**DATEX II profile for RestAreas – Dynamic part**

**ASFINAG**

Version 00-02-00

* 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 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.

* 1. Data Dictionary for "ASFINAG Rest Areas - Dynamic Part"
     1. "GenericPublication" package
        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

* + - 1. "GenericPublication" package association roles

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

* + - 1. "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

* + 1. "ParkingRecordStatus" package
       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

* + - 1. "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

* + - 1. "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 |
|  | 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 |
|  | 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 queuing 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 |
| 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 |
|  | 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

* + 1. "ParkingStatusPublication" package
       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

* + - 1. "ParkingStatusPublication" package association roles

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

* + - 1. "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

* + 1. "ParkingVehicleCountAndRate" package
       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

* + - 1. "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

* + - 1. "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 |
|  | measurementOrCalcualtionTime | Measurement or calcualtion 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

* + 1. "Validity" package
       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

* + - 1. "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

* + - 1. "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

* + 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 14— 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 |
| 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

* 1. Data Dictionary of <<datatypes>> 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".

* + 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>> "Seconds"

Seconds.

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

A measure of weight defined in metric tonnes.

* 1. 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".

* + 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"

* + 1. 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"

* + 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 18— Values contained in the enumeration "FuelTypeEnum"

* + 1. 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"

* + 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 20— Values contained in the enumeration "LoadTypeEnum"

* + 1. 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"

* + 1. 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"

* + 1. 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"

* + 1. 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"

* + 1. 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"

* + 1. 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"

* + 1. 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"

* + 1. 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"

* + 1. 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"

* + 1. 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"

* + 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 31— 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 32— 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 33— 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 34— Values contained in the enumeration "VehicleUsageEnum"

* + 1. 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"

* + 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 36— Values contained in the enumeration "WinterEquipmentManagementTypeEnum"

* 1. 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; Omitted = Static validity information is significant (if static validity is omitted too, declaration is valid). | 0..1 | Boolean |
| 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 |
| measurementOrCalcualtionTime | VehicleCountWithinInterval | Measurement or calcualtion 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 calculated. It may also be a future time at which a data value is predicted. | 0..1 | DateTime |
| 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

* 1. 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

* 1. Figures



Figure 1: ParkingStatusPublication



Figure 2: ParkingRecordStatus



Figure 3: ParkingRecordStatus (cont.)



Figure 4: VehicleCountAndRate