:ExtensionType
</D2LogicalModel:wmsPictogramDisplayCharacteristicsExtension> [0..1]
```

#### Schema Component Representation

```
<xs:complexType name="VmsPictogramDisplayCharacteristics">

<a href="cxs:element name="pictogramLanternsPresent" type="D2LogicalModel:Boolean" minOccurs="0" maxOccurs="1"/>
<a href="cxs:element name="pictogramSequencingCapable" type="D2LogicalModel:Boolean" minOccurs="0" maxOccurs="1"/>
<a href="cxs:element name="pictogramPixelsAcross" type="D2LogicalModel:NonNegativeInteger" minOccurs="0" maxOccurs="1"/>
<a href="cxs:element name="pictogramPixelsAcross" type="pictogramPixelsAcross" t
               <xs:element name="pictogramPixelsDown" type="D2LogicalModel:NonNegativeInteger" minOccurs="0" maxOccurs="1"/>
             <xs:element name="pictogramPixelsDown" type="<u>D2LogicalModel:NonNegativeInteger</u>" minOccurs="0" maxOccurs="1"/>
<xs:element name="pictogramDisplayHeight" type="<u>D2LogicalModel:MetresAsFloat</u>" minOccurs="0" maxOccurs="1"/>
<xs:element name="pictogramDisplayWidth" type="<u>D2LogicalModel:MetresAsFloat</u>" minOccurs="0" maxOccurs="1"/>
<xs:element name="pictogramCodeListIdentifier" type="<u>D2LogicalModel:String</u>" minOccurs="0" maxOccurs="1"/>
<xs:element name="maxPictogramLuminanceLevel" type="<u>D2LogicalModel:NonNegativeInteger</u>" minOccurs="0"
              maxOccurs="1"/>
             <xs:element name="pictogramNumberOfColours" type="D2LogicalModel:NonNegativeInteger" minOccurs="0"
maxOccurs="1"/>
               <xs:element name="maxNumberOfSequentialPictograms" type="D2LogicalModel:NonNegativeInteger" minOccurs="0"</pre>
              maxOccurs="1"/>
               <xs:element name="pictogramPositionAbsolute" type="<u>D2LogicalModel:PositionAbsoluteEnum</u>" minOccurs="0"
              maxOccurs="1"/>
              <xs:element name="pictogramPositionX" type="D2LogicalModel:MetresAsFloat" minOccurs="0" maxOccurs="1"/>
<xs:element name="pictogramPositionY" type="D2LogicalModel:MetresAsFloat" minOccurs="0" maxOccurs="1"/>
               <xs:element name="pictogramPositionRelativeToText" type="D2LogicalModel:PositionRelativeEnum" minOccurs="0"</pre>
              maxOccurs="1"/>
               <xs:element name="vmsSupplementaryPanelCharacteristics"</pre>
               type="D2LogicalModel:VmsSupplementaryPanelCharacteristics" minOccurs="0"/>
             <xs:element name="vmsPictogramDisplayCharacteristicsExtension" type="D2LogicalModel:_ExtensionType"
minOccurs="0"/>
       </xs:sequence>
 /xs:complexType>
```

#### Complex Type: VmsRecord

Super-types: None
Sub-types: None

Name VmsRecord Abstract no

Documentation A sub-record in the VMS Unit table defining the characteristics of a single variable message sign that is

controlled by a specific VMS unit. Locations are on or adjacent to the road network but may be updated over time if relating to a mobile VMS unit.

XML Instance Representation

```
Cp2LogicalModel:vmsDescription> D2LogicalModel:MultilingualString 
/D2LogicalModel:vmsDwsrer> D2LogicalModel:MultilingualString 
/D2LogicalModel:vmsPhysicalMounting> D2LogicalModel:PhysicalMountingEnum 
/D2LogicalModel:vmsPhysicalMounting> D2LogicalModel:PhysicalMountingEnum 
/D2LogicalModel:vmsType> D2LogicalModel:String 
/D2LogicalModel:vmsType> D2LogicalModel:String 
/D2LogicalModel:vmsTypeCode> D2LogicalModel:String 
/D2LogicalModel:vmsTypeCode> D2LogicalModel:String 
/D2LogicalModel:vmsTypeCode> D2LogicalModel:String 
/D2LogicalModel:vmsTypeCode> D2LogicalModel:String 
/D2LogicalModel:vmsDipcode> D2LogicalModel:String 
/D2LogicalModel:vmsDipcode> D2LogicalModel:String 
/D2LogicalModel:vmsDipcode> D2LogicalModel:Mptresase 
/D2LogicalMode

/D2LogicalMode
```

### Schema Component Representation

```
<xs:element name="vmsTextDisplayCharacteristics" type="D2LogicalModel:VmsTextDisplayCharacteristics"</pre>
      minOccurs="0"/>
      <xs:element name="vmsPictogramDisplayCharacteristics"</pre>
      type="<u>D2LogicalModel</u>:<u>_VmsRecordPictogramDisplayAreaIndexVmsPictogramDisplayCharacteristics</u>" minOccurs="0"
      maxOccurs="unbounded"
      <xs:element name="vmsLocation" type="D2LogicalModel:Location" minOccurs="0"/>
      <xs:element name="vmsManagedLogicalLocation" type="D2LogicalModel:VmsManagedLogicalLocation" minOccurs="0"/>
<xs:element name="backgroundImageUrl" type="D2LogicalModel:UrlLink" minOccurs="0"/>
<xs:element name="vmsRecordExtension" type="D2LogicalModel:ExtensionType" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

# Complex Type: VmsSupplementaryPanelCharacteristics

Super-types: None Sub-types. None

Name **VmsSupplementaryPanelCharacteristics** 

Abstract no

Documentation Characteristics of a panel which may display details (sometimes regulatory in nature) that are supplemental

to the main pictogram, comprising an additional line of text and/or a pictogram.

### XML Instance Representation

```
<<u>D2LogicalModel</u>:supplementaryPictogramCodeListIdentifier> <u>D2LogicalModel</u>:<u>String</u>

CodeListIdentifier> [0..1]
< \underline{\texttt{D2LogicalModel}} : \texttt{supplementaryPanelPixelsAcross} \\ \underline{\texttt{D2LogicalModel}} : \underline{\texttt{NonNegativeInteger}} \\
/D2LogicalModel:supplementaryPanelPixelsAcross> [0..1] ?
<D2LogicalModel:supplementaryPanelPixelsDown> D2LogicalModel:NonNegativeInteger

</p
<D2LogicalModel:supplementaryPanelDisplayHeight> D2LogicalModel:MetresAsFloat

</pr>
</pr>
</pr>
LogicalModel:supplementaryPanelDisplayWidth>
D2LogicalModel:MetresAsFloat
</D2LogicalModel:supplementaryPanelDisplayWidth> [0..1]
<D2LogicalModel:supplementaryPanelPositionX> D2LogicalModel:MetresAsFloat
D2LogicalModel:supplementaryPanelPositionX> [0..1] ?
<<u>D2LogicalModel</u>:SupplementaryPanelPositionY> <u>D2LogicalModel</u>:MetresAsFloat
</br>
</bd>

</D2LogicalModel</td>
:supplementaryPanelPositionY> [0..1]

<D2LogicalModel:relativePositionToPictogramArea> D2LogicalModel:PositionRelativeEnum
/patch in the control of t

LogicalModel:vmsSupplementaryPanelCharacteristicsExtension> [0..1]
```

## Schema Component Representation

```
<xs:complexType name="VmsSupplementaryPanelCharacteristics">
  <xs:sequence>
     <xs:element name="supplementaryPictogramCodeListIdentifier" type="D2LogicalModel:String" minOccurs="0"</pre>
     maxOccurs="1"/>
     <xs:element name="supplementaryPanelPixelsAcross" type="D2LogicalModel:NonNegativeInteger" minOccurs="0"</pre>
     maxOccurs="1"/>
     <xs:element name="supplementaryPanelPixelsDown" type="D2LogicalModel:NonNegativeInteger" minOccurs="0"</pre>
     maxOccurs="1"/>
     <xs:element name="supplementaryPanelDisplayHeight" type="D2LogicalModel:MetresAsFloat" minOccurs="0"</pre>
     maxOccurs="1"/>
     <xs:element name="supplementaryPanelDisplayWidth" type="D2LogicalModel:MetresAsFloat" minOccurs="0"</pre>
     maxOccurs="1"/>
     <xs:element name="supplementaryPanelPositionX" type="D2LogicalModel: MetresAsFloat" minOccurs="0" maxOccurs="1"/>
<xs:element name="supplementaryPanelPositionY" type="D2LogicalModel: MetresAsFloat" minOccurs="0" maxOccurs="1"/>
     <xs:element name="relativePositionToPictogramArea" type="<u>D2LogicalModel:PositionRelativeEnum</u>" minOccurs="0"
     maxOccurs="1"/>
     <xs:element name="vmsSupplementaryPanelCharacteristicsExtension" type="D2LogicalModel: ExtensionType"</pre>
     minOccurs="0"/>
  </xs:sequence>
</xs:complexType>
```

# Complex Type: VmsTablePublication

<u>PayloadPublication</u> < **VmsTablePublication** (by extension) Super-types: None Sub-types.

VmsTablePublication Name

Abstract no

**Documentation** A publication containing one or more VMS Unit Tables each comprising a set of records which hold details of

VMS units.

# XML Instance Representation

```
"D2LogicalModel:Language [1] ?">
<<u>D2LogicalModel</u>:publicationTime> <u>D2LogicalModel:DateTime</u> </<u>D2LogicalModel</u>:publicationTime> [1] ?
<u>D2LogicalModel</u>:publicationCreator> <u>D2LogicalModel:InternationalIdentifier</u>
<D2LogicalModel:payloadPublicationExtension> D2LogicalModel:_ExtensionType
  D2LogicalModel:payloadPublicationExtension> [0..1]
<<u>D2LogicalModel</u>:headerInformation> <u>D2LogicalModel</u>:<u>HeaderInformation</u> </<u>D2LogicalModel</u>:headerInformation> [1]
<<u>D2LogicalModel</u>:vmsUnitTable> <u>D2LogicalModel</u>:VmsUnitTable /<u>D2LogicalModel</u>:vmsUnitTable> [1..*]
<<u>D2LogicalModel</u>:vmsTablePublicationExtension> <u>D2LogicalModel</u>:_ExtensionType
</D2LogicalModel:vmsTablePublicationExtension> [0..1]
```

top

</...>

#### Schema Component Representation

top

### Complex Type: VmsTextDisplayCharacteristics

Super-types: None
Sub-types: None

Name VmsTextDisplayCharacteristics

<u>Abstract</u> no

**Documentation** Characteristics specific to the textual display area on the VMS.

#### XML Instance Representation

```
<<u>D2LogicalModel</u>:textLanternsPresent> <u>D2LogicalModel</u>:<u>Boolean</u> </<u>D2LogicalModel</u>:textLanternsPresent> [0..1] ?
<<u>D2LogicalModel</u>:textPageSequencingCapable> <u>D2LogicalModel</u>:Boolean </<u>D2LogicalModel</u>:textPageSequencingCapable>
<<u>D2LogicalModel</u>:textPixelsAcross> <u>D2LogicalModel</u>:NonNegativeInteger </<u>D2LogicalModel</u>:textPixelsAcross> [0..1] ?
<<u>D2LogicalModel</u>:textPixelsDown> <u>D2LogicalModel:NonNegativeInteger</u> </<u>D2LogicalModel</u>:textPixelsDown> [0..1] ?
<<u>D2LogicalModel</u>:textDisplayHeight> <u>D2LogicalModel</u>:<u>MetresAsFloat</u> </<u>D2LogicalModel</u>:textDisplayHeight> [0..1]
CD2LogicalModel:textDisplayWidth> D2LogicalModel:MetresAsFloat 
D2LogicalModel:textDisplayWidth> D2LogicalModel:MetresAsFloat 
CD2LogicalModel:maxNumberOfCharacters> D2LogicalModel:NonNegativeInteger 
CD2LogicalModel:maxNumberOfCharacters> D2LogicalModel:maxNumberOfCharacters>
<D2LogicalModel:maxFontHeight> D2LogicalModel:NonNegativeInteger /D2LogicalModel:maxFontHeight> [0..1]
<u>P2LogicalModel</u>:minFontHeight> <u>D2LogicalModel</u>:MonNegativeInteger </<u>D2LogicalModel</u>:minFontHeight> [0..1]
<<u>D2LogicalModel</u>:maxFontWidth> <u>D2LogicalModel:NonNegativeInteger</u> </<u>D2LogicalModel</u>:maxFontWidth> [0..1]
< \underline{D2LogicalModel}: minFontWidth > \underline{D2LogicalModel}: \underline{NonNegativeInteger} < /\underline{D2LogicalModel}: minFontWidth > [0...1]
 $$ \frac{\text{D2LogicalModel}:maxFontSpacing} $$ \underline{\text{D2LogicalModel}:NonNegativeInteger} < \frac{\text{D2LogicalModel}:maxFontSpacing} $$ [0..1] < \underline{\text{D2LogicalModel}:minFontSpacing} $$ \underline{\text{D2LogicalModel}:NonNegativeInteger} < \frac{\text{D2LogicalModel}:minFontSpacing} $$ [0..1] 
<<u>D2LogicalModel</u>:maxTextLuminanceLevel> <u>D2LogicalModel</u>:MonNegativeInteger </<u>D2LogicalModel</u>:maxTextLuminanceLevel>
<<u>D2LogicalModel</u>:maxNumberOfSequentialPages> <u>D2LogicalModel:NonNegativeInteger</u>
/D2LogicalModel:maxNumberOfSequentialPages> [0..1] ?
<<u>D2LogicalModel</u>:textPositionX> <u>D2LogicalModel</u>:MetresAsFloat </<u>D2LogicalModel</u>:textPositionX> [0..1] ?
<<u>D2LogicalModel</u>:textPositionY> <u>D2LogicalModel</u>:MetresAsFloat </<u>D2LogicalModel</u>:textPositionY> [0..1] ?
<D2LogicalModel:vmsTextDisplayCharacteristicsExtension> D2LogicalModel:_ExtensionType

Colored to the color of the color
```

# Schema Component Representation

top

### Complex Type: VmsUnitRecord

Super-types:	None		
Sub-types:	None		

Name VmsUnitRecord

<u>Abstract</u> n

**Documentation** A versioned single VMS unit entry/record in the VMS Unit table that defines the characteristics of the VMS

unit.

```
XML Instance Representation
```

#### **Schema Component Representation**

Complex Type: VmsUnitTable

Complex Type. Villsomerable

Super-types: None
Sub-types: None

Name VmsUnitTable

<u>Abstract</u> no

**Documentation** A versioned VMS Unit Table comprising a number of data records, each record defining the characteristics of

a specific deployed variable message sign unit.

XML Instance Representation

```
<...
id="xs:string [1]"
version="xs:string [1]">
  < \frac{D2LogicalModel}{D2LogicalModel}:\text{vmsUnitTableIdentification} \text{D2LogicalModel}:\text{vmsUnitTableIdentification} \text{[0..1] ?}
  <\frac{D2LogicalModel}{D2LogicalModel}:\text{vmsUnitRecord} \text{D2LogicalModel}:\text{vmsUnitRecord} \text{[1..*]}
  <\frac{D2LogicalModel}{D2LogicalModel}:\text{vmsUnitTableExtension} \text{D2LogicalModel}:\text{vmsUnitTableExtension} \text{[0...]}
  </rr>
  </rr>

    </rd>
    </rd>
    </rd>

    </rd>

    <t
```

Schema Component Representation

Complex Type: \_ExtensionType

```
Super-types: None
Sub-types: None
```

Name \_ExtensionType

<u>Abstract</u> 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>
```

top

<u>top</u>

# Complex Type: \_IntermediatePointOnLinearElement

```
Super-types: None
Sub-types: None
```

Name \_\_IntermediatePointOnLinearElement

<u>Abstract</u> no

### XML Instance Representation

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

#### Schema Component Representation

<u>top</u>

### Complex Type: \_LinearExtensionType

Super-types: None
Sub-types: None

Name \_\_LinearExtensionType

<u>Abstract</u> no

# XML Instance Representation

```
<...>
<<u>D2LogicalModel</u>:openlrExtendedLinear> <u>D2LogicalModel</u>:<u>OpenlrExtendedLinear</u> </<u>D2LogicalModel</u>:openlrExtendedLinear>
[0..1]

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

### Schema Component Representation

<u>top</u>

# Complex Type: \_PointExtensionType

```
    Super-types:
    None

    Sub-types:
    None
```

Name \_\_PointExtensionType

<u>Abstract</u> no

## XML Instance Representation

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

### Schema Component Representation

<u>top</u>

# $\textbf{Complex Type: \_VmsRecordPictogramDisplayAreaIndexVmsPictogramDisplayCharacteristics}$

 $\_VmsRecordPictogramDisplayAreaIndexVmsPictogramDisplayCharacteristics$ 

Name <u>Abstract</u>

no

```
XML Instance Representation
```

```
pictogramDisplayAreaIndex="xs:int [1]">
                                   < \underline{\texttt{D2LogicalModel}} : \texttt{vmsPictogramDisplayCharacteristics} \\ \underline{\texttt{D2LogicalModel}} : \underline{\texttt{VmsPictogramDisplayCharacteristics}} \\ \underline{\texttt{D2LogicalModel}} : \underline{\texttt{D2LogicalModel}} : \underline{\texttt{VmsPictogramDisplayCharacteristics}} \\ \underline{\texttt{D2LogicalModel}} : \underline{\texttt{VmsPictogramDisplayCharacteristics}} \\ \underline{\texttt{D2LogicalModel}} : \underline{\texttt{VmsPictogramDisplayCharacteristics}} \\ \underline{\texttt{D2LogicalModel}} : \underline{\texttt{D
                                   </<u>D2LogicalModel</u>:vmsPictogramDisplayCharacteristics> [1]
```

#### Schema Component Representation

```
<xs:complexType name="_VmsRecordPictogramDisplayAreaIndexVmsPictogramDisplayCharacteristics">
  <xs:sequence>
    <xs:element name="vmsPictogramDisplayCharacteristics" type="D2LogicalModel: VmsPictogramDisplayCharacteristics"</pre>
    minOccurs="1" maxOccurs="1"/>
  </xs:sequence>
  <xs:attribute name="pictogramDisplayAreaIndex" type="xs:int" use="required"/>
</xs:complexType>
```

Complex Type: \_VmsUnitRecordVmsIndexVmsRecord

```
Super-types.
                              None
Sub-types.
                              None
```

\_VmsUnitRecordVmsIndexVmsRecord Name

<u>Abstract</u> nο

XML Instance Representation

```
vmsIndex="xs:int [1]">
  <<u>D2LogicalModel</u>:vmsRecord> <u>D2LogicalModel</u>:vmsRecord </<u>D2LogicalModel</u>:vmsRecord> [1]
```

Schema Component Representation

```
<xs:complexType name="_VmsUnitRecordVmsIndexVmsRecord">
  <xs:sequence>
     <xs:element name="vmsRecord" type="D2LogicalModel: VmsRecord" minOccurs="1" maxOccurs="1"/>
  </xs:sequence>
  <xs:attribute name="vmsIndex" type="xs:int" use="required"/>
</xs:complexType>
```

<u>top</u>

<u>top</u>

# 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'}

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. Documentation

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>
```

<u>top</u>

### Simple Type: AlertCLocationCode

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

AlertCLocationCode Name

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.

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

### Simple Type: AngleInDegrees

 Super-types:
 xs:nonNegativeInteger < NonNegativeInteger (by restriction) < AngleInDegrees (by restriction)</th>

 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>
```

<u>top</u>

### Simple Type: AreaOfInterestEnum

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

Name AreaOfInterestEnum

Content

· Base XSD Type: string

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

**Documentation** Types of areas of interest.

# Schema Component Representation

top

# Simple Type: AxlesPerHour

 Super-types:
 xs:nonNegativeInteger < NonNegativeInteger (by restriction) < AxlesPerHour (by restriction)</td>

 Sub-types:
 None

Name AxlesPerHour

Content

Base XSD Type: nonNegativeInteger

**Documentation** Vehicle axles per hour.

# Schema Component Representation

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>
```

<u>top</u>

### Simple Type: CarriagewayEnum

Super-types: <u>xs</u>:string < CarriagewayEnum (by restriction)

Sub-types: None

#### Name

CarriagewayEnum

Content

- · Base XSD Type: string
- value comes from list:

**Documentation** List of descriptors identifying specific carriageway details.

#### Schema Component Representation

top

# Simple Type: ComputationMethodEnum

 Super-types:
 xs:string < ComputationMethodEnum (by restriction)</th>

 Sub-types:
 None

### Name

ComputationMethodEnum

Content

- Base XSD Type: string
- value comes from list:

 $\label{thm:ticAverageOfSamplesBasedOnAFixedNumberOfSamples' | 'arithmeticAverageOfSamplesInATimePeriod' | 'harmonicAverageOfSamplesInATimePeriod' | 'harmo$ 

{'connectingCarriageway'|entrySlipRoad'|'exitSlipRoad'|flyover'|fleftHandFeederRoad'|fleftHandParallelCarriageway'|mainCarriageway'|oppositeCar

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

# Schema Component Representation

<u>top</u>

### Simple Type: ConcentrationVehiclesPerKilometre

 Super-types:
 xs:nonNegativeInteger < NonNegativeInteger (by restriction) < ConcentrationVehiclesPerKilometre (by restriction)</th>

 Sub-types:
 None

Name

ConcentrationVehiclesPerKilometre

Content

Base XSD Type: nonNegativeInteger

Documentation

A measure of traffic density defined in number of vehicles per kilometre of road.

# Schema Component Representation

top

# Simple Type: ConfidentialityValueEnum

 Super-types:
 xs:string < ConfidentialityValueEnum (by restriction)</th>

 Sub-types:
 None

Name

ConfidentialityValueEnum

Content

- Base XSD Type: string
- value comes from list: {"internalUse"|noRestriction"|restrictedToAuthorities"|restrictedToAuthoritiesAndTrafficOperators"|restrictedToAuthoritiesTrafficOperatorsAndPublisher

**Documentation** Values of confidentiality

#### Schema Component Representation

top

### Simple Type: CountryEnum

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

Name

CountryEnum

Content

- Base XSD Type: string
- value comes from list:
   {at'|be'|bg'|ch'|cs'|cy|'cz'|de'|dk'|ee'|es'|fi|'fo'|fr'|gb'|gg'|gi'|gr'|hr'|hu||ie'|im'|is'|it'|je||ii'|It'|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"</pre>
  <xs:restriction base="xs:string">
      <xs:enumeration value="at"</pre>
      <xs:enumeration value="be'</pre>
      <xs:enumeration value="bg"</pre>
      <xs:enumeration value="ch"</pre>
     <xs:enumeration value="cs'</pre>
     <xs:enumeration value="cy"</pre>
      <xs:enumeration value="cz"</pre>
     <xs:enumeration value="de"</pre>
     <xs:enumeration value="dk"</pre>
      <xs:enumeration value="ee"</pre>
      <xs:enumeration value="es"</pre>
     <xs:enumeration value="fi"</pre>
      <xs:enumeration value="fo"</pre>
      <xs:enumeration value="fr"</pre>
      <xs:enumeration value="gb"</pre>
      <xs:enumeration value="gg"</pre>
      <xs:enumeration value="gi"</pre>
      <xs:enumeration value="gr"</pre>
     <xs:enumeration value="hr"</pre>
      <xs:enumeration value="hu"</pre>
      <xs:enumeration value="ie"</pre>
      <xs:enumeration value="im"</pre>
      <xs:enumeration value="is"</pre>
      <xs:enumeration value="it"</pre>
      <xs:enumeration value="je"</pre>
      <xs:enumeration value="li"</pre>
      <xs:enumeration value="lt"</pre>
      <xs:enumeration value="lu"</pre>
      <xs:enumeration value="lv"</pre>
      <xs:enumeration value="ma"</pre>
      <xs:enumeration value="mc"</pre>
      <xs:enumeration value="mk"</pre>
      <xs:enumeration value="mt"</pre>
      <xs:enumeration value="nl"</pre>
      <xs:enumeration value="no"</pre>
      <xs:enumeration value="pl"</pre>
      <xs:enumeration value="pt"</pre>
      <xs:enumeration value="ro"</pre>
     <xs:enumeration value="se"</pre>
      <xs:enumeration value="si"</pre>
      <xs:enumeration value="sk"</pre>
     <xs:enumeration value="sm"</pre>
      <xs:enumeration value="tr"</pre>
      <xs:enumeration value="va"</pre>
      <xs:enumeration value="other"/>
  </xs:restriction>
</xs:simpleType>
```

<u>top</u>

### Simple Type: DateTime

```
    Super-types:
    xs:dateTime < DateTime (by restriction)</th>

    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

<u>top</u>

### Simple Type: DirectionEnum

```
    Super-types:
    xs:string < DirectionEnum (by restriction)</th>

    Sub-types:
    None
```

Name

DirectionEnum

Content

- · Base XSD Type: string
- value comes from list:

 $\label{thm:continuity} \begin{tabular}{l} \begin{$ 

**Documentation** List of directions of travel.

#### Schema Component Representation

```
<xs:simpleType name="DirectionEnum"</pre>
   <xs:restriction base="xs:string">
  <xs:enumeration value="allDirections"/>
     <xs:enumeration value="bothWays",</pre>
     <xs:enumeration value="clockwise"</pre>
     <xs:enumeration value="anticlockwise"/>
     <xs:enumeration value="innerRing"</pre>
     <xs:enumeration value="outerRing"</pre>
     <xs:enumeration value="northBound"</pre>
     <xs:enumeration value="northEastBound"/>
     <xs:enumeration value="eastBound"</pre>
     <xs:enumeration value="southEastBound"/>
     <xs:enumeration value="southBound"</pre>
     <xs:enumeration value="southWestBound"/>
     <xs:enumeration value="westBound"</pre>
     <xs:enumeration value="northWestBound"/>
     <xs:enumeration value="inboundTowardsTown"/>
     <xs:enumeration value="outboundFromTown"/>
     <xs:enumeration value="unknown"</pre>
     <xs:enumeration value="opposite"/>
     <xs:enumeration value="other"/>
  </xs:restriction>
</xs:simpleType>
```

<u>top</u>

# Simple Type: ElaboratedDataFaultEnum

 Super-types:
 xs:string < ElaboratedDataFaultEnum (by restriction)</th>

 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

top

# Simple Type: FaultSeverityEnum

```
    Super-types:
    xs:string < FaultSeverityEnum (by restriction)</th>

    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

```
<xs:simpleType name="FaultSeverityEnum">
  <xs:restriction base="xs:string">
```

<u>top</u>

### Simple Type: Float

Super-types: xs:float < Float (by restriction)

Sub-types:

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  $m \times 2^{4}e$ , where m is an integer whose absolute value is less than  $2^{4}e$ , and e is an integer between -149 and 104, inclusive.

Schema Component Representation

<u>top</u>

### Simple Type: HeightGradeEnum

 Super-types:
 xs:string < HeightGradeEnum (by restriction)</th>

 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

<u>top</u>

### Simple Type: InformationStatusEnum

 Super-types:
 xs:string < InformationStatusEnum (by restriction)</th>

 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

<u>top</u>

# Simple Type: Integer

```
    Super-types:
    xs:integer < Integer (by restriction)</th>

    Sub-types:
    None
```

Name

Integer

Content

· Base XSD Type: integer

#### Documentation

#### Schema Component Representation

<u>top</u>

### Simple Type: JunctionClassificationEnum

```
    Super-types:
    xs:string < JunctionClassificationEnum (by restriction)</td>

    Sub-types:
    None
```

Name

JunctionClassificationEnum

Content

- · Base XSD Type: string
- value comes from list:

{'threeWayInterchange'|'interchange'|'motorwayConnection'|'junction'|'temporaryJunction'|'borderCrossing'|'junctionInOneDirection'|'operationalServic

**Documentation** Explicit type of a junction.

### **Schema Component Representation**

top

### Simple Type: LaneEnum

```
    Super-types:
    xs:string < LaneEnum (by restriction)</td>

    Sub-types:
    None
```

Name

LaneEnum

Content

- · Base XSD Type: string
- value comes from list: {'emergencyLane'|'leftLane'|'middleLane'|'rightLane'}

# Documentation

List of descriptors identifying specific lanes.

### Schema Component Representation

<u>top</u>

# Simple Type: Language

```
    Super-types:
    xs:language < Language (by restriction)</td>

    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

<u>top</u>

# 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

top

### Simple Type: LinearReferencingDirectionEnum

```
    Super-types:
    xs:string < LinearReferencingDirectionEnum (by restriction)</td>

    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

<u>top</u>

### Simple Type: LocationDescriptorEnum

```
    Super-types:
    xs:string < LocationDescriptorEnum (by restriction)</th>

    Sub-types:
    None
```

Name

LocationDescriptorEnum

Content

- Base XSD Type: string
- value comes from list:

{aroundABendInRoad'|'atMotorwayInterchange'|'atRestArea'|'atServiceArea'|'atTollPlaza'|'atTunnelEntryOrExit'|'inbound'|'inGallery'|'inTheCentre'|'inT

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

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

### Simple Type: MeasurementEquipmentFaultEnum

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

Name MeasurementEquipmentFaultEnum

Content

Base XSD Type: string

{'intermittentDataValues'|'noDataValuesAvailable'|'spuriousUnreliableDataValues'|'unspecifiedOrUnknownFault'|'other'}

**Documentation** Types of measurement equipment faults.

### Schema Component Representation

<u>top</u>

#### Simple Type: MetresAsFloat

 Super-types:
 xs:float < Float (by restriction) < MetresAsFloat (by restriction)</td>

 Sub-types:
 None

Name MetresAsFloat

Content

· Base XSD Type: float

**Documentation** A measure of distance defined

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

# Schema Component Representation

<u>top</u>

### Simple Type: MetresAsNonNegativeInteger

 Super-types:
 xs:nonNegativeInteger < NonNegativeInteger (by restriction) < MetresAsNonNegativeInteger (by restriction)</th>

 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

<u>top</u>

# Simple Type: MultilingualStringValueType

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

Sub-types:

• MultilingualStringValue (by extension)
```

Name MultilingualStringValueType

Content

· Base XSD Type: string

length <= 1024</li>

# Schema Component Representation

<u>top</u>

```
Sub-types:

- AlertCLocationCode (by restriction)

- AngleInDegrees (by restriction)

- AngleInDegrees (by restriction)

- AxlesPerHour (by restriction)

- ConcentrationVehiclesPerKilometre (by restriction)

- MetresAsNonNegativeInteger (by restriction)

- PassengerCarUnitsPerHour (by restriction)

- VehiclesPerHour (by restriction)

- VehiclesPerHour (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>
```

<u>top</u>

### Simple Type: OpenIrFormOfWayEnum

```
Super-types: Xs:string < OpenIrFormOfWayEnum (by restriction)
Sub-types: None
```

Name Content OpenIrFormOfWayEnum

· Base XSD Type: string

· value comes from list:

 $\label{lem:condition} \label{lem:condition} \label{lem:condition$ 

**Documentation** Enumeration of for of way

#### Schema Component Representation

<u>top</u>

# Simple Type: OpenIrFunctionalRoadClassEnum

```
    Super-types:
    xs:string < OpenIrFunctionalRoadClassEnum (by restriction)</th>

    Sub-types:
    None
```

Name

Open Ir Functional Road Class Enum

Content

Base XSD Type: string

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

Documentation

Enemuration of functional road class

### **Schema Component Representation**

<u>top</u>

# Simple Type: OpenIrOrientationEnum

```
    Super-types:
    xs:string < OpenIrOrientationEnum (by restriction)</th>

    Sub-types:
    None
```

Name Content OpenIrOrientationEnum

Content

• Base XSD Type: string

Documentation

Enumeration of side of road

### Schema Component Representation

<u>top</u>

### Simple Type: OpenIrSideOfRoadEnum

 Super-types:
 xs:string < OpenIrSideOfRoadEnum (by restriction)</th>

 Sub-types:
 None

Name OpenIrSideOfRoadEnum

Content

· Base XSD Type: string

• value comes from list: {'onRoadOrUnknown'|'right'|'left'|'both'}

**Documentation** Enumeration of side of road

### Schema Component Representation

<u>top</u>

# Simple Type: PassengerCarUnitsPerHour

 Super-types:
 xs:nonNegativeInteger < NonNegativeInteger (by restriction) < PassengerCarUnitsPerHour (by restriction)</th>

 Sub-types:
 None

Name PassengerCarUnitsPerHour

Content

Base XSD Type: nonNegativeInteger

**Documentation** Passenger car units per hour.

# Schema Component Representation

<u>top</u>

# 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>
```

<u>top</u>

# Simple Type: PhysicalMountingEnum

 Super-types:
 xs:string < PhysicalMountingEnum (by restriction)</th>

 Sub-types:
 None

Name

PhysicalMountingEnum

Content

- Base XSD Type: string
- value comes from list:
  {'centralReservationMounted'|'gantryMounted'|'overheadBridgeMounted'|'roadsideCantileverMounted'|'roadsideMounted'|'trailerMounted'|'tunnelEntra

**Documentation** The ways in which equipments such as VMS are mounted or deployed on the road.

#### Schema Component Representation

top

### Simple Type: PositionAbsoluteEnum

```
    Super-types:
    xs:string < PositionAbsoluteEnum (by restriction)</th>

    Sub-types:
    None
```

Name

PositionAbsoluteEnum

Content

Base XSD Type: string

• value comes from list: {'onLeft'|'onRight'|'atTop'|'atBottom'}

Documentation

Absolute positions of an item within an alloted space.

### Schema Component Representation

top

# Simple Type: PositionRelativeEnum

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

Name Content Position Relative Enum

• Base XSD Type: string

• value comes from list: {'above'|'below'|'toTheLeft'|'toTheRight'}

Documentation

Relative positions of one item to another.

### **Schema Component Representation**

<u>top</u>

# Simple Type: ReferentTypeEnum

```
    Super-types:
    xs:string < ReferentTypeEnum (by restriction)</th>

    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.

### 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

<u>top</u>

# Simple Type: Seconds

 Super-types:
 xs:float < Float (by restriction) < Seconds (by restriction)</td>

 Sub-types:
 None

Name Seconds

Content

Base XSD Type: float

**Documentation** Seconds.

### Schema Component Representation

top

# Simple Type: String

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

Name String

Content

Documentation

Base XSD Type: string

• length <= 1024

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**

<u>top</u>

### Simple Type: TpegLoc01FramedPointLocationSubtypeEnum

 Super-types:
 xs:string < TpegLoc01FramedPointLocationSubtypeEnum (by restriction)</td>

 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.

### 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

<u>top</u>

# Simple Type: TpegLoc01SimplePointLocationSubtypeEnum

 Super-types:
 xs.string < TpegLoc01SimplePointLocationSubtypeEnum (by restriction)</th>

 Sub-types:
 None

Name TpegLoc01SimplePointLocationSubtypeEnum

Content

Base XSD Type: string

• value comes from list: {'intersection'|'nonLinkedPoint'}

**Documentation** Types of simple point.

# Schema Component Representation

<u>top</u>

# Simple Type: TpegLoc03llcPointDescriptorSubtypeEnum

 Super-types:
 xs:string < TpegLoc03llcPointDescriptorSubtypeEnum (by restriction)</th>

 Sub-types:
 None

Name TpegLoc03llcPointDescriptorSubtypeEnum

Content

• Base XSD Type: string

• value comes from list: {'tpegllcName1'|'tpegllcName2'|'tpegllcName3'}

**Documentation** Descriptors for describing a junction by identifying the intersecting roads at a road junction.

### Schema Component Representation

<u>top</u>

# Simple Type: TpegLoc03JunctionPointDescriptorSubtypeEnum

 Super-types:
 xs:string < TpegLoc03JunctionPointDescriptorSubtypeEnum (by restriction)</th>

 Sub-types:
 None

Name TpegLoc03JunctionPointDescriptorSubtypeEnum

Content

• Base XSD Type: string

• value comes from list: {'junctionName'}

Descriptors for describing a point at a road junction.

# Schema Component Representation

Documentation

<u>top</u>

### Simple Type: TpegLoc03OtherPointDescriptorSubtypeEnum

```
Super-types: xs:string < TpegLoc03OtherPointDescriptorSubtypeEnum (by restriction)
Sub-types: None
```

Name Content TpegLoc03OtherPointDescriptorSubtypeEnum

- Base XSD Type: string
- · value comes from list:

{administrativeAreaName'|'administrativeReferenceName'|'airportName'|'areaName'|'buildingName'|'busStopIdentifier'|'busStopName'|'canalName'|'c

**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="TpegLoc030therPointDescriptorSubtypeEnum">
  <xs:restriction base="<u>xs</u>:string">
  <xs:enumeration value="administrativeAreaName"/</pre>
     <xs:enumeration value="administrativeReferenceName"/>
     <xs:enumeration value="airportName"/</pre>
     <xs:enumeration value="areaName"</pre>
     <xs:enumeration value="buildingName"</pre>
     <xs:enumeration value="busStopIdentifier"/>
     <xs:enumeration value="busStopName"</pre>
     <xs:enumeration value="canalName"</pre>
     <xs:enumeration value="countyName"</pre>
     <xs:enumeration value="ferryPortName"</pre>
     <xs:enumeration value="intersectionName"/>
     <xs:enumeration value="lakeName"</pre>
     <xs:enumeration value="linkName"</pre>
     <xs:enumeration value="localLinkName"/>
     <xs:enumeration value="metroStationName"/>
     <xs:enumeration value="nationName"</pre>
     <xs:enumeration value="nonLinkedPointName"/>
     <xs:enumeration value="parkingFacilityName"/>
<xs:enumeration value="pointName"/>
     <xs:enumeration value="pointOfInterestName"/>
<xs:enumeration value="railwayStation"/>
     <xs:enumeration value="regionName"</pre>
     <xs:enumeration value="riverName"</pre>
     <xs:enumeration value="seaName"</pre>
     <xs:enumeration value="serviceAreaName"/>
     <xs:enumeration value="tidalRiverName"/>
     <xs:enumeration value="townName"/</pre>
     <xs:enumeration value="other"</pre>
  </xs:restriction>
</xs:simpleType>
```

top

### Simple Type: TrafficStatusEnum

```
    Super-types:
    xs:string < TrafficStatusEnum (by restriction)</td>

    Sub-types:
    None
```

Name Content TrafficStatusEnum

· Base XSD Type: string

• value comes from list: {'impossible'|'congested'|'heavy'|'freeFlow'|'unknown'}

Documentation

List of terms used to describe traffic conditions.

### **Schema Component Representation**

<u>top</u>

# Simple Type: UrgencyEnum

```
    Super-types:
    xs:string < UrgencyEnum (by restriction)</td>

    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

### Schema Component Representation

<u>top</u>

# Simple Type: Url

 Super-types:
 xs:anyURI < Url (by restriction)</td>

 Sub-types:
 None

Name Url

Content

· Base XSD Type: anyURI

**Documentation** A Uniform Resource Locator (URL) address comprising a compact string of characters for a resource

vailable on the Internet

### **Schema Component Representation**

<u>top</u>

# Simple Type: UrlLinkTypeEnum

 Super-types:
 xs:string < UrlLinkTypeEnum (by restriction)</td>

 Sub-types:
 None

Name UrlLinkTypeEnum

Content

Base XSD Type: string

• value comes from list: {'documentPdf|'html'|'image'|'rss'|'videoStream'|'voiceStream'|'other'}

**Documentation** Types of URL links.

### Schema Component Representation

<u>top</u>

# Simple Type: VehiclesPerHour

 Super-types:
 xs:nonNegativeInteger < NonNegativeInteger (by restriction) < VehiclesPerHour (by restriction)</th>

 Sub-types:
 None

Name VehiclesPerHour

Content

Base XSD Type: nonNegativeInteger

**Documentation** Vehicles per hour.

# Schema Component Representation

<u>top</u>

# Simple Type: VmsTypeEnum

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

Name VmsTypeEnum

Content

• Base XSD Type: string

 $\bullet \quad \textit{value} \ \, \text{comes from list: \{'colourGraphic'|'continuousSign'|'monochromeGraphic'|'matrixSign'|'other'\}}$ 

# Documentation

Type of variable message sign.

# Schema Component Representation

<u>top</u>