**DATEX II profile for Network Management dynamic**

**ASFINAG**

Version 00-01-00

* 1. Overview

ASFINAG provides DATEX II traffic information of Austrian motorways for service providers and other interested institutions. This profile describes the message content for the Network Management. Note that the publication is two-folded: A static part (PredefinedLocationsPublication, no separate document on this) and a dynamic part (this document). Further note, that it is possible to omit the static part in case location referencing is done in the dynamic part (single file solution) using the Level B extension LinearByCoordinates (included in the corresponding dynamic schema, but not in this document either).

In essence, this document covers both the two-file and the single-file solution, as the main content does not differ between these solutions.

The static file is only described in pictures at the end of this document.

ASFINAG specific documentation (for example the basis of computation) is accentuated in colour.

* 1. Data Dictionary for “ASFINAG Network Management dynamic”
     1. "GroupOfLocations" package
        1. "GroupOfLocations" package classes

| **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 |
| 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 |
| LocationByReference | Location by reference | A location defined by reference to a predefined location. |  | no |
| NetworkLocation | Network location | The specification of a location on a network (as a point or a linear location). |  | yes |

Table 1— Classes of the "GroupOfLocations" package

* + - 1. "GroupOfLocations" package association roles

| **Class name** | **Role name** | **Designation** | **Definition** | **Multiplicity** | **Target** |
| --- | --- | --- | --- | --- | --- |
| Itinerary | routeDestination | Route destination | Destination of a route or final location in an itinerary. | 0..\* | Destination |
| ItineraryByIndexedLocations | locationContainedInItinerary | Location contained in itinerary | A location contained in an itinerary (i.e. an ordered set of locations defining a route or itinerary). | 1..1 | Location |
| Location | locationForDisplay | Location for display | A location which may be used by clients for visual display on user interfaces. | 0..1 | PointCoordinates |
| NonOrderedLocationGroupByList | locationContainedInGroup | Location contained in group | A location contained in a non ordered group of locations. | 2..\* | Location |

Table 2— Associations of the "GroupOfLocations" package

* + - 1. "GroupOfLocations" package attributes

| **Class name** | **Attribute name** | **Designation** | **Definition** | **Multiplicity** | **Type** |
| --- | --- | --- | --- | --- | --- |
| LocationByReference | predefinedLocationReference | Predefined location reference | A reference to a versioned predefined location.  ASFINAG: This class & this attribute will only be used in a two-file solution (i.e. together with a static file with predefined locations), not with the ‘single file solution’ | 1..1 | VersionedReference |

Table 3— 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 4— 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 | capacityRemaining | Capacity remaining | The ratio of current capacity to the normal (free flow) road capacity in the defined direction, expressed as a percentage. Capacity is the maximum number of vehicles that can pass a specified point on the road, in unit time given the specified conditions. | 0..1 | Percentage |
|  | 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 |
|  | numberOfOperationalLanes | Number of operational lanes | The number of usable lanes in the specified direction which remain fully operational (this may include the hard shoulder if it is being used as an operational lane). | 0..1 | NonNegativeInteger |
|  | originalNumberOfLanes | Original number of lanes | The normal number of usable lanes in the specified direction that the carriageway has before reduction due to roadworks or traffic events. | 0..1 | NonNegativeInteger |
|  | residualRoadWidth | Residual road width | The total width of the combined operational lanes in the specified direction. | 0..1 | MetresAsFloat |
|  | 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 5— Attributes of the "Impact" package

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

| **Class name** | **Designation** | **Definition** | **Stereotype** | **Abstract** |
| --- | --- | --- | --- | --- |
| GeneralInstructionOrMessageToRoadUsers | General instruction or message to road users | General instruction and/or message that is issued by the network/road operator which is applicable to drivers and sometimes passengers. |  | no |
| GeneralNetworkManagement | General network management | Network management action that is instigated either manually or automatically by the network/road operator. Compliance with any resulting control may be advisory or mandatory. |  | no |
| 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 |
| SpeedManagement | Speed management | Speed management action that is instigated by the network/road operator. |  | no |
| WinterDrivingManagement | Winter driving management | Winter driving management action that is instigated by the network/road operator. |  | no |

Table 6— 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 7— Associations of the "NetworkManagement" package

* + - 1. "NetworkManagement" package attributes

| **Class name** | **Attribute name** | **Designation** | **Definition** | **Multiplicity** | **Type** |
| --- | --- | --- | --- | --- | --- |
| GeneralInstructionOrMessageToRoadUsers | generalInstructionToRoadUsersType | General instruction to road users type | General instruction that is issued by the network/road operator which is applicable to drivers and sometimes passengers. | 0..1 | GeneralInstructionToRoadUsersTypeEnum |
|  | generalMessageToRoadUsers | General message to road users | General message that is issued by the network/road operator which is applicable to drivers and sometimes passengers, e.g. details about an amber alert (missing or abducted child alert). | 0..1 | MultilingualString |
| GeneralNetworkManagement | generalNetworkManagementType | General network management type | The type of traffic management action instigated by the network/road operator. | 1..1 | GeneralNetworkManagementTypeEnum |
|  | trafficManuallyDirectedBy | Traffic manually directed by | Type of person that is manually directing traffic (applicable if generalNetworkManagementType is set to "trafficBeingManuallyDirected"). | 0..1 | PersonCategoryEnum |
| NetworkManagement | applicableForTrafficDirection | Applicable for traffic direction | The ultimate traffic direction to which the network management is applicable. | 0..\* | DirectionEnum |
|  | applicableForTrafficType | Applicable for traffic type | The type of traffic to which the network management is applicable. | 0..\* | TrafficTypeEnum |
|  | automaticallyInitiated | Automatically initiated | Defines whether the network management is initiated by an automatic system. | 0..1 | Boolean |
|  | 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 |
|  | placesAtWhichApplicable | Places at which applicable | Places, in generic terms, at which the network management applies. | 0..\* | PlacesEnum |
| RoadOrCarriagewayOrLaneManagement | minimumCarOccupancy | Minimum car occupancy | The minimum number of persons required in a vehicle in order for it to be allowed to transit the specified road section. | 0..1 | NonNegativeInteger |
|  | roadOrCarriagewayOrLaneManagementType | Road or carriageway or lane management type | Type of road, carriageway or lane management action instigated by operator. | 1..1 | RoadOrCarriagewayOrLaneManagementTypeEnum |
| SpeedManagement | speedManagementType | Speed management type | Type of speed management action instigated by operator. | 0..1 | SpeedManagementTypeEnum |
|  | temporarySpeedLimit | Temporary speed limit | Temporary limit defining the maximum advisory or mandatory speed of vehicles. | 0..1 | KilometresPerHour |
| WinterDrivingManagement | winterEquipmentManagementType | Winter equipment management type | Type of winter equipment management action instigated by operator. | 1..1 | WinterEquipmentManagementTypeEnum |

Table 8— Attributes of the "NetworkManagement" 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 9— Classes of the "OperatorAction" package

* + - 1. "OperatorAction" package association roles

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

* + - 1. "OperatorAction" package attributes

| **Class name** | **Attribute name** | **Designation** | **Definition** | **Multiplicity** | **Type** |
| --- | --- | --- | --- | --- | --- |
| OperatorAction | actionOrigin | Action origin | Indicates whether the actions to be undertaken by the operator are the result of an internal operation or external influence. | 0..1 | OperatorActionOriginEnum |
|  | actionPlanIdentifier | Action plan identifier | The identifier of the traffic management action plan to which this action relates. | 0..1 | String |
|  | operatorActionStatus | Operator action status | The status of the defined operator action. | 0..1 | OperatorActionStatusEnum |

Table 10— Attributes of the "OperatorAction" 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 11— 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** |
| --- | --- | --- | --- | --- |
| 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 |
| SituationRecord | Situation record | An identifiable versioned instance of a single record/element within a situation. | versionedIdentifiable | yes |

Table 12— 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 |
|  | nonGeneralPublicComment | Non general public comment | A comment which should not be distributed to the general public. | 0..\* | Comment |

Table 13— 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 |
|  | commentDateTime | Comment date time | The date/time at which the comment was made. | 0..1 | DateTime |
|  | commentType | Comment type | A classification of the the type of comment. | 0..1 | CommentTypeEnum |
| SituationRecord | confidentialityOverride | Confidentiality override | The extent to which the related information may be circulated, according to the recipient type. Recipients must comply with this confidentiality statement. This overrides any confidentiality defined for the situation as a whole in the header information. | 0..1 | ConfidentialityValueEnum |
|  | 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 |
|  | situationRecordCreationReference | Situation record creation reference | A unique alphanumeric reference (either an external reference or GUID) of the SituationRecord object (the first version of the record) that was created by the original supplier. | 0..1 | String |
|  | 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 |
|  | situationRecordFirstSupplierVersionTime | Situation record first supplier version time | The date/time that the current version of the Situation Record was written into the database of the original supplier in the supply chain. | 0..1 | DateTime |
|  | situationRecordObservationTime | Situation record observation time | The date/time that the information represented by the current version of the SituationRecord was observed by the original (potentially external) source of the information. | 0..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 14— Attributes of the "SituationRecord" 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 15— 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 16— 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 | overrunning | Overrunning | The activity or action described by the SituationRecord is still in progress, overrunning its planned duration as indicated in a previous version of this record. | 0..1 | Boolean |
|  | validityStatus | Validity status | Specification of validity, either explicitly overriding the validity time specification or confirming it. | 1..1 | ValidityStatusEnum |

Table 17— 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 |
| HeaviestAxleWeightCharacteristic | Heaviest axle weight characteristic | Weight characteristic of the heaviest axle on the vehicle. |  | no |
| HeightCharacteristic | Height characteristic | Height characteristic of a vehicle. |  | no |
| LengthCharacteristic | Length characteristic | Length characteristic of a vehicle. |  | no |
| NumberOfAxlesCharacteristic | Number of axles characteristic | Number of axles characteristic of a vehicle. |  | no |
| VehicleCharacteristics | Vehicle characteristics | The characteristics of a vehicle, e.g. lorry of gross weight greater than 30 tonnes. |  | no |
| WidthCharacteristic | Width characteristic | Width characteristic of a vehicle. |  | no |

Table 18— 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 |
| HeaviestAxleWeightCharacteristic | comparisonOperator | Comparison operator | The operator to be used in the vehicle characteristic comparison operation. | 1..1 | ComparisonOperatorEnum |
|  | heaviestAxleWeight | Heaviest axle weight | The weight of the heaviest axle on the vehicle. | 1..1 | Tonnes |
| HeightCharacteristic | comparisonOperator | Comparison operator | The operator to be used in the vehicle characteristic comparison operation. | 1..1 | ComparisonOperatorEnum |
|  | vehicleHeight | Vehicle height | The height of the highest part, excluding antennae, of an individual vehicle above the road surface, in metres. | 1..1 | MetresAsFloat |
| LengthCharacteristic | comparisonOperator | Comparison operator | The operator to be used in the vehicle characteristic comparison operation. | 1..1 | ComparisonOperatorEnum |
|  | vehicleLength | Vehicle length | The overall distance between the front and back of an individual vehicle, including the length of any trailers, couplings, etc. | 1..1 | MetresAsFloat |
| NumberOfAxlesCharacteristic | comparisonOperator | Comparison operator | The operator to be used in the vehicle characteristic comparison operation. | 1..1 | ComparisonOperatorEnum |
|  | numberOfAxles | Number of axles | The total number of axles of an individual vehicle. | 1..1 | NonNegativeInteger |
| VehicleCharacteristics | fuelType | Fuel type | The type of fuel used by the vehicle. | 0..1 | FuelTypeEnum |
|  | loadType | Load type | The type of load carried by the vehicle, especially in respect of hazardous loads. | 0..1 | LoadTypeEnum |
|  | vehicleEquipment | Vehicle equipment | The type of equipment in use or on board the vehicle. | 0..1 | VehicleEquipmentEnum |
|  | vehicleType | Vehicle type | Vehicle type. | 0..\* | VehicleTypeEnum |
|  | vehicleUsage | Vehicle usage | The type of usage of the vehicle (i.e. for what purpose is the vehicle being used). | 0..1 | VehicleUsageEnum |
| WidthCharacteristic | comparisonOperator | Comparison operator | The operator to be used in the vehicle characteristic comparison operation. | 1..1 | ComparisonOperatorEnum |
|  | vehicleWidth | Vehicle width | The maximum width of an individual vehicle, in metres. | 1..1 | MetresAsFloat |

Table 19— Attributes of the "VehicleCharacteristics" package

* 1. Data Dictionary of <<datatypes>> for “ASFINAG Network Management dynamic”

This clause contains the definitions of all data types which are used in the “ASFINAG Network Management dynamic”.

* + 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>> "Percentage"

A measure of percentage.

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

A measure of weight defined in metric tonnes.

* 1. Data Dictionary of <<enumerations>> for “ASFINAG Network Management dynamic”

This clause contains the definitions of all enumerations which are used in the “ASFINAG Network Management dynamic”.

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

Classification of comment types.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| abnormalLoadMovementNote | Abnormal load movement note | A free text human oriented note describing details of abnormal load movements associated with the SituationRecord. |
| dataProcessingNote | Data processing note | A free text human oriented note describing the way the information in the SituationRecord has been or should be processed. |
| description | Description | A free text human oriented description of the situation element defined by the SituationRecord. |
| internalNote | Internal note | A free text human oriented note that supports internal traffic control operations relating to the situation element defined by the SituationRecord. |
| locationDescriptor | Location descriptor | A free text human oriented description of the location of the situation element defined by the SituationRecord. |
| other | Other | Other than as defined in this enumeration. |
| warning | Warning | A free text human oriented warning relating to the SituationRecord, such as advising the recipient that an advanced warning on VMS should be activated. |

Table 20— Values contained in the enumeration "CommentTypeEnum"

* + 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 21— 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 22— 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 and traffic operators | 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 23— Values contained in the enumeration "ConfidentialityValueEnum"

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

List of directions of travel.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| allDirections | All directions | All directions (where more than two are applicable) at this point on the road network. |
| anticlockwise | Anticlockwise | Anti-clockwise. |
| bothWays | Both ways | Both directions that are applicable at this point on the road network. |
| clockwise | Clockwise | Clockwise. |
| eastBound | East bound | East bound general direction. |
| inboundTowardsTown | Inbound towards town | Heading towards town centre direction of travel. |
| innerRing | Inner ring | Inner ring direction. |
| northBound | North bound | North bound general direction. |
| northEastBound | North east bound | North east bound general direction. |
| northWestBound | North west bound | North west bound general direction. |
| opposite | Opposite | Opposite direction to the normal direction of flow at this point on the road network. |
| other | Other | Other than as defined in this enumeration. |
| outboundFromTown | Outbound from town | Heading out of or away from the town centre direction of travel. |
| outerRing | Outer ring | Outer ring direction. |
| southBound | South bound | South bound general direction. |
| southEastBound | South east bound | South east bound general direction. |
| southWestBound | South west bound | South west bound general direction. |
| unknown | Unknown | Direction is unknown. |
| westBound | West bound | West bound general direction. |

Table 24— Values contained in the enumeration "DirectionEnum"

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

Type of fuel used by a vehicle.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| battery | Battery | Battery. |
| biodiesel | Biodiesel | Biodiesel. |
| diesel | Diesel | Diesel. |
| dieselBatteryHybrid | Diesel battery hybrid | Diesel and battery hybrid. |
| ethanol | Ethanol | Ethanol. |
| hydrogen | Hydrogen | Hydrogen. |
| liquidGas | Liquid gas | Liquid gas of any type including LPG. |
| lpg | LPG | Liquid petroleum gas. |
| methane | Methane | Methane gas. |
| petrol | Petrol | Petrol. |
| petrolBatteryHybrid | Petrol battery hybrid | Petrol and battery hybrid. |

Table 25— Values contained in the enumeration "FuelTypeEnum"

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

General instructions that may be issued to road users (specifically drivers and sometimes passengers) by an operator or operational system in support of network management activities or emergency situations.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| allowEmergencyVehiclesToPass | Allow emergency vehicles to pass | Allow emergency vehicles to pass. |
| approachWithCare | Approach with care | Approach with care. |
| avoidTheArea | Avoid the area | Drivers are to avoid the area. |
| closeAllWindowsTurnOffHeaterAndVents | Close all windows turn off heater and vents | Close all windows and turn off heater and vents. |
| crossJunctionWithCare | Cross junction with care | Cross junction with care. |
| doNotAllowUnnecessaryGaps | Do not allow unnecessary gaps | Do not allow unnecessary gaps. |
| doNotLeaveYourVehicle | Do not leave your vehicle | Do not leave your vehicle. |
| doNotThrowOutAnyBurningObjects | Do not throw out any burning objects | Do not throw out any burning objects. |
| doNotUseNavigationSystems | Do not use navigation systems | Do not use navigation systems to determine routing. |
| driveCarefully | Drive carefully | Drive carefully. |
| driveWithExtremeCaution | Drive with extreme caution | Drive with extreme caution. |
| flashYourLights | Flash your lights | Flash your lights to warn oncoming traffic of hazard ahead. |
| followTheVehicleInFrontSmoothly | Follow the vehicle in front smoothly | Follow the vehicle in front, smoothly. |
| increaseNormalFollowingDistance | Increase normal following distance | Increase normal following distance. |
| inEmergencyWaitForPatrolService | In emergency wait for patrol service | In emergency, wait for patrol service (either road operator or police patrol service). |
| keepYourDistance | Keep your distance | Keep your distance. |
| leaveYourVehicleProceedToNextSafePlace | Leave your vehicle proceed to next safe place | Leave your vehicle and proceed to next safe place. |
| noNakedFlames | No naked flames | No naked flames. |
| noOvertaking | No overtaking | No overtaking on the specified section of road. |
| noSmoking | No smoking | No smoking. |
| noStopping | No stopping | No stopping. |
| noUturns | No U-turns | No U-turns. |
| observeAmberAlert | Observe amber alert | Observe current amber alert (an emergency alert issued for a missing or abducted child). |
| observeSignals | Observe signals | Observe signals. |
| observeSigns | Observe signs | Observe signs. |
| onlyTravelIfAbsolutelyNecessary | Only travel if absolutely necessary | Only travel if absolutely necessary. |
| other | Other | Other than as defined in this enumeration. |
| overtakeWithCare | Overtake with care | Overtake with care. |
| pullOverToTheEdgeOfTheRoadway | Pull over to the edge of the roadway | Pull over to the edge of the roadway. |
| stopAtNextSafePlace | Stop at next safe place | Stop at next safe place. |
| stopAtNextServiceArea | Stop at next service area | Stop at next rest service area or car park. |
| switchOffEngine | Switch off engine | Switch off engine. |
| switchOffMobilePhonesAndTwoWayRadios | Switch off mobile phones and two way radios | Switch off mobile phones and two-way radios. |
| testYourBrakes | Test your brakes | Test your brakes. |
| useBusService | Use bus service | Use bus service. |
| useFogLights | Use fog lights | Use fog lights. |
| useHazardWarningLights | Use hazard warning lights | Use hazard warning lights. |
| useHeadlights | Use headlights | Use headlights. |
| useRailService | Use rail service | Use rail service. |
| useTramService | Use tram service | Use tram service. |
| useUndergroundService | Use underground service | Use underground service. |
| waitForEscortVehicle | Wait for escort vehicle | Wait for escort vehicle. |

Table 26— Values contained in the enumeration "GeneralInstructionToRoadUsersTypeEnum"

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

Types of network management actions.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| bridgeSwingInOperation | Bridge swing in operation | The bridge at the specified location has swung or lifted and is therefore temporarily closed to traffic. |
| convoyService | Convoy service | A convoy service is in operation. |
| obstacleSignalling | Obstacle signalling | Signs are being put out before or around an obstacle to protect drivers. |
| other | Other | Other than as defined in this enumeration. |
| rampMeteringInOperation | Ramp metering in operation | Ramp metering is now active at the specified location. |
| temporaryTrafficLights | Temporary traffic lights | Traffic is being controlled by temporary traffic lights (red-yellow-green or red-green). |
| tollGatesOpen | Toll gates open | Toll gates are open with no fee collection at the specified location. |
| trafficBeingManuallyDirected | Traffic being manually directed | Traffic is being manually directed. |
| trafficHeld | Traffic held | Traffic in the specified direction is temporarily held up due to an unplanned event (e.g. for clearance of wreckage following an accident). |

Table 27— Values contained in the enumeration "GeneralNetworkManagementTypeEnum"

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

Types of load carried by a vehicle.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| abnormalLoad | Abnormal load | A load that exceeds normal vehicle dimensions in terms of height, length, width, gross vehicle weight or axle weight or any combination of these. Generally termed an "abnormal load". |
| ammunition | Ammunition | Ammunition. |
| chemicals | Chemicals | Chemicals of unspecified type. |
| combustibleMaterials | Combustible materials | Combustible materials of unspecified type. |
| corrosiveMaterials | Corrosive materials | Corrosive materials of unspecified type. |
| debris | Debris | Debris of unspecified type. |
| empty | Empty | No load. |
| explosiveMaterials | Explosive materials | Explosive materials of unspecified type. |
| extraHighLoad | Extra high load | A load of exceptional height. |
| extraLongLoad | Extra long load | A load of exceptional length. |
| extraWideLoad | Extra wide load | A load of exceptional width. |
| fuel | Fuel | Fuel of unspecified type. |
| glass | Glass | Glass. |
| goods | Goods | Any goods of a commercial nature. |
| hazardousMaterials | Hazardous materials | Materials classed as being of a hazardous nature. |
| liquid | Liquid | Liquid of an unspecified nature. |
| livestock | Livestock | Livestock. |
| materials | Materials | General materials of unspecified type. |
| materialsDangerousForPeople | Materials dangerous for people | Materials classed as being of a danger to people or animals. |
| materialsDangerousForTheEnvironment | Materials dangerous for the environment | Materials classed as being potentially dangerous to the environment. |
| materialsDangerousForWater | Materials dangerous for water | Materials classed as being dangerous when exposed to water (e.g. materials which may react exothermically with water). |
| oil | Oil | Oil. |
| ordinary | Ordinary | Materials that present limited environmental or health risk. Non-combustible, non-toxic, non-corrosive. |
| other | Other | Other than as defined in this enumeration. |
| perishableProducts | Perishable products | Products or produce that will significantly degrade in quality or freshness over a short period of time. |
| petrol | Petrol | Petrol or petroleum. |
| pharmaceuticalMaterials | Pharmaceutical materials | Pharmaceutical materials. |
| radioactiveMaterials | Radioactive materials | Materials that emit significant quantities of electro-magnetic radiation that may present a risk to people, animals or the environment. |
| refuse | Refuse | Refuse. |
| toxicMaterials | Toxic materials | Materials of a toxic nature which may damage the environment or endanger public health. |
| vehicles | Vehicles | Vehicles of any type which are being transported. |

Table 28— Values contained in the enumeration "LoadTypeEnum"

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

Origins of operator actions.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| external | External | Operator action originated externally to the authority which is taking the action. |
| internal | Internal | Operator action originated within the authority which is taking the action. |

Table 29— Values contained in the enumeration "OperatorActionOriginEnum"

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

List of statuses associated with operator actions.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| approved | Approved | The action has been approved by the recipient of the request but activity to implement the action has not yet commenced. |
| beingImplemented | Being implemented | The action is in the process of being implemented. |
| beingTerminated | Being terminated | The action is in the process of being terminated either because the action has reached the end of its validity period or because new circumstances have arisen and its termination has been requested, e.g. because of a traffic jam on the alternative route. |
| implemented | Implemented | The action is fully implemented. |
| rejected | Rejected | The action has been rejected by the recipient of the request and hence is not implemented. |
| requested | Requested | A request, either internal or external, has been received to implement an action. It has neither been approved nor has any activity yet been undertaken to implement the action. |
| terminationRequested | Termination requested | A request, either internal or external, has been received to terminate the action, but activity to terminate the action has not yet commenced. |

Table 30— Values contained in the enumeration "OperatorActionStatusEnum"

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

Categories of person.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| adult | Adult | Adult. |
| child | Child | Child (age 4 to 17). |
| emergencyServicesPerson | Emergency services person | A member of the emergency services, other than the police. |
| fireman | Fireman | A member of the fire service. |
| infant | Infant | Infant (age 0 to 3). |
| medicalStaff | Medical staff | A member of the medical service. |
| memberOfThePublic | Member of the public | A member of the general public. |
| policeman | Policeman | A member of the police force. |
| politician | Politician | A politician. |
| publicTransportPassenger | Public transport passenger | A passenger on or from a public transport vehicle. |
| sickPerson | Sick person | A sick person. |
| trafficOfficer | Traffic officer | A traffic patrol officer of the road authority. |
| trafficWarden | Traffic warden | A member of the local traffic warden service. |
| veryImportantPerson | Very important person | A very important person. |

Table 31— Values contained in the enumeration "PersonCategoryEnum"

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

List of types of places.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| aroundBendsInTheRoad | Around bends in the road | Around bends in the road. |
| atCustomsPosts | At customs posts | At customs posts. |
| atHighAltitudes | At high altitudes | At high altitudes. |
| atTollPlazas | At toll plazas | At toll plazas. |
| inBuiltUpAreas | In built up areas | In built up areas, i.e. villages, towns and cities. |
| inContraflowSections | In contraflow sections | In sections of the road where contraflow is in operation. |
| inForestedAreas | In forested areas | On sections of the road where it runs through or adjacent to forested areas. |
| inGalleries | In galleries | In galleries. |
| inLowLyingAreas | In low lying areas | In low lying areas. |
| inRoadworksAreas | In roadworks areas | In roadworks areas. |
| inRuralAreas | In rural areas | In rural areas, i.e. outside villages, towns and cities. |
| inShadedAreas | In shaded areas | In shaded areas. |
| inTheCityCentre | In the city centre | In the city centre. |
| inTheInnerCityAreas | In the inner city areas | In the inner city areas. |
| inTunnels | In tunnels | In tunnels. |
| onBridges | On bridges | On bridges. |
| onDownHillSections | On down hill sections | On down hill sections of the road. |
| onDualCarriagewaySections | On dual carriageway sections | On dual carriageway sections of the road. |
| onElevatedSections | On elevated sections | On elevated sections of the road. |
| onEnteringOrLeavingTunnels | On entering or leaving tunnels | On entering or leaving tunnels. |
| onEnteringTheCountry | On entering the country | On entry into the country. |
| onFlyovers | On flyovers | On flyover sections of the road, i.e. sections of the road which pass over another road. |
| onLeavingTheCountry | On leaving the country | On leaving the country. |
| onMotorways | On motorways | On motorways. |
| onNonMotorways | On non motorways | On non motorways. |
| onPasses | On passes | On mountain passes. |
| onRoundabouts | On roundabouts | On roundabouts. |
| onSingleCarriagewaySections | On single carriageway sections | On single carriageway sections of the road. |
| onSlipRoads | On slip roads | On slip roads. |
| onUndergroundSections | On underground sections | On underground sections of the road. |
| onUnderpasses | On underpasses | On underpasses, i.e. sections of the road which pass under another road. |
| onUpHillSections | On up hill sections | On hill sections of the road. |
| other | Other | Other than as defined in this enumeration. |
| overTheCrestOfHills | Over the crest of hills | Over the crest of hills. |

Table 32— Values contained in the enumeration "PlacesEnum"

* + 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. |
| probable | Probable | The source has a reasonably high level of confidence of the occurrence of the situation record version content. |
| riskOf | Risk of | The source has a moderate level of confidence of the occurrence of the situation record version content. |

Table 33— Values contained in the enumeration "ProbabilityOfOccurrenceEnum"

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

Management actions relating to road, carriageway or lane usage.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| carPoolLaneInOperation | Car pool lane in operation | Dedicated car pool lane(s) are in operation for vehicles carrying at least the specified number of occupants. |
| carriagewayClosures | Carriageway closures | Carriageway closures are in operation at the specified location. |
| clearALaneForEmergencyVehicles | Clear a lane for emergency vehicles | Clear a lane for emergency vehicles. |
| clearALaneForSnowploughsAndGrittingVehicles | Clear a lane for snowploughs and gritting vehicles | Clear a lane for snow ploughs and gritting vehicles. |
| closedPermanentlyForTheWinter | Closed permanently for the winter | The road is closed to vehicles with the specified characteristics or all, if none defined, for the duration of the winter. |
| contraflow | Contraflow | Two-way traffic is temporarily sharing a single carriageway. |
| doNotUseSpecifiedLanesOrCarriageways | Do not use specified lanes or carriageways | Do not use the specified lane(s) or carriageway(s). |
| hardShoulderRunningInOperation | Hard shoulder running in operation | The hard shoulder is open as an operational lane. |
| 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. |
| keepToTheLeft | Keep to the left | Keep to the left. |
| keepToTheRight | Keep to the right | Keep to the right. |
| 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. |
| lanesDeviated | Lanes deviated | Lane deviations are in operation at the specified location. |
| narrowLanes | Narrow lanes | Normal lane widths are temporarily reduced. |
| newRoadworksLayout | New roadworks layout | A new layout of lanes/carriageway has been implemented associated with roadworks. |
| other | Other | Other than as defined in this enumeration. |
| overnightClosures | Overnight closures | Every night the road is closed to vehicles with the specified characteristics or all, if none defined, in the specified direction by decision of the appropriate authorities. |
| roadCleared | Road cleared | The road has been cleared of earlier reported problems. |
| roadClosed | Road closed | The road is closed to vehicles with the specified characteristics or all, if none defined, in the specified direction. |
| rollingRoadBlock | Rolling road block | Traffic officers or police are driving slowly in front of a queue of traffic to create a gap in the traffic to allow for clearance activities to take place in safety on the road ahead. |
| rushHourLaneInOperation | Rush hour lane in operation | Dedicated rush (peak) hour lane(s) are in operation. |
| singleAlternateLineTraffic | Single alternate line traffic | Traffic is being controlled to move in alternate single lines. This control may be undertaken by traffic lights or flagman. |
| tidalFlowLaneInOperation | Tidal flow lane in operation | Dedicated tidal flow lane(s) are in operation in the specified direction. |
| turnAroundInOperation | Turn around in operation | Traffic is being directed back down the opposite carriageway, possibly requiring the temporary removal of the central crash barrier. |
| useOfSpecifiedLanesOrCarriagewaysAllowed | Use of specified lanes or carriageways allowed | The specified lane(s) or carriageway(s) may be used. The normal lane(s) or carriageway(s) restrictions are not currently in force. |
| useSpecifiedLanesOrCarriageways | Use specified lanes or carriageways | Use the specified lane(s) or carriageway(s). |
| vehicleStorageInOperation | Vehicle storage in operation | Vehicles are being stored on the roadway and/or at a rest area or service area at the specified location. |
| weightRestrictionInOperation | Weight restriction in operation | A weight restriction is in operation. |

Table 34— 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** |
| --- | --- | --- |
| high | High | Perceived by supplier as being of a high level. |
| highest | Highest | Perceived by supplier as being of the highest level. |
| low | Low | Perceived by supplier as being of a low level. |
| lowest | Lowest | Perceived by supplier as being of the lowest discernible level. |
| medium | Medium | Perceived by supplier as being of a medium level. |
| none | None | Perceived by supplier as having a severity rating of none. |
| unknown | Unknown | Perceived by supplier as being of an unknown level. |

Table 35— Values contained in the enumeration "SeverityEnum"

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

Management actions relating to speed.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| activeSpeedControlInOperation | Active speed control in operation | Automatic speed control measures are in place at the specified location, whereby speed limits are set by an automatic system which is triggered by traffic sensing equipment. |
| doNotSlowdownUnnecessarily | Do not slowdown unnecessarily | Do not slow down unnecessarily. |
| observeSpeedLimit | Observe speed limit | Observe speed limit. |
| other | Other | Other than as defined in this enumeration. |
| policeSpeedChecksInOperation | Police speed checks in operation | Police speed checks are in operation. |
| reduceYourSpeed | Reduce your speed | Reduce your speed. |
| speedRestrictionInOperation | Speed restriction in operation | A speed restriction is in operation. |

Table 36— Values contained in the enumeration "SpeedManagementTypeEnum"

* + 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. |
| carriagewayPartiallyObstructed | Carriageway partially obstructed | The carriageway is partially 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. |
| lanesPartiallyObstructed | Lanes partially obstructed | One or more lanes is partially 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. |
| roadPartiallyObstructed | Road partially obstructed | The road is partially obstructed in both directions due to an unplanned event. |

Table 37— Values contained in the enumeration "TrafficConstrictionTypeEnum"

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

Types of traffic, mostly classified by its destination type.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| accessOnlyTraffic | Access only traffic | Traffic destined for local access only. |
| destinedForAirport | Destined for airport | Traffic destined for the airport. |
| destinedForAirportArrivals | Destined for airport arrivals | Traffic destined for airport arrivals. |
| destinedForAirportDepartures | Destined for airport departures | Traffic destined for airport departures. |
| destinedForFerryService | Destined for ferry service | Traffic destined for the ferry service. |
| destinedForRailService | Destined for rail service | Traffic destined for the rail service. |
| holidayTraffic | Holiday traffic | Traffic heading towards holiday destinations. |
| localTraffic | Local traffic | Traffic heading towards local destinations. |
| longDistanceTraffic | Long distance traffic | Traffic heading towards destinations which are a long distance away. |
| regionalTraffic | Regional traffic | Traffic heading towards local regional destinations. |
| residentsOnlyTraffic | Residents only traffic | Local residents only traffic. |
| throughTraffic | Through traffic | Traffic which is not for local access, i.e. traffic not destined for local town, city or built up area but for transit though the area. |
| visitorTraffic | Visitor traffic | Traffic heading towards local visitor attraction. |

Table 38— Values contained in the enumeration "TrafficTypeEnum"

* + 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 39— Values contained in the enumeration "ValidityStatusEnum"

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

Types of vehicle equipment in use or on board.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| notUsingSnowChains | Not using snow chains | Vehicle not using snow chains. |
| notUsingSnowChainsOrTyres | Not using snow chains or tyres | Vehicle not using either snow tyres or snow chains. |
| snowChainsInUse | Snow chains in use | Vehicle using snow chains. |
| snowChainsOrTyresInUse | Snow chains or tyres in use | Vehicle using snow tyres or snow chains. |
| snowTyresInUse | Snow tyres in use | Vehicle using snow tyres. |
| withoutSnowTyresOrChainsOnBoard | Without snow tyres or chains on board | Vehicle which is not carrying on board snow tyres or chains. |

Table 40— Values contained in the enumeration "VehicleEquipmentEnum"

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

Types of vehicle.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| agriculturalVehicle | Agricultural vehicle | Vehicle normally used for agricultural purposes, e.g. tractor, combined harvester etc. |
| anyVehicle | Any vehicle | Vehicle of any type. |
| articulatedVehicle | Articulated vehicle | Articulated vehicle. |
| bicycle | Bicycle | Bicycle. |
| bus | Bus | Bus. |
| car | Car | Car. |
| caravan | Caravan | Caravan. |
| carOrLightVehicle | Car or light vehicle | Car or light vehicle. |
| carWithCaravan | Car with caravan | Car towing a caravan. |
| carWithTrailer | Car with trailer | Car towing a trailer. |
| constructionOrMaintenanceVehicle | Construction or maintenance vehicle | Vehicle normally used for construction or maintenance purposes, e.g. digger, excavator, bulldozer, lorry mounted crane etc. |
| fourWheelDrive | Four wheel drive | Four wheel drive vehicle. |
| highSidedVehicle | High sided vehicle | High sided vehicle. |
| lorry | Lorry | Lorry of any type. |
| moped | Moped | Moped (a two wheeled motor vehicle characterized by a small engine typically less than 50cc and by normally having pedals). |
| motorcycle | Motorcycle | Motorcycle. |
| motorcycleWithSideCar | Motorcycle with side car | Three wheeled vehicle comprising a motorcycle with an attached side car. |
| motorscooter | Motorscooter | Motorscooter (a two wheeled motor vehicle characterized by a step-through frame and small diameter wheels). |
| other | Other | Other than as defined in this enumeration. |
| tanker | Tanker | Vehicle with large tank for carrying bulk liquids. |
| threeWheeledVehicle | Three wheeled vehicle | Three wheeled vehicle of unspecified type. |
| trailer | Trailer | Trailer. |
| tram | Tram | Tram. |
| twoWheeledVehicle | Two wheeled vehicle | Two wheeled vehicle of unspecified type. |
| van | Van | Van. |
| vehicleWithCaravan | Vehicle with caravan | Vehicle (of unspecified type) towing a caravan. |
| vehicleWithCatalyticConverter | Vehicle with catalytic converter | Vehicle with catalytic converter. |
| vehicleWithoutCatalyticConverter | Vehicle without catalytic converter | Vehicle without catalytic converter. |
| vehicleWithTrailer | Vehicle with trailer | Vehicle (of unspecified type) towing a trailer. |
| withEvenNumberedRegistrationPlates | With even numbered registration plates | Vehicle with even numbered registration plate. |
| withOddNumberedRegistrationPlates | With odd numbered registration plates | Vehicle with odd numbered registration plate. |

Table 41— Values contained in the enumeration "VehicleTypeEnum"

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

Types of usage of a vehicle.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| agricultural | Agricultural | Vehicle used for agricultural purposes. |
| commercial | Commercial | Vehicle which is limited to non-private usage or public transport usage. |
| emergencyServices | Emergency services | Vehicle used by the emergency services. |
| military | Military | Vehicle used by the military. |
| nonCommercial | Non commercial | Vehicle used for non-commercial or private purposes. |
| patrol | Patrol | Vehicle used as part of a patrol service, e.g. road operator or automobile association patrol vehicle. |
| recoveryServices | Recovery services | Vehicle used to provide a recovery service. |
| roadMaintenanceOrConstruction | Road maintenance or construction | Vehicle used for road maintenance or construction work purposes. |
| roadOperator | Road operator | Vehicle used by the road operator. |
| taxi | Taxi | Vehicle used to provide an authorised taxi service. |

Table 42— Values contained in the enumeration "VehicleUsageEnum"

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

Instructions relating to the use of winter equipment.

| **Enumerated value name** | **Designation** | **Definition** |
| --- | --- | --- |
| doNoUseStudTyres | Do no use stud tyres | Do not use stud tyres. |
| other | Other | Other than as defined in this enumeration. |
| useSnowChains | Use snow chains | Use snow chains. |
| useSnowChainsOrTyres | Use snow chains or tyres | Use snow chains or snow tyres. |
| useSnowTyres | Use snow tyres | Use snow tyres. |
| winterEquipmentOnBoardRequired | Winter equipment on board required | The carrying of winter equipment (snow chains and/or snow tyres) is required. |

Table 43— Values contained in the enumeration "WinterEquipmentManagementTypeEnum"

* 1. Alphabetical list of attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute name** | **Class name** | **Designation** | **Definition** | **Multiplicity** | **Type** |
| actionOrigin | OperatorAction | Action origin | Indicates whether the actions to be undertaken by the operator are the result of an internal operation or external influence. | 0..1 | OperatorActionOriginEnum |
| actionPlanIdentifier | OperatorAction | Action plan identifier | The identifier of the traffic management action plan to which this action relates. | 0..1 | String |
| applicableForTrafficDirection | NetworkManagement | Applicable for traffic direction | The ultimate traffic direction to which the network management is applicable. | 0..\* | DirectionEnum |
| applicableForTrafficType | NetworkManagement | Applicable for traffic type | The type of traffic to which the network management is applicable. | 0..\* | TrafficTypeEnum |
| automaticallyInitiated | NetworkManagement | Automatically initiated | Defines whether the network management is initiated by an automatic system. | 0..1 | Boolean |
| capacityRemaining | Impact | Capacity remaining | The ratio of current capacity to the normal (free flow) road capacity in the defined direction, expressed as a percentage. Capacity is the maximum number of vehicles that can pass a specified point on the road, in unit time given the specified conditions. | 0..1 | Percentage |
| comment | Comment | Comment | A free text comment that can be used by the operator to convey un-coded observations/information. | 1..1 | MultilingualString |
| commentDateTime | Comment | Comment date time | The date/time at which the comment was made. | 0..1 | DateTime |
| commentType | Comment | Comment type | A classification of the the type of comment. | 0..1 | CommentTypeEnum |
| comparisonOperator | GrossWeightCharacteristic | Comparison operator | The operator to be used in the vehicle characteristic comparison operation. | 1..1 | ComparisonOperatorEnum |
| comparisonOperator | HeaviestAxleWeightCharacteristic | Comparison operator | The operator to be used in the vehicle characteristic comparison operation. | 1..1 | ComparisonOperatorEnum |
| comparisonOperator | HeightCharacteristic | Comparison operator | The operator to be used in the vehicle characteristic comparison operation. | 1..1 | ComparisonOperatorEnum |
| comparisonOperator | NumberOfAxlesCharacteristic | Comparison operator | The operator to be used in the vehicle characteristic comparison operation. | 1..1 | ComparisonOperatorEnum |
| comparisonOperator | LengthCharacteristic | Comparison operator | The operator to be used in the vehicle characteristic comparison operation. | 1..1 | ComparisonOperatorEnum |
| comparisonOperator | WidthCharacteristic | 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 |
| confidentialityOverride | SituationRecord | Confidentiality override | The extent to which the related information may be circulated, according to the recipient type. Recipients must comply with this confidentiality statement. This overrides any confidentiality defined for the situation as a whole in the header information. | 0..1 | ConfidentialityValueEnum |
| fuelType | VehicleCharacteristics | Fuel type | The type of fuel used by the vehicle. | 0..1 | FuelTypeEnum |
| generalInstructionToRoadUsersType | GeneralInstructionOrMessageToRoadUsers | General instruction to road users type | General instruction that is issued by the network/road operator which is applicable to drivers and sometimes passengers. | 0..1 | GeneralInstructionToRoadUsersTypeEnum |
| generalMessageToRoadUsers | GeneralInstructionOrMessageToRoadUsers | General message to road users | General message that is issued by the network/road operator which is applicable to drivers and sometimes passengers, e.g. details about an amber alert (missing or abducted child alert). | 0..1 | MultilingualString |
| generalNetworkManagementType | GeneralNetworkManagement | General network management type | The type of traffic management action instigated by the network/road operator. | 1..1 | GeneralNetworkManagementTypeEnum |
| grossVehicleWeight | GrossWeightCharacteristic | Gross vehicle weight | The gross weight of the vehicle and its load, including any trailers. | 1..1 | Tonnes |
| heaviestAxleWeight | HeaviestAxleWeightCharacteristic | Heaviest axle weight | The weight of the heaviest axle on the vehicle. | 1..1 | Tonnes |
| loadType | VehicleCharacteristics | Load type | The type of load carried by the vehicle, especially in respect of hazardous loads. | 0..1 | LoadTypeEnum |
| minimumCarOccupancy | RoadOrCarriagewayOrLaneManagement | Minimum car occupancy | The minimum number of persons required in a vehicle in order for it to be allowed to transit the specified road section. | 0..1 | NonNegativeInteger |
| numberOfAxles | NumberOfAxlesCharacteristic | Number of axles | The total number of axles of an individual vehicle. | 1..1 | NonNegativeInteger |
| 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 |
| numberOfOperationalLanes | Impact | Number of operational lanes | The number of usable lanes in the specified direction which remain fully operational (this may include the hard shoulder if it is being used as an operational lane). | 0..1 | NonNegativeInteger |
| operatorActionStatus | OperatorAction | Operator action status | The status of the defined operator action. | 0..1 | OperatorActionStatusEnum |
| originalNumberOfLanes | Impact | Original number of lanes | The normal number of usable lanes in the specified direction that the carriageway has before reduction due to roadworks or traffic events. | 0..1 | NonNegativeInteger |
| 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 |
| overrunning | Validity | Overrunning | The activity or action described by the SituationRecord is still in progress, overrunning its planned duration as indicated in a previous version of this record. | 0..1 | Boolean |
| placesAtWhichApplicable | NetworkManagement | Places at which applicable | Places, in generic terms, at which the network management applies. | 0..\* | PlacesEnum |
| predefinedLocationReference | LocationByReference | Predefined location reference | A reference to a versioned predefined location.  ASFINAG: This class & this attribute will only be used in a two-file solution (i.e. together with a static file with predefined locations), not with the ‘single file solution’ | 1..1 | VersionedReference |
| probabilityOfOccurrence | SituationRecord | Probability of occurrence | An assessment of the degree of likelihood that the reported event will occur. | 1..1 | ProbabilityOfOccurrenceEnum |
| residualRoadWidth | Impact | Residual road width | The total width of the combined operational lanes in the specified direction. | 0..1 | MetresAsFloat |
| roadOrCarriagewayOrLaneManagementType | RoadOrCarriagewayOrLaneManagement | Road or carriageway or lane management type | Type of road, carriageway or lane management action instigated by operator. | 1..1 | RoadOrCarriagewayOrLaneManagementTypeEnum |
| 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 |
| situationRecordCreationReference | SituationRecord | Situation record creation reference | A unique alphanumeric reference (either an external reference or GUID) of the SituationRecord object (the first version of the record) that was created by the original supplier. | 0..1 | String |
| 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 |
| situationRecordFirstSupplierVersionTime | SituationRecord | Situation record first supplier version time | The date/time that the current version of the Situation Record was written into the database of the original supplier in the supply chain. | 0..1 | DateTime |
| situationRecordObservationTime | SituationRecord | Situation record observation time | The date/time that the information represented by the current version of the SituationRecord was observed by the original (potentially external) source of the information. | 0..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 |
| speedManagementType | SpeedManagement | Speed management type | Type of speed management action instigated by operator. | 0..1 | SpeedManagementTypeEnum |
| temporarySpeedLimit | SpeedManagement | Temporary speed limit | Temporary limit defining the maximum advisory or mandatory speed of vehicles. | 0..1 | KilometresPerHour |
| 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 |
| trafficManuallyDirectedBy | GeneralNetworkManagement | Traffic manually directed by | Type of person that is manually directing traffic (applicable if generalNetworkManagementType is set to "trafficBeingManuallyDirected"). | 0..1 | PersonCategoryEnum |
| validityStatus | Validity | Validity status | Specification of validity, either explicitly overriding the validity time specification or confirming it. | 1..1 | ValidityStatusEnum |
| vehicleEquipment | VehicleCharacteristics | Vehicle equipment | The type of equipment in use or on board the vehicle. | 0..1 | VehicleEquipmentEnum |
| vehicleHeight | HeightCharacteristic | Vehicle height | The height of the highest part, excluding antennae, of an individual vehicle above the road surface, in metres. | 1..1 | MetresAsFloat |
| vehicleLength | LengthCharacteristic | Vehicle length | The overall distance between the front and back of an individual vehicle, including the length of any trailers, couplings, etc. | 1..1 | MetresAsFloat |
| vehicleType | VehicleCharacteristics | Vehicle type | Vehicle type. | 0..\* | VehicleTypeEnum |
| vehicleUsage | VehicleCharacteristics | Vehicle usage | The type of usage of the vehicle (i.e. for what purpose is the vehicle being used). | 0..1 | VehicleUsageEnum |
| vehicleWidth | WidthCharacteristic | Vehicle width | The maximum width of an individual vehicle, in metres. | 1..1 | MetresAsFloat |
| winterEquipmentManagementType | WinterDrivingManagement | Winter equipment management type | Type of winter equipment management action instigated by operator. | 1..1 | WinterEquipmentManagementTypeEnum |

Table 44- 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 |
| locationContainedInGroup | NonOrderedLocationGroupByList | Location contained in group | A location contained in a non ordered group of locations. | 2..\* | Location |
| locationContainedInItinerary | ItineraryByIndexedLocations | Location contained in itinerary | A location contained in an itinerary (i.e. an ordered set of locations defining a route or itinerary). | 1..1 | Location |
| locationForDisplay | Location | Location for display | A location which may be used by clients for visual display on user interfaces. | 0..1 | PointCoordinates |
| nonGeneralPublicComment | SituationRecord | Non general public comment | A comment which should not be distributed to the general public. | 0..\* | Comment |
| routeDestination | Itinerary | Route destination | Destination of a route or final location in an itinerary. | 0..\* | Destination |
| 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 45- Alphabetical list of roles

* 1. Figures

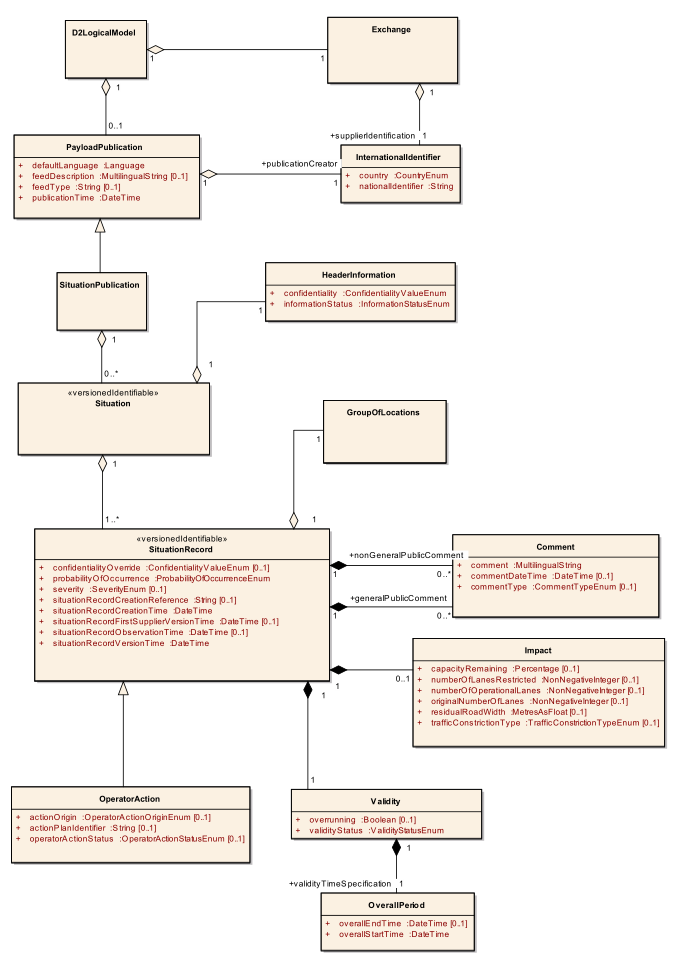


Figure 1: Situation Publication

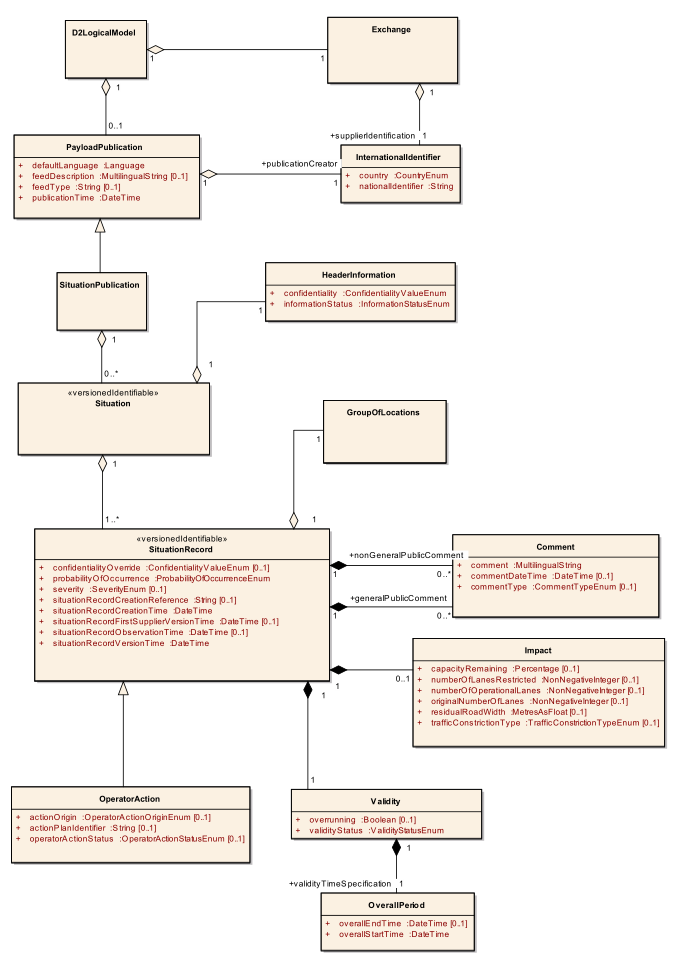


Figure 2: Operator Action

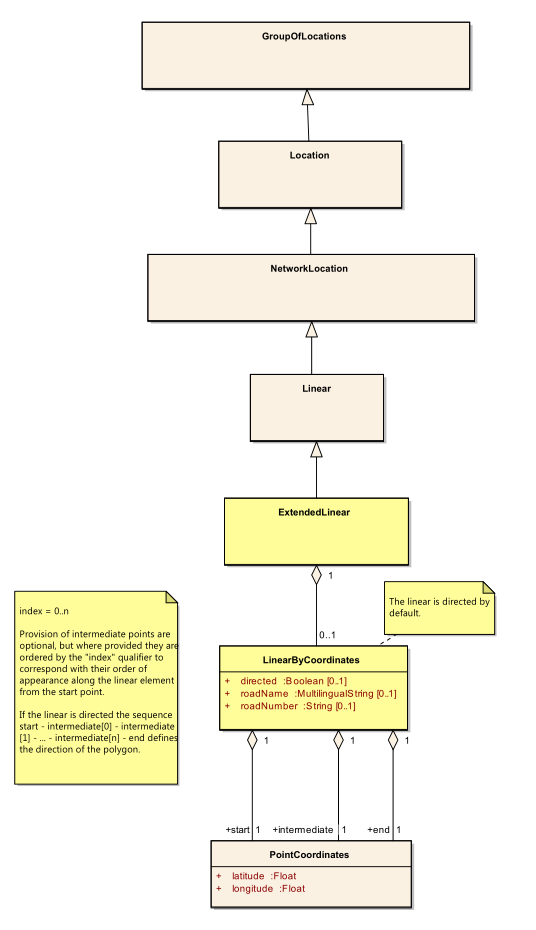


Figure 3: LinearByCoordinates when using single file solution  
(location reference classes not included in this document)  
OR when using a static file.

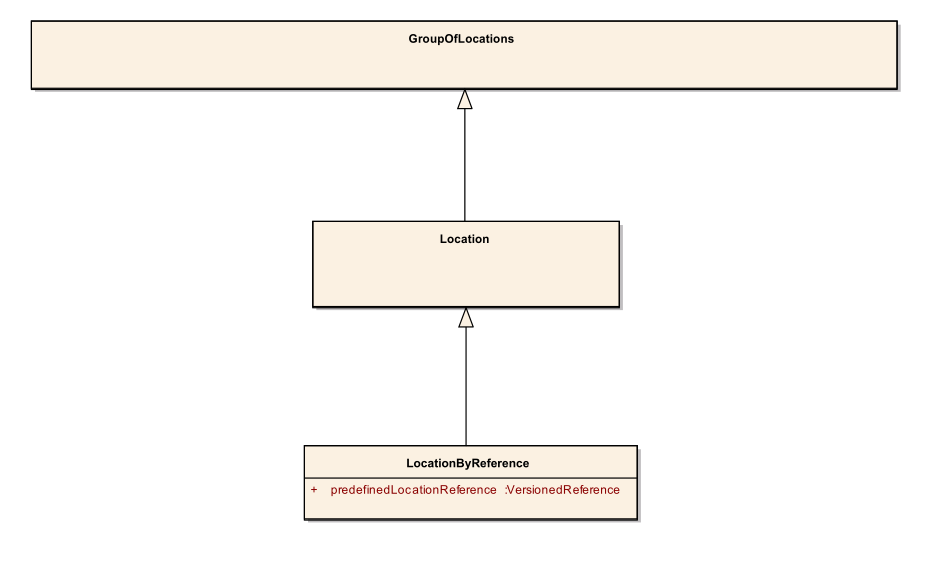


Figure 4: LocationByReference when using a static file in addition

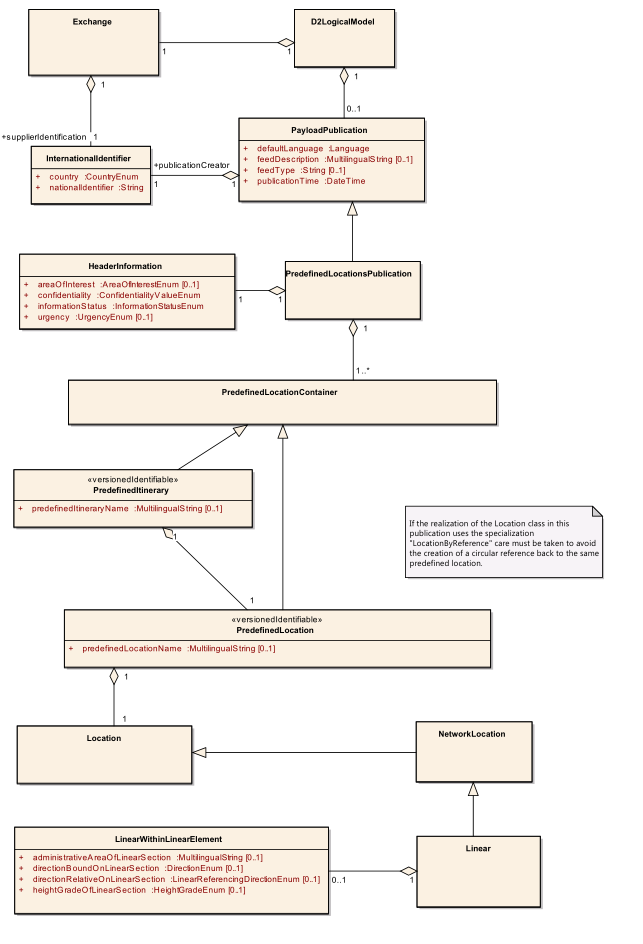


Figure 5: PredefinedLocationPublication (static structure, not part of this document)

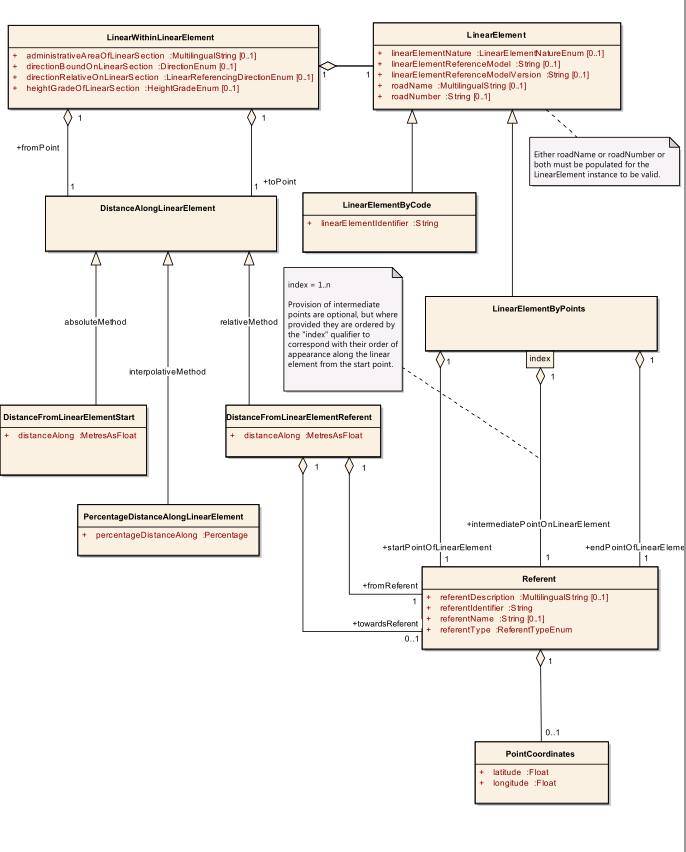


Figure 6: LinearWithinLinear (static structure, not part of this document)



Figure 7: Supplementary Positional Description and Affected Carriageways and Lanes  
(static structure, not part of this document)