

DIRECTIVE 2004/52/EC
OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 29 April 2004

on the interoperability of electronic road toll systems
in the Community
(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 7(1) thereof,

Having regard to the proposal from the Commission,

Having regard to the Opinion of the European Economic and Social Committee ¹,

Having regard to the Opinion of the Committee of the Regions ²,

Acting in accordance with the procedure laid down in Article 251 of the Treaty ³,

¹ OJ C 32, 5.2.2004, p. 36.

² OJ C 73, 23.3.2004, p. 54.

³ Opinion of the European Parliament of 18 December 2003 (not yet published in the Official Journal), Council Common Position of 22 March 2004 (OJ C 95 E, 20.4.2004, p. 53) and Position of the European Parliament of 20 April 2004.

Whereas:

- (1) By its Resolution of 17 June 1997 on the development of telematics in road transport, in particular with respect to electronic fee collection (EFC) ¹, the Council called on the Commission and Member States to develop a strategy for the convergence of EFC systems in order to achieve an appropriate level of interoperability at a European level. The communication of the Commission on interoperable electronic fee collection systems in Europe was the first stage of this strategy.
- (2) The majority of Member States which have installed electronic toll systems to finance road infrastructure costs or to collect road usage fees (jointly referred to hereinafter as "electronic toll systems") use short-range microwave technology and frequencies close to 5,8 GHz, but these systems are currently not totally compatible. The work on microwave technology undertaken by the European Committee for Standardisation (CEN) resulted in January 2003 in the preparation of technical standards making for the compatibility of 5,8 GHz microwave electronic toll systems, following the adoption of technical pre-standards in 1997. However, these pre-standards do not cover all the Dedicated Short-Range Communications (DSRC) 5,8 GHz systems in operation in the Community and encompass two variants which are not totally compatible. They are based on the Open Systems Interconnection model defined by the International Standardisation Organisation for communication between computer systems.

¹ OJ C 194, 25.6.1997, p. 5.

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- (3) Manufacturers of equipment and infrastructure managers have nonetheless agreed, within the Community, to develop interoperable products based on existing DSRC 5,8 GHz systems. The equipment that will need to be made available to users should accordingly be capable of communicating with the technologies that may only be used in new electronic toll systems to be deployed in the Community after 1 January 2007, namely satellite positioning technology, mobile communications technology using the GSM-GPRS standard and 5,8 GHz microwave technology.
- (4) It is essential that the standardisation work be completed as quickly as possible to establish technical standards ensuring technical compatibility among electronic toll systems based on 5,8 GHz microwave technology and on satellite positioning and mobile communications technologies, in order to avoid further fragmentation of the market.
- (5) It is necessary to provide for the widespread deployment of electronic toll systems in the Member States and neighbouring countries, and the need is arising to have interoperable systems suited to the future development of road-charging policy at Community level and to future technical developments.
- (6) The electronic toll systems should be interoperable and based on open and public standards, available on a non-discriminatory basis to all system suppliers.

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- (7) In introducing new electronic toll systems, sufficient equipment should be made available to avoid discrimination between the undertakings concerned.
- (8) In particular, owing to their great flexibility and versatility, application of the new satellite positioning (GNSS) and mobile communications (GSM/GPRS) technologies to electronic toll systems may serve to meet the requirements of the new road-charging policies planned at Community and Member State level. These technologies enable the number of kilometres covered per category of road to be counted without requiring costly investment in infrastructure. They also open the door to additional new safety and information services for travellers, such as the automatic alarm triggered by a vehicle involved in an accident and indicating its position, and real-time information on traffic conditions, traffic levels and journey times. With regard to satellite positioning, the Galileo project launched by the Community in 2002 is designed to provide, as of 2008, information services of higher quality than that provided by the current satellite navigation systems and which are optimal for road telematic services. The European geostationary navigation overlay service (EGNOS) precursor system will already be operational in 2004, providing similar results. However, these innovative systems could raise problems concerning the reliability of checks and with regard to fraud prevention. However, owing to the considerable advantages referred to above, the application of satellite positioning and mobile communications technologies is in principle to be recommended in introducing new electronic toll systems.

- (9) The proliferation of technologies for electronic toll systems already in use or planned in the coming years (mainly 5,8 GHz microwave, satellite positioning and mobile communications) and the proliferation of specifications imposed by the Member States and neighbouring countries for their electronic toll systems may compromise both the smooth operation of the internal market and transport policy objectives. Such a situation is liable to lead to the proliferation of incompatible and expensive electronic boxes in the driving cabs of heavy goods vehicles, and to drivers making mistakes when using them with the result, for example, of unintentionally avoiding payment. Such a proliferation is unacceptable to users and to manufacturers of vehicles for cost, safety and legal reasons.
- (10) Artificial barriers to the operation of the internal market should be removed, while still allowing the Member States and the Community to implement a variety of road-charging policies for all types of vehicles at local, national or international level. The equipment installed in vehicles should allow such road-charging policies to be implemented in accordance with the principles of non-discrimination between the citizens of all Member States. The interoperability of electronic toll systems at Community level therefore needs to be ensured as soon as possible.

- (11) Drivers are legitimately concerned to see improved quality of service on the road infrastructure, in particular in terms of safety, as well as a substantial reduction in congestion at toll plazas, especially on busy days and at certain particularly congested points in the road network. The definition of the European electronic toll service needs to address that concern. Provision should, moreover, be made to ensure that the technologies and components provided for can, as far as technically possible, also be combined with other vehicle components, in particular the electronic tachograph and emergency call capabilities. Intermodal systems should not be excluded at a later stage.
- (12) The option of accessing other, future applications in addition to toll collection should be ensured by fitting appropriate equipment.
- (13) A European electronic toll service should provide interoperability at technical, contractual and procedural level, covering:
- (a) a single contract between the clients and the operators offering the service, complying with a contractual set of rules allowing all operators and/or issuers to provide the service, giving access to the whole network;
 - (b) a set of technical standards and requirements allowing the industry to provide the necessary equipment for the provision of the service.

- (14) Contractual interoperability provides the potential for important facilitation to some road-users and for significant economies in administration for commercial road users.
- (15) Electronic toll systems contribute significantly to reducing the risk of accidents, thus increasing road safety, to reducing the number of cash transactions and to reducing congestion at toll plazas, especially on busy days. They also reduce the negative environmental impact of waiting and restarting vehicles and congestion, as well as the environmental impact related to the installation of new toll gates or expansion of existing toll stations.
- (16) The White Paper on European Transport Policy for 2010 contains objectives of safety and fluidity of road traffic. Interoperable Intelligent Transport Services and Systems are a key tool in the achievement of these objectives.
- (17) The introduction of electronic toll systems will entail the processing of personal data. Such processing needs to be carried out in accordance with Community rules, as set out inter alia in Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data ¹ and Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector ². The right to protection of personal data is explicitly recognised by Article 8 of the Charter of Fundamental Rights of the European Union.

¹ OJ L 281, 23.11.1995, p. 31. Directive as amended by Regulation (EC) No 1882/2003 (OJ L 284, 31.10.2003, p. 1).

² OJ L 201, 31.7.2002, p. 37.

- (18) Automatic debiting of toll charges to bank accounts or credit/debit card accounts which are domiciled anywhere, in the Community and beyond, is conditional on a fully operational Community payments area with non-discriminatory service charges.
- (19) Systems of electronic toll collection which are put in place in the Member States should meet the following fundamental criteria: the system should be amenable to ready incorporation of future technological and systems improvements and developments without costly redundancy of older models and methods, the costs of its adoption by commercial and private road users should be insignificant compared with the benefits to those road users as well as to society as a whole, and its implementation in any Member State should be non-discriminatory in all respects between domestic road users and road users from other Member States.
- (20) Since the objectives of this Directive, in particular, the interoperability of electronic toll systems in the internal market and the introduction of a European electronic toll service covering the entire Community road network on which tolls are charged, cannot be sufficiently achieved by the Member States and can therefore, by reason of their European dimension, be better achieved at Community level, the Community may take measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty. In accordance with the principle of proportionality as set out in that Article, this Directive does not go beyond what is necessary in order to achieve those objectives.

- (21) The inclusion of interested parties (such as toll-service operators, infrastructure managers, electronics and motor industries and users) in Commission consultations on technical and contractual aspects of creating the European electronic toll service should be provided for. Where appropriate, the Commission should also consult non-governmental organisations active in the field of privacy protection, road safety and the environment.
- (22) To set up the European electronic toll service it will first be necessary to establish guidelines to be laid down by the Electronic Toll Committee established by this Directive.
- (23) This Directive does not affect the Member States' freedom to lay down rules governing road infrastructure charging and taxation matters.
- (24) The measures necessary for the implementation of this Directive should be adopted in accordance with Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission ¹,

HAVE ADOPTED THIS DIRECTIVE:

Article 1

Objective and scope

1. This Directive lays down the conditions necessary to ensure the interoperability of electronic road toll systems in the Community. It applies to the electronic collection of all types of road fees, on the entire Community road network, urban and interurban, motorways, major and minor roads, and various structures such as tunnels, bridges and ferries.

¹ OJ L 184, 17.7.1999, p. 23.

2. This Directive does not apply to:

- (a) road toll systems for which no electronic means of toll collection exists;
- (b) electronic road toll systems which do not need the installation of on-board equipment;
- (c) small, strictly local road toll systems for which the costs of compliance with the requirements of this Directive would be disproportionate to the benefits.

3. To achieve the objective set in paragraph 1, a European electronic toll service shall be created. This service, which is complementary to the national electronic toll services of the Member States, shall ensure the interoperability throughout the Community, for users, of the electronic toll systems that have already been introduced in the Member States and of those to be introduced in the future in the framework of this Directive.

Article 2

Technological solutions

1. All new electronic toll systems brought into service on or after 1 January 2007 shall, for carrying out electronic toll transactions, use one or more of the following technologies:

- (a) satellite positioning;

- (b) mobile communications using the GSM-GPRS standard (reference GSM TS 03.60/23.060);
- (c) 5,8 GHz microwave technology

2. The European electronic toll service shall be brought into service pursuant to Article 3(1). Operators shall make available to interested users on-board equipment which is suitable for use with all electronic toll systems in service in the Member States using the technologies referred to in paragraph 1 and which is suitable for use in all types of vehicle, in accordance with the timetable set out in Article 3(4). This equipment shall at least be interoperable and capable of communicating with all the systems operating in the Member States using one or more of the technologies listed in paragraph 1. The detailed arrangements in this respect shall be determined by the Committee referred to in Article 5(1), including arrangements for the availability of on-board equipment to meet the demand of interested users.

3. It is recommended that new electronic toll systems brought into service after the adoption of this Directive use the satellite positioning and mobile communications technologies listed in paragraph 1. In respect of the possible migration to systems using such technologies by systems using other technologies, the Commission, in liaison with the Committee referred to in Article 5(1), shall draw up a report by 31 December 2009. This report shall include a study of use of each of the technologies referred to in paragraph 1, as well as a cost-benefit analysis. If appropriate, the Commission shall accompany the report with a proposal to the European Parliament and the Council for a migration strategy.

4. Without prejudice to paragraph 1, on-board equipment may also be suitable for other technologies, on condition that this does not lead to an additional burden for users or create discrimination between them. Where relevant, on-board equipment may also be linked to the vehicle's electronic tachograph.

5. Where Member States have toll systems, they shall take the necessary measures to increase the use of electronic toll systems. They shall endeavour to ensure that, by 1 January 2007 at the latest, at least 50% of traffic flow in each toll station can use electronic toll systems. Lanes used for electronic toll collection may also be used for toll collection by other means, with due regard to safety.

6. Interoperability work on existing toll technologies undertaken in connection with the European electronic toll service shall ensure the full compatibility and interfacing of those technologies with the technologies referred to in paragraph 1 and of their equipment with each other.

7. Member States shall ensure that processing of personal data necessary for the operation of the European electronic toll service is carried out in accordance with the Community rules protecting the freedoms and fundamental rights of individuals, including their privacy, and that, in particular, the provisions of Directives 95/46/EC and 2002/58/EC are complied with.

Article 3

Setting-up of a European electronic toll service

1. A European electronic toll service shall be set up which encompasses all the road network in the Community on which tolls or road usage fees are collected electronically. This electronic toll service will be defined by a contractual set of rules allowing all operators and/or issuers to provide the service, a set of technical standards and requirements and a single subscription contract between the clients and the operators and/or issuers offering the service. This contract shall give access to the service on the whole of the network and subscriptions shall be available from the operator of any part of the network and/or from the issuer.
2. The European electronic toll service shall be independent of the fundamental decisions taken by Member States to levy tolls on particular types of vehicles, of the level of charges and of the purpose for which such charges are levied. It shall concern only the method of collecting tolls or fees. The service shall allow for contracts to be concluded irrespective of the place of registration of the vehicle, the nationality of the parties to the contract, and the zone or point on the road network in respect of which the toll is due.
3. The system shall allow intermodality to develop without creating disadvantages for other modes of transport.

4. Where Member States have national systems of electronic toll collection, they shall ensure that operators and/or issuers offer the European electronic toll service to their customers in accordance with the following timetable:

- (a) for all vehicles exceeding 3,5 tonnes and for all vehicles which are allowed to carry more than nine passengers (driver + 8), at the latest three years after the decisions on the definition of the European electronic toll service, as referred to in Article 4(4), have been taken;
- (b) for all other types of vehicle, at the latest five years after the decisions on the definition of the European electronic toll service, as referred to in Article 4(4), have been taken.

Article 4

Features of the European electronic toll service

1. The European electronic toll service shall be based on the items listed in the Annex to this Directive.
2. Where appropriate, this Annex may be modified for technical reasons in accordance with the procedure referred to in Article 5(2).
3. The European electronic toll service shall employ the technological solutions referred to in Article 2, using specifications which shall be publicly available.

4. The decisions relating to the definition of the European electronic toll service shall be taken by the Commission in accordance with the procedure referred to in Article 5(2), by 1 July 2006. Such decisions shall only be taken if all the conditions, evaluated on the basis of appropriate studies, are in place to enable interoperability to work from all points of view, including technical, legal and commercial.
5. If the decisions referred to in paragraph 4 are not taken by 1 July 2006, the Commission shall, in accordance with the procedure referred to in Article 5(2), set a new date by which such decisions are to be taken.
6. Technical decisions relating to the realisation of the European electronic toll service shall be taken by the Commission in accordance with the procedure referred to in Article 5(2).
7. The Commission shall ask the relevant standardisation bodies, in particular the CEN, in accordance with the procedure laid down by Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations ¹, to make every necessary effort rapidly to adopt standards applicable to electronic toll systems with regard to the technologies listed in Article 2(1).
8. Equipment for the European electronic toll service shall comply in particular with the requirements of Directives 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity ² and Council Directive 89/336/EEC of 3 May 1989 on the approximation of the laws of the Member States relating to electromagnetic compatibility ³.

¹ OJ L 204, 21.7.1998, p. 37. Directive as last amended by the 2003 Act of Accession.

² OJ L 91, 7.4.1999, p. 10. Directive as amended by Regulation (EC) No 1882/2003.

³ OJ L 139, 23.5.1989, p. 19. Directive as last amended by Directive 93/68/EEC (OJ L 220, 30.8.1993, p. 1).

Article 5

Committee procedure

1. The Commission shall be assisted by an Electronic Toll Committee (hereinafter "the Committee").
2. Where reference is made to this paragraph, Articles 5 and 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.

The period laid down in Article 5(6) of Decision 1999/468/EC shall be set at three months.

3. The Committee shall adopt its Rules of Procedure.

Article 6

Implementation

Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive before*. They shall immediately forward to the Commission the text of those provisions, together with a table correlating those provisions with this Directive.

When Member States adopt these measures, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. The methods of making such reference shall be laid down by Member States.

* 18 months after the date of entry into force of the Directive.

Article 7

Entry into force

This Directive shall enter into force on the twentieth day following that of its publication in the Official Journal of the European Union.

Article 8

Addressees

This Directive is addressed to the Member States.

Done at Strasbourg, 29 April 2004.

For the European Parliament

The President

P. COX

For the Council

The President

M. McDOWELL

ANNEX

Items required for the definition and deployment of the European electronic toll service

The matters listed below are essential for the definition and deployment of the European electronic toll service set up under the Directive. These matters are distinguished between technical, procedural and legal issues :

Technical issues:

- (a) operational procedures for the service: subscription, instructions for use, installation and attachment of on-board equipment in vehicles, processing of transactions at toll stations or for continuous charging, procedures for recovering transaction-data in the event of equipment breakdown or malfunction, control systems, invoicing and collection of sums due, after-sales service, customer assistance, definition of the level of service offered to customers; when establishing such operational procedures, the existing procedures in the Member States shall be taken into account;
- (b) functional specifications of the service: description of the functions of on-board equipment and ground-based equipment;
- (c) technical specifications of ground-based and on-board equipment supporting the service, and the standards, certification procedures and constraints to be observed;

- (d) launching and following up work involving relevant standardisation bodies, and any technical additions to the standards or pre-standards used, in order to ensure interoperability,
- (e) specifications for installing on-board equipment;
- (f) transactional models: precise definition of transactional algorithms for each different type of toll (fixed-point tolls or continuous charging), and definition of the data exchanged between on-board and ground-based equipment and of the data formats;
- (g) arrangements for the availability of on-board equipment to meet the demand of all interested users;

Procedural issues:

- (h) procedures for verification of technical performance of on-board equipment, roadside equipment and the way equipment is installed in vehicles;
- (i) parameters for vehicle classification: validation of a Community list of technical parameters from which each Member State will select those it wishes to use for its charging policy. The parameters will represent vehicles' physical, engine and environmental characteristics. Establishment of vehicle classes based on those parameters will be a matter for Member States;

- (j) implementation of procedures for dealing with particular cases, such as any type of malfunction. This relates in particular to cases in which the road toll operators and the customer come from different countries;

Legal issues:

- (k) validation of the chosen technical solutions vis-à-vis the Community rules protecting the freedoms and fundamental rights of individuals, including their privacy. In particular, it will be necessary to ensure compliance with Directive 95/46/EC and Directive 2002/58/EC;
 - (l) setting non-discriminatory common rules and minimum requirements which potential service providers should respect when providing the service;
 - (m) assessment of the possibility of harmonising the rules of enforcement relating to electronic road tolls;
 - (n) a memorandum of understanding between road toll operators, enabling the European electronic toll service to be implemented, including conflict resolution procedures.
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