

DATEX II profile for RestAreas – Dynamic part

ASFINAG

Version 00-02-00

A.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 dynamic part of Rest Areas.

The DATEX standard location referencing methods are not included in this document. ASFINAG specific documentation (for example the basis of computation) is accentuated in colour.

A.2 Data Dictionary for "ASFINAG Rest Areas - Dynamic Part"

A.2.1 "GenericPublication" package

A.2.1.1 "GenericPublication" package classes

Class name	Designation	Definition	Stereotype	Abstract
GenericPublication	Generic publication	A publication used to make level B extensions at the publication level.		no

Table 1— Classes of the "GenericPublication" package

A.2.1.2 "GenericPublication" package association roles

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

A.2.1.3 "GenericPublication" package attributes

Class name	Attribute name	Designation	Definition	Multiplicity	Type
GenericPublication	genericPublicationName	Generic publication name	The name of the generic publication.	1..1	String

Table 2— Attributes of the "GenericPublication" package

A.2.2 "ParkingRecordStatus" package

A.2.2.1 "ParkingRecordStatus" package classes

Class name	Designation	Definition	Stereotype	Abstract
GroupOfParkingSitesStatus	Group of parking sites status	Dynamic status information for the static object 'GroupOfParkingSites'.		no
GroupOfParkingSpacesStatus	Group of parking spaces status	The status of the assigned parking spaces in the specified parking site, i.e. the status of those spaces assigned for particular types of person or vehicle and/or for specific duration types (e.g. short stay).		no
ParkingAccessStatus	Parking access status	The opening and fault status of one access.		no
ParkingEquipmentOrServiceFacilityStatus	Parking equipment or service facility status	The number of E&S can be overridden here (for example during restoration). Furthermore, the current availability of E&S can be given (for example number of free electric charging stations). The E&S are identified from the static model by an index.		no
ParkingOccupancy	Parking occupancy	Parking capacity information for the parking site as well as for AssignedParkingSpaces.		no
ParkingRecordStatus	Parking record status	Contains the current status of one parking record defined in the static model (i.e. parking site or group of parking sites) or historical or forecasted data for one parking. Only for the second case, 'parkingStatusTime' must be specified.		yes
ParkingRouteStatus	Parking route status	The status of a parking route (active/inactive) defined in the static part of the model.		no
ParkingSiteStatus	Parking site status	Dynamic status information for the static object 'ParkingSite'.		no
ParkingSpaceStatus	Parking space status	Status (occupied or closed) for a single parking space which was defined in the static part of the model.		no
ParkingStatusValidity	Parking status validity	To be used only for historical or forecasted data. Choose between an explicit point of time, an offset or all points of time within a specified period.		no
ParkingUsageScenarioStatus	Parking usage scenario status	The current status for this parking usage scenario.		no

Table 3— Classes of the "ParkingRecordStatus" package

A.2.2.2 "ParkingRecordStatus" package association roles

Class name	Role name	Designation	Definition	Multiplicity	Target
ParkingRecordStatus	overrideParkingThresholds	Override parking thresholds	Possibility to override the thresholds for the parking, which are in principle defined in the static part of the model (ParkingStatusPublication).	0..1	ParkingThresholds
ParkingStatusValidity	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).	0..1	OverallPeriod

Table 4— Associations of the "ParkingRecordStatus" package

A.2.2.3 "ParkingRecordStatus" package attributes

Class name	Attribute name	Designation	Definition	Multiplicity	Type
GroupOfParkingSitesStatus	groupOfParkingSitesStatus	Group of parking sites status	The status of the group of parking sites (available spaces or not).	0..1	GroupOfParkingSitesStatusEnum
GroupOfParkingSpacesStatus	groupDeclarationValidNow	Group declaration valid now	Override validity of AssignedParkingSpaces: True = Parking space declaration is valid now; False = Parking space declaration is invalid now; Omitted = Static validity information is significant (if static validity is omitted too, declaration is valid).	0..1	Boolean
	groupOfParkingSpacesClosed	Group of parking spaces closed	True: The group of parking spaces is closed / not accessible. False or omitted: The group of parking spaces is accessible. This is no statement about its occupation.	0..1	Boolean
ParkingAccessStatus	accessFault	Access fault	A fault indicator for this special access.	0..*	ParkingFaultEnum
	accessOpeningStatus	Access opening status	The opening status of this access.	0..1	OpeningStatusEnum
	accessReference	Access reference	The reference to an access defined in the static part of the model.	1..1	Reference
ParkingEquipmentOrServiceFacilityStatus	equipmentOperationStatus	Equipment operation status	Specifies whether this equipment is available / is in operation or not.	0..1	OperationStatusEnum
	numberOfEquipmentOrServiceFacilityOverride	Number of equipment or service facility override	Overrides the static value 'numberOfEquipmentOrServiceFacility' (for example because of long- or midterm closures, such as renovation).	0..1	NonNegativeInteger
	numberOfSubitemsOverride	Number of subitems override	Overrides the static value 'numberOfSubitems' (for example because of long- or midterm closures, such as renovation).	0..1	NonNegativeInteger
	serviceFacilityOpeningStatus	Service facility opening status	Specifies whether this service facility is open or not.	0..1	OpeningStatusEnum

Class name	Attribute name	Designation	Definition	Multiplicity	Type
	vacantEquipmentOrServiceFacilitySubitems	Vacant equipment or service facility subitems	Sets the number of currently vacant elements of either equipment (e.g. free toilets) or service facility sub items (e.g. free restaurant places).	0..1	NonNegativeInteger
ParkingOccupancy	parkingNotAllowed	Parking not allowed	In case of 'true', parking is not allowed (e.g. abnormal closure).	0..1	Boolean
	parkingNumberOfOccupiedSpaces	Parking number of occupied spaces	The number of currently occupied spaces in the specified parking site, group of parking sites or assigned parking.	0..1	NonNegativeInteger
	parkingNumberOfSpacesOverride	Parking number of spaces override	Possibility to override the static value 'parkingNumberOfSpaces'.	0..1	NonNegativeInteger
	parkingNumberOfVacantSpaces	Parking number of vacant spaces	The total number of currently vacant parking spaces available in the specified parking site, group of parking sites or group of parking spaces.	0..1	NonNegativeInteger
	parkingNumberOfVacantSpacesGraded	Parking number of vacant spaces graded	Number of vacant spaces by grading (enumeration).	0..1	ParkingVacantSpacesEnum
	parkingNumberOfVacantSpacesHigherThan	Parking number of vacant spaces higher than	The number of vacant parking spaces is higher than the given value (example: More than 10 spaces are free).	0..1	NonNegativeInteger
	parkingNumberOfVacantSpacesLowerThan	Parking number of vacant spaces lower than	The number of vacant parking spaces is lower than the given value (example: Less than 10 spaces are free).	0..1	NonNegativeInteger
	parkingNumberOfVehicles	Parking number of vehicles	Number of vehicles (of specified type) on the parking site, the group of parking sites or the group of parking spaces. Parking too narrow or too wide may effect differences to the 'occupiedSpaces' value. Should not include petrol station traffic.	0..1	NonNegativeInteger
	parkingOccupancy	Parking occupancy	The percentage value of parking spaces occupied in the specified parking site, group of parking sites or assigned parking.	0..1	Percentage
	parkingOccupancyGraded	Parking occupancy graded	Occupied parking spaces by a percentage-grading (enumeration).	0..1	ParkingOccupancyEnum

Class name	Attribute name	Designation	Definition	Multiplicity	Type
	parkingOccupancyTrend	Parking occupancy trend	The trend of the occupancy of the parking spaces in the specified parking site, group of parking sites or assigned parking.	0..1	ParkingOccupancyTrendEnum
ParkingRecordStatus	blurredAvailability	Blurred availability	When true, all information about availability (free spaces etc.) is blurred (usually because of business competition).	0..*	Boolean
	parkingConditions	Parking conditions	Defines if normal parking conditions are suspended or special parking conditions are in force.	0..1	ParkingConditionsEnum
	parkingFault	Parking fault	A fault indicator for the parking site.	0..*	ParkingFaultEnum
	parkingQueueingTime	Parking queueing time	The current queueing time (duration) for entering the parking site.	0..1	Seconds
	parkingRecordReference	Parking record reference	A reference to a static parking record object, i.e. a parking site or a group of parking sites.	1..1	VersionedReference
	parkingStatusDescription	Parking status description	Additional textual information about the parking status. Can also be used as an alternative in case the enumeration values for 'parkingSiteStatus' or 'groupOfParkingSitesStatus' do not fit.	0..1	MultilingualString
	parkingStatusOriginTime	Parking status origin time	The time when the information in this message was generated. Unless 'ParkingStatusValidity' is used, this is also the time the information in this message refers to.	1..1	DateTime
	winterEquipmentManagementType	Winter equipment management type	Type of winter equipment management action instigated by operator.	0..*	WinterEquipmentManagementTypeEnum
ParkingRouteStatus	parkingRouteActive	Parking route active	Defines if this parking route is currently active or not.	1..1	Boolean
	parkingRouteReference	Parking route reference	A reference to a parking route.	1..1	VersionedReference

Class name	Attribute name	Designation	Definition	Multiplicity	Type
ParkingSiteStatus	parkingSiteFullAtFloor	Parking site full at floor	The parking site is full at the specified floor(s).	0..*	Integer
	parkingSiteOpeningStatus	Parking site opening status	The opening status of the parking site (open or not).	1..1	OpeningStatusEnum
	parkingSiteOvercrowdingStatus	Parking site overcrowding status	The overcrowding status of the parking site. Choose between using a two-stage approach or the more general statement '(not) overcrowding'. You can sharpen this information by using the 'Thresholds' component.	0..1	ParkingSiteOvercrowdingStatusEnum
	parkingSiteStatus	Parking site status	The status of the parking site (spaces available or not).	1..1	ParkingSiteStatusEnum
ParkingSpaceStatus	lastCalibration	Last calibration	Date of last calibration of the detection system in question.	0..1	DateTime
	measurementOrCalculationTime	Measurement or calculation time	Point in time at which this specific value or set of values has been measured or calculated. It may also be a future time at which a data value is predicted.	0..1	DateTime
	parkingSpaceClosed	Parking space closed	True: The parking space is closed / not accessible. False or omitted: The parking space is accessible. This is no statement about its occupation.	0..1	Boolean
	parkingSpaceDeclarationValidNow	Parking space declaration valid now	Override validity of 'ParkingSpace': True = Parking space declaration is valid now; False = Parking space declaration is invalid now; Omitted = Static validity information is significant (if static validity is omitted too, declaration is valid).	0..1	Boolean
	parkingSpaceOccupied	Parking space occupied	True: Parking space is occupied; False: Parking space is free.	1..1	Boolean
ParkingStatusValidity	parkingStatusTime	Parking status time	Only use for forecasts or historical data to express the point of time for which the information of this parking is either reported or forecasted. Alternately you can define this point of time as an offset with 'parkingStatusTimeOffsetToOrigin'.	0..1	DateTime

Class name	Attribute name	Designation	Definition	Multiplicity	Type
	parkingStatusTimeOffsetToOrigin	Parking status time offset to origin	Only use for forecasts or historical data to express the point of time for which the information of this parking is either reported or forecasted (in form of an offset in seconds to 'parkingStatusOriginTime'; use negative values for historical data).	0..1	Seconds
ParkingUsageScenarioStatus	usageScenarioOperationStatus	Usage scenario operation status	The current status for this parking usage scenario.	1..1	OperationStatusEnum

Table 5— Attributes of the "ParkingRecordStatus" package

A.2.3 "ParkingStatusPublication" package

A.2.3.1 "ParkingStatusPublication" package classes

Class name	Designation	Definition	Stereotype	Abstract
ParkingStatusPublication	Parking status publication	A publication containing the current status of one or more parking sites and/or group of parking sites.		no

Table 6— Classes of the "ParkingStatusPublication" package

A.2.3.2 "ParkingStatusPublication" package association roles

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

A.2.3.3 "ParkingStatusPublication" package attributes

Class name	Attribute name	Designation	Definition	Multiplicity	Type
ParkingStatusPublication	parkingTableReference	Parking table reference	It is possible to limit the publication to one or more ParkingTable and to set a reference to these tables here.	0..*	VersionedReference

Table 7— Attributes of the "ParkingStatusPublication" package

A.2.4 "ParkingVehicleCountAndRate" package

A.2.4.1 "ParkingVehicleCountAndRate" package classes

Class name	Designation	Definition	Stereotype	Abstract
VehicleCountAndRate	Vehicle count and rate	Vehicle rates can be assigned to a parking site or to assigned parking spaces. Furthermore, they can reference to a measurement site or to an entrance/exit.		no
VehicleCountWithinInterval	Vehicle count within interval	Gives incoming and/or outgoing vehicles and/or change of occupied spaces within a given interval. The interval is given in positive or negative seconds related to 'measurementOrCalculationTime' or 'measurementDefaultTime'.		no
VehicleRate	Vehicle rate	Gives information about fill and exit rates OR vehicle flow rate (without direction). If the time stamp is omitted, 'measurementTimeDefault' is used.		no

Table 8— Classes of the "ParkingVehicleCountAndRate" package

A.2.4.2 "ParkingVehicleCountAndRate" package association roles

Class name	Role name	Designation	Definition	Multiplicity	Target
VehicleCountWithinInterval	changeOfOccupiedSpaces	Change of occupied spaces	The change in the number of occupied spaces for specified vehicles within the given interval. Negative values mean less occupied spaces than at the beginning of the interval.	0..1	OccupancyChangeValue
	countedVehicles	Counted vehicles		0..1	VehicleCharacteristics
	numberOfIncomingVehicles	Number of incoming vehicles	Number of vehicles of specified type that entered the specified parking within the given interval.	0..1	VehicleCountValue
	numberOfOutgoingVehicles	Number of outgoing vehicles	Number of vehicles of specified type that left the specified parking within the given interval.	0..1	VehicleCountValue
VehicleRate	exitRate	Exit rate	The rate at which vehicles are exiting the parking.	0..1	VehicleFlowValue
	fillRate	Fill rate	The rate at which vehicles are entering the parking.	0..1	VehicleFlowValue
	measuredVehicles	Measured vehicles		0..1	VehicleCharacteristics
	vehicleFlowRate	Vehicle flow rate	A value of vehicle flow rate expressed in vehicles per hour.	0..1	VehicleFlowValue

Table 9— Associations of the "ParkingVehicleCountAndRate" package

A.2.4.3 "ParkingVehicleCountAndRate" package attributes

Class name	Attribute name	Designation	Definition	Multiplicity	Type
VehicleCountAndRate	coveringPetrolStationArea	Covering petrol station area	Indication, if this detector also covers the area of a petrol station.	0..1	Boolean
	dedicatedAccess	Dedicated access	Specifies a reference to an access, object (i.e. an entrance, an exit or both). A Point location and further characteristics can be specified for those objects.	0..1	Reference
	lastCalibration	Last calibration	Date of last calibration of the detection system in question.	0..1	DateTime
	measuredValueIndex	Measured value index	If a measurement site is specified, the index of the measured value can be specified here.	0..1	NonNegativeInteger
	measurementSiteReference	Measurement site reference	A reference to a versioned measurement site record defined in a Measurement Site table.	0..1	VersionedReference
	measurementTimeDefault	Measurement time default	The time associated with the set of measurements. It may be the time of the beginning, the end or the middle of the measurement period.	0..1	DateTime
VehicleCountWithinInterval	measurementInterval	Measurement interval	Interval for which the data applies. Usually, this value should be negative. Example: -300 = last 5 minutes up to 'measurementOrCalculationTime' or 'measurementTimeDefault'. Use a positive value only for predictions. Example: 600 = next ten minutes.	1..1	Seconds
	measurementOrCalculationTime	Measurement or calculation time	Point in time at which this specific value or set of values has been measured or calculated. It may also be a future time at which a data value is predicted.	0..1	DateTime
VehicleRate	measurementOrCalculationTime	Measurement or calculation time	Point in time at which this specific value or set of values has been measured or calculated. It may also be a future time at which a data value is predicted.	0..1	DateTime

Table 10— Attributes of the "ParkingVehicleCountAndRate" package

A.2.5 "Validity" package

A.2.5.1 "Validity" package classes

Class name	Designation	Definition	Stereotype	Abstract
DayWeekMonth	Day week month	Specification of periods defined by the intersection of days, weeks and months.		no
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
Period	Period	A continuous time period or a set of discontinuous time periods defined by the intersection of a set of criteria all within an overall delimiting interval.		no
Validity	Validity	Specification of validity, either explicitly or by a validity time period specification which may be discontinuous.		no

Table 11— Classes of the "Validity" package

A.2.5.2 "Validity" package association roles

Class name	Role name	Designation	Definition	Multiplicity	Target
OverallPeriod	exceptionPeriod	Exception period	A single time period, a recurring time period or a set of different recurring time periods during which validity is false.	0..*	Period
	validPeriod	Valid period	A single time period, a recurring time period or a set of different recurring time periods during which validity is true.	0..*	Period
Period	recurringDayWeekMonthPeriod	Recurring day week month period	A recurring period defined in terms of days of the week, weeks of the month and months of the year.	0..*	DayWeekMonth
	recurringTimePeriodOfDay	Recurring time period of day	A recurring period of a day.	0..*	TimePeriodOfDay
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 12— Associations of the "Validity" package

A.2.5.3 "Validity" package attributes

Class name	Attribute name	Designation	Definition	Multiplicity	Type
DayWeekMonth	applicableDay	Applicable day	Applicable day of the week. "All days of the week" is expressed by non-inclusion of this attribute.	0..7	DayEnum
	applicableMonth	Applicable month	Applicable month of the year. "All months of the year" is expressed by non-inclusion of this attribute.	0..12	MonthOfYearEnum
	applicableWeek	Applicable week	Applicable week of the month (1 to 5). "All weeks of the month" is expressed by non-inclusion of this attribute.	0..5	WeekOfMonthEnum
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
Period	endOfPeriod	End of period	End of a period.	0..1	DateTime
	periodName	Period name	The name of the period.	0..1	MultilingualString
	startOfPeriod	Start of period	Start of period.	0..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 13— Attributes of the "Validity" package

A.2.6 "VehicleCharacteristics" package

A.2.6.1 "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 14— Classes of the "VehicleCharacteristics" package

A.2.6.2 "VehicleCharacteristics" package association roles

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

A.2.6.3 "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
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
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 15— Attributes of the "VehicleCharacteristics" package

A.3 Data Dictionary of <<datatype>> for "ASFINAG Rest Areas - Dynamic Part"

This clause contains the definitions of all data types which are used in the "ASFINAG Rest Areas - Dynamic Part".

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

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

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

A measure of percentage.

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

Seconds.

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

A measure of weight defined in metric tonnes.

A.4 Data Dictionary of <<enumerations>> for "ASFINAG Rest Areas - Dynamic Part"

This clause contains the definitions of all enumerations which are used in the "ASFINAG Rest Areas - Dynamic Part".

A.4.1 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 16— Values contained in the enumeration "ComparisonOperatorEnum"

A.4.2 The <<enumeration>> "DayEnum"

Days of the week.

Enumerated value name	Designation	Definition
friday	Friday	Friday.
monday	Monday	Monday.
saturday	Saturday	Saturday.
sunday	Sunday	Sunday.
thursday	Thursday	Thursday.
tuesday	Tuesday	Tuesday.
wednesday	Wednesday	Wednesday.

Table 17— Values contained in the enumeration "DayEnum"

A.4.3 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 18— Values contained in the enumeration "FuelTypeEnum"

A.4.4 The <<enumeration>> "GroupOfParkingSitesStatusEnum"

The status of the group of parking sites (available spaces or not).

Enumerated value name	Designation	Definition
allParkingsFull	All parkings full	All parkings within the group are full.
enoughSpacesAvailable	Enough spaces available	Enough spaces available within the group.
multiStoreyParkingsFull	Multi storey parkings full	All multi storey parkings within the group are full.
noMoreParkingSpacesAvailable	No more parking spaces available	No more parking spaces available within the group.
other	Other	Other.
unknown	Unknown	The status of the group of parking sites is unknown.

Table 19— Values contained in the enumeration "GroupOfParkingSitesStatusEnum"

A.4.5 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.

Enumerated value name	Designation	Definition
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 electromagnetic 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 20— Values contained in the enumeration "LoadTypeEnum"

A.4.6 The <<enumeration>> "MonthOfYearEnum"

A list of the months of the year.

Enumerated value name	Designation	Definition
april	April	The month of April.
august	August	The month of August.
december	December	The month of December.
february	February	The month of February.
january	January	The month of January.
july	July	The month of July.
june	June	The month of June.
march	March	The month of March.
may	May	The month of May.
november	November	The month of November.
october	October	The month of October.
september	September	The month of September.

Table 21— Values contained in the enumeration "MonthOfYearEnum"

A.4.7 The <<enumeration>> "OpeningStatusEnum"

The opening status of some entity (e.g. parking site, service facility, access,...)

Enumerated value name	Designation	Definition
closed	Closed	Closed, usually because of the regular opening times.
closedAbnormal	Closed abnormal	Closed because of some scheduled or unscheduled event, like holiday, maintenance, construction works or any kind of problems. It is possible that the closure will last for some time.
open	Open	Open resp. available.
openingTimesInForce	Opening times in force	The normal opening times are in force, i.e. it is not explicit said if it's open right now.
other	Other	Other.
statusUnknown	Status unknown	The opening status is unknown.

Table 22— Values contained in the enumeration "OpeningStatusEnum"

A.4.8 The <<enumeration>> "OperationStatusEnum"

Specifies, whether some scenario or equipment is in operation or not.

Enumerated value name	Designation	Definition
inOperation	In operation	The specified element is in operation right now.
limitedOperation	Limited operation	The specified element is in operation on a limited basis.
notInOperation	Not in operation	The specified element is not operating right now.
notInOperationAbnormal	Not in operation abnormal	The specified element is not operating due to abnormal conditions (holidays, restoration-works, long-term closure,).
technicalDefect	Technical defect	The specified element is not in operation due to a technical defect.
unknown	Unknown	There is no information about the operation status.

Table 23— Values contained in the enumeration "OperationStatusEnum"

A.4.9 The <<enumeration>> "ParkingConditionsEnum"

Defines if normal parking conditions are suspended or special parking conditions are in force.

Enumerated value name	Designation	Definition
normalParkingConditionsSuspended	Normal parking conditions suspended	The parking conditions (possibly including tariffs) that normally apply are temporarily suspended.
other	Other	Other.
specialParkingConditionsInForce	Special parking conditions in force	Parking conditions, other than those that normally apply, are currently in force for the parking site.

Table 24— Values contained in the enumeration "ParkingConditionsEnum"

A.4.10 The <<enumeration>> "ParkingFaultEnum"

Types of parking site or access faults.

Enumerated value name	Designation	Definition
barrierMalfunction	Barrier malfunction	The entrance or exit barrier(s) are malfunctioning causing access problems to vehicles.
communicationsFailure	Communications failure	Communications failure affecting parking site.
entranceExitObstructed	Entrance exit obstructed	One or more entrances or exits are obstructed to some degree causing access problems to vehicles.
erroneousOccupancyDisplayed	Erroneous occupancy displayed	Occupancy information displayed on signs associated with parking site (e.g. at entrance) are erroneous.
erroneousOccupancyInformation	Erroneous occupancy information	Occupancy information is subject to errors due to malfunctioning equipment.
noParkingInformationAvailable	No parking information available	No parking information available.
other	Other	Other than as defined in this enumeration.
paymentMachinesInoperative	Payment machines inoperative	Payment machines are not functioning normally.
reservationServiceOutOfOrder	Reservation service out of order	Reservation service out of order.
unknown	Unknown	Unknown parking facility fault.
unspecified	Unspecified	General fault of unspecified type.

Table 25— Values contained in the enumeration "ParkingFaultEnum"

A.4.11 The <<enumeration>> "ParkingOccupancyEnum"

Parking Occupancy enum.

Enumerated value name	Designation	Definition
expectCarParkToBeFull	Expect car park to be full	Expect car park to be full.
full	Full	Full.
percentage10	Percentage10	10% full.
percentage20	Percentage20	20% full.
percentage30	Percentage30	30% full.
percentage40	Percentage40	40% full.
percentage50	Percentage50	50% full.
percentage60	Percentage60	60% full.
percentage70	Percentage70	70% full.
percentage80	Percentage80	80% full.
percentage90	Percentage90	90% full.
unknown	Unknown	Unknown.

Table 26— Values contained in the enumeration "ParkingOccupancyEnum"

A.4.12 The <<enumeration>> "ParkingOccupancyTrendEnum"

List of terms used to describe the trend in parking space occupancy.

Enumerated value name	Designation	Definition
decreasing	Decreasing	Parking space occupancy is decreasing.
decreasingQuickly	Decreasing quickly	Parking space occupancy is decreasing quickly.
decreasingSlowly	Decreasing slowly	Parking space occupancy is decreasing slowly.
increasing	Increasing	Parking space occupancy is increasing.
increasingQuickly	Increasing quickly	Parking space occupancy is increasing quickly.
increasingSlowly	Increasing slowly	Parking space occupancy is increasing slowly.
other	Other	Other.
stable	Stable	Parking space occupancy is stable.
unknown	Unknown	Unknown.

Table 27— Values contained in the enumeration "ParkingOccupancyTrendEnum"

A.4.13 The <<enumeration>> "ParkingSiteOvercrowdingStatusEnum"

The overcrowding status of the parking site. Choose between two levels or simply (no) overcrowding.

Enumerated value name	Designation	Definition
noOvercrowding	No overcrowding	The parking site is not overcrowded.
other	Other	Other.
overcrowding	Overcrowding	The parking site is overcrowded (as specified in ParkingThresholds).
overcrowdingLevel1	Overcrowding level1	The parking site is overcrowded at level 1 (as specified in ParkingThresholds).
overcrowdingLevel2	Overcrowding level2	The parking site is overcrowded at level 2 (as specified in ParkingThresholds).
unknown	Unknown	The overcrowding level is unknown.

Table 28— Values contained in the enumeration "ParkingSiteOvercrowdingStatusEnum"

A.4.14 The <<enumeration>> "ParkingSiteStatusEnum"

The status of the parking site (spaces available or not).

Enumerated value name	Designation	Definition
almostFull	Almost full	The parking site is almost full (as defined by its configuration parameters).
full	Full	The parking site is full (as defined by its configuration parameters).
fullAtEntrance	Full at entrance	The parking site is considered full at its entrance (e.g. full sign is displayed at entrance or on managing VMS).
other	Other	Other.
spacesAvailable	Spaces available	Parking spaces are currently available.
unknown	Unknown	The status of the parking site is unknown.

Table 29— Values contained in the enumeration "ParkingSiteStatusEnum"

A.4.15 The <<enumeration>> "ParkingVacantSpacesEnum"

Parking vacant spaces enum.

Enumerated value name	Designation	Definition
expectNoSpacesAvailable	Expect no spaces available	Expect no parking spaces available.
lessThan10SpacesAvailable	Less than10 spaces available	Less than 10 parking spaces available.
lessThan20SpacesAvailable	Less than20 spaces available	Less than 20 parking spaces available.
lessThan30SpacesAvailable	Less than30 spaces available	Less than 30 parking spaces available.
lessThan40SpacesAvailable	Less than40 spaces available	Less than 40 parking spaces available.
lessThan50SpacesAvailable	Less than50 spaces available	Less than 50 parking spaces available.
noParkingSpacesAvailable	No parking spaces available	No parking spaces available.
onlyAFewSpacesAvailable	Only a few spaces available	Only a few parking spaces available.
other	Other	Other.
unknown	Unknown	Unknown.

Table 30— Values contained in the enumeration "ParkingVacantSpacesEnum"

A.4.16 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 31— Values contained in the enumeration "ValidityStatusEnum"

A.4.17 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 32— Values contained in the enumeration "VehicleEquipmentEnum"

A.4.18 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.

Enumerated value name	Designation	Definition
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 33— Values contained in the enumeration "VehicleTypeEnum"

A.4.19 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 34— Values contained in the enumeration "VehicleUsageEnum"

A.4.20 The <<enumeration>> "WeekOfMonthEnum"

Weeks of the month.

Enumerated value name	Designation	Definition
fifthWeekOfMonth	Fifth week of month	Fifth week of the month (at most only 3 days and non in February when not a leap year).
firstWeekOfMonth	First week of month	First week of the month.
fourthWeekOfMonth	Fourth week of month	Fourth week of the month.
secondWeekOfMonth	Second week of month	Second week of the month.
thirdWeekOfMonth	Third week of month	Third week of the month.

Table 35— Values contained in the enumeration "WeekOfMonthEnum"

A.4.21 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 36— Values contained in the enumeration "WinterEquipmentManagementTypeEnum"

A.5 Alphabetical list of attributes

Attribute name	Class name	Designation	Definition	Multiplicity	Type
accessFault	ParkingAccessStatus	Access fault	A fault indicator for this special access.	0..*	ParkingFaultEnum
accessOpeningStatus	ParkingAccessStatus	Access opening status	The opening status of this access.	0..1	OpeningStatusEnum
accessReference	ParkingAccessStatus	Access reference	The reference to an access defined in the static part of the model.	1..1	Reference
applicableDay	DayWeekMonth	Applicable day	Applicable day of the week. "All days of the week" is expressed by non-inclusion of this attribute.	0..7	DayEnum
applicableMonth	DayWeekMonth	Applicable month	Applicable month of the year. "All months of the year" is expressed by non-inclusion of this attribute.	0..12	MonthOfYearEnum

applicableWeek	DayWeekMonth	Applicable week	Applicable week of the month (1 to 5). "All weeks of the month" is expressed by non-inclusion of this attribute.	0..5	WeekOfMonthEnum
blurredAvailability	ParkingRecordStatus	Blurred availability	When true, all information about availability (free spaces etc.) is blurred (usually because of business competition).	0..*	Boolean
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	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
comparisonOperator	NumberOfAxlesCharacteristic	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
coveringPetrolStationArea	VehicleCountAndRate	Covering petrol station area	Indication, if this detector also covers the area of a petrol station.	0..1	Boolean
dedicatedAccess	VehicleCountAndRate	Dedicated access	Specifies a reference to an access, object (i.e. an entrance, an exit or both). A Point location and further characteristics can be specified for those objects.	0..1	Reference
endOfPeriod	Period	End of period	End of a period.	0..1	DateTime
equipmentOperationStatus	ParkingEquipmentOrServiceFacilityStatus	Equipment operation status	Specifies whether this equipment is available / is in operation or not.	0..1	OperationStatusEnum
fuelType	VehicleCharacteristics	Fuel type	The type of fuel used by the vehicle.	0..1	FuelTypeEnum
genericPublicationName	GenericPublication	Generic publication name	The name of the generic publication.	1..1	String
grossVehicleWeight	GrossWeightCharacteristic	Gross vehicle weight	The gross weight of the vehicle and its load, including any trailers.	1..1	Tonnes
groupDeclarationValidNow	GroupOfParkingSpacesStatus	Group declaration valid now	Override validity of AssignedParkingSpaces: True = Parking space declaration is valid now; False = Parking space declaration is invalid now;	0..1	Boolean

			Omitted = Static validity information is significant (if static validity is omitted too, declaration is valid).		
groupOfParkingSitesStatus	GroupOfParkingSitesStatus	Group of parking sites status	The status of the group of parking sites (available spaces or not).	0..1	GroupOfParkingSitesStatusEnum
groupOfParkingSpacesClosed	GroupOfParkingSpacesStatus	Group of parking spaces closed	True: The group of parking spaces is closed / not accessible. False or omitted: The group of parking spaces is accessible. This is no statement about its occupation.	0..1	Boolean
heaviestAxleWeight	HeaviestAxleWeightCharacteristic	Heaviest axle weight	The weight of the heaviest axle on the vehicle.	1..1	Tonnes
lastCalibration	ParkingSpaceStatus	Last calibration	Date of last calibration of the detection system in question.	0..1	DateTime
lastCalibration	VehicleCountAndRate	Last calibration	Date of last calibration of the detection system in question.	0..1	DateTime
loadType	VehicleCharacteristics	Load type	The type of load carried by the vehicle, especially in respect of hazardous loads.	0..1	LoadTypeEnum
measuredValueIndex	VehicleCountAndRate	Measured value index	If a measurement site is specified, the index of the measured value can be specified here.	0..1	NonNegativeInteger
measurementInterval	VehicleCountWithinInterval	Measurement interval	Interval for which the data applies. Usually, this value should be negative. Example: -300 = last 5 minutes up to 'measurementOrCalculationTime' or 'measurementTimeDefault'. Use a positive value only for predictions. Example: 600 = next ten minutes.	1..1	Seconds
measurementOrCalculationTime	VehicleCountWithinInterval	Measurement or calculation time	Point in time at which this specific value or set of values has been measured or calculated. It may also be a future time at which a data value is predicted.	0..1	DateTime
measurementOrCalculationTime	ParkingSpaceStatus	Measurement or calculation time	Point in time at which this specific value or set of values has been measured or	0..1	DateTime

			calculated. It may also be a future time at which a data value is predicted.		
measurementOrCalculationTime	VehicleRate	Measurement or calculation time	Point in time at which this specific value or set of values has been measured or calculated. It may also be a future time at which a data value is predicted.	0..1	DateTime
measurementSiteReference	VehicleCountAndRate	Measurement site reference	A reference to a versioned measurement site record defined in a Measurement Site table.	0..1	VersionedReference
measurementTimeDefault	VehicleCountAndRate	Measurement time default	The time associated with the set of measurements. It may be the time of the beginning, the end or the middle of the measurement period.	0..1	DateTime
numberOfAxles	NumberOfAxlesCharacteristic	Number of axles	The total number of axles of an individual vehicle.	1..1	NonNegativeInteger
numberOfEquipmentOrServiceFacilityOverride	ParkingEquipmentOrServiceFacilityStatus	Number of equipment or service facility override	Overrides the static value 'numberOfEquipmentOrServiceFacility' (for example because of long- or midterm closures, such as renovation).	0..1	NonNegativeInteger
numberOfSubitemsOverride	ParkingEquipmentOrServiceFacilityStatus	Number of subitems override	Overrides the static value 'numberOfSubitems' (for example because of long- or midterm closures, such as renovation).	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
parkingConditions	ParkingRecordStatus	Parking conditions	Defines if normal parking conditions are suspended or special parking conditions are in force.	0..1	ParkingConditionsEnum
parkingFault	ParkingRecordStatus	Parking fault	A fault indicator for the parking site.	0..*	ParkingFaultEnum

parkingNotAllowed	ParkingOccupancy	Parking not allowed	In case of 'true', parking is not allowed (e.g. abnormal closure).	0..1	Boolean
parkingNumberOfOccupiedSpaces	ParkingOccupancy	Parking number of occupied spaces	The number of currently occupied spaces in the specified parking site, group of parking sites or assigned parking.	0..1	NonNegativeInteger
parkingNumberOfSpacesOverride	ParkingOccupancy	Parking number of spaces override	Possibility to override the static value 'parkingNumberOfSpaces'.	0..1	NonNegativeInteger
parkingNumberOfVacantSpaces	ParkingOccupancy	Parking number of vacant spaces	The total number of currently vacant parking spaces available in the specified parking site, group of parking sites or group of parking spaces.	0..1	NonNegativeInteger
parkingNumberOfVacantSpacesGraded	ParkingOccupancy	Parking number of vacant spaces graded	Number of vacant spaces by grading (enumeration).	0..1	ParkingVacantSpacesEnum
parkingNumberOfVacantSpacesHigherThan	ParkingOccupancy	Parking number of vacant spaces higher than	The number of vacant parking spaces is higher than the given value (example: More than 10 spaces are free).	0..1	NonNegativeInteger
parkingNumberOfVacantSpacesLowerThan	ParkingOccupancy	Parking number of vacant spaces lower than	The number of vacant parking spaces is lower than the given value (example: Less than 10 spaces are free).	0..1	NonNegativeInteger
parkingNumberOfVehicles	ParkingOccupancy	Parking number of vehicles	Number of vehicles (of specified type) on the parking site, the group of parking sites or the group of parking spaces. Parking too narrow or too wide may effect differences to the 'occupiedSpaces' value. Should not include petrol station traffic.	0..1	NonNegativeInteger
parkingOccupancy	ParkingOccupancy	Parking occupancy	The percentage value of parking spaces occupied in the specified parking site, group of parking sites or assigned parking.	0..1	Percentage
parkingOccupancyGraded	ParkingOccupancy	Parking occupancy graded	Occupied parking spaces by a percentage-grading (enumeration).	0..1	ParkingOccupancyEnum
parkingOccupancyTrend	ParkingOccupancy	Parking occupancy trend	The trend of the occupancy of the parking spaces in the specified parking site, group of parking sites or assigned parking.	0..1	ParkingOccupancyTrendEnum

parkingQueueingTime	ParkingRecordStatus	Parking queueing time	The current queuing time (duration) for entering the parking site.	0..1	Seconds
parkingRecordReference	ParkingRecordStatus	Parking record reference	A reference to a static parking record object, i.e. a parking site or a group of parking sites.	1..1	VersionedReference
parkingRouteActive	ParkingRouteStatus	Parking route active	Defines if this parking route is currently active or not.	1..1	Boolean
parkingRouteReference	ParkingRouteStatus	Parking route reference	A reference to a parking route.	1..1	VersionedReference
parkingSiteFullAtFloor	ParkingSiteStatus	Parking site full at floor	The parking site is full at the specified floor(s).	0..*	Integer
parkingSiteOpeningStatus	ParkingSiteStatus	Parking site opening status	The opening status of the parking site (open or not).	1..1	OpeningStatusEnum
parkingSiteOvercrowdingStatus	ParkingSiteStatus	Parking site overcrowding status	The overcrowding status of the parking site. Choose between using a two-stage approach or the more general statement '(not) overcrowding'. You can sharpen this information by using the 'Thresholds' component.	0..1	ParkingSiteOvercrowdingStatusEnum
parkingSiteStatus	ParkingSiteStatus	Parking site status	The status of the parking site (spaces available or not).	1..1	ParkingSiteStatusEnum
parkingSpaceClosed	ParkingSpaceStatus	Parking space closed	True: The parking space is closed / not accessible. False or omitted: The parking space is accessible. This is no statement about its occupation.	0..1	Boolean
parkingSpaceDeclarationValidNow	ParkingSpaceStatus	Parking space declaration valid now	Override validity of 'ParkingSpace': True = Parking space declaration is valid now; False = Parking space declaration is invalid now; Omitted = Static validity information is significant (if static validity is omitted too, declaration is valid).	0..1	Boolean
parkingSpaceOccupied	ParkingSpaceStatus	Parking space occupied	True: Parking space is occupied; False: Parking space is free.	1..1	Boolean
parkingStatusDescription	ParkingRecordStatus	Parking status description	Additional textual information about the parking status. Can also be used as an alternative in case the enumeration values for 'parkingSiteStatus' or 'groupOfParkingSitesStatus' do not fit.	0..1	MultilingualString

parkingStatusOriginTime	ParkingRecordStatus	Parking status origin time	The time when the information in this message was generated. Unless 'ParkingStatusValidity' is used, this is also the time the information in this message refers to.	1..1	DateTime
parkingStatusTime	ParkingStatusValidity	Parking status time	Only use for forecasts or historical data to express the point of time for which the information of this parking is either reported or forecasted. Alternately you can define this point of time as an offset with 'parkingStatusTimeOffsetToOrigin'.	0..1	DateTime
parkingStatusTimeOffsetToOrigin	ParkingStatusValidity	Parking status time offset to origin	Only use for forecasts or historical data to express the point of time for which the information of this parking is either reported or forecasted (in form of an offset in seconds to 'parkingStatusOriginTime'; use negative values for historical data).	0..1	Seconds
parkingTableReference	ParkingStatusPublication	Parking table reference	It is possible to limit the publication to one or more ParkingTable and to set a reference to these tables here.	0..*	VersionedReference
periodName	Period	Period name	The name of the period.	0..1	MultilingualString
serviceFacilityOpeningStatus	ParkingEquipmentOrServiceFacilityStatus	Service facility opening status	Specifies whether this service facility is open or not.	0..1	OpeningStatusEnum
startOfPeriod	Period	Start of period	Start of period.	0..1	DateTime
usageScenarioOperationStatus	ParkingUsageScenarioStatus	Usage scenario operation status	The current status for this parking usage scenario.	1..1	OperationStatusEnum
vacantEquipmentOrServiceFacilitySubitems	ParkingEquipmentOrServiceFacilityStatus	Vacant equipment or service facility subitems	Sets the number of currently vacant elements of either equipment (e.g. free toilets) or service facility sub items (e.g. free restaurant places).	0..1	NonNegativeInteger
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
vehicleWidth	WidthCharacteristic	Vehicle width	The maximum width of an individual vehicle, in metres.	1..1	MetresAsFloat
winterEquipmentManagementType	ParkingRecordStatus	Winter equipment management type	Type of winter equipment management action instigated by operator.	0..*	WinterEquipmentManagementTypeEnum

Table 37- Alphabetical list of attributes

A.6 Alphabetical list of roles

Role name	Class name	Designation	Definition	Multiplicity	Target
changeOfOccupiedSpaces	VehicleCountWithinInterval	Change of occupied spaces	The change in the number of occupied spaces for specified vehicles within the given interval. Negative values mean less occupied spaces than at the beginning of the interval.	0..1	OccupancyChangeValue
countedVehicles	VehicleCountWithinInterval	Counted vehicles		0..1	VehicleCharacteristics
exceptionPeriod	OverallPeriod	Exception period	A single time period, a recurring time period or a set of different recurring time periods during which validity is false.	0..*	Period
exitRate	VehicleRate	Exit rate	The rate at which vehicles are exiting the parking.	0..1	VehicleFlowValue
fillRate	VehicleRate	Fill rate	The rate at which vehicles are entering the parking.	0..1	VehicleFlowValue
measuredVehicles	VehicleRate	Measured vehicles		0..1	VehicleCharacteristics

numberOfIncomingVehicles	VehicleCountWithinInterval	Number of incoming vehicles	Number of vehicles of specified type that entered the specified parking within the given interval.	0..1	VehicleCountValue
numberOfOutgoingVehicles	VehicleCountWithinInterval	Number of outgoing vehicles	Number of vehicles of specified type that left the specified parking within the given interval.	0..1	VehicleCountValue
overrideParkingThresholds	ParkingRecordStatus	Override parking thresholds	Possibility to override the thresholds for the parking, which are in principle defined in the static part of the model (ParkingStatusPublication).	0..1	ParkingThresholds
recurringDayWeekMonthPeriod	Period	Recurring day week month period	A recurring period defined in terms of days of the week, weeks of the month and months of the year.	0..*	DayWeekMonth
recurringTimePeriodOfDay	Period	Recurring time period of day	A recurring period of a day.	0..*	TimePeriodOfDay
validityTimeSpecification	ParkingStatusValidity	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).	0..1	OverallPeriod
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
validPeriod	OverallPeriod	Valid period	A single time period, a recurring time period or a set of different recurring time periods during which validity is true.	0..*	Period
vehicleFlowRate	VehicleRate	Vehicle flow rate	A value of vehicle flow rate expressed in vehicles per hour.	0..1	VehicleFlowValue

Table 38- Alphabetical list of roles

A.7 Figures

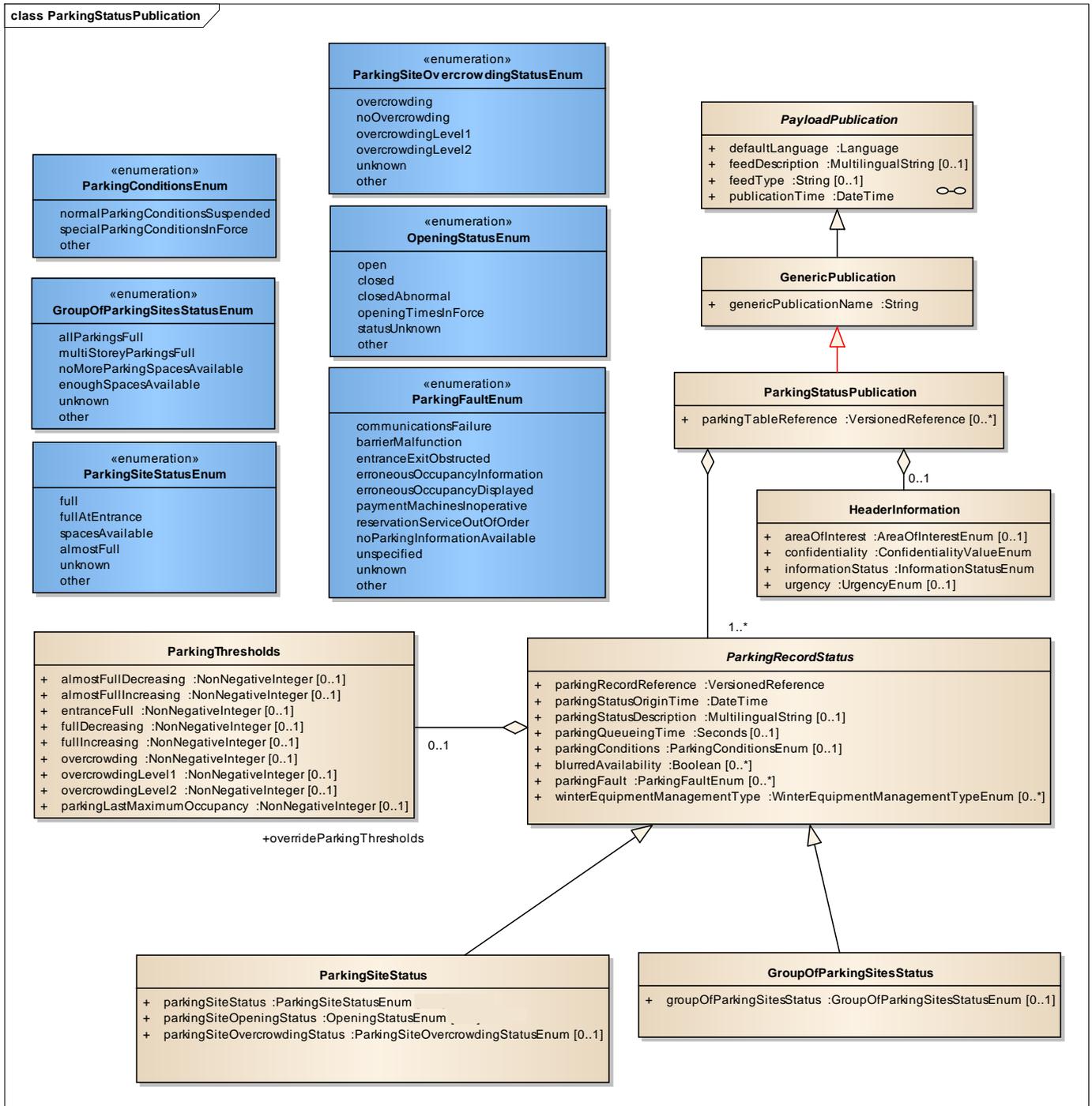


Figure 1: ParkingStatusPublication

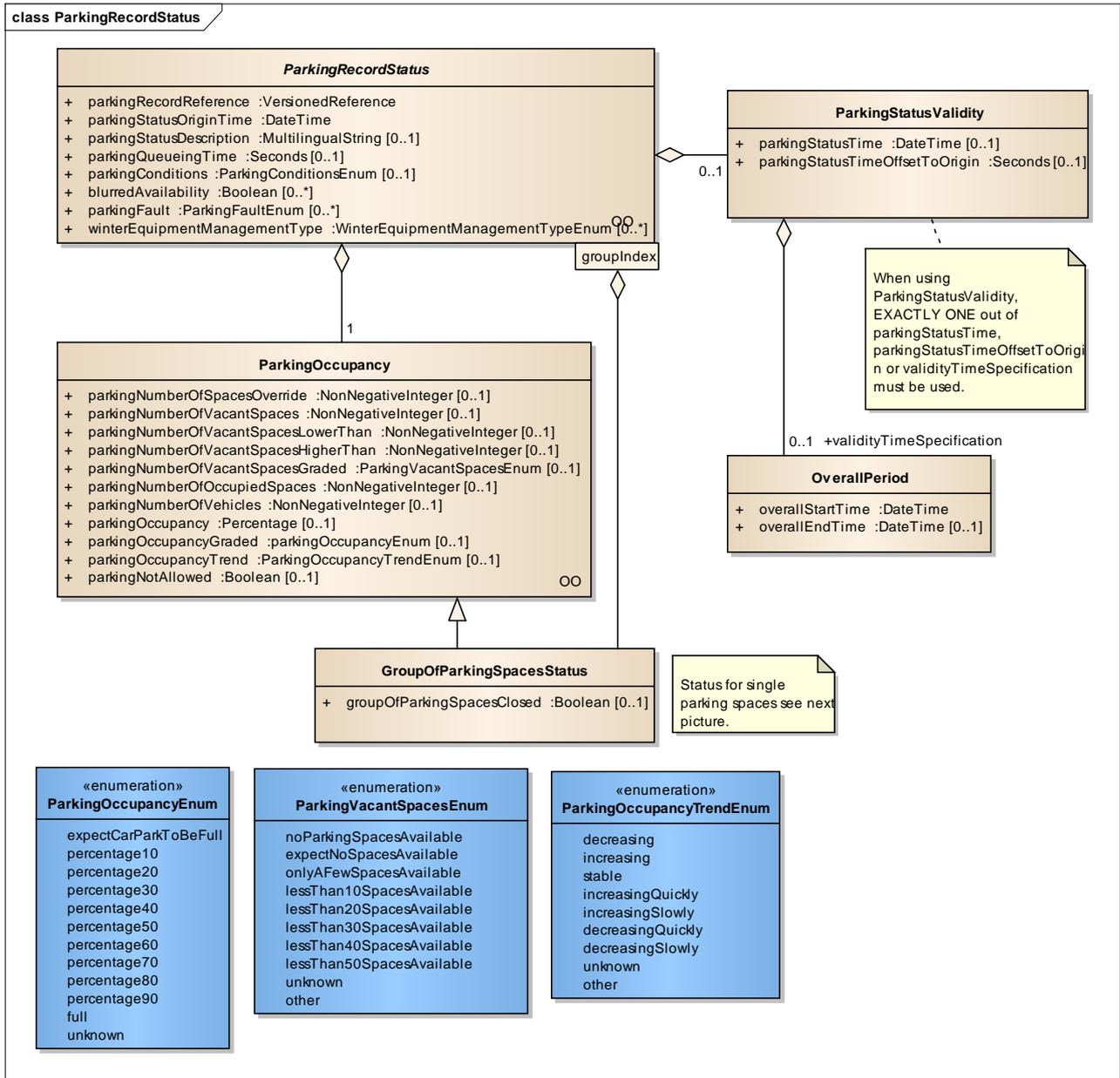


Figure 2: ParkingRecordStatus

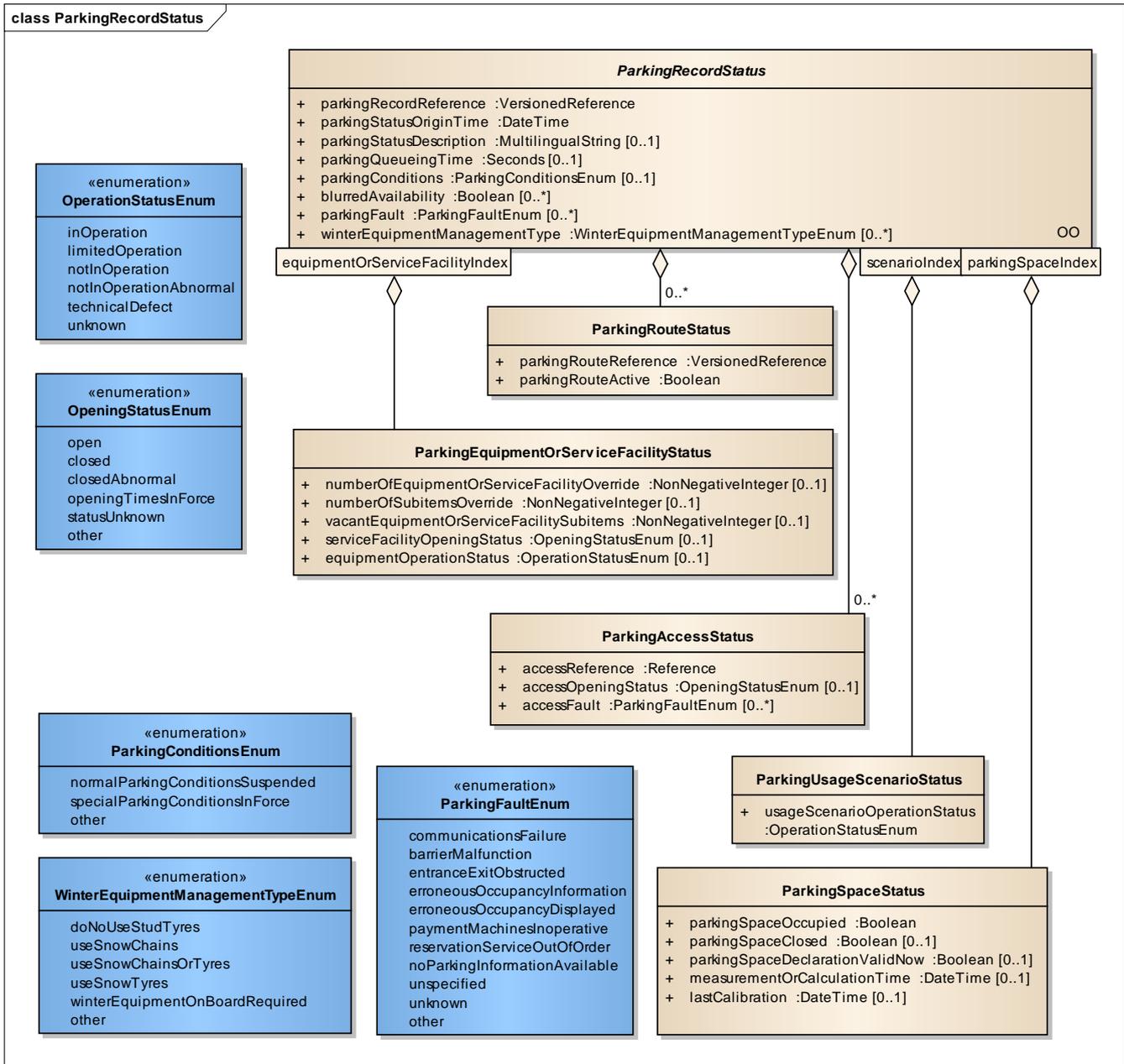


Figure 3: ParkingRecordStatus (cont.)

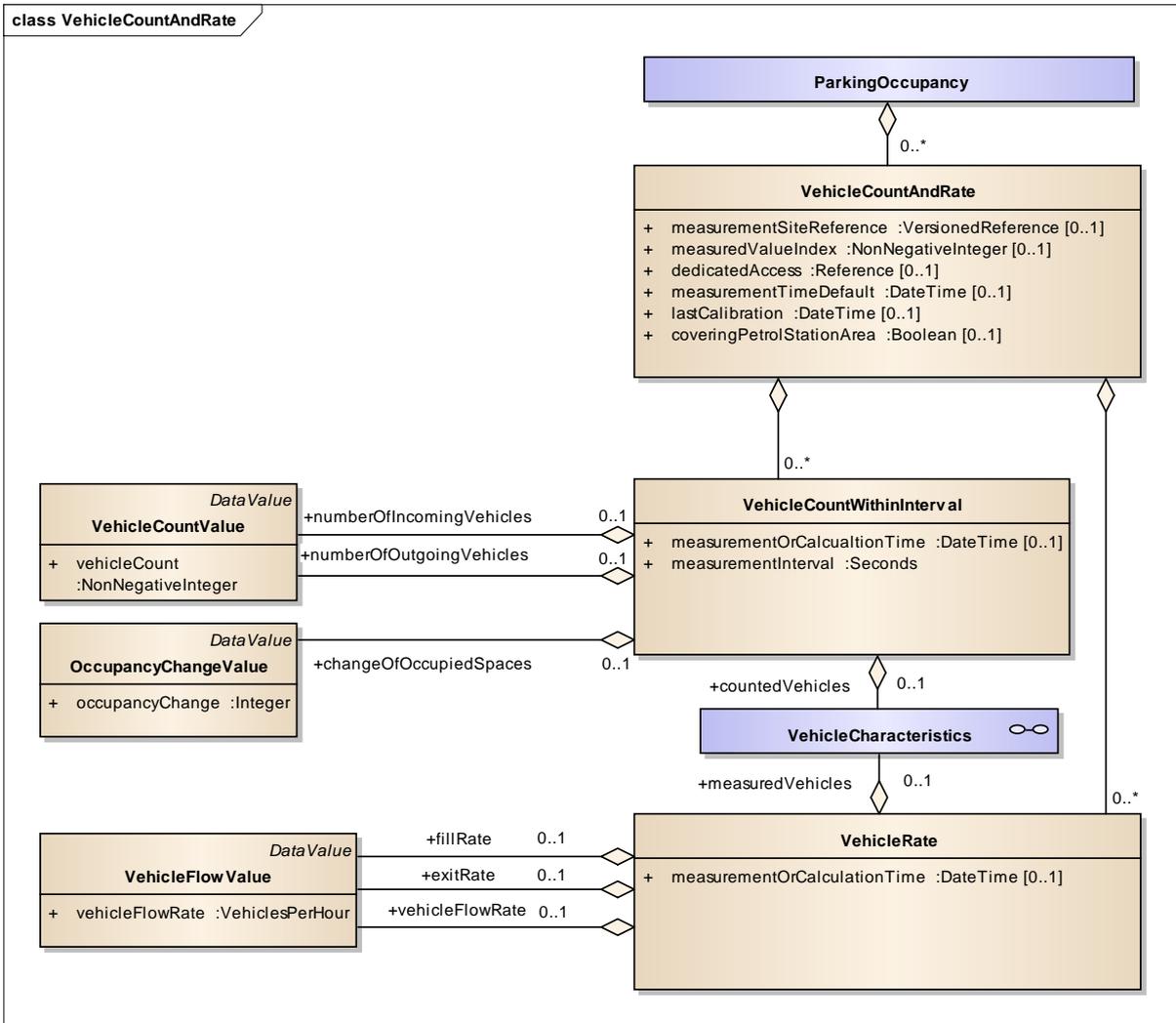


Figure 4: VehicleCountAndRate