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## **The Competitive Environment of the EETS**

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### **Abstract**

Despite many efforts by many stakeholders, the European Electronic Toll Service (EETS) is still not a reality in the everyday life of road users. Therefore the following question arises: Will the EETS ever become reality and is it worthwhile to register as an EETS Provider? This paper presents Rapp's view on the competitive environment of the EETS. The development of this competitive environment is strongly driven by the current and future EETS legislation and the technological developments in the world of tolling and beyond, such as connected and automated driving.

### **Keywords:**

EETS, competitive environment, tolling as a service

### **Still no EETS**

According to Directive 2004/52/EC, the European Electronic Toll Service (EETS) should have been offered at the latest from October 2012 onwards for heavy commercial vehicles and October 2014 for all other vehicle classes. Despite many efforts by many stakeholders, the EETS is still not a reality in the everyday life of road users. Therefore the following question arises: Will the EETS ever become reality and is it worthwhile to register as an EETS Provider? Various legal, economic and technical issues, which influence the current tolling world through the introduction of the EETS were analysed by Rapp [1]. This paper presents Rapp's view on the competitive environment of the EETS.

## **New regulatory framework**

The development of the competitive environment is strongly influenced by the EETS legislation. A recurring point of discussion was that the current regulation fails to define a business context which makes EETS affordable to service providers. See also Rapp's paper "Has the EETS any Market Potential?" (CP0791) prepared for this ITS European Congress.

After putting the EETS in the broader context of European transport policy, the European Commission presented in 2012 the progress achieved in its implementation and the next steps to be taken for making the EETS operational [2]. In response to this Commission's communication, the European Parliament emphasized the need for drastic measures to achieve the establishment of the EETS. In 2015, the Commission launched an ex-post evaluation to assess the implementation and effects of the EETS in all 28 Member States in the period 2004-2014 [3]. Most of the information was gathered through a stakeholders' consultation (incl. Member States, ASECAP, AETIS, REETS, NB-EETS Coordination Group, standardisation organisations, IRU, FIA, general public). Also two supportive studies were commissioned that were performed by 4icom [4, 5]. A report on the results of the public consultation can be found on the Commission's Mobility and Transport website [6].

The results of the ex-post evaluation show that the objectives of the existing legislation have been too narrow or too far-reaching at certain points. It is expected that different problem areas will be addressed in a new legal framework, for example:

- Europe-wide coverage of EETS domains within 24 months after registration
- Business model, in particular remuneration, for EETS Providers
- An "EETS-OBU" as a criterion for registration
- Inadequate/incomplete standards, especially for GNSS systems
- EETS for passenger cars and/or based on additional toll technologies (e.g. ANPR)
- Clarity on tasks and powers, particularly between the Commission, Member States and Conciliation Bodies

The preparatory process for the revision of the EETS legislation was started in 2016; a revision that has been called for many years by many different stakeholders. This revision also provides the Commission with the possibility to view electronic toll collection from a broader perspective. In October 2016, the Commission indicated its current state of reflection on a possible review of the EETS legislation [7]. The following objectives of the revision were emphasised:

- Make EETS available to the users as soon as possible
- EETS should contribute to the efficiency of electronic toll collection

Possible solutions include:

- Reduce costs of market entry for EETS Providers

- Ensure fairness and non-discrimination
- Create a balanced set of rights and obligations for all actors
- Distinguish between the heavy- and light vehicles' markets
- Co-operation to increase the efficiency of the service

All envisaged policies will be tested as part of a Commission Impact Assessment. According to the 2017 Commission Work Programme, the EETS revision is planned to take place in Q2/2017<sup>1</sup>. Our expectation of the upcoming regulatory changes is that in any case the European coverage (incl. deadline) will be deleted and rather a regional development will be pursued. This development is then left to the EETS Providers, so that they can cover/extend their customer portfolios at the best. We also expect the new legislation to focus on EETS for heavy vehicles and that there will be clearer rules on the compensation for EETS Providers to strengthen their business case. These assumptions are the starting point for the rest of this paper.

### Registered EETS Providers – Status Quo

There are currently seven registered EETS Providers in Europe (see Table 1). AGES pioneered as the first registered EETS Provider. However, AGES informed its business partners in April 2016 that it would stop their activities being an EETS Provider. Axxès can be regarded the most advanced EETS Provider at this moment. Their Viaxxès Sat unit can be used in 6 European countries: Austria, France, Spain, Portugal, Belgium (Liefkenshoek tunnel and Viapass network) and Germany (Herrentunnel)<sup>2</sup>. Axxès intends to soon extend the networks that accept the tag to include the Storebælt bridge in Denmark, the Øresundsbron bridge connecting Denmark and Sweden and the Swedish and Norwegian motorway networks.

**Table 1 – Registered EETS Providers (Status: 22 March 2017)**

EETS Provider	Country	Since
Axxès SAS	France	21.12.15
Total Marketing Services S.A.	France	25.02.16
Telepass S.p.A.	Italy	23.03.16
eurotoll	France	10.06.16
BroBizz A/S	Denmark	15.09.16
WAG (Eurowag)	Czech Republic	30.01.17
T-Systems EETS GmbH	Germany	22.02.17

<sup>1</sup> [https://ec.europa.eu/info/sites/info/files/cwp\\_2017\\_annex\\_i\\_en.pdf](https://ec.europa.eu/info/sites/info/files/cwp_2017_annex_i_en.pdf) (consulted: 22 March 2017)

<sup>2</sup> <https://www.axxes.fr/en/peage-autriche.html> (consulted: 9 December 2016)

## **Future EETS Providers**

Potential EETS Providers can be found among the members of AETIS, Association of Electronic Toll and Interoperable Services, and the service providers active in the (continuation of) the REETS TEN project. However, also “new” players might enter the EETS world.

### *AETIS members*

AETIS was founded as a non-profit making association with, as their main goal, to represent its members as a stakeholder group with regard to the definition of the EETS Provider role in the relevant EU legislation<sup>3</sup>. AETIS has currently 12 members, i.e. companies that act as (potential) EETS Providers and are represented by AETIS. Five AETIS members are officially registered EETS Providers (Axxès, Total, Telepass, eurotoll and Eurowag).

### *REETS Providers*

As a first step towards full European interoperability, Member States with significant volume of traffic on the trans-European network should encourage the cross-border interoperability of their electronic road toll systems. These early deployment project(s), on a regional basis, will be promoted in a way so that they can be extended to cover all the electronically tolled road infrastructures in the EU as soon as possible at a later stage and can provide concrete experiences in solving practical EETS issues [2].

On this basis, the Commission has supported the REETS-TEN project (2013-2015). The project aimed to provide EETS-compliant services in a cross-border regional area formed by the following countries: Austria, Denmark, France, Germany, Italy, Poland, Spain and Switzerland. The EETS Information Platform and the cross-border pilot projects are being continued under the auspices of the EETS Facilitation Platform<sup>4</sup>.

In the EETS Working Group of the EETS Facilitation Platform, various EETS Providers or AETIS members are active as service providers interested in (R)EETS. In addition, the following stakeholders act as (potential) REETS Providers: Arvato/Bertelsmann, SkyToll and Via Verde.

### *National toll operators*

The current EETS legislation particularly focuses on the role of the new toll service providers, the EETS Providers. The future role of the national toll operators has received little attention, although these stakeholders are certainly thinking about their future. Existing toll operators in various countries (e.g. Germany, Austria, Belgium, Slovakia) now offer the entire range of services and could theoretically also be an EETS Provider.

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<sup>3</sup> <http://www.aetis-europe.eu/mission-statement.html> (consulted: 9 December 2016)

<sup>4</sup> See also: <http://www.eetsinfoplatform.eu/>

## The Competitive Environment of the EETS

In principle, the current EETS legislation allows today's national toll operators to act as EETS Providers. However, esp. in the case of public tenders, the question arises whether the contracts between the state and the toll operator will permit this. In particular difficulties arise regarding the delimitation to the national toll system and the remuneration of an EETS Provider. For example, some Member States prefer the same company to be in charge of the operation of the toll system, the toll collection and the enforcement. In this situation, it is difficult to determine which part of the company's remuneration is equivalent to the toll collection – an activity in competition with EETS Providers – and whether the EETS Providers would be discriminated against.

Hopefully the revision of the EETS legislation will bring more clarity about a separation of accounts with respect to the activities of a national toll operator and an EETS Provider, if these activities are to be carried out by the same company.

### *OBU/vehicle manufacturers and IT operators*

The EETS market is constantly evolving: new players are coming, others are leaving. This is also due to the development of the in-vehicle tolling technology (see also below). For example, On-Board Units (OBUs) are nowadays demanded as a retrofit variant. It is therefore conceivable that OBU manufacturers, such as Kapsch, can also act as EETS Providers.

It is also expected that OBUs in special variants are increasingly being installed by the vehicle manufacturers in the original equipment. The new digital control unit (tachograph) is the driver for this development for heavy vehicles. It will be installed in nearly all new heavy vehicles in Europe from 2018 onwards and can be retrofitted in older vehicles. The manufacturers of these devices have an interest in expanding these devices with the functionality of an EETS-OBU.

In the long term, it is to be expected that Toll Chargers will increasingly receive the data relevant to the toll collection from the vehicle manufacturers. Therefore it cannot be ruled out that the vehicle manufacturers will in the long term also appear as an EETS Provider – with EETS being a service within their “Total Care” service concept.

Suppliers of IT and telecommunication services will also increasingly want to appear as system providers, for example as partners of an EETS Provider. The early involvement of Deutsche Telekom at Toll Collect or the interest of IBM in this sector are clear examples.

*Partnerships*

Due to the complexity of the tasks of an EETS Provider (see Table 2), it is assumed that different actors will bundle their competences in order to be more successful in the long term. For example, partnerships with payment specialists or OBU/vehicle manufacturers are conceivable [8].

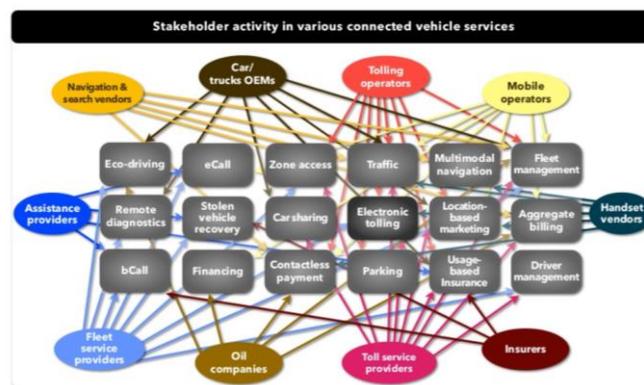
**Table 2 – Most important tasks of an EETS Provider following from the requirements of the EETS Decision and the business processes of the CESARE model**

Tasks of an EETS Provider
<ul style="list-style-type: none"> <li>• Legal and contractual issues                             <ul style="list-style-type: none"> <li>○ Preparation, implementation and maintenance of the status of an EETS Provider (registration conditions)</li> <li>○ Negotiation with Toll Chargers and other relevant stakeholders, permanent contract management</li> <li>○ Financing and bank guarantee</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• Organisational processes and customer management                             <ul style="list-style-type: none"> <li>○ Customer Relationship Management, e.g.                                     <ul style="list-style-type: none"> <li>▪ Management of customer accounts</li> <li>▪ Helpdesk</li> </ul> </li> <li>○ Payment processing, e.g.                                     <ul style="list-style-type: none"> <li>▪ Invoicing of EETS Users</li> <li>▪ Clearing with fleet card issuers and payment means providers</li> <li>▪ Clearing with Toll Chargers</li> </ul> </li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• Technical processes and systems                             <ul style="list-style-type: none"> <li>○ Suitability for use testing</li> <li>○ Comprehensive safety concept</li> <li>○ OBU/user management (e.g. distribution and personalisation of OBU)</li> <li>○ Toll collection/enforcement                                     <ul style="list-style-type: none"> <li>▪ OBU, e.g. HMI and interfaces</li> <li>▪ Central system, e.g. interfaces for toll context data, user lists, black lists, etc.</li> </ul> </li> </ul> </li> </ul>

**Future tolling technologies**

The competitive environment of the EETS is also strongly driven by technological developments. Although CEN DSRC will be provisionally available, the general trend towards GNSS and smartphone technologies is emerging. The market for special toll collection devices is increasingly moving towards “tolling as a service” with toll collection being one of the connected vehicle services (see Figure) . It is expected that tolling applications will increasingly be integrated into other existing devices (e.g. fleet management devices, tachographs, board computers) and customers will increasingly be interested in value-added services [9].

**The competition for connected services will only accelerate**



**Figure 1 – Electronic tolling as part of the connected vehicle [10]**

Overall, the value of movement data is high and brings new participants into the market, who do not have the toll collection, rather the contact with the user in focus. Vehicles will increasingly communicate with each other and with the road infrastructure and be equipped with additional communication channels (C-ITS). Technologically, these systems are able to reproduce all the basic functions of a GNSS-OBU in the vehicle. In the longer term, with more and more (partly) automated vehicles, it is to be expected that vehicle manufacturers will play an important role on the tolling market, being the ones having first access to all vehicle-related and positioning data.

Which tolling technologies will be used in the future mainly depends on two factors:

- Technological possibilities or the expected technological progress, as well as its availability and profitability in relation to the respective field of application
- Legal, social and political framework conditions in a region or country, that is also influenced by the market participants and their interests

A (future) tolling technology should always be evaluated from the perspective of users, operators and traffic policy. In reality, the interests of politics and the economy are often perceived.

**Outlook**

The competitive environment of the EETS is strongly influenced by the current and the future/revised EETS legislation as well as by technological developments. The most important “EETS Provider groups” can be represented as follows:

- Fuel card and payment providers
- OBU manufacturers
- Vehicle (esp. truck) manufacturers
- Today’s toll operators

Except for a few actors, who can do all activities “in-house”, most actors are expected to bundle their competences in order to be able to carry out the complex tasks of an EETS Provider, to realise synergy potentials and to achieve savings. In particular with regard to connected and (partly) automated driving, the cooperation between different market players will gain in importance.

An important role is reserved for fuel card providers as they have currently the best access to EETS Users. It is to be expected that today’s fuel card customers will in future be equipped with an EETS-OBU and EETS will become a fixed component in the portfolio of the market-leading fuel card companies to secure their market shares.

It is difficult to make a statement about the total number of future EETS Providers. Based on political discussions in Germany, it seems plausible that here 2-3 EETS Providers will be active in future. Although a relatively large number of potential EETS Providers exist at the moment, we believe that ultimately there will be few registered EETS Providers, based on different partnerships. In case the revised EETS legislation will accept interoperability on a very small scale, the number of registered EETS Providers could be larger.

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