

Measure 59: Electronic road toll system

First page:

Policy package:

1C: Road Pricing, taxation and financing

Measure 59:

In 2002 propose a directive guaranteeing the interoperability of means of payment on the trans-European road network

What is the problem being addressed ?

The goal of this measure is also linked very strongly to the White Paper objective “Shifting the balance between modes of transport”. A first council agreement (COM (2003) 132 of 23.04.03), which forces the implementation of this measure already exist. This European Parliament had a first reading on the general approach, documented in the Council agreement.

This proposal was published in April 2003 by the Commission and included a suggestion on the interoperability of electronic road toll systems. If adopted, the Directive would establish a single European toll service, based on the principle of 'one contact per customer, one box per vehicle'. The service would be deployed in two phases, from 2005 for vehicles over 3.5t and from 2010 for cars. According to the Commission's proposal, all toll systems in the EU are to rely exclusively on satellite positioning and mobile communications by 2012. The 5.8 GHz microwave technology would have to be phased out by this date.

Measure's costs and/or benefits:

The costs, which will be occur through an implementation of this measure are not calculable. The costs depends heavily on the system, which will be implemented. For example costs for the German system are much higher (because of its complexity) compared to the Austrian system.

Legislative implementation at the EU level:

The Commission presented a proposal in COM (2003) 132 of 23.04.03. Council agreed on a general approach on 5.12.03 pending the European Parliament (EP) opinion in first reading. Later the Council had incorporated Parliament's key amendments from first reading. The Transport Ministers agreed with the EP that whereas the Commission had proposed to make use of satellite positioning and mobile technologies obligatory in new toll systems as of a certain date, no such obligation should be imposed, and that the use of these new technologies should only be recommended. Hence, systems using the traditional 5,8 GHz microwave technology may continue to co-exist with systems using the new satellite technologies. Indeed, it should be considered too that Member States should be allowed to use different systems microwave technology, mobile communications using the GSM-GPRS standard or satellite based systems (actually different systems are developed and are or will be implemented very soon, e.g. Germany, Austria).

Parliament and Council also modified the time-frame as proposed by the European Commission for the putting into place of the European electronic toll service, as follows:

- the decisions relating to the definition of this service should be taken at the latest by 1 January 2006;
- operators and/or issuers should offer the service to their customers according to the following timetable: i) for all vehicles over 3,5 tonnes and/or allowed to carry more than 9 passengers, at latest three years after the decisions of the definition of the service have been taken (so 1 January 2009 at the latest); ii) for all other types of vehicle, at the latest five years the decisions on the definition of the service have been taken (so 1 January 2011 at the latest).

Finally, it was also agreed that the proposed Directive will not affect the freedom of Member States to lay down rules governing road infrastructure charging and taxation matters. Moreover, the Directive does not apply to road systems for which no electronic means of toll collection exists and to electronic road systems which do not need the installation of equipment on board vehicles. Small, strictly local road toll systems would not be under the scope of the Directive either.

What are the objectives ?

The achievement of the measure objective can be documented – if and when the Directive will enter into force – by the fact that all Member States have implemented a common interoperable system of payment on the trans-European road network. However, this has to be realized only on the roads where a toll collection systems exist, which are not present in all EU countries (see second page)

Interactions with other WP measures:

There is obviously a strong link with Measure 57 – Infrastructure charging. There is also an clear link with the Galileo programme, which will provide satellite capacity to the electronic toll services.

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Output indicators:

The key output indicator will be:

- Length of tolled trans-European road network accessible with interoperable electronic toll system per Member State (in percentage).

The length of motorways in Europe and the length of tolled roads for some European countries is presented in the following table, taken from the project CUPID.

Motorways in Europe, length at the end of the specified year (km)

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU-15	index
1970	488	184	6 061	11	387	1 553	0	3 913	7	1 209	478	66	108	403	1 183	16 051	100
1980	1 203	516	9 225	91	2 008	4 862	0	5 900	44	1 798	938	132	204	850	2 683	30 454	190
1990	1 631	601	10 809	190	4 693	6 824	26	6 193	78	2 092	1 445	316	225	939	3 180	39 242	244
1995	1 666	796	11 190	420	6 962	8 275	72	6 435	123	2 208	1 596	687	394	1 262	3 307	45 393	283
1996	1 674	832	11 246	470	7 295	8 596	80	6 465	115	2 208	1 607	710	431	1 350	3 344	46 423	289
1997	1 679	855	11 309	500	7 750	8 864	94	6 469	118	2 336	1 613	797	444	1 423	3 412	47 663	297
1998	1 682	873	11 427	500	8 269	9 303	103	6 478	115	2 225	1 613	1 252	473	1 439	3 473	49 225	307
1999	1 691	902	11 515	500	8 893	9 626	103	6 478	115	2 291	1 634	1 441	512	1 484	3 579	50 764	316
2000	1 702	922	11 712	707	9 049	9 766	103	6 478	115	2 289	1 633	1 482	549	1 506	3 612	51 625	322
2001	1 727	953	11 786	742	9 571	9 934	125	6 478	115	2 291	1 645	1 659	602	1 529	3 605	52 762	329
Out of this tolled inter-urban roads																	
2001	1	8	-	917	2445	7771	-	5593	-	-	2000	1219	-	8	-	19962	

Source: Eurostat, International Road Federation, national statistics

Outcome indicators: intermediate impacts on transport markets

The Directive will have impacts on:

- the suppliers of system components, i. e. the producers of technologies for traffic management and of components on board of vehicles. With the enlargement of the market thanks to the new interoperability we may assist to increasing competition and consolidation of the equipment market, with a concentration process in the industry which will tend to create a small number of large companies or system integrators. Efficiency gains may be reflected partially in a reduction of prices of components sold to the highways infrastructure managers and especially to the wider market of road users (owners of lorries, private cars etc.);
- road haulers, which may experience productivity gains from reduced waiting times at toll barriers and a more convenient and easily accountable payment process.

Outcome indicators: final impacts on transport users and non users

The main effect expected from the measure is the reduction in waiting times at the toll barriers, and this will cause substantial travel time savings for the road users.