

# DATEX II profile for toll

## ASFINAG

Version 00-01-00

### 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 toll roads (i.e. in this case roads of Austria which are charged in addition to the motorway-vignette).

This profile contains a Level B extension for the Toll Publication (see picture at the end of this document).

A toll booth will be referenced by a Point location. The charged road can be referenced with their length (according to this point) or by a Linear Object. The description of these standard location referencing methods is not included in this document.

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

### A.2 Data Dictionary for "ASFINAG Toll"

#### A.2.1 "TariffsAndPayment" package

##### A.2.1.1 "TariffsAndPayment" package classes

Class name	Designation	Definition	Stereotype	Abstract
AcceptedPaymentCards	Accepted payment cards	Use this class to describe details in case acceptedMeansOfPayment is set to 'paymentCard'.		no
Charge	Charge	A particular charge for a specified interval belonging a charge band.		no
ChargeBand	Charge band	A charge band in accordance with the specified conditions, possibly up to a maximum duration, during a specified period and for a vehicle of specified characteristics (in case of parking).	versionedIdentifiable	no
TariffsAndPayment	Tariffs and payment	A table of charges under various conditions, primary used for parking.		no

Table 1— Classes of the "TariffsAndPayment" package

##### A.2.1.2 "TariffsAndPayment" package association roles

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

### A.2.1.3 "TariffsAndPayment" package attributes

Class name	Attribute name	Designation	Definition	Multiplicity	Type
AcceptedPaymentCards	otherPaymentCardBrands	Other payment card brands	Further accepted brands of payment cards.	0..*	String
	otherPaymentCards	Other payment cards	Further accepted payment cards.	0..*	String
	paymentCardBrands	Payment card brands	List of accepted brands for payment cards.	0..*	PaymentCardBrandsEnum
	paymentCards	Payment cards	List of accepted payment cards.	1..*	PaymentCardTypesEnum
Charge	charge	Charge	Charge for the specified interval (for vehicle of defined characteristics, if any specified) up to the maximum defined duration and during the defined period(s).	1..1	AmountOfMoney
	chargeInterval	Charge interval	Interval for which the charge applies (e.g. charge applies for 2 hours (to specify in seconds)). If no interval is specified, the price is valid for the whole period (kind of flat fee).	0..1	Seconds
	chargeTypeDescription	Charge type description	Additional description for this kind of charge type, especially if the enumeration does not fit. <b>ASFINAG possible content: "Einzeltarif", "Jahrestarif", "Vignetten Jahrestarif"</b>	0..1	MultilingualString
	maxIterationsOfCharge	Max iterations of charge	This charge must not be applied more often within this charge band than specified in this attribute. Thus it is possible to specify the first hour for free, for example.	0..1	NonNegativeInteger
ChargeBand	chargeCurrency	Charge currency	A three-character code according to ISO 4217 for the currency in which the parking charge is specified (e.g. EUR, GBP, SEK, CZK).	1..1	CurrencyEnum
TariffsAndPayment	lastUpdated	Last updated	The date/time at which this information was last updated.	0..1	DateTime

Class name	Attribute name	Designation	Definition	Multiplicity	Type
	paymentAdditionalDescription	Payment additional description	Additional description, for instance instructions or telephone number for paying by SMS. ASFİNAG possible content: "SOFORT Überweisung", "EPS Online Überweisung"	0..1	MultilingualString

Table 2— Attributes of the "TariffsAndPayment" package

## A.2.2 "TollPublication" package

### A.2.2.1 "TollPublication" package classes

Class name	Designation	Definition	Stereotype	Abstract
TollBooth	Toll booth	A toll booth, where one or more toll routes are charged.		no
TollPublication	Toll publication	A publication for toll roads and their charge.		no
TollRoute	Toll route	A toll route with its charges. At least one of Linear location or lengthAffected has to be specified.	versionedIdentifiable	no

Table 3— Classes of the "TollPublication" package

### A.2.2.2 "TollPublication" package association roles

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

### A.2.2.3 "TollPublication" package attributes

Class name	Attribute name	Designation	Definition	Multiplicity	Type
TollBooth	tollBoothName	Toll booth name	Name or identifier for the toll booth.	0..1	MultilingualString
TollRoute	lengthAffected	Length affected	This indicates the length of road measured in metres affected by the associated traffic element.	0..1	MetresAsFloat
	subTollRoutes	Sub toll routes	List of toll routes, which are part of this route.	0..*	VersionedReference
	tollRouteDescription	Toll route description	Name or description for the toll route.	1..1	MultilingualString

Class name	Attribute name	Designation	Definition	Multiplicity	Type
	tollRouteReferenceYearTicket	Toll route reference year ticket	Referemce to a toll route where a corresponidng year ticket is available (if any).	0..*	VersionedReference

**Table 4— Attributes of the "TollPublication" package**

### A.3 Data Dictionary of <<datatype>> for "ASFINAG Toll"

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

#### A.3.1 The <<datatype>> "AmountOfMoney"

A monetary value expressed to two decimal places.

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

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

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

Seconds.

### A.4 Data Dictionary of <<enumerations>> for "ASFINAG Toll"

This clause contains the definitions of all enumerations which are used in the "ASFINAG Toll".

#### A.4.1 The <<enumeration>> "CurrencyEnum"

Three letter code defining the currency according to ISO 4217 (e.g. EUR for Euro). This enumeration only contains European currencies including the US dollar.

Enumerated value name	Designation	Definition
eur	Eur	Euro

**Table 5— Values contained in the enumeration "CurrencyEnum"**

#### A.4.2 The <<enumeration>> "PaymentCardBrandsEnum"

Brands of payment cards.

Enumerated value name	Designation	Definition
americanExpress	American express	American Express
cirrus	Cirrus	Cirrus
dinersClub	Diners club	Diners Club
discoverCard	Discover card	Discover Card
giroCard	Giro card	Girocard
maestro	Maestro	Maestro
masterCard	Master card	MasterCard
other	Other	Other
visa	Visa	Visa
vPay	V pay	V PAY

Table 6— Values contained in the enumeration "PaymentCardBrandsEnum"

#### A.4.3 The <<enumeration>> "PaymentCardTypesEnum"

Types of payment cards.

Enumerated value name	Designation	Definition
chargeCard	Charge card	Charge card
creditCard	Credit card	Credit card
debitCard	Debit card	Debit card
fleetCard	Fleet card	Fleet or petrol station card.
other	Other	Some other type of card.
storedValueCard	Stored value card	Stored value card / prepaid card.

Table 7— Values contained in the enumeration "PaymentCardTypesEnum"

## A.5 Alphabetical list of attributes

Attribute name	Class name	Designation	Definition	Multiplicity	Type
charge	Charge	Charge	Charge for the specified interval (for vehicle of defined characteristics, if any specified) up to the maximum defined duration and during the defined period(s).	1..1	AmountOfMoney
chargeCurrency	ChargeBand	Charge currency	A three-character code according to ISO 4217 for the currency in which the parking charge is specified (e.g. EUR, GBP, SEK, CZK).	1..1	CurrencyEnum
chargeInterval	Charge	Charge interval	Interval for which the charge applies (e.g. charge applies for 2 hours (to specify in seconds)). If no interval is specified, the price is valid for the whole period (kind of flat fee).	0..1	Seconds
chargeTypeDescription	Charge	Charge type description	Additional description for this kind of charge type, especially if the enumeration does not fit. <b>ASFINAG possible content: "Einzeltarif", "Jahrestarif", "Vignetten Jahrestarif"</b>	0..1	MultilingualString
lastUpdated	TariffsAndPayment	Last updated	The date/time at which this information was last updated.	0..1	DateTime
lengthAffected	TollRoute	Length affected	This indicates the length of road measured in metres affected by the associated traffic element.	0..1	MetresAsFloat
maxIterationsOfCharge	Charge	Max iterations of charge	This charge must not be applied more often within this charge band than specified in this attribute. Thus it is possible to specify the first hour for free, for example.	0..1	NonNegativeInteger
otherPaymentCardBrands	AcceptedPaymentCards	Other payment card brands	Further accepted brands of payment cards.	0..*	String
otherPaymentCards	AcceptedPaymentCards	Other payment cards	Further accepted payment cards.	0..*	String
paymentAdditionalDescription	TariffsAndPayment	Payment additional description	Additional description, for instance instructions or telephone number for paying by SMS.	0..1	MultilingualString

			ASFINAG possible content: "SOFORT Überweisung", "EPS Online Überweisung"		
paymentCardBrands	AcceptedPaymentCards	Payment card brands	List of accepted brands for payment cards.	0..*	PaymentCardBrandsEnum
paymentCards	AcceptedPaymentCards	Payment cards	List of accepted payment cards.	1..*	PaymentCardTypesEnum
subTollRoutes	TollRoute	Sub toll routes	List of toll routes, which are part of this route.	0..*	VersionedReference
tollBoothName	TollBooth	Toll booth name	Name or identifier for the toll booth.	0..1	MultilingualString
tollRouteDescription	TollRoute	Toll route description	Name or description for the toll route.	1..1	MultilingualString
tollRouteReferenceYearTicket	TollRoute	Toll route reference year ticket	Referemce to a toll route where a corresponidng year ticket is available (if any).	0..*	VersionedReference

**Table 8- Alphabetical list of attributes**

## A.6 Alphabetical list of roles

There are no defined association roles in "ASFINAG Toll".

## A.7 Figure

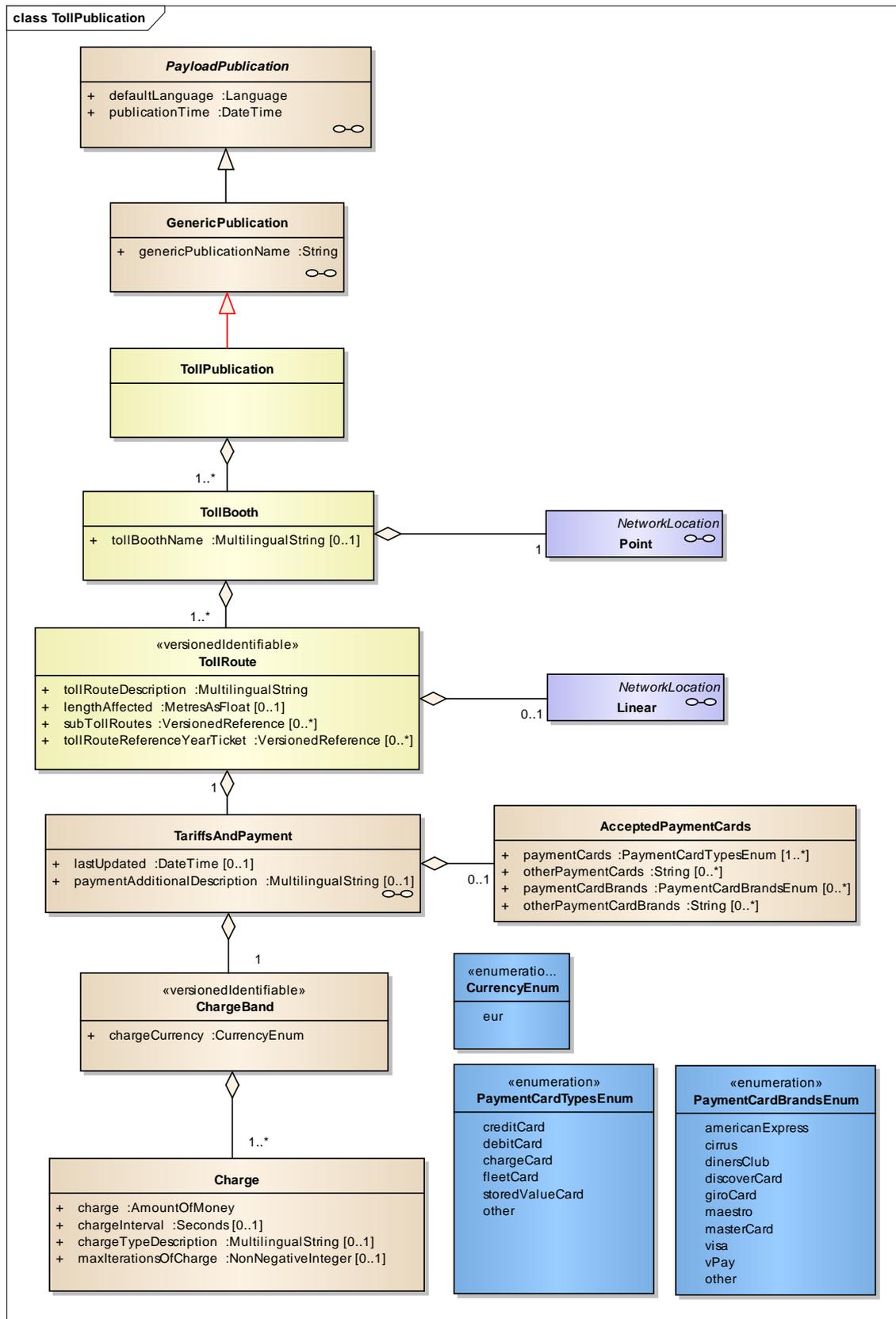


Figure 1 – Toll Publication – Level B classes are shown in light yellow.