



Geographical information management screen

SATELLIC TOLL CONTEXT MANAGEMENT

FLEXIBLE DEFINITION AND MAINTENANCE OF TOLL ROAD NETWORKS AND TARIFF MODELS

Electronic toll collection based on autonomous on-board equipment leverages satellite positioning technology to localize vehicles. Accurately detecting that a vehicle is using a tolled road segment or area and calculating the relevant toll fee requires a set of

toll context data. The toll context describes the road network in terms of geographical objects, highlighting which of these geographical objects are subject to tolling (toll objects) and the charging rules for toll objects (tariff model).

Satellite Toll Context Management defines and maintains geographical objects, toll objects and tariff models in accordance with rules provided by the toll charger. Drawing on in-depth knowledge of toll operations gained from the world's first satellite-based road charging system and based on proven technology, T-Systems provides a range of services to define, maintain and optimize toll context data.

BENEFITS

- Reduced effort for modelling toll road networks thanks to standard digital maps
- Support of high-quality toll detection algorithms
- Compliance with EETS
- Full-service offering

KEY FEATURES

- Definition of tariff models with one or more toll charging schemes, each of which may apply to motorways, highways, city areas, zones, etc.
- Definition of toll charging schemes (based on vehicle, location, time and user classes) to enable accurate toll fee calculation for each combination of classes, in line with the European Electronic Toll Service (EETS)
- Management of geographical information to define and maintain the elements of road networks (roads, zones, tunnels, bridges, etc.) in a model based on standard digital maps and state-of-the-art standard software
- Definition of the elements of a road network for which one or more tariff schemes apply (toll objects)
- Continuous improvement of toll context quality with information from Satellite Device Management

EXAMPLE: DEFINITION OF CLASSES ELIGIBLE FOR CHARGING

TIME CLASS	TIME OF DAY	ROAD USER CLASS	USER STATUS	LOCATION CLASS	LOCATION TYPE
Time 1	00:00 – 05:59	RU 1	Resident	Loc 1	Motorway
Time 2	06:00 – 08:59	RU 2	Foreigner	Loc 2	Non Motorway
Time 3	09:00 – 14:59			Loc 3	Area City
Time 4	15:00 – 18:59			Loc 4	Area Suburbia
Time 5	19:00 – 23:59				

VEHICLE CLASS	EMISSION CLASS ("EURO")	NUMBER OF AXLES	WEIGHT
LKW 1	0	≤ 3	> 12 t
LKW 2	1	≤ 3	> 12 t
LKW 3	2	≤ 3	> 12 t
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PKW 1	0	-	-
PKW 2	1	-	-
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PUBLISHER

T-Systems International GmbH
Hahnstraße 43 d
60528 Frankfurt am Main
Germany

CONTACT

T-Systems International GmbH
Public Sector & Healthcare
Satellite Tolling Competence Center
info_satellite@t-systems.com
www.t-systems.com/satellite