DATEX II profile for OtherDENM  
ECo-AT

Version 00-01-00

* 1. Overview

This profile describes the message content for the OtherDENM use case as described by the project ECo-AT using the Situation publication. This profile distinguishes between 64 different message types in the context of traffic messages.

Location referencing is done using “ItineraryByIndexedLocations” in form of coordinates and ALERT-C. The extension “LinearByCoordinates” is used.

* 1. Data Dictionary for “OtherDENM”
     1. "Accident" package
        1. "Accident" package classes

| **Class name** | **Designation** | **Definition** | **Stereotype** | **Abstract** |
| --- | --- | --- | --- | --- |
| Accident | Accident | Accidents are events where one or more vehicles are involved in collisions or in leaving the roadway. These include collisions between vehicles or with other road users or obstacles. |  | no |

Table 1— Classes of the "Accident" package

* + - 1. "Accident" package association roles

There are no defined association roles in the "Accident" package.

* + - 1. "Accident" package attributes

| **Class name** | **Attribute name** | **Designation** | **Definition** | **Multiplicity** | **Type** |
| --- | --- | --- | --- | --- | --- |
| Accident | accidentType | Accident type | A characterization of the nature of the accident. | 1..\* | AccidentTypeEnum |
|  | totalNumberOfVehiclesInvolved | Total number of vehicles involved | The total number of vehicles that are involved. | 0..1 | NonNegativeInteger |

Table 2— Attributes of the "Accident" package

* + 1. "AlertCMethod4Linear" package
       1. "AlertCMethod4Linear" package classes

| **Class name** | **Designation** | **Definition** | **Stereotype** | **Abstract** |
| --- | --- | --- | --- | --- |
| AlertCMethod4Linear | ALERT-C method4 linear | 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. |  | no |

Table 3— Classes of the "AlertCMethod4Linear" package

* + - 1. "AlertCMethod4Linear" package association roles

There are no defined association roles in the "AlertCMethod4Linear" package.

* + - 1. "AlertCMethod4Linear" package attributes

There are no defined attributes in the "AlertCMethod4Linear" package.

* + 1. "AlertCMethod4Point" package
       1. "AlertCMethod4Point" package classes

| **Class name** | **Designation** | **Definition** | **Stereotype** | **Abstract** |
| --- | --- | --- | --- | --- |
| AlertCMethod4Point | ALERT-C method4 point | 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. |  | no |

Table 4— Classes of the "AlertCMethod4Point" package

* + - 1. "AlertCMethod4Point" package association roles

There are no defined association roles in the "AlertCMethod4Point" package.

* + - 1. "AlertCMethod4Point" package attributes

There are no defined attributes in the "AlertCMethod4Point" package.

* + 1. "Conditions" package
       1. "Conditions" package classes

| **Class name** | **Designation** | **Definition** | **Stereotype** | **Abstract** |
| --- | --- | --- | --- | --- |
| Conditions | Conditions | Any conditions which have the potential to degrade normal driving conditions. |  | no |
| PoorEnvironmentConditions | Poor environment conditions | Any environmental conditions which may be affecting the driving conditions on the road. |  | no |
| RoadConditions | Road conditions | Conditions of the road surface which may affect driving conditions. These may be related to the weather (e.g. ice, snow etc.) or to other conditions (e.g. oil, mud, leaves etc. on the road) |  | yes |
| WeatherRelatedRoadConditions | Weather related road conditions | Road surface conditions that are related to the weather which may affect the driving conditions, such as ice, snow or water. |  | no |

Table 5— Classes of the "Conditions" package

* + - 1. "Conditions" package association roles

There are no defined association roles in the "Conditions" package.

* + - 1. "Conditions" package attributes

| **Class name** | **Attribute name** | **Designation** | **Definition** | **Multiplicity** | **Type** |
| --- | --- | --- | --- | --- | --- |
| Conditions | drivingConditionType | Driving condition type | Description of the driving conditions at the specified location. | 0..1 | DrivingConditionTypeEnum |
| PoorEnvironmentConditions | poorEnvironmentType | Poor environment type | The type of environment condition which is affecting driving conditions. | 1..\* | PoorEnvironmentTypeEnum |
| WeatherRelatedRoadConditions | weatherRelatedRoadConditionType | Weather related road condition type | The type of road surface condition that is related to the weather which is affecting the driving conditions. | 1..\* | WeatherRelatedRoadConditionTypeEnum |

Table 6— Attributes of the "Conditions" package

* + 1. "Exchange " package
       1. "Exchange" package classes

| **Class name** | **Designation** | **Definition** | **Stereotype** | **Abstract** |
| --- | --- | --- | --- | --- |
| Exchange | Exchange | Details associated with the management of the exchange between the supplier and the client. |  | no |
| InternationalIdentifier | International identifier | An identifier/name whose range is specific to the particular country. |  | no |

**Table 7— Classes of the "Exchange" package**

* + - 1. "Exchange" package association roles

| **Class name** | **Role name** | **Designation** | **Definition** | **Multiplicity** | **Target** |
| --- | --- | --- | --- | --- | --- |
| Exchange | supplierIdentification | Supplier identification | An identifier/name whose range is specific to the particular country. | 1..1 | InternationalIdentifier |

**Table 8— Associations of the "Exchange" package**

* + - 1. "Exchange" package attributes

| **Class name** | **Attribute name** | **Designation** | **Definition** | **Multiplicity** | **Type** |
| --- | --- | --- | --- | --- | --- |
| Exchange | clientIdentification | Client identification | In a data exchange process, an identifier of the organisation or group of organisations which receives information from the DATEX II supplier system. | 0..1 | String |

**Table 9— Attributes of the "Exchange" package**

* + 1. "D2LogicalModel " package
       1. "D2LogicalModel" package classes

| **Class name** | **Designation** | **Definition** | **Stereotype** | **Abstract** |
| --- | --- | --- | --- | --- |
| Exchange | Exchange | Details associated with the management of the exchange between the supplier and the client. |  | no |
| D2LogicalModel | D2 logical model | The DATEX II logical model comprising exchange, content payload and management sub-models. |  | no |
| PayloadPublication | Payload publication | A payload publication of traffic related information or associated management information created at a specific point in time that can be exchanged via a DATEX II interface. |  | yes |

**Table 10— Classes of the "D2LogicalModel" package**

* + - 1. " D2LogicalModel" package association roles

There are no (or not used) association roles in the “D2LogicalModel” package

* + - 1. " D2LogicalModel" package attributes

There are no (or not used) package attributes in the “D2LogicalModel” package

* + 1. "GroupOfLocations " package
       1. "GroupOfLocations" package classes

| **Class name** | **Designation** | **Definition** | **Stereotype** | **Abstract** |
| --- | --- | --- | --- | --- |
| AffectedCarriagewayAndLanes | Affected carriageway and lanes | Supplementary positional information which details carriageway and lane locations. Several instances may exist where the element being described extends over more than one carriageway. |  | no |
| AlertCDirection | ALERT-C direction | The direction of traffic flow along the road to which the information relates. |  | no |
| AlertCLocation | ALERT-C location | Identification of a specific point, linear or area location in an ALERT-C location table. |  | no |
| AlertCMethod4PrimaryPointLocation | ALERT-C method4 primary point location | The point (called Primary point) which is either a single point or at the downstream end of a linear road section. The point is specified by a reference to a point in a pre-defined ALERT-C location table plus a non-negative offset distance. |  | no |
| AlertCMethod4SecondaryPointLocation | ALERT-C method4 secondary point location | 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. |  | no |
| GroupOfLocations | Group of locations | 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. |  | yes |
| Itinerary | Itinerary | Multiple (i.e. more than one) physically separate locations arranged as an ordered set that defines an itinerary or route. |  | yes |
| ItineraryByIndexedLocations | Itinerary by indexed locations | Multiple physically separate locations arranged as an ordered set that defines an itinerary or route. The index qualifier indicates the order. |  | no |
| Location | Location | 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. |  | yes |
| NetworkLocation | Network location | The specification of a location on a network (as a point or a linear location). |  | yes |
| OffsetDistance | Offset distance | The non negative offset distance from the ALERT-C referenced point to the actual point. |  | no |
| Point | Point | A single geospatial point. |  | no |
| PointCoordinates | Point coordinates | A pair of coordinates defining the geodetic position of a single point using the European Terrestrial Reference System 1989 (ETRS89). |  | no |
| SupplementaryPositionalDescription | Supplementary positional description | A collection of supplementary positional information which improves the precision of the location. |  | no |

Table 11— Classes of the "GroupOfLocations" package

* + - 1. "GroupOfLocations" package association roles

| **Class name** | **Role name** | **Designation** | **Definition** | **Multiplicity** | **Target** |
| --- | --- | --- | --- | --- | --- |
| ItineraryByIndexedLocations | locationContainedInItinerary | Location contained in itinerary | A location contained in an itinerary (i.e. an ordered set of locations defining a route or itinerary). | 0..\* | Location |
| Point | pointByCoordinates | Point by coordinates | A single point defined only by a coordinate set with an optional bearing direction. | 0..1 | PointByCoordinates |
| PointByCoordinates | pointCoordinates | Point coordinates | A pair of coordinates defining the geodetic position of a single point using the European Terrestrial Reference System 1989 (ETRS89). | 1..1 | PointCoordinates |

Table 12— Associations of the "GroupOfLocations" package

* + - 1. "GroupOfLocations" package attributes

| **Class name** | **Attribute name** | **Designation** | **Definition** | **Multiplicity** | **Type** |
| --- | --- | --- | --- | --- | --- |
| AffectedCarriagewayAndLanes | carriageway | Carriageway | Indicates the section of carriageway to which the location relates. | 1..1 | CarriagewayEnum |
|  | lane | Lane | Indicates the specific lane to which the location relates. | 0..\* | LaneEnum |
|  | specificLocation | Specific location | Unique code within the ALERT-C location table which identifies the specific point, linear or area location. | 1..1 | AlertCLocationCode |
| AlertCDirection | alertCDirectionCoded | ALERT-C direction coded | The direction of traffic flow to which the situation, traffic data or information is related. Positive is in the direction of coding of the road. | 1..1 | AlertCDirectionEnum |
|  | alertCDirectionNamed | ALERT-C direction named | ALERT-C name of a direction e.g. Brussels -> Lille. | 0..1 | MultilingualString |
|  | alertCDirectionSense | ALERT-C direction sense | Indicates for circular routes (i.e. valid only for ring roads) the sense in which navigation should be made from the primary location to the secondary location, to avoid ambiguity. TRUE indicates positive RDS direction, i.e. direction of coding of road. | 0..1 | Boolean |
| AlertCLocation | alertCLocationName | ALERT-C location name | Name of ALERT-C location. | 0..1 | MultilingualString |
|  | specificLocation | Specific location | Unique code within the ALERT-C location table which identifies the specific point, linear or area location. | 1..1 | AlertCLocationCode |
| OffsetDistance | offsetDistance | Offset distance | The non negative offset distance from the ALERT-C referenced point to the actual point. The ALERT-C locations in the Primary and Secondary locations must always encompass the linear section being specified, thus Offset Distance is towards the other point. | 1..1 | MetresAsNonNegativeInteger |
| PointByCoordinates | bearing | Bearing | A bearing at the point measured in degrees (0 - 359). Unless otherwise specified the reference direction corresponding to 0 degrees is North. | 0..1 | NonNegativeInteger |
| PointCoordinates | latitude | Latitude | Latitude in decimal degrees using the European Terrestrial Reference System 1989 (ETRS89). | 1..1 | Float |
|  | longitude | Longitude | Longitude in decimal degrees using the European Terrestrial Reference System 1989 (ETRS89). | 1..1 | Float |
| SupplementaryPositionalDescription | locationDescriptor | Location descriptor | Specifies a descriptor which helps to identify the specific location. | 0..\* | LocationDescriptorEnum |

Table 13— Attributes of the "GroupOfLocations" package

* + 1. "Impact" package
       1. "Impact" package classes

| **Class name** | **Designation** | **Definition** | **Stereotype** | **Abstract** |
| --- | --- | --- | --- | --- |
| Impact | Impact | An assessment of the impact that an event or operator action defined by the situation record has on the driving conditions. |  | no |

Table 14— Classes of the "Impact" package

* + - 1. "Impact" package association roles

There are no defined association roles in the "Impact" package.

* + - 1. "Impact" package attributes

| **Class name** | **Attribute name** | **Designation** | **Definition** | **Multiplicity** | **Type** |
| --- | --- | --- | --- | --- | --- |
| Impact | numberOfLanesRestricted | Number of lanes restricted | The number of normally usable lanes on the carriageway which are now restricted either fully or partially (this may include the hard shoulder if it is normally available for operational use, e.g. in hard shoulder running schemes). | 0..1 | NonNegativeInteger |
|  | trafficConstrictionType | Traffic constriction type | The type of constriction to which traffic is subjected as a result of an event or operator action. | 0..1 | TrafficConstrictionTypeEnum |

Table 15— Attributes of the "Impact" package

* + 1. "Linear" package
       1. "Linear" package classes

| **Class name** | **Designation** | **Definition** | **Stereotype** | **Abstract** |
| --- | --- | --- | --- | --- |
| AlertCLinear | ALERT-C linear | A linear section along a road defined between two points on the road by reference to a pre-defined ALERT-C location table. |  | yes |
| Linear | Linear | A linear section along a single road with optional directionality defined between two points on the same road. |  | no |

Table 16— Classes of the "Linear" package

* + - 1. "Linear" package association roles

There are no defined association roles in the "Linear" package.

* + - 1. "Linear" package attributes

| **Class name** | **Attribute name** | **Designation** | **Definition** | **Multiplicity** | **Type** |
| --- | --- | --- | --- | --- | --- |
| AlertCLinear | alertCLocationCountryCode | ALERT-C location country code | EBU country code. | 1..1 | String |
|  | alertCLocationTableNumber | ALERT-C location table number | Number allocated to an ALERT-C table in a country. Ref. EN ISO 14819-3 for the allocation of a location table number. | 1..1 | String |
|  | alertCLocationTableVersion | ALERT-C location table version | Version number associated with an ALERT-C table reference. | 1..1 | String |

**Table 17— Attributes of the "Linear" package**

* + 1. "LinearByCoordinates" package
       1. "LinearByCoordinates" package classes

| **Class name** | **Designation** | **Definition** | **Stereotype** | **Abstract** |
| --- | --- | --- | --- | --- |
| ExtendedLinear | Extended linear | Extension point for linear Locations. |  | no |
| LinearByCoordinates | Linear by coordinates | A linear location defined by coordinates. |  | no |

Table 18— Classes of the "LinearByCoordinates" package

* + - 1. "LinearByCoordinates" package association roles

| **Class name** | **Role name** | **Designation** | **Definition** | **Multiplicity** | **Target** |
| --- | --- | --- | --- | --- | --- |
| LinearByCoordinates | end | End | End point of a LinearByCoordinates | 1..1 | PointCoordinates |
|  | intermediate | Intermediate | Points of a LinearByCoordinates object that are neither start or end point. | 1..1 | PointCoordinates |
|  | start | Start | Start point of a LinearByCoordinates | 1..1 | PointCoordinates |

Table 19— Associations of the "LinearByCoordinates" package

* + - 1. "LinearByCoordinates" package attributes

| **Class name** | **Attribute name** | **Designation** | **Definition** | **Multiplicity** | **Type** |
| --- | --- | --- | --- | --- | --- |
| LinearByCoordinates | directed | Directed | Whether this linear is directed or not. Default is directed=true | 0..1 | Boolean |
|  | roadName | Road name | Name of the road of which the linear element forms a part. | 0..1 | MultilingualString |
|  | roadNumber | Road number | Identifier/number of the road of which the linear element forms a part. | 0..1 | String |

Table 20— Attributes of the "LinearByCoordinates" package

* + 1. "NetworkManagement" package
       1. "NetworkManagement" package classes

| **Class name** | **Designation** | **Definition** | **Stereotype** | **Abstract** |
| --- | --- | --- | --- | --- |
| NetworkManagement | Network management | Network management action which is applicable to the road network and its users. |  | yes |
| RoadOrCarriagewayOrLaneManagement | Road or carriageway or lane management | Road, carriageway or lane management action that is instigated by the network/road operator. |  | no |

Table 21— Classes of the "NetworkManagement" package

* + - 1. "NetworkManagement" package association roles

| **Class name** | **Role name** | **Designation** | **Definition** | **Multiplicity** | **Target** |
| --- | --- | --- | --- | --- | --- |
| NetworkManagement | forVehiclesWithCharacteristicsOf | For vehicles with characteristics of | The characteristics of those vehicles for which the network management is applicable. | 0..\* | VehicleCharacteristics |

Table 22— Associations of the "NetworkManagement" package

* + - 1. "NetworkManagement" package attributes

| **Class name** | **Attribute name** | **Designation** | **Definition** | **Multiplicity** | **Type** |
| --- | --- | --- | --- | --- | --- |
| NetworkManagement | complianceOption | Compliance option | Defines whether the network management instruction or the control resulting from a network management action is advisory or mandatory. | 1..1 | ComplianceOptionEnum |
| RoadOrCarriagewayOrLaneManagement | roadOrCarriagewayOrLaneManagementType | Road or carriageway or lane management type | Type of road, carriageway or lane management action instigated by operator. | 1..1 | RoadOrCarriagewayOrLaneManagementTypeEnum |

Table 23— Attributes of the "NetworkManagement" package

* + 1. "Obstruction" package
       1. "Obstruction" package classes

| **Class name** | **Designation** | **Definition** | **Stereotype** | **Abstract** |
| --- | --- | --- | --- | --- |
| AnimalPresenceObstruction | Animal presence obstruction | An obstruction on the road resulting from the presence of animals. |  | no |
| EnvironmentalObstruction | Environmental obstruction | An obstruction on the road resulting from an environmental cause. |  | no |
| GeneralObstruction | General obstruction | Any stationary or moving obstacle of a physical nature, other than of an animal, vehicle, environmental, or damaged equipment nature. |  | no |
| Obstruction | Obstruction | Any stationary or moving obstacle of a physical nature (e.g. obstacles or vehicles from an earlier accident, shed loads on carriageway, rock fall, abnormal or dangerous loads, or animals etc.) which could disrupt or endanger traffic. |  | yes |
| VehicleObstruction | Vehicle obstruction | An obstruction on the road caused by one or more vehicles. |  | no |

Table 24— Classes of the "Obstruction" package

* + - 1. "Obstruction" package association roles

There are no defined association roles in the "Obstruction" package.

* + - 1. "Obstruction" package attributes

| **Class name** | **Attribute name** | **Designation** | **Definition** | **Multiplicity** | **Type** |
| --- | --- | --- | --- | --- | --- |
| AnimalPresenceObstruction | alive | Alive | Indicates whether the identified animals are dead (immobile) or alive (potentially mobile). | 0..1 | Boolean |
| AnimalPresenceObstruction | animalPresenceType | Animal presence type | Indicates the nature of animals present on or near the roadway. | 1..1 | AnimalPresenceTypeEnum |
| EnvironmentalObstruction | environmentalObstructionType | Environmental obstruction type | Characterization of an obstruction on the road resulting from an environmental cause. | 1..1 | EnvironmentalObstructionTypeEnum |
| GeneralObstruction | obstructionType | Obstruction type | Characterization of the type of general obstruction. | 1..\* | ObstructionTypeEnum |
| Obstruction | numberOfObstructions | Number of obstructions | The number of obstructions that are partly or wholly blocking the road. | 0..1 | NonNegativeInteger |
| VehicleObstruction | vehicleObstructionType | Vehicle obstruction type | Characterization of an obstruction on the road caused by one or more vehicles. | 1..1 | VehicleObstructionTypeEnum |

Table 25— Attributes of the "Obstruction" package

* + 1. "OperatorAction" package
       1. "OperatorAction" package classes

| **Class name** | **Designation** | **Definition** | **Stereotype** | **Abstract** |
| --- | --- | --- | --- | --- |
| OperatorAction | Operator action | Actions that a traffic operator can decide to implement to prevent or help correct dangerous or poor driving conditions, including maintenance of the road infrastructure. |  | no |

Table 26— Classes of the "OperatorAction" package

* + - 1. "OperatorAction" package association roles

There are no defined association roles in the "OperatorAction" package.

* + - 1. "OperatorAction" package attributes

There are no defined attributes in the "OperatorAction" package.

* + 1. "PayloadPublication" package
       1. "PayloadPublication" package classes

| **Class name** | **Designation** | **Definition** | **Stereotype** | **Abstract** |
| --- | --- | --- | --- | --- |
| PayloadPublication | Payload publication | A payload publication of traffic related information or associated management information created at a specific point in time that can be exchanged via a DATEX II interface. |  | no |

Table 27— Classes of the "PayloadPublication" package

* + - 1. "PayloadPublication" package association roles

| **Class name** | **Role name** | **Designation** | **Definition** | **Multiplicity** | **Target** |
| --- | --- | --- | --- | --- | --- |
| PayloadPublication | publicationCreator | Publication creator | An identifier/name whose range is specific to the particular country. | 1..1 | InternationalIdentifier |

Table 28— Associations of the "PayloadPublication" package

* + - 1. "PayloadPublication" package attributes

| **Class name** | **Attribute name** | **Designation** | **Definition** | **Multiplicity** | **Type** |
| --- | --- | --- | --- | --- | --- |
| PayloadPublication | publicationTime | Publication time | Date/time at which the payload publication was created. | 1..1 | DateTime |
| PayloadPublication | lang | Language | The default language used throughout the payload publication. | 1..1 | Language |

Table 29— Attributes of the "PayloadPublication" package

* + 1. "ReusableClasses" package
       1. "ReusableClasses" package classes

| **Class name** | **Designation** | **Definition** | **Stereotype** | **Abstract** |
| --- | --- | --- | --- | --- |
| GroupOfVehiclesInvolved | Group of vehicles involved | Group of the vehicles involved having common characteristics and/or status. |  | no |
| HeaderInformation | Header information | Management information relating to the data contained within a publication. |  | no |
| InternationalIdentifier | International identifier | An identifier/name whose range is specific to the particular country. |  | no |
| Source | Source | Details of the source from which the information was obtained. |  | no |

Table 30— Classes of the "ReusableClasses" package

* + - 1. "ReusableClasses" package association roles

There are no defined association roles in the "ReusableClasses" package.

* + - 1. "ReusableClasses" package attributes

| **Class name** | **Attribute name** | **Designation** | **Definition** | **Multiplicity** | **Type** |
| --- | --- | --- | --- | --- | --- |
| GroupOfVehiclesInvolved | numberOfVehicles | Number of vehicles | The number of vehicles of this group that are involved. | 0..1 | NonNegativeInteger |
| HeaderInformation | confidentiality | Confidentiality | The extent to which the related information may be circulated, according to the recipient type. Recipients must comply with this confidentiality statement. | 1..1 | ConfidentialityValueEnum |
|  | informationStatus | Information status | The status of the related information (real, test, exercise ....). | 1..1 | InformationStatusEnum |
| InternationalIdentifier | country | Country | ISO 3166-1 two character country code. | 1..1 | CountryEnum |
|  | nationalIdentifier | National identifier | Identifier or name unique within the specified country. | 1..1 | String |
| Source | reliable | Reliable | An indication as to whether the source deems the associated information to be reliable/correct. "True" indicates it is deemed reliable. | 0..1 | Boolean |
|  | sourceCountry | Source country | ISO 3166-1 two character country code of the source of the information. | 0..1 | CountryEnum |
|  | sourceIdentification | Source identification | Identifier of the organisation or the traffic equipment which has produced the information relating to this version of the information. | 0..1 | String |
|  | sourceName | Source name | The name of the organisation which has produced the information relating to this version of the information. | 0..1 | MultilingualString |
|  | sourceType | Source type | Information about the technology used for measuring the data or the method used for obtaining qualitative descriptions relating to this version of the information. | 0..1 | SourceTypeEnum |

Table 31— Attributes of the "ReusableClasses" package

* + 1. "Roadworks" package
       1. "Roadworks" package classes

| **Class name** | **Designation** | **Definition** | **Stereotype** | **Abstract** |
| --- | --- | --- | --- | --- |
| MaintenanceWorks | Maintenance works | Roadworks involving the maintenance or installation of infrastructure. |  | no |
| Roadworks | Roadworks | Highway maintenance, installation and construction activities that may potentially affect traffic operations. |  | yes |
| Subjects | Subjects | The subjects with which the roadworks are associated. |  | no |

Table 32— Classes of the "Roadworks" package

* + - 1. "Roadworks" package association roles

There are no defined association roles in the "Roadworks" package.

* + - 1. "Roadworks" package attributes

| **Class name** | **Attribute name** | **Designation** | **Definition** | **Multiplicity** | **Type** |
| --- | --- | --- | --- | --- | --- |
| MaintenanceWorks | roadMaintenanceType | Road maintenance type | The type of road maintenance or installation work at the specified location. | 1..\* | RoadMaintenanceTypeEnum |
| Subjects | subjectTypeOfWorks | Subject type of works | The subject type of the roadworks (i.e. on what the construction or maintenance work is being performed). | 1..1 | SubjectTypeOfWorksEnum |

Table 33— Attributes of the "Roadworks" package

* + 1. "SituationPublication" package
       1. "SituationPublication" package classes

| **Class name** | **Designation** | **Definition** | **Stereotype** | **Abstract** |
| --- | --- | --- | --- | --- |
| Situation | Situation | An identifiable instance of a traffic/travel situation comprising one or more traffic/travel circumstances which are linked by one or more causal relationships. Each traffic/travel circumstance is represented by a Situation Record. | versionedIdentifiable | no |
| SituationPublication | Situation publication | A publication containing zero or more traffic/travel situations. |  | no |

Table 34— Classes of the "SituationPublication" package

* + - 1. "SituationPublication" package association roles

There are no defined association roles in the "SituationPublication" package.

* + - 1. "SituationPublication" package attributes

There are no defined attributes in the "SituationPublication" package.

* + 1. "SituationRecord" package
       1. "SituationRecord" package classes

| **Class name** | **Designation** | **Definition** | **Stereotype** | **Abstract** |
| --- | --- | --- | --- | --- |
| Cause | Cause | Contains details of the cause of a record within a situation |  | yes |
| Comment | Comment | A free text comment with an optional date/time stamp that can be used by the operator to convey un-coded observations/information. |  | no |
| NonManagedCause | Non managed cause | A cause of this situation record which is not managed by the publication creator, i.e. one which is not represented by another situation record produced by the same publication creator. |  | no |
| SituationRecord | Situation record | An identifiable versioned instance of a single record/element within a situation. | versionedIdentifiable | yes |

Table 35— Classes of the "SituationRecord" package

* + - 1. "SituationRecord" package association roles

| **Class name** | **Role name** | **Designation** | **Definition** | **Multiplicity** | **Target** |
| --- | --- | --- | --- | --- | --- |
| SituationRecord | generalPublicComment | General public comment | A comment which may be freely distributed to the general public | 0..\* | Comment |

Table 36— Associations of the "SituationRecord" package

* + - 1. "SituationRecord" package attributes

| **Class name** | **Attribute name** | **Designation** | **Definition** | **Multiplicity** | **Type** |
| --- | --- | --- | --- | --- | --- |
| Comment | comment | Comment | A free text comment that can be used by the operator to convey un-coded observations/information. | 1..1 | MultilingualString |
| NonManagedCause | causeType | Cause type | Indicates an external influence that may be the causation of components of a situation. | 0..1 | CauseTypeEnum |
| SituationRecord | probabilityOfOccurrence | Probability of occurrence | An assessment of the degree of likelihood that the reported event will occur. | 1..1 | ProbabilityOfOccurrenceEnum |
|  | severity | Severity | The assessment of the impact (in terms of severity) that this element of the situation is having, or will have, on the traffic flow as perceived by the supplier. | 0..1 | SeverityEnum |
|  | situationRecordCreationTime | Situation record creation time | The date/time that the SituationRecord object (the first version of the record) was created by the original supplier. | 1..1 | DateTime |
|  | situationRecordVersionTime | Situation record version time | The date/time that this current version of the SituationRecord within the situation was written into the database of the supplier which is involved in the data exchange. Identity and version of record are defined by the class stereotype implementation. | 1..1 | DateTime |
|  | situationRecordExtension | Situation record extension | Extension class for SituationRecord. | 0..1 | \_SituationRecordExtensionType |
| \_SituationRecordExtensionType | situationRecordExtendedApproved | Situation record extended approved | Extension class for SituationRecord. | 0..1 | SituationRecordExtendedApproved |
| SituationRecordExtendedApproved | safetyRelatedMessage | Safety related message | Indicates, whether this SituationRecord specifies a safety related message according to Commission Delegated Regulation (EU) No 886/2013. | 0..1 | Boolean |

Table 37— Attributes of the "SituationRecord" package

* + 1. "TrafficElement" package
       1. "TrafficElement" package classes

| **Class name** | **Designation** | **Definition** | **Stereotype** | **Abstract** |
| --- | --- | --- | --- | --- |
| AbnormalTraffic | Abnormal traffic | A traffic condition which is not normal. |  | no |
| TrafficElement | Traffic element | An event which is not planned by the traffic operator, which is affecting, or has the potential to affect traffic flow. |  | yes |

Table 38— Classes of the "TrafficElement" package

* + - 1. "TrafficElement" package association roles

There are no defined association roles in the "TrafficElement" package.

* + - 1. "TrafficElement" package attributes

| **Class name** | **Attribute name** | **Designation** | **Definition** | **Multiplicity** | **Type** |
| --- | --- | --- | --- | --- | --- |
| AbnormalTraffic | abnormalTrafficType | Abnormal traffic type | A characterization of the nature of abnormal traffic flow, i.e. specifically relating to the nature of the traffic movement. | 0..1 | AbnormalTrafficTypeEnum |
|  | queueLength | Queue length | The length of a queue or the average length of queues in separate lanes due to a situation. | 0..1 | MetresAsNonNegativeInteger |

Table 39— Attributes of the "TrafficElement" package

* + 1. "Validity" package
       1. "Validity" package classes

| **Class name** | **Designation** | **Definition** | **Stereotype** | **Abstract** |
| --- | --- | --- | --- | --- |
| OverallPeriod | Overall period | A continuous or discontinuous period of validity defined by overall bounding start and end times and the possible intersection of valid periods (potentially recurring) with the complement of exception periods (also potentially recurring). |  | no |
| Validity | Validity | Specification of validity, either explicitly or by a validity time period specification which may be discontinuous. |  | no |

Table 40— Classes of the "Validity" package

* + - 1. "Validity" package association roles

| **Class name** | **Role name** | **Designation** | **Definition** | **Multiplicity** | **Target** |
| --- | --- | --- | --- | --- | --- |
| Validity | validityTimeSpecification | Validity time specification | A specification of periods of validity defined by overall bounding start and end times and the possible intersection of valid periods with exception periods (exception periods overriding valid periods). | 1..1 | OverallPeriod |

Table 41— Associations of the "Validity" package

* + - 1. "Validity" package attributes

| **Class name** | **Attribute name** | **Designation** | **Definition** | **Multiplicity** | **Type** |
| --- | --- | --- | --- | --- | --- |
| OverallPeriod | overallEndTime | Overall end time | End of bounding period of validity defined by date and time. | 0..1 | DateTime |
|  | overallStartTime | Overall start time | Start of bounding period of validity defined by date and time. | 1..1 | DateTime |
| Validity | validityStatus | Validity status | Specification of validity, either explicitly overriding the validity time specification or confirming it. | 1..1 | ValidityStatusEnum |

Table 42— Attributes of the "Validity" package

* + 1. "VehicleCharacteristics" package
       1. "VehicleCharacteristics" package classes

| **Class name** | **Designation** | **Definition** | **Stereotype** | **Abstract** |
| --- | --- | --- | --- | --- |
| GrossWeightCharacteristic | Gross weight characteristic | Gross weight characteristic of a vehicle. |  | no |
| VehicleCharacteristics | Vehicle characteristics | The characteristics of a vehicle, e.g. lorry of gross weight greater than 30 tonnes. |  | no |

Table 43— Classes of the "VehicleCharacteristics" package

* + - 1. "VehicleCharacteristics" package association roles

There are no defined association roles in the "VehicleCharacteristics" package.

* + - 1. "VehicleCharacteristics" package attributes

| **Class name** | **Attribute name** | **Designation** | **Definition** | **Multiplicity** | **Type** |
| --- | --- | --- | --- | --- | --- |
| GrossWeightCharacteristic | comparisonOperator | Comparison operator | The operator to be used in the vehicle characteristic comparison operation. | 1..1 | ComparisonOperatorEnum |
|  | grossVehicleWeight | Gross vehicle weight | The gross weight of the vehicle and its load, including any trailers. | 1..1 | Tonnes |
| VehicleCharacteristics | vehicleType | Vehicle type | Vehicle type. | 0..\* | VehicleTypeEnum |

Table 44— Attributes of the "VehicleCharacteristics" package

* 1. Data Dictionary of <<datatypes>> for “OtherDENM Profile”

This clause contains the definitions of all data types which are used in the “OtherDENM Profile”.

* + 1. The <<datatype>> "KilometresPerHour"

A measure of speed defined in kilometres per hour.

* + 1. The <<datatype>> "MetresAsFloat"

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

* + 1. The <<datatype>> "MetresAsNonNegativeInteger"

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

* + 1. The <<datatype>> "Tonnes"

A measure of weight defined in metric tonnes.

* 1. Data Dictionary of <<enumerations>> for “OtherDENM Profile”

This clause contains the definitions of all enumerations which are used in the “OtherDENM Profile”.

* + 1. The <<enumeration>> "AbnormalTrafficTypeEnum"

Collection of descriptive terms for abnormal traffic conditions specifically relating to the nature of the traffic movement.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| slowTraffic | Slow traffic | Traffic is slow moving at the specified location, but not yet forming queues (i.e. average speed is between 25% and 75% of its free-flow level). |
| stationaryTraffic | Stationary traffic | Traffic is stationary, or very near stationary, at the specified location (i.e. average speed is less than 10% of its free-flow level). |

Table 45— Values contained in the enumeration "AbnormalTrafficTypeEnum"

* + 1. The <<enumeration>> "AlertCDirectionEnum"

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.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| both | Both | Indicates that both directions of traffic flow are affected by the situation or relate to the traffic data. |
| negative | Negative | The direction of traffic flow concerned by a situation or traffic data. In ALERT-C the negative direction corresponds to the negative offset direction within the RDS location table. |
| positive | Positive | The direction of traffic flow concerned by a situation or traffic data. In ALERT-C the positive direction corresponds to the positive offset direction within the RDS location table. |
| unknown | Unknown | Unknown direction. |

**Table 46— Values contained in the enumeration "AlertCDirectionEnum"**

* + 1. The <<enumeration>> "AccidentTypeEnum"

Collection of descriptive terms for types of accidents.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| accident | Accident | Accidents are situations in which one or more vehicles lose control and do not recover. They include collisions between vehicle(s) or other road user(s), between vehicle(s) and fixed obstacle(s), or they result from a vehicle running off the road. |
| accidentInvolvingBuses | Accident involving buses | Includes all accidents involving at least one passenger vehicle. |
| accidentInvolvingHazardousMaterials | Accident involving hazardous materials | Includes all accidents involving at least one vehicle believed to be carrying materials, which could present an additional hazard to road users. |
| accidentInvolvingHeavyLorries | Accident involving heavy lorries | Includes all accidents involving at least one heavy goods vehicle. |
| multivehicleAccident | Multivehicle accident | Includes all accidents involving three or more vehicles. |
| other | Other | Other than as defined in this enumeration. |
| secondaryAccident | Secondary accident | Includes all situations resulting from vehicles avoiding or being distracted by earlier accidents. |
| seriousAccident | Serious accident | Includes all accidents believed to involve fatality or injury expected to require overnight hospitalisation. |

Table 47— Values contained in the enumeration "AccidentTypeEnum"

* + 1. The <<enumeration>> "AnimalPresenceTypeEnum"

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| animalsOnTheRoad | Animals on the road | Traffic may be disrupted due to animals on the roadway. |
| herdOfAnimalsOnTheRoad | Herd of animals on the road | Traffic may be disrupted due to a herd of animals on the roadway. |
| largeAnimalsOnTheRoad | Large animals on the road | Traffic may be disrupted due to large animals on the roadway. |

* + 1. The <<enumeration>> "CauseTypeEnum"

Types of causes of situations which are not managed or are off network.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| accident | Accident | Accident. |
| congestion | Congestion | Traffic congestion. |
| earlierAccident | Earlier accident | An earlier accident. |
| earlierEvent | Earlier event | An earlier event |
| earlierIncident | Earlier incident | An earlier incident |
| obstruction | Obstruction | Obstruction (of unspecified type) on the roadway. |
| pollutionAlert | Pollution alert | An alert relating to dangerous levels of pollution. |
| poorWeather | Poor weather | Poor weather conditions. |
| other | Other | Other than as defined in this enumeration. |

Table 48— Values contained in the enumeration "CauseTypeEnum"

* + 1. The <<enumeration>> "CarriagewayEnum"

List of descriptors identifying specific carriageway details.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| mainCarriageway | Main carriageway | On the main carriageway. |
| slipRoads | Slip roads | On the slip roads. |

Table 49— Values contained in the enumeration "CarriagewayEnum"

* + 1. The <<enumeration>> "ComparisonOperatorEnum"

Logical comparison operations.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| equalTo | Equal to | Logical comparison operator of "equal to". |
| greaterThan | Greater than | Logical comparison operator of "greater than". |
| greaterThanOrEqualTo | Greater than or equal to | Logical comparison operator of "greater than or equal to". |
| lessThan | Less than | Logical comparison operator of "less than". |
| lessThanOrEqualTo | Less than or equal to | Logical comparison operator of "less than or equal to". |

Table 50— Values contained in the enumeration "ComparisonOperatorEnum"

* + 1. The <<enumeration>> "ComplianceOptionEnum"

Types of compliance.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| advisory | Advisory | Advisory compliance. |
| mandatory | Mandatory | Mandatory compliance. |

Table 51— Values contained in the enumeration "ComplianceOptionEnum"

* + 1. The <<enumeration>> "ConfidentialityValueEnum"

Values of confidentiality.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| internalUse | Internal use | For internal use only of the recipient organisation. |
| noRestriction | No restriction | No restriction on usage. |
| restrictedToAuthorities | Restricted to authorities | Restricted for use only by authorities. |
| restrictedToAuthoritiesAndTrafficOperators | Restricted to authorities | Restricted for use only by authorities and traffic operators. |
| restrictedToAuthoritiesTrafficOperatorsAndPublishers | Restricted to authorities traffic operators and publishers | Restricted for use only by authorities, traffic operators and publishers (service providers). |
| restrictedToAuthoritiesTrafficOperatorsAndVms | Restricted to authorities traffic operators and Vms | Restricted for use only by authorities, traffic operators, publishers (service providers) and variable message signs. |

Table 52— Values contained in the enumeration "ConfidentialityValueEnum"

* + 1. The <<enumeration>> "CountryEnum"

List of countries.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| at | at | Austria |
| de | de | Germany |

Table 53— Values contained in the enumeration "CountryEnum"

* + 1. The <<enumeration>> "DrivingConditionTypeEnum"

Types of the perceived driving conditions.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| hazardous | Hazardous | Driving conditions are hazardous due to environmental conditions. |
| other | Other | Other than as defined in this enumeration. |

Table 54— Values contained in the enumeration "DrivingConditionTypeEnum"

* + 1. The <<enumeration>> "EnvironmentalObstructionTypeEnum"

Types of environmental obstructions.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| avalanches | Avalanches | The road may be obstructed or partially obstructed due to snow slides. |
| other | Other | Other than as defined in this enumeration. |

Table 55— Values contained in the enumeration "EnvironmentalObstructionTypeEnum"

* + 1. The <<enumeration>> "InformationStatusEnum"

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

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| real | Real | The information is real. It is not a test or exercise. |
| securityExercise | Security exercise | The information is part of an exercise which is for testing security. |
| technicalExercise | Technical exercise | The information is part of an exercise which includes tests of associated technical subsystems. |
| test | Test | The information is part of a test for checking the exchange of this type of information. |

Table 56— Values contained in the enumeration "InformationStatusEnum"

* + 1. The <<enumeration>> "LaneEnum"

List of descriptors identifying specific lanes.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| emergencyLane | Emergency lane | In the emergency lane. |
| leftLane | Left lane | In the left lane. |
| middleLane | Middle lane | In the middle lane. |
| rightLane | Right lane | In the right lane. |

Table 57— Values contained in the enumeration "LaneEnum"

* + 1. The <<enumeration>> "LocationDescriptorEnum"

List of descriptors to help to identify a specific location.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| inTunnel | In tunnel | In tunnel. |

Table 58— Values contained in the enumeration "LocationDescriptorEnum"

* + 1. The <<enumeration>> "ObstructionTypeEnum"

Types of obstructions on the roadway.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| objectOnTheRoad | Object on the road | The road may be obstructed or traffic hindered due to objects laying on the roadway. |
| obstructionOnTheRoad | Obstruction on the road | Unspecified obstruction on the roadway which may cause traffic disruption. |
| other | Other | Other than as defined in this enumeration. |
| peopleOnRoadway | People on roadway | People on the roadway which may cause traffic disruption. |
| rescueAndRecoveryWork | Rescue and recovery work | Work is being undertaken by emergency services which may present a hazard to road users. |
| shedLoad | Shed load | Spillage of transported goods on the roadway which may cause traffic disruption. |
| spillageOnTheRoad | Spillage on the road | Includes all situations where a spillage has occurred on the roadway due to an earlier incident. |

Table 59— Values contained in the enumeration "ObstructionTypeEnum"

* + 1. The <<enumeration>> "PoorEnvironmentTypeEnum"

Types of poor environmental conditions.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| denseFog | Dense fog | Dense fog, limiting visibility to 50m or less. |
| fog | Fog | Fog, visibility more than 50m. |
| frost | Frost | Frost can be expected. |
| hail | Hail | Falling ice pellets or frozen rain. |
| heavyRain | Heavy rain | Heavy rainfall, limiting visibility to 50m or less. |
| heavySnowfall | Heavy snowfall | Heavy rainfall, limiting visibility to 50m or less. |
| snowfall | Snowfall | Falling snow, visibility more than 50m. |
| strongWinds | Strong winds | Winds between 40 km/h and 60 km/h. |
| thunderStorms | Thunder storms | Electrical storms, generally with heavy rain. |
| visibilityReduced | Visibility reduced | Environmental conditions causing reduced visibility. |

Table 60— Values contained in the enumeration "PoorEnvironmentTypeEnum"

* + 1. The <<enumeration>> "ProbabilityOfOccurrenceEnum"

Levels of confidence that the sender has in the information, ordered {certain, probable, risk of}.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| certain | Certain | The source is completely certain of the occurrence of the situation record version content. |

Table 61— Values contained in the enumeration "ProbabilityOfOccurrenceEnum"

* + 1. The <<enumeration>> "RoadMaintenanceTypeEnum"

Types of road maintenance.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| maintenanceWork | Maintenance work | Maintenance of road, associated infrastructure or equipments. |
| roadworks | Roadworks | Road maintenance or improvement activity of an unspecified nature which may potentially cause traffic disruption. |

Table 62— Values contained in the enumeration "RoadMaintenanceTypeEnum"

* + 1. The <<enumeration>> "RoadOrCarriagewayOrLaneManagementTypeEnum"

Management actions relating to road, carriageway or lane usage.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| carriagewayClosures | Carriageway closures | Carriageway closures are in operation at the specified location. |
| heightRestrictionInOperation | Height restriction in operation | A height restriction is in operation. |
| intermittentShortTermClosures | Intermittent short term closures | Road closures occur intermittently on the specified road in the specified direction for short durations. |
| laneClosures | Lane closures | Lane closures are in operation at the specified location for vehicles with the specified characteristics or all, if none defined, in the specified direction. |
| roadClosed | Road closed | The road is closed to vehicles with the specified characteristics or all, if none defined, in the specified direction. |
| weightRestrictionInOperation | Weight restriction in operation | A weight restriction is in operation. |

Table 63— Values contained in the enumeration "RoadOrCarriagewayOrLaneManagementTypeEnum"

* + 1. The <<enumeration>> "SeverityEnum"

Levels of severity of a situation as whole assessed by the impact that the situation may have on traffic flow as perceived by the supplier.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| highest | Highest | Perceived by supplier as being of the highest level. |

Table 64— Values contained in the enumeration "SeverityEnum"

* + 1. The <<enumeration>> "SourceTypeEnum"

Type of sources from which situation information may be derived.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| roadAuthorities | Road authorities | A road authority. |
| trafficMonitoringStation | Traffic monitoring station | A station, usually automatic, dedicated to the monitoring of the road network. |

Table 65— Values contained in the enumeration "SourceTypeEnum"

* + 1. The <<enumeration>> "SubjectTypeOfWorksEnum"

Subject types of construction or maintenance work.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| bridge | Bridge | Bridge on, over or under the highway. |
| tunnel | Tunnel | Road tunnel. |

Table 66— Values contained in the enumeration "SubjectTypeOfWorksEnum"

* + 1. The <<enumeration>> "TrafficConstrictionTypeEnum"

Types of constriction to which traffic is subjected as a result of an event.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| carriagewayBlocked | Carriageway blocked | The carriageway is totally obstructed in the specified direction due to an unplanned event. |
| lanesBlocked | Lanes blocked | One or more lanes is totally obstructed in the specified direction due to an unplanned event. |
| roadBlocked | Road blocked | The road is totally obstructed, for all vehicles in both directions, due to an unplanned event. |

Table 67— Values contained in the enumeration "TrafficConstrictionTypeEnum"

* + 1. The <<enumeration>> "TrafficStatusEnum"

List of terms used to describe traffic conditions.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| congested | Congested | Traffic in the specified direction is congested making driving very slow and difficult. |
| freeFlow | Free flow | Traffic in the specified direction is free flowing. |
| heavy | Heavy | Traffic in the specified direction is heavier than usual making driving conditions more difficult than normal. |
| impossible | Impossible | Traffic in the specified direction is completely congested, effectively at a standstill, making driving impossible. |
| unknown | Unknown | Traffic conditions are unknown. |

Table 68— Values contained in the enumeration "TrafficStatusEnum"

* + 1. The <<enumeration>> "ValidityStatusEnum"

Values of validity status that can be assigned to a described event, action or item.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| active | Active | The described event, action or item is currently active regardless of the definition of the validity time specification. |
| definedByValidityTimeSpec | Defined by validity time spec | The validity status of the described event, action or item is in accordance with the definition of the validity time specification. |
| suspended | Suspended | The described event, action or item is currently suspended, that is inactive, regardless of the definition of the validity time specification. |

Table 69— Values contained in the enumeration "ValidityStatusEnum"

* + 1. The <<enumeration>> "VehicleObstructionTypeEnum"

Types of obstructions involving vehicles.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| abnormalLoad | Abnormal load | Vehicle(s) carrying exceptional load(s) which may cause traffic disruption. |
| brokenDownHeavyLorry | Broken down heavy lorry | Broken down heavy lorry/lorries on the carriageway which may cause traffic disruption. |
| brokenDownVehicle | Broken down vehicle | Broken down vehicle(s) on the carriageway which may cause traffic disruption. |
| overheightVehicle | Overheight vehicle | Vehicles of height greater than normally allowed which may cause traffic disruption. |
| vehicleOnFire | Vehicle on fire | A vehicle is or has been on fire and may cause traffic disruption. |
| vehicleOnWrongCarriageway | Vehicle on wrong carriageway | A vehicle is travelling the wrong way along a divided highway (i.e. on the wrong side). |
| other | Other | Other than as defined in this enumeration. |

Table 70— Values contained in the enumeration "VehicleObstructionTypeEnum"

* + 1. The <<enumeration>> "VehicleTypeEnum"

Types of vehicle.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| bus | Bus | Bus. |
| car | Car | Car. |
| lorry | Lorry | Lorry of any type. |

Table 71— Values contained in the enumeration "VehicleTypeEnum"

* + 1. The <<enumeration>> "WeatherRelatedRoadConditionTypeEnum"

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

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| blackIce | Black ice | Severe skid risk due to black ice (i.e. clear ice, which is impossible or very difficult to see). |
| ice | Ice | Increased skid risk due to ice (of any kind). |
| wet | Wet | Road surface is wet. |
| other | Other | Other than as defined in this enumeration. |

Table 72— Values contained in the enumeration "WeatherRelatedRoadConditionTypeEnum"

* 1. Alphabetical list of attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute name** | **Class name** | **Designation** | **Definition** | **Multiplicity** | **Type** |
| abnormalTrafficType | AbnormalTraffic | Abnormal traffic type | A characterization of the nature of abnormal traffic flow, i.e. specifically relating to the nature of the traffic movement. | 0..1 | AbnormalTrafficTypeEnum |
| accidentType | Accident | Accident type | A characterization of the nature of the accident. | 1..\* | AccidentTypeEnum |
| alertCDirectionCoded | AlertCDirection | ALERT-C direction coded | The direction of traffic flow to which the situation, traffic data or information is related. Positive is in the direction of coding of the road. | 1..1 | AlertCDirectionEnum |
| alertCDirectionNamed | AlertCDirection | ALERT-C direction named | ALERT-C name of a direction e.g. Brussels -> Lille. | 0..1 | MultilingualString |
| alertCDirectionSense | AlertCDirection | ALERT-C direction sense | Indicates for circular routes (i.e. valid only for ring roads) the sense in which navigation should be made from the primary location to the secondary location, to avoid ambiguity. TRUE indicates positive RDS direction, i.e. direction of coding of road. | 0..1 | Boolean |
| alertCLocationCountryCode | AlertCLinear | ALERT-C location country code | EBU country code. | 1..1 | String |
| alertCLocationName | AlertCLocation | ALERT-C location name | Name of ALERT-C location. | 0..1 | MultilingualString |
| alertCLocationTableNumber | AlertCLinear | ALERT-C location table number | Number allocated to an ALERT-C table in a country. Ref. EN ISO 14819-3 for the allocation of a location table number. | 1..1 | String |
| alertCLocationTableVersion | AlertCLinear | ALERT-C location table version | Version number associated with an ALERT-C table reference. | 1..1 | String |
| Alive | AnimalPresenceObstruction | Alive | Indicates whether the identified animals are dead (immobile) or alive (potentially mobile). | 0..1 | Boolean |
| animalPresenceType | AnimalPresenceObstruction | Animal presence type | Indicates the nature of animals present on or near the roadway. | 1..1 | AnimalPresenceTypeEnum |
| causeType | NonManagedCause | Cause type | Indicates an external influence that may be the causation of components of a situation. | 0..1 | CauseTypeEnum |
| clientIdentification | Exchange | Client identification | In a data exchange process, an identifier of the organisation or group of organisations which receives information from the DATEX II supplier system. | 0..1 | String |
| comment | Comment | Comment | A free text comment that can be used by the operator to convey un-coded observations/information. | 1..1 | MultilingualString |
| comparisonOperator | GrossWeightCharacteristic | Comparison operator | The operator to be used in the vehicle characteristic comparison operation. | 1..1 | ComparisonOperatorEnum |
| complianceOption | NetworkManagement | Compliance option | Defines whether the network management instruction or the control resulting from a network management action is advisory or mandatory. | 1..1 | ComplianceOptionEnum |
| confidentiality | HeaderInformation | Confidentiality | The extent to which the related information may be circulated, according to the recipient type. Recipients must comply with this confidentiality statement. | 1..1 | ConfidentialityValueEnum |
| country | InternationalIdentifier | Country | ISO 3166-1 two character country code. | 1..1 | CountryEnum |
| drivingConditionType | Conditions | Driving condition type | Description of the driving conditions at the specified location. | 0..1 | DrivingConditionTypeEnum |
| environmentalObstructionType | EnvironmentalObstruction | Environmental obstruction type | Characterization of an obstruction on the road resulting from an environmental cause. | 1..1 | EnvironmentalObstructionTypeEnum |
| grossVehicleWeight | GrossWeightCharacteristic | Gross vehicle weight | The gross weight of the vehicle and its load, including any trailers. | 1..1 | Tonnes |
| informationStatus | HeaderInformation | Information status | The status of the related information (real, test, exercise ....). | 1..1 | InformationStatusEnum |
| nationalIdentifier | InternationalIdentifier | National identifier | Identifier or name unique within the specified country. | 1..1 | String |
| numberOfLanesRestricted | Impact | Number of lanes restricted | The number of normally usable lanes on the carriageway which are now restricted either fully or partially (this may include the hard shoulder if it is normally available for operational use, e.g. in hard shoulder running schemes). | 0..1 | NonNegativeInteger |
| numberOfObstructions | Obstruction | Number of obstructions | The number of obstructions that are partly or wholly blocking the road. | 0..1 | NonNegativeInteger |
| numberOfVehicles | GroupOfVehiclesInvolved | Number of vehicles | The number of vehicles of this group that are involved. | 0..1 | NonNegativeInteger |
| obstructionType | GeneralObstruction | Obstruction type | Characterization of the type of general obstruction. | 1..\* | ObstructionTypeEnum |
| overallEndTime | OverallPeriod | Overall end time | End of bounding period of validity defined by date and time. | 0..1 | DateTime |
| overallStartTime | OverallPeriod | Overall start time | Start of bounding period of validity defined by date and time. | 1..1 | DateTime |
| poorEnvironmentType | PoorEnvironmentConditions | Poor environment type | The type of environment condition which is affecting driving conditions. | 1..\* | PoorEnvironmentTypeEnum |
| probabilityOfOccurrence | SituationRecord | Probability of occurrence | An assessment of the degree of likelihood that the reported event will occur. | 1..1 | ProbabilityOfOccurrenceEnum |
| publicationTime | PayloadPublication | Publication time | Date/time at which the payload publication was created. | 1..1 | DateTime |
| queueLength | AbnormalTraffic | Queue length | The length of a queue or the average length of queues in separate lanes due to a situation. | 0..1 | MetresAsNonNegativeInteger |
| reliable | Source | Reliable | An indication as to whether the source deems the associated information to be reliable/correct. "True" indicates it is deemed reliable. | 0..1 | Boolean |
| roadMaintenanceType | MaintenanceWorks | Road maintenance type | The type of road maintenance or installation work at the specified location. | 1..\* | RoadMaintenanceTypeEnum |
| roadOrCarriagewayOrLaneManagementType | RoadOrCarriagewayOrLaneManagement | Road or carriageway or lane management type | Type of road, carriageway or lane management action instigated by operator. | 1..1 | RoadOrCarriagewayOrLaneManagementTypeEnum |
| safetyRelatedMessage | SituationRecordExtendedApproved | Safety related message | Indicates, whether this SituationRecord specifies a safety related message according to Commission Delegated Regulation (EU) No 886/2013. | 0..1 | Boolean |
| severity | SituationRecord | Severity | The assessment of the impact (in terms of severity) that this element of the situation is having, or will have, on the traffic flow as perceived by the supplier. | 0..1 | SeverityEnum |
| situationRecordCreationTime | SituationRecord | Situation record creation time | The date/time that the SituationRecord object (the first version of the record) was created by the original supplier. | 1..1 | DateTime |
| situationRecordVersionTime | SituationRecord | Situation record version time | The date/time that this current version of the SituationRecord within the situation was written into the database of the supplier which is involved in the data exchange. Identity and version of record are defined by the class stereotype implementation. | 1..1 | DateTime |
| sourceCountry | Source | Source country | ISO 3166-1 two character country code of the source of the information. | 0..1 | CountryEnum |
| sourceIdentification | Source | Source identification | Identifier of the organisation or the traffic equipment which has produced the information relating to this version of the information. | 0..1 | String |
| sourceName | Source | Source name | The name of the organisation which has produced the information relating to this version of the information. | 0..1 | MultilingualString |
| sourceType | Source | Source type | Information about the technology used for measuring the data or the method used for obtaining qualitative descriptions relating to this version of the information. | 0..1 | SourceTypeEnum |
| subjectTypeOfWorks | Subjects | Subject type of works | The subject type of the roadworks (i.e. on what the construction or maintenance work is being performed). | 1..1 | SubjectTypeOfWorksEnum |
| totalNumberOfVehiclesInvolved | Accident | Total number of vehicles involved | The total number of vehicles that are involved. | 0..1 | NonNegativeInteger |
| trafficConstrictionType | Impact | Traffic constriction type | The type of constriction to which traffic is subjected as a result of an event or operator action. | 0..1 | TrafficConstrictionTypeEnum |
| validityStatus | Validity | Validity status | Specification of validity, either explicitly overriding the validity time specification or confirming it. | 1..1 | ValidityStatusEnum |
| vehicleObstructionType | VehicleObstruction | Vehicle obstruction type | Characterization of an obstruction on the road caused by one or more vehicles. | 1..1 | VehicleObstructionTypeEnum |
| vehicleType | VehicleCharacteristics | Vehicle type | Vehicle type. | 0..\* | VehicleTypeEnum |
| weatherRelatedRoadConditionType | WeatherRelatedRoadConditions | Weather related road condition type | The type of road surface condition that is related to the weather which is affecting the driving conditions. | 1..\* | WeatherRelatedRoadConditionTypeEnum |

Table 73- Alphabetical list of attributes

* 1. Alphabetical list of roles

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Role name** | **Class name** | **Designation** | **Definition** | **Multiplicity** | **Target** |
| forVehiclesWithCharacteristicsOf | NetworkManagement | For vehicles with characteristics of | The characteristics of those vehicles for which the network management is applicable. | 0..\* | VehicleCharacteristics |
| generalPublicComment | SituationRecord | General public comment | A comment which may be freely distributed to the general public | 0..\* | Comment |
| validityTimeSpecification | Validity | Validity time specification | A specification of periods of validity defined by overall bounding start and end times and the possible intersection of valid periods with exception periods (exception periods overriding valid periods). | 1..1 | OverallPeriod |

Table 74- Alphabetical list of roles

* 1. Figures



Figure 1: Basic SituationPublication model



Figure 2: SituationRecord types used in the OtherDENM profile



Figure 3: Location referencing in the OtherDENM profile