DATEX II profile for OtherDENM

ECo-AT

Version 00-01-00

A.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.

A.2 Data Dictionary for "OtherDENM"

A.2.1 "Accident" package

A.2.1.1 "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

A.2.1.2 "Accident" package association roles

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

A.2.1.3 "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

A.2.2 "AlertCMethod4Linear" package

A.2.2.1 "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

A.2.2.2 "AlertCMethod4Linear" package association roles

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

A.2.2.3 "AlertCMethod4Linear" package attributes

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

A.2.3 "AlertCMethod4Point" package

A.2.3.1 "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

A.2.3.2 "AlertCMethod4Point" package association roles

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

A.2.3.3 "AlertCMethod4Point" package attributes

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

A.2.4 "Conditions" package

A.2.4.1 "Conditions" package classes

Class name	Designation	Definition	Stereotype	Abstract
Conditions	Conditions	Any conditions which have the potential to degrade normal driving conditions.		no
PoorEnvironmentCond itions	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
WeatherRelatedRoad Conditions	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

A.2.4.2 "Conditions" package association roles

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

A.2.4.3 "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	DrivingCondition TypeEnum
PoorEnvironmentCond itions	poorEnvironmentType	Poor environment type	The type of environment condition which is affecting driving conditions.	1..*	PoorEnvironme ntTypeEnum
WeatherRelatedRoad Conditions	weatherRelatedRoadC onditionType	Weather related road condition type	The type of road surface condition that is related to the weather which is affecting the driving conditions.	1..*	WeatherRelated RoadConditionT ypeEnum

Table 6— Attributes of the "Conditions" package

A.2.5 "Exchange " package

A.2.5.1   "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

A.2.5.2   "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

A.2.5.3   "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

A.2.6 "D2LogicalModel " package

A.2.6.1   "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

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.		yes

Table 10— Classes of the "D2LogicalModel" package

A.2.6.2 " D2LogicalModel" package association roles

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

A.2.6.3 " D2LogicalModel" package attributes

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

A.2.7 "GroupOfLocations " package

A.2.7.1 "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

Class name	Designation	Definition	Stereotype	Abstract
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

A.2.7.2 "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

A.2.7.3 "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

Class name	Attribute name	Designation	Definition	Multiplicity	Type
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

A.2.8 "Impact" package

A.2.8.1 "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

A.2.8.2 "Impact" package association roles

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

A.2.8.3 "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

A.2.9 "Linear" package

A.2.9.1 "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

A.2.9.2 "Linear" package association roles

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

A.2.9.3 "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

A.2.10 "LinearByCoordinates" package

A.2.10.1 "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

A.2.10.2 "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

A.2.10.3 "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

A.2.11 "NetworkManagement" package

A.2.11.1 "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

A.2.11.2 "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

A.2.11.3 "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

A.2.12 "Obstruction" package

A.2.12.1 "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

A.2.12.2 "Obstruction" package association roles

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

A.2.12.3 "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

A.2.13 "OperatorAction" package

A.2.13.1 "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

A.2.13.2 "OperatorAction" package association roles

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

A.2.13.3 "OperatorAction" package attributes

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

A.2.14 "PayloadPublication" package

A.2.14.1 "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

A.2.14.2 "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

A.2.14.3 "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

A.2.15 "ReusableClasses" package

A.2.15.1 "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

A.2.15.2 "ReusableClasses" package association roles

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

A.2.15.3 "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

A.2.16 "Roadworks" package

A.2.16.1 "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

A.2.16.2 "Roadworks" package association roles

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

A.2.16.3 "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

A.2.17 "SituationPublication" package

A.2.17.1 "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

A.2.17.2 "SituationPublication" package association roles

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

A.2.17.3 "SituationPublication" package attributes

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

A.2.18 "SituationRecord" package

A.2.18.1 "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

A.2.18.2 "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

A.2.18.3 "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

Table 37— Attributes of the "SituationRecord" package

A.2.19 "TrafficElement" package

A.2.19.1 "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

A.2.19.2 "TrafficElement" package association roles

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

A.2.19.3 "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	AbnormalTraffic TypeEnum
	queueLength	Queue length	The length of a queue or the average length of queues in separate lanes due to a situation.	0..1	MetresAsNonNe gativeInteger

Table 39— Attributes of the "TrafficElement" package

A.2.20 "Validity" package

A.2.20.1 "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

A.2.20.2 "Validity" package association roles

Class name	Role name	Designation	Definition	Multiplicity	Target
Validity	validityTimeSpecificati on	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

A.2.20.3 "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

A.2.21 "VehicleCharacteristics" package

A.2.21.1 "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

A.2.21.2 "VehicleCharacteristics" package association roles

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

A.2.21.3 "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

A.3 Data Dictionary of <<datatypes>> for "OtherDENM Profile"

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

A.3.1 The <<datatype>> "KilometresPerHour"

A measure of speed defined in kilometres per hour.

A.3.2 The <<datatype>> "MetresAsFloat"

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

A.3.3 The <<datatype>> "MetresAsNonNegativeInteger"

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

A.3.4 The <<datatype>> "Tonnes"

A measure of weight defined in metric tonnes.

A.4 Data Dictionary of <<enumerations>> for "OtherDENM Profile"

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

A.4.1 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"

A.4.2 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"

A.4.3 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"

A.4.4 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.

A.4.5 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"

A.4.6 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"

A.4.7 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"

A.4.8 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"

A.4.9 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"

A.4.10 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"

A.4.11 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"

A.4.12 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"

A.4.13 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"

A.4.14 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"

A.4.15 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"

A.4.16 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"

A.4.17 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"

A.4.18 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"

A.4.19 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"

A.4.20 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"

A.4.21 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.

<center>Table 64— Values contained in the enumeration "SeverityEnum"</center>

A.4.22 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.

<center>Table 65— Values contained in the enumeration "SourceTypeEnum"</center>

A.4.23 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.

<center>Table 66— Values contained in the enumeration "SubjectTypeOfWorksEnum"</center>

A.4.24 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"

A.4.25 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"

A.4.26 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"

A.4.27 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"

A.4.28 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"

A.4.29 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"

A.5 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	AbnormalTraffic TypeEnum
accidentType	Accident	Accident type	A characterization of the nature of the accident.	1..*	AccidentTypeEn um
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	AlertCDirectionE num

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
alertCLocationCountry Code	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
alertCLocationTableNu mber	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
alertCLocationTableVe rsion	AlertCLinear	ALERT-C location table version	Version number associated with an ALERT-C table reference.	1..1	String
Alive	AnimalPresenceObstr uction	Alive	Indicates whether the identified animals are dead (immobile) or alive (potentially mobile).	0..1	Boolean
animalPresenceType	AnimalPresenceObstr uction	Animal presence type	Indicates the nature of animals present on or near the roadway.	1..1	AnimalPresence TypeEnum
causeType	NonManagedCause	Cause type	Indicates an external influence that may be the causation of components of a situation.	0..1	CauseTypeEnu m
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	GrossWeightCharacter istic	Comparison operator	The operator to be used in the vehicle characteristic comparison operation.	1..1	ComparisonOpe ratorEnum
complianceOption	NetworkManagement	Compliance option	Defines whether the network management instruction or the control resulting from a network management action is advisory or	1..1	ComplianceOpti onEnum

			mandatory.		
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	RoadOrCarriagewayOrLaneManagementEnum
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	0..1	MultilingualStrin

			produced the information relating to this version of the information.		g
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

A.6 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	1..1	OverallPeriod

			periods with exception periods (exception periods overriding valid periods).		

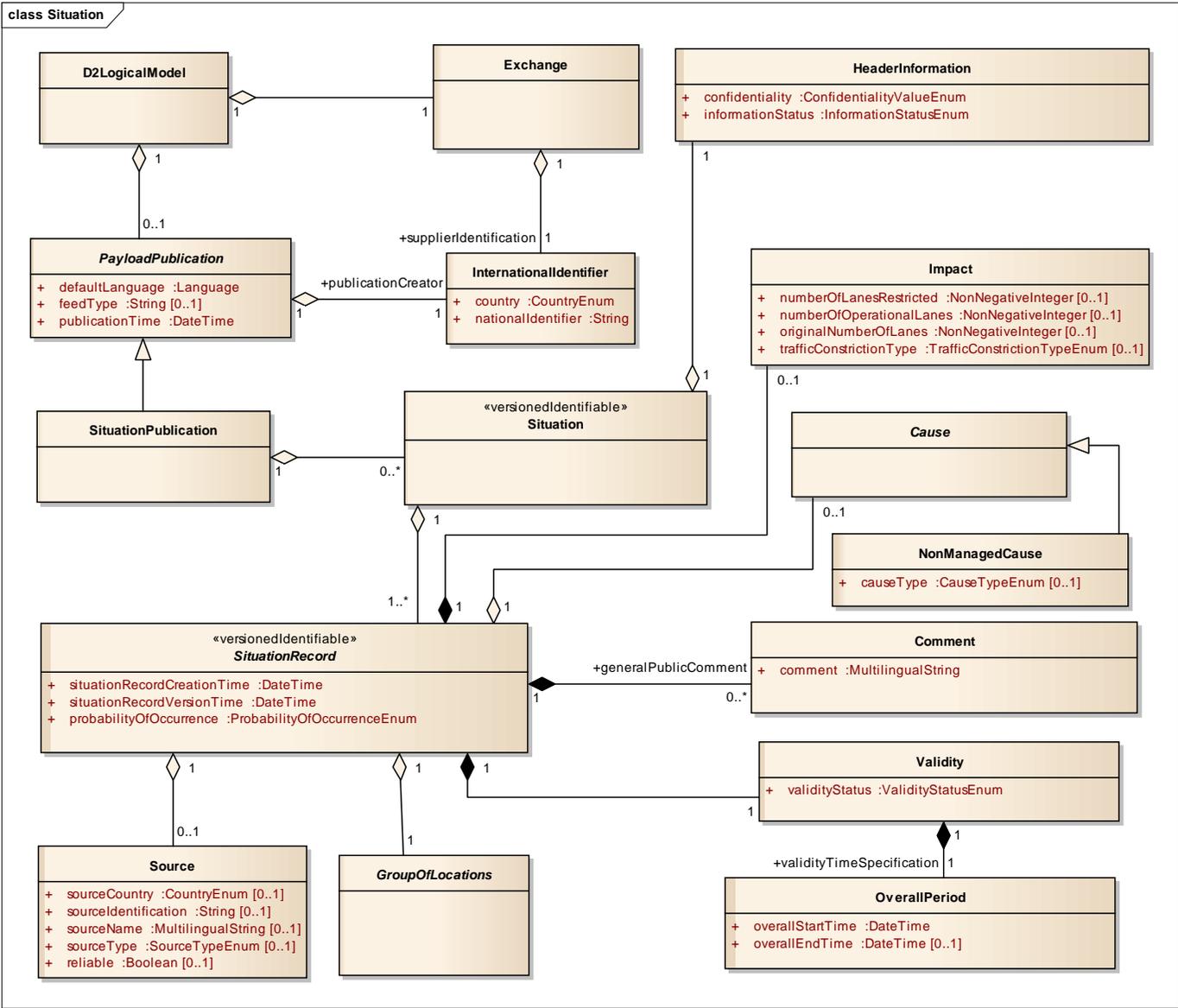**Table 74- Alphabetical list of roles**

A.7 Figures

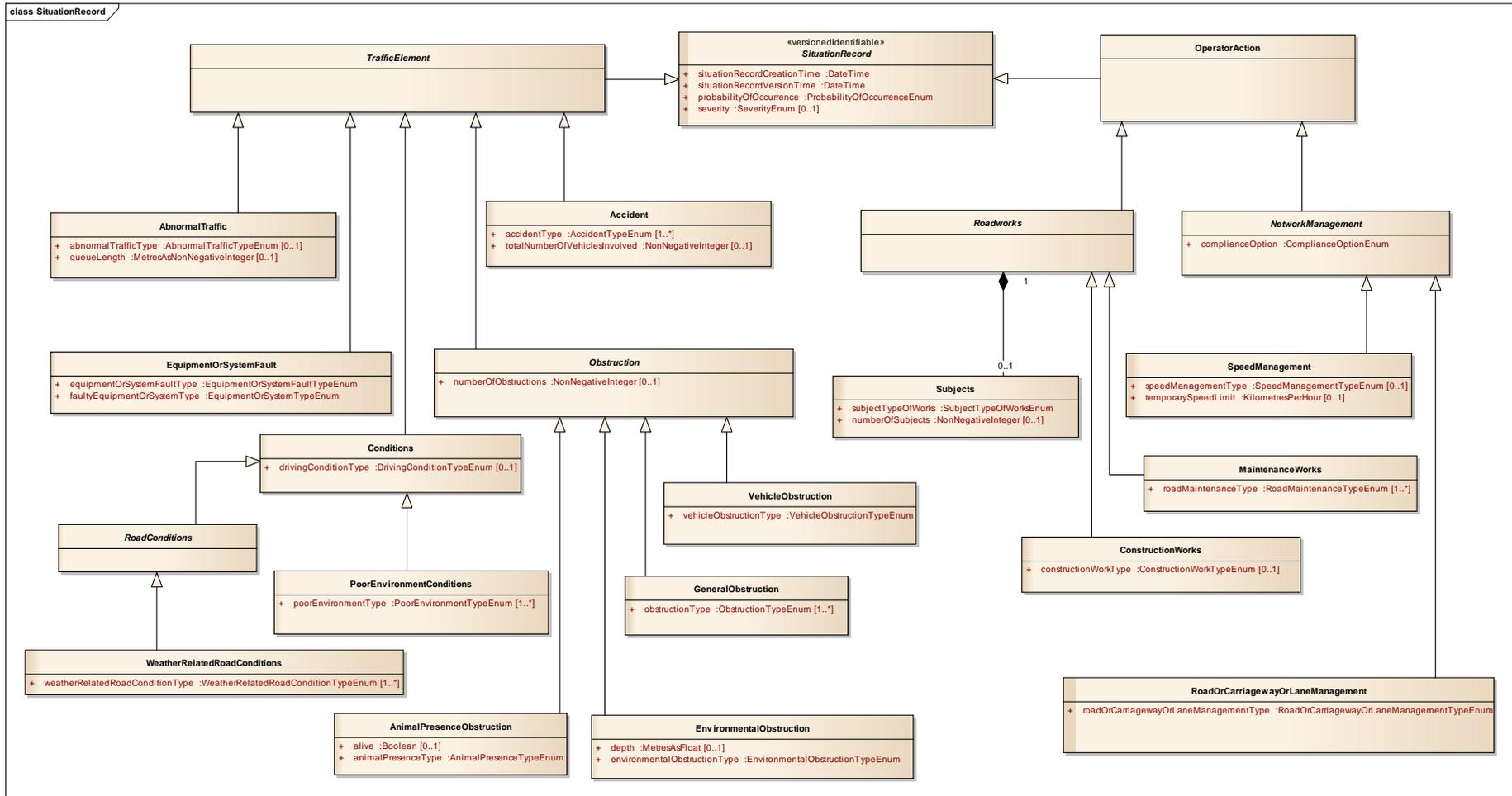Figure 1: Basic SituationPublication model

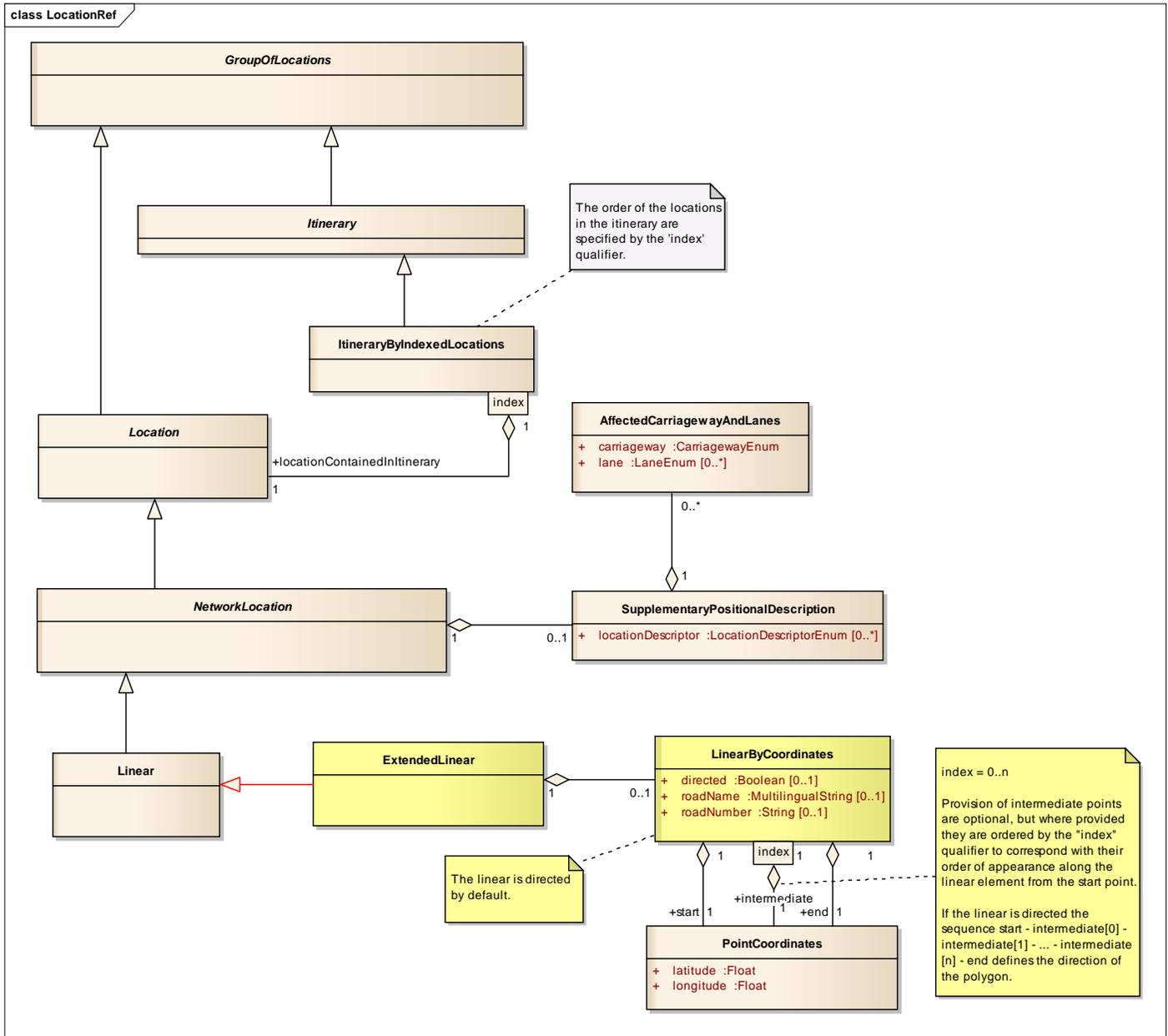**Figure 2: SituationRecord types used in the OtherDENM profile**

Figure 3: Location referencing in the OtherDENM profile