
Smart Mobility in the City of Leuven

Sven Maerivoet – Transport and Mobility Leuven

General information
A possible technological implementation
Technology showcase

Goal for the City of Leuven in this project
An intelligent kilometre pricing

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Your link to integrated analyses |

Goal for the City of Leuven in this project

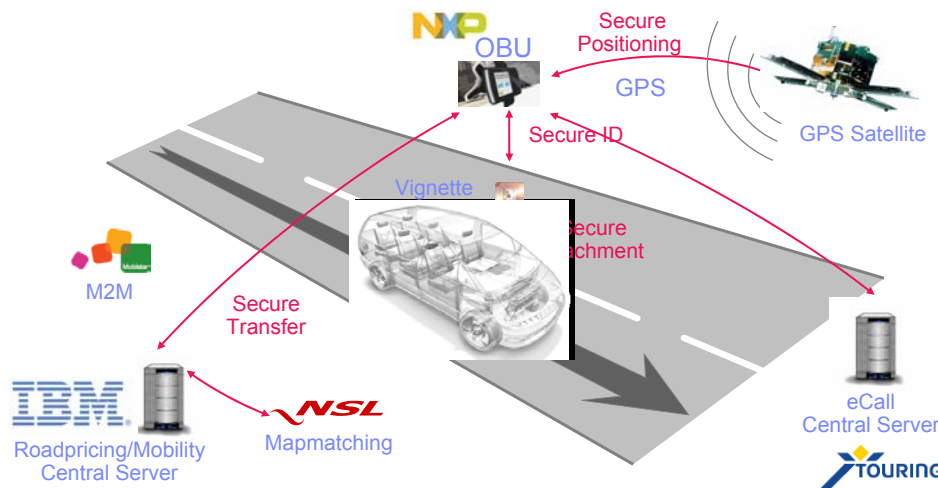
- Ease trips by reducing their total impedance:
 - More fluid.
 - Safer.
 - More accessible (for all traffic modes).
 - More liveable (environment and noise).
- ➡ Inform the City of Leuven and support them in creating a pricing scheme as a possible means to improve mobility.

An intelligent kilometre pricing

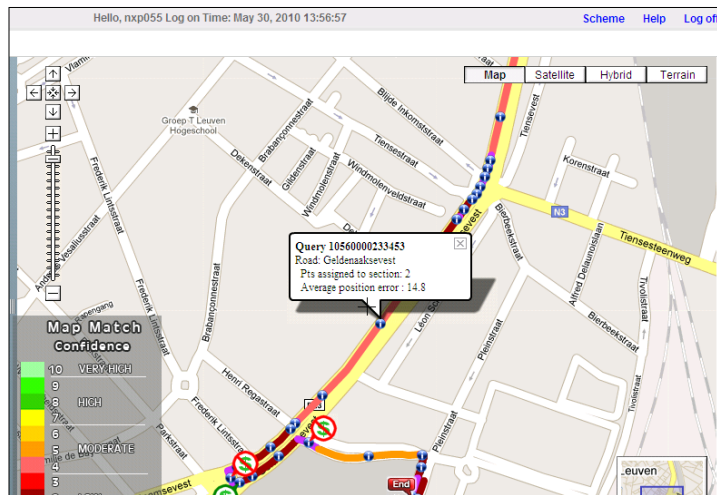
- Goal for Flemish government: make optimal use of the road network's hierarchy.
 - Use the highest level as much as possible, avoid rat runs: keep habitable areas liveable and highways flowing.
 - **Requires a differentiation in space.**
- However, capacity of the road network is limited: congestion.
 - **Requires a differentiation in time.**
- On top, different kinds of vehicles:
 - Difference in emissions, noise, harmful effects, ...
 - **Requires a differentiation to type of vehicle.**

→ *Everything is possible: cordon toll, zoning, travel time, distance, ...*

Technology used



Information stored in the back-end: map-matching



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Information stored in the back-end: trip information

Home Hello, nxp055 Log on Time: May 30, 2010 13:56:57 Scheme Help Log off

Journey Detail Journey ID: 2010042100000017628

#	Road Type	Time Boundary	Distance (Km)	Amount (€)	Charge Desc.
11	Secondary Road		0.391	0.03	SUV on the Local Road
12	Secondary Road		0.016		SUV on the Local Road
13	Major A Road		2.351	0.06	SUV on the Main Road
14	Major B Road		3.671	0.10	SUV on the Main Road
15	Major A Road		0.649	0.02	SUV on the Connection Road
16	Major B Road		1.613	0.04	SUV on the Connection Road
17	Local Road		0.026		SUV on the Local Road
18	Major A Road		0.133		SUV on the Connection Road
19	Local Road		0.390	0.03	SUV on the Local Road
20					Journey end
Total:			35.348	1.63	

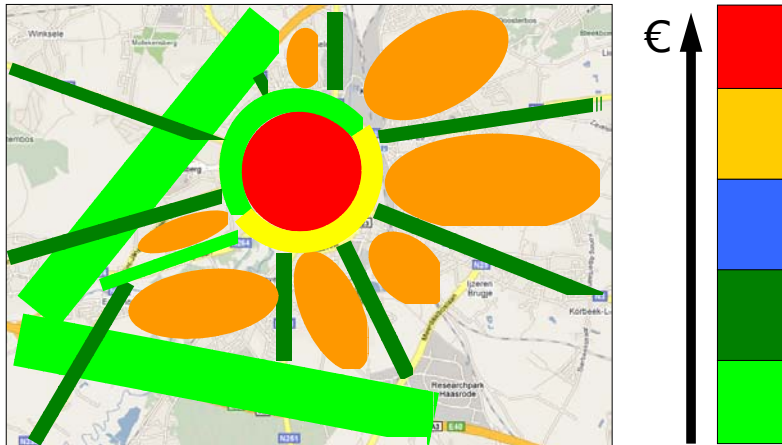
Page 2 of 2

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Pricing scheme for the region around Leuven

(in cooperation with the City of Leuven)



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Definition of base tariffs

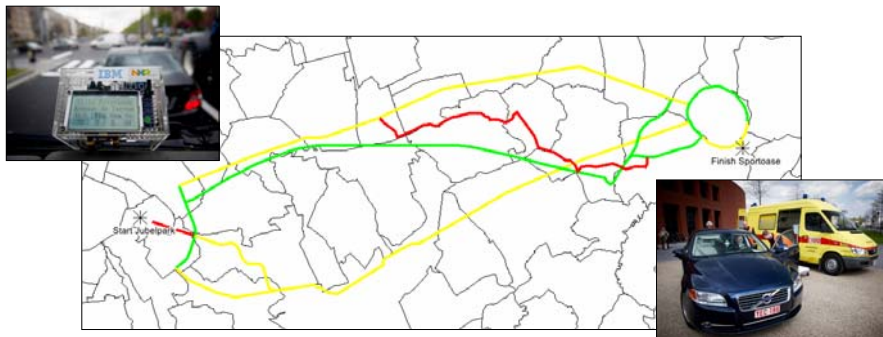
- **Cost neutral: users will together not pay more.**
 - Or also: the average user pays exactly his road tax during 1 year.
- ↓
- Variabilising the existing road tax:
 - Is dependent on the type of vehicle.
 - Weighed by the external costs.
 - Incorporates driven distances (~15,000 km/year).
 - Politically defensible.
 - **However only limited 'control' possible!**
(hence 'base tariffs')
- Differentiation wrt. space.
 - Differentiation wrt. type of vehicle.
 - Car (1.6 l): 242.75 euro.
 - SUV (2.4 l): 532.36 euro.
 - Bus: 69.97 (!) euro.
 - Truck (E5): 1817,18 euro.
 - For now, no differentiation wrt. time.

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Example of variabilisation: showcase 21/04/2010

- Car (1.6 litre), SUV (2.4 litre), autobus, and truck (Euro-5, 2+3 wheel axles, incl. Eurovignet).

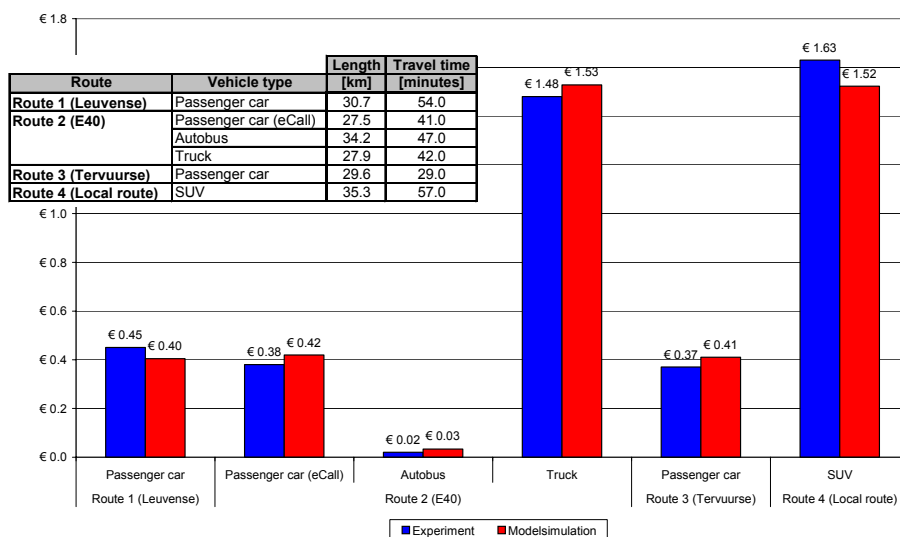


	Differentiated tariff [cent/km]			
	Car (1.6 l)	SUV (2.4 l)	Autobus	Truck (Euro-5)
Level 1 (highways, main roads)	1.2	2.7	0.1	4.6
Level 2 (secondary roads)	1.3	2.8	0.2	6.6
Level 3 (local roads)	3.0	6.6	0.2	7.3

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Summary of total costs



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