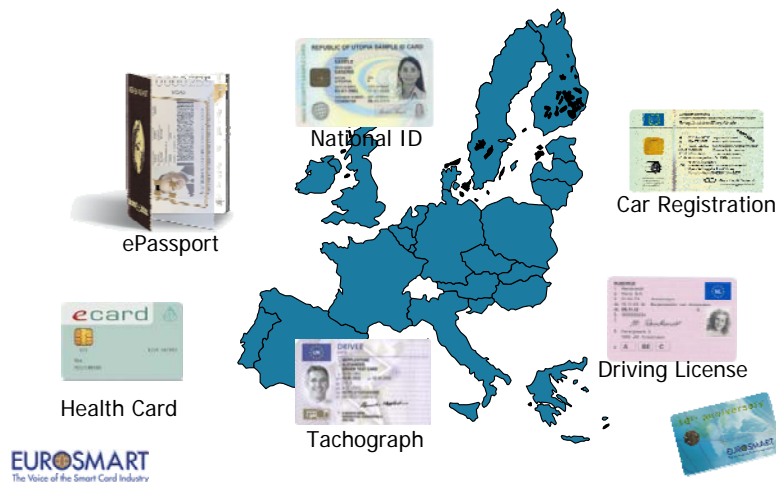


ELECTRONIC DRIVING LICENCE – A PAN-EUROPEAN LONG TERM SOLUTION

EU legislation and funded research continue to support ICT technologies and promote their deployment in the Europe. Smart Card technology is still well positioned in that field as more and more applications are now being influenced by governmental bodies.



For the smart card industry, the European Agenda in the public sector domain is impressive: Electronic Passport, Residence permit, Healthcare Smart Card, Electronic Driving Licence, Tachograph, Car registration...

Context of increased security for Member States and citizens

The trend is set in Europe: Electronic Passports are to be deployed in August 2006; most European countries have a National ID card and several (Belgium, Estonia, Finland, Italy...) have adopted or are adopting an electronic National ID card; several countries have deployed an electronic Healthcare card (Austria, Belgium, France, Germany, Italy, Slovenia...).

Europe should take the benefit of existing standards, existing infrastructure, existing experience put into place for the ePassport and eID.

Driving Licenses are set to follow a similar trend. In most countries, they are also widely used as ID documents for security-sensitive operations such as opening bank accounts or boarding airplanes. Driving License-based ID theft leads to substantial financial and human risks.

The migration for more secure credit-card format (versus paper) Driving Licenses has already been set by many European countries.

The introduction of the chip to provide an ultimate level of security and privacy is a logical next step.

European Driving License legislation is well advanced and needs to go further

In 1991, Europe harmonised many of the driving rules, enabling eased circulation in Europe. In 1994, Europe authorised the use of plastic credit card-shaped Driving Licenses in conjunction of the joining of Finland and Sweden, which already used such secure documents. In 1997, Europe made plastic credit-card format Driving Licenses an option in addition to the paper format.

There are now over 110 different driving license models used by around 250 million European citizens. All of these driving licences have to be recognised throughout the EU without any formality and are thus an essential tool for facilitating the free movement of such a large number of citizens. Although driving licences have to be mutually recognised, the continued existence of different models, differing in inherent rights, validity periods, language and layout renders such recognition difficult. The lack of communication between issuing authorities adds to this difficulty.

Today, 17 countries have started deploying credit card format driving licenses. There are still 8 countries issuing paper driving licenses. Ongoing discussions in some EU countries are linking national security to electronic ID cards and electronic driving licence cards. Some early indications are published in UK, Sweden and Spain.

The current proposal, under work since 2003, recasting Directive 91/439/ECC, aims at deploying a Europe-wide harmonised and secure credit card-shaped driving license that would have a document lifetime of 10 years. It sets the chip as an option.

Mathieu Grosch, Member of the Parliament and rapporteur on this text, amended the proposal in February 2005, to ensure future interoperability of the electronic driving licences to be issued in different countries. It is precisely on common specifications/platform that the industry is supporting the position of the Parliament and wishes to convince the Council of Ministers to adopt a common view.

A common regulation with precise objectives

The Directive proposal has the following main objectives:

- **Reduce the possibilities of fraud:** elimination of the possibility of issuing a paper model driving licence in favour of the plastic card driving licence model. Member States will have the option of incorporating a microchip in the driving licence containing the information printed on the card;
- **Guarantee the free movement of citizens:** driving licence holders will keep their acquired rights, but regular renewal of the document will limit the possibilities of fraud by allowing the anti-fraud protection of all licences and the holder's photograph to be updated. All licences will have the same validity period and will be valid in all the Member States, unconditionally, for the same administrative validity.
- **Contribute to improved road safety:** introduce of a new category of licence for mopeds, harmonise the periodicity of medical checks for professional drivers and lay down minimum requirements for the initial qualification and the training of driving examiners.

Smart card for Driving License provide additional security and privacy

Although, as mentioned, the chip is optional and left to Member States to decide, it will provide significant **advantages, corresponding to the objectives of the regulation:**

- **Security:** information written on the document is also securely stored into the chip so it cannot be altered. It provides an ultimate level of security against counterfeiting. It enables additional use of biometric information if required.
- **Privacy** is enabled as the chip can filter appropriate information to selected authorised people. This includes sensitive information such as home address or optional biometric information.
- **Verification** is eased by instantaneous uncovering of counterfeiting. Optional biometrics are processed by matching algorithms.

If Driving Licenses have a contactless interface, they can take advantage of the reading infrastructure being deployed for electronic passports. The system used for electronic Passports is now proven to be a reliable interface in terms of security, privacy, interoperability and durability.

Standards are established, and Europe needs to contribute to their finalisation

International ISO standards focus on the machine-readable, credit card-shaped Driving License: **ISO 18013¹**. Organizations and companies from various countries contribute to it: United States, Japan, Korea, Australia, South Africa and Europe in particular.

Part I, which relates to the physical characteristics of the plastic Driving License card, is finalised. Part II relates to the data structure of the machine-readable data and is close to finalisation. Part III relates to the verification procedures (reading of the data on the chip) and is currently being written. This latter part describes the privacy mechanisms such as the Basic Access Control and Extended Access Control implemented by Europe for the electronic Passport.

Although no country has any obligation to implement ISO standards, it is desirable that Europe contributes to the Verification Procedures with its own requirements in terms of privacy mechanisms.

Recommendations from EUROSMT

If we combine the objectives of the driving licence regulation, the advantages of choosing an electronic driving licence and the existing standard and infrastructure, EUROSMT wishes to address the following recommendation to the European Ministers of Transport:

Europe should adopt a common framework to secure its identity documents; it is already the case for travelling documents, electronic passports², as well as electronic identity cards (if used travelling inside Europe);

Europe should take the benefit of existing standards, existing infrastructure, existing experience put into place for the ePassport and eID.

Eurosmart wishes to point out various documents on the table to provide guidance and interoperability in the implementation of an electronic driving licence interoperable on the European territory:

- Registration documents for vehicles (smart card format specifications available) EC Directive 127/2003;
- National eID card, common minimum security standards and procedure³ adopted by Council of Ministers in December 2005
- International Standard for electronic driving license, ISO 18013 (Working group 10).

EUROSMT proposal for high secure, EU harmonised, electronic driving license:

ISO-Standard 18013 for format & data structure combined with the existing security architecture for travelling documents in line with the Council Conclusions of December 2005 on national identity documents.

Secure (and optionally electronic) driving licence common framework has been under discussion since October 2003. An agreement in 2006 will facilitate the work of the administrative and enforcement authorities, and should contribute to reinforce safety on European roads.

¹ ISO/IEC 18013-1:2005

² Council Regulation 2252/2004 of 13 December 2004

³ Council Conclusions Justice and Home Affairs of 1-2 December 2005

MORE INFORMATION

Learn from examples and exchange on common basis

Several countries are deploying electronic driving license. Early deployments use proprietary implementations and EUROSMART would not recommend this approach. To give an overview, worldwide:

- **El Salvador** was the first country to introduce, in 1998, a smart card-based Driving License. The scheme is proprietary and the chips securely store the facial photo, fingerprints and a digital signature.
- **India** has followed in 2004. Their solution is proprietary, contact-based, 4k Memory, without biometrics.
- **Russia** has deployed and starts test installation with contact-less Driving License in 2005.
- **Japan** is just about to fully deploy ISO-compliant contactless Driving License. The first implementation in Japan would be the prefecture in Tokyo, starting 2006. A complete switchover could be possible by 2013. Japan has already adopted a plastic card document renewed every 3/5 years and demonstrated the increase of road safety with today round 77 Mio Driving Licence in circulation. The next generation of Driving Licence cards has 8k Memory and contains facial data with data compression, according JPEG 2000.
- **Australia** is studying an ISO-compliant Driving License pilot to deploy by 2007 in Queensland.
- **US** could use smart technology in its plan to secure by May 2008 its Driving License in the context of the Real ID Act.

Existing viable national large scale projects should help convince EU Members States to adopt a long-term strategy and to measure the reality of fraud reduction impact of an electronic document.

EUROSMART

EUROSMART is the Brussels based international association representing the Smart Card Industry for multi-sector applications. Through its activities, Eurosmart act as a catalyst and forum for the smart card stakeholders. In a global environment, Eurosmart encourages interoperability through international cooperation. Eurosmart achievements have been acknowledged by the smart card community as "the voice of the experts".

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