EasyWay 2007-2009

Study on the Pan-European Service "eCall: the in-vehicle emergency call for road accidents" in the EasyWay project

Interaction between operational motorway management

and the eCall

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T A B L E   O F   C O N T E N T S

1. Foreword

EasyWay[1] is the principal programme at a European level aimed at the promotion of:

- more innovative technologies applied to road transport;

- interoperability;

- improvement of existing infrastructures,

in the perspective of increasing safety, efficiency and reliability of the Trans-European Road Network (TERN[2]).

In the first phase of the EasyWay programme particular importance was given to eCall[3], as part of the wider Community initiative eSafety[4] promoted by the European Commission, DG INF-SO[5] with the aim of enhancing safety by means of the development of technological instruments.

The eCall consists in the activation of a pan-European in-vehicle emergency call service. In an accident the eCall device, set off manually by the people inside the car or automatically by sensors installed in the car, calls the single European emergency call number 112[6] and, as well as establishing a voice connection, transmits a minimum set of data[7]:

- the time and place of the accident;

- the vehicle identification;

- information about services required,

directly to the nearest emergency service answering point (PSAP[8] - Public Safety Answering Point).

The analysis carried out by the E-MERGE[9] project and financed by the European Commission, has demonstrated that a system that sends the exact coordinates of the

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[1] EasyWay is a project promoted by the European Commission. It is aimed at improving safety and mobility on the TERN road network by means of the development and diffusion of Intelligent Transport Systems and Services (ITS)

[2] TERN: *Trans-European Road Network* - the function of the Trans-European Networks is that of creating a modern efficient infrastructure able to link the European regions to national networks

[3] eCall: the Pan-European Service of the in-vehicle emergency call for road accidents

[4] eSafety: is a European Commission initiative the with the aim of promoting the development and use of in-vehicle Intelligent Safety Systems to increase road safety in Europe

[5] DG INF-SO: *European Commission - Directorate General for Information Society*

[6] 112: single European emergency call number

[7] MSD: *Minimum Set of Data*

[8] PSAP: *(Public Safety Answering Point)* – the point that is the first to receive the emergency calls under the responsibility of a public authority or private organisation recognised by the government

[9] E-MERGE: (*Enhanced emergency response)* – is a project that between April 2002 and March 2004 deployed eCall trials in 6 test centres, with the involvement of automobile companies, PSAP personnel, Service Providers, emergency operators, public authorities and others. The test results were extremely positive with a degree of reliability equal to 100%

location of the accident to the PSAP and rescue services can reduce the response time to the accident by about 50% in rural areas and up to 40% in urban areas. In the case of serious injuries, faster medical intervention following an accident can significantly reduce the death rate and the seriousness of the injuries. In accident medicine this is known as the "Golden Hour Principle".

The estimates of the cost-benefit relationship of the eCall calculated in the context of the E-EMERGE project and the SEiSS[10] study show that in the EU-25 it is possible to save up to 2,500 lives a year, with a reduction of up to 25% of the seriousness of the injuries. These estimates are based on the CARE[11] database of road accidents in 2002.

The objective of the eCall project consists in the setting up of a pan-European emergency service that can be used by all the vehicles in Europe, independently of the type, the country of registration and where they are, and which uses the single European emergency call number 112.

Therefore, the potential of the eCall, highlighted by the E-MERGE project (reduction in the time needed to collect information from the operators and the intervention time needed in the accident management) and the SEiSS study (up to 2,500 lives could be saved every year) must be integrated with the management procedures already in use on motorways.

For this purpose, the European regulatory framework related to the single European emergency call number 112 will be analysed, the Italian regulatory framework relative to the adoption of the Community directives, regulations and decisions will be defined, the level of diffusion of the single European emergency call number will be outlined also in relation to its evolution from 112 to E112[12] in Europe and in Italy and the state of the art of the 112 experiment being carried out in the province of Salerno will be described.

In order to know the state of implementation of the single European emergency number E112 and the operational procedures on accident management by the European concessionaire companies, a questionnaire will be drawn up to be presented to the Coper III[13] of the Asecap[14], and submitted to its members.

Moreover, an analysis will be made of the contents of the European Parliament resolutions and the communications of the European Commission relative to the eCall service and the Italian regulations related to the eCall.

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[10] SEiSS: *Exploratory Study on the potential socio-economic impact of the introduction of Intelligent Safety Systems in Road Vehicles*

[11] CARE: *European Road Accident Database* : is a Community database on road accidents resulting in death or injury, with no statistics on damage, only accidents.

[12] E112: Single European Number with location-enhanced emergency call services

[13] Coper III: Permanent Committee of ASECAP (*Association Européenne des Concessionnaires d'Autoroutes et d'Ouvrages à Péage*) with the task of studying issues relative to the intelligent transport systems

[14] ASECAP: *Association Européenne des Concessionnaires d'Autoroutes et d'Ouvrages à Péage (European Association of tolled motorways, bridges and tunnels)*. ASECAP is the only European professional association of tolled motorways companies. It gathers and represents 131 organisations that manage more than 25 000 kilometres of toll roads through 17 European countries

Furthermore, an analysis will be made of the implementation of the eCall in the European and Italian motorway system and how its introduction must take the already existing procedures into consideration. The procedures, players and technological resources linked to this will be highlighted, which are used at present by the concessionaire companies in rescue operations along the Italian toll motorway network.

In conclusion, a SWOT analysis will be carried out on the introduction of the eCall in motorway management, the result of which will constitute the input to define suggestions and lines of action in order to reach the effective implementation of the eCall without generating inefficiencies that could have repercussions in a worsening of motorway safety conditions.

2. The single European emergency call number 112 and its evolution to E-112

The single European emergency number 112 was introduced with a EU Council decision in 1991[15], as a complementary number to the national emergency numbers and to provide greater accessibility of the emergency services in all the European Union Member States.

The directive on the universal service adopted in 2002[16] sets down the obligation for telecommunications operators to put information on the location of users calling 112 at the disposal of the rescue services, in the measure in which it is feasible. Location-enhanced 112 calls are known as E112[17] calls.

The directive relative to privacy and electronic communications[18] contains clauses for the safeguard of personal data and the protection of privacy in electronic communications. In a real emergency, however, it is considered that the need for rescue prevails over the protection of private life. The directive therefore allows the organisations in charge of the handling of emergency calls to process information relative to location and other personal data.

The Community regulations on telecommunications requires the Member States to guarantee that citizens can call the single European emergency number 112 free of charge from any type of telephone on national territory; these calls must furthermore receive an answer and appropriate handling and the operators must give the emergency services location-enhanced information on the caller.

In 2006, the European Commission began infringement proceedings against:

- **14 Member States** for failure to transmit the location of the caller (Belgium, Cyprus, Greece, Hungary, Ireland, Italy, Lithuania, Luxemburg, Leetonia, Holland, Poland, Portugal, Rumania, Slovakia);

- and two other countries for the unavailability of the 112 service (Bulgaria and Rumania).

In June 2008 the Commission launched a website dedicated to the 112 number (ec.europa.eu/112)[19], that gives citizens travelling in the EU information in all the official EU languages.

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[15] See § European regulatory framework and related documents

[16] See § European regulatory framework and related documents

[17] For all 112 calls, the network operator can send information relative to location (push) or make it available upon request (pull). In many cases the information relative to location comes from the position of the wireless cell (the so-called Cell-ID)

[18] See § European regulatory framework and related documents

[19] IP/08/836 Date: 03/06/2008

2.1. Analysis of the regulatory framework

2.1.1. EUROPEAN REGULATORY FRAMEWORK AND RELATED DOCUMENTS

Year	Reference	Title	Main objectives
1991	**Council Decision 91/396/EEC** [20]	on the introduction of a single European emergency call number	The Council Decision establishes the compulsory introduction of the single European emergency call number 112 for the Member States by 31 December 1992.
2002	**Directive 2002/22/EC of the European Parliament and of the Council** [21]	on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive)	The Directive establishes: - "112" by 24 July 2003 with functionality of caller location - at least an emergency services that replies to "112" - access to all emergency services trough "112" - call processing in foreign language - Speed in emergency handling - Caller location if fixed or mobile network - "112" identification like single European emergency call number in all communications to the citizens
2002	**Directive 2002/58/EC of the European Parliament and of the Council** [22]	Concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on privacy and electronic communications)	The Directive establishes that the providers of the public communications networks and services could deactivate the calling line identification presentation and the elimination of the presentation of calling line identification, and the temporary denial or absence of consent of a subscriber or user for the

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[20] Published in the EU Official Journal L 217, 6.8.1991

[21] Published in the EU Official Journal L 108, 24.4.2002

[22] Published in the EU Official Journal L 201, 12.7.2002

Year	Reference	Title	Main objectives
			processing of location data, on a per-line basis for organisations dealing with emergency calls and recognised as such by a Member State, including law enforcement agencies, ambulance services and fire brigades, for the purpose of responding to such calls
2003	**Commission Recommendation 2003/558/EC** [23]	on the processing of caller location information in electronic communication networks for the purpose of location-enhanced emergency call services	The Recommendation establishes that the for every emergency call made to the European emergency call number 112, public telephone network operators should, initiated by the network, forward (push) to public safety answering points the best information available as to the location of the caller, to the extent technically feasible. It is acceptable that operators make available location information on request only (pull)

2.1.2. ITALIAN REGULATORY FRAMEWORK AND RELATED DOCUMENTS

Year	Reference	Title	Main objectives
2003	**Legis. Decree 196/2003** [24]	Code relative to the protection of personal data	With the adoption of Legis. Decree No. 196/2003 a specific discipline was introduced into the Italian legal system on the subject of location, which foresees specific precautions for the processing of data relative to localisation that differ from traffic

[23] Published in the EU Official Journal L 189, 29.7.2003
[24] Published in the IT Official Journal No. 174, 29.07.2003

Year	Reference	Title	Main objectives
			data (art. 126). This is owing to the specific information that the caller must give prior to the initiation of the service, and in terms of the revocability of consent or the temporary "freezing" of the service. The regulation in fact provides that the person concerned can interrupt the value added service by means of a simple function and free of charge.
2003	**Legis. Decree 259/2003**[25]	Code of electronic communications	The Legis. Decree establishes the introduction of the single European emergency call number 112. In particular "for every call to the single European emergency call number 112, the public telephone network operators put at the disposal of the authorities in charge of rescue services and civil defence the information relative to the caller's location, as far as it is technically feasible".
2003	**Pres. Decree of 4 August 2003**	Establishment of a "Work group for the setting-up of the single European emergency call number"	"A work group" is established "for the setting-up of the single European emergency call number" with the task of realising first of all a feasibility study for the analysis of the problems concerning the creation of the single European emergency call number on national territory, proposing the modalities and actions needed for the realisation of the subsequent

[25] Published in the IT Official Journal No. 214, 15.09.2003

Year	Reference	Title	Main objectives
			experimentation in suitable national contexts and the definition of the plan for the extension of the service to the whole country, supervising the coordination needed among the players involved.
2005	**Pres. Decree of 30 June 2005**[26]	Establishment of a special body called the "Technical-operational unit for the introduction of the Single European Emergency Call Number"	A special body is established called the "Technical-operational unit for the introduction of the Single European Emergency Call Number" with the task of defining, organising and coordinating all the activity needed to carry out the project for the setting-up of the single European emergency call number, supplying the various administrations and players involved with administrative, organisational and technical guidelines. The body carries out its work until the end of the mandate of the government having leadership.
2008	**Ministerial Decree of 22/01/2008**[27]	Single European emergency call number 112	The decrees "requires that" the telephone companies send the callers' identification and location to the police and Carabinieri.

[26] Published in the IT Official Journal No. 237, 11.10.2005
[27] Published in the IT Official Journal No. 59, 10.3.2008

2.2. The state of implementation of the single European emergency call number 112 and E112: in Europe

The website dedicated to 112 (ec.europa.eu/112), inaugurated by the Commission in 2008, shows the state of implementation of the single European emergency call number 112 in the Member States, based upon the information given by them and highlights the **best practice:**

- **Quick handling of calls**: the Member States gave information on the response time to the 112 calls once connected.

    o At least 97% of the calls is answered **within 20 seconds** in the Czech Republic, Spain and the United Kingdom;

    o and at least 71% **within 10 seconds** in the Netherlands and Finland.

- 17 countries declared they were able to **answer 112 calls made in the languages of the Union**: the answer centres (PSAP) are able to answer calls:

    o in English in 16 countries (Austria, Bulgaria, Czech Republic, Denmark, Germany, Estonia, Finland, France, Hungary, Greece, Lithuania, Malta, the Netherlands, Slovenia, Spain and Sweden);

    o 7 countries have declared that their centres can answer in the language of one bordering Member State (Bulgaria, Germany, Estonia, Spain, Lithuania, Hungary and Slovenia).

    o some have taken special measures that allow their centres to answer in other languages, as well as diverting the call to other answer centres with competent personnel (Czech Republic, Greece, Slovenia and Spain) or to interpreting services (Finland, France, the Netherlands, Spain, Sweden and the United Kingdom).

- **Raising awareness:**

    o 4 countries broadcast TV programmes advertising the 112 number (Cyprus, Czech Republic, Latvia and Sweden).

    o Finland and Romania celebrate "112 day" every year on 11 February

- **Other useful instruments are:**

    o variable message signs on motorways (Austria and Hungary);

    o leaflets at motorway toll stations (Spain);

    o SMSs sent to users of mobile phones in roaming (Hungary).

and also the **defaults**:

- **112 is not yet fully available in Bulgaria** and infringement proceedings are still under way. From the information received, the emergency number is active in the Sophia region but not all over the country.

- **The impossibility to localise the call in the case of mobile phone calls : EU** infringement proceedings have begun against:

  o 6 countries (**Italy**, Lithuania, the Netherlands, Poland, Romania and Slovakia).

- 9 countries have not given information on **response times to 112 calls** once connected: Belgium, France, **Italy**, Cyprus, Luxemburg, Malta, Poland, Romania and Slovakia.

- 10 countries have not given information **on the ability of the answering centres to answer calls in at least one European language different from their own national or official language**. Belgium, Ireland, **Italy**, Cyprus, Leetonia, Luxemburg, Poland, Portugal, Romania and Slovakia.

2.2.1. QUESTIONNAIRE TO THE EUROPEAN COUNTRIES ON THE E112 NUMBER

Below is given a synthesis of the state of implementation of the E112 resulting from the questionnaire (see Annex 1) presented to the Coper III and completed by some of the members belonging to Asecap (Austria, Croatia, France, Ireland, Poland, Portugal, Slovenia and Spain).

In Annex 2 it is possible to see the complete version of the questionnaires.

The fact is stressed that as Directive 2002/22/EC is aimed more at the telecommunications companies than the motorway ones, some members that filled in the questionnaire did not answer the questions relative to the directive because they were not fully aware of the implementation of the same.

European Countries Asecap Members Km in operation[28]	The state of implementation of Directive 2002/22/EC (Universal Service Directive)	
	The implementation of Directive 2002/22/EC	Practical/technical example of Directive 2002/22/EC implementation
Austria **ASFINAG**[29] **2,103,7**	ASFINAG has no complete knowledge about how all the Articles are implemented in Austria, although this information can be provided on a case by case basis if requested. What can be said is that for example: • Article 6 (3): is implemented in Austria • Article 19 (1): is implemented in Austria • Article 26: 112 is implemented in Austria but to what extent "the caller location information" is known to the authorities handling emergencies should be analysed. • Article 30 (1): is implemented in Austria	Any further information can be provided upon request

[28] Source: Aiscat in figures - 2008
[29] Autobahnen- und Schnellstraßen- Finanzierungs- Aktiengesellschaft

European Countries Asecap Members Km in operation[28]	The state of implementation of Directive 2002/22/EC (Universal Service Directive)	
	The implementation of Directive 2002/22/EC	Practical/technical example of Directive 2002/22/EC implementation
Croatia[30] **HUKA**[31] **1,198,7**	The E-112 number is implemented within the 112 Service (being a part of the Croatian Protection and Rescue Authority). Along with its operation communication centers (State centre and 20 regional centers) the Service collects and processes information, data and messages 24 hours a day. The 112 Center functions as a unique communication center for all kinds of emergency situation. The number is free of charge, and can be dialled from all mobile networks, fixed networks and all types of telephone devices simply by dialing 112.	
France ASFA[32] **8.522,4**	112 is operational both for fixed and mobile in France and works quite well. E112 (voice+location) don't work well. Fixe: the name of person and phone number who call is given to the operator Mobile: nothing automatic. Only by specific demand by fax, the localisation of the mobile cell is given.	

European Countries Asecap Members Km in operation[28]	The state of implementation of Directive 2002/22/EC (Universal Service Directive)	
	The implementation of Directive 2002/22/EC	Practical/technical example of Directive 2002/22/EC implementation
Ireland ITIA[33] **146,0**	Originating from the Communications Regulation (Amendment) Act 2007, the Department of Communications, Energy and Natural Resources has established the emergency call answering service (ECAS). Following a public procurement process, BT Ireland is to operate the ECAS over the next 5 years. ECAS will include the processing of mobile location information. See http://www.dcenr.gov.ie/Communications/Business+and+Technology/Emergency+Call+Answering+Service.htm .	There is no provision for interfacing with motorway operators. Directive 2002/22/EC does not include any specific references to motorway operators.
Poland Autostrada Wielkopolska 235,0	In order to implement Directive 2002/22/EC the Polish Government amended the Telecommunications Law (the Act of 16 July 2004) by implementing its recommendations on common service to the Polish legislature. Moreover, the Minister of Infrastructures issued an ordinance on detailed conditions concerning the provision of a universal service and requirements concerning broadband Internet access service for authorised units. The scope of a performed universal service ensures access for all end users to publicly available telephone services, charge free contact with rescue services with the application	Further implementations of Directive 2002/22/EC are regulated by amendments introduced to Acts and Ordinances. The Act of 6 September 2006 on State Medical Rescue requires the receiving and dialling of calls to the emergency number. Calls dialled to the 112 emergency number are currently received by emergency communication centres, District/Municipal Fire Service Management Posts (for fixed-line telephony) and at District Police Posts (for mobile telephony), whose task is to receive alerts or redirect them to the relevant units of the Police, the State Fire Service or

[33] Irish Tolling Industry Association

European Countries Asecap Members Km in operation[28]	The state of implementation of Directive 2002/22/EC (Universal Service Directive)	
	The implementation of Directive 2002/22/EC	Practical/technical example of Directive 2002/22/EC implementation
	of the European emergency number "112". The common telecommunications service is provided throughout the country.	rescue service. Currently work is in progress on the system target model and the "All-Polish" tele-information network project for the purposes of handling the 112 emergency number to be implemented. The project is aimed at the improvement of the quality of cooperation between the organizational units of the Police, the State Fire Service and the State Medical Rescue within the scope of handling calls to emergency numbers.
Portugal APCAP[34] 1.721,3	Portugal has adopted the Directive and *Portugal Telecom* and the remaining telecom operators have to comply with existing legal framework in accordance with Directive 2002/22/EC. On E-112 the question is that any call for 112 should be geographically identified to allow the fastest sanitary assistance, meaning that telephone exchanges/switches must clearly indicate the address of the caller.	Among other examples, I may refer the situation I was involved at *Brisatel*, a telecom operation from *Brisa*[35]. In that operation we were discussing with *Portugal Telecom (PT)* about the use of its infrastructure, namely their local loop network (the network between the local exchanges and the users homes) and *PT* was obliged to publish their costs, upon *ANACOM* certification, for the other operators like *Brisatel* to be able to use that basic infrastructure.

[34] Associação Portuguesa das Sociedades Concessionárias de Auto-Estradas ou Pontes com Portagens
[35] Auto-estradas de Portugal was created in 1972

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European Countries Asecap Members Km in operation[28]	The state of implementation of Directive 2002/22/EC (Universal Service Directive)	
	The implementation of Directive 2002/22/EC	Practical/technical example of Directive 2002/22/EC implementation
Slovenia DARS D.D[36] 552,4	The Slovenian status of the e-112 (2008): • 112 Emergency Services in Slovenia: • Emergency calls in 112 (1998) • Caller locations fully implemented in 2006 (fixed) and 2007 (mobile) • Emergency calls for disabled users (autumn 2008) • E-Call (2010) Information on 112: On web: www.sos112.si On mobile phones: wap.sos112.si	Caller location information for 112 calls in Slovenia must be available by law – Art. 72. ZOE in all PSAPs by the end of 2008. All telecommunication operators in Slovenia must make caller location information available in PSAPs by the end of 2008 with the Push System.
Spain ASETA[37], 3,334,5	This directive concerns the rights and obligations of the telecommunication networks users and, in our opinion, is more focused on telecommunication operators than on toll road operators.	

[36] Druzba za avtoceste v Republiki Sloveniji d.d.
[37] Asociación de Sociedades Españolas Concesionarias de Autopistas, Túneles, Puentes y Vías de Peaje

2.3. The state of implementation of the single emergency number 112 and E112: in Italy

According to the European Commission, to date Italy is still in default in relation to the functioning of the single European emergency number 112 foreseen by the European Union in 1991 and confirmed with detailed specifications in 2002.

In 2003 a "Work Group for the establishment of the Single European Emergency Number" was set up (DPCM del 04/08/2003) with the task of carrying out a feasibility study to decide how the 112 answering points should be structured and organised in Italy, also technologically

In 2004, the start of an experiment in the provinces of Salerno, Catanzaro and Palermo was announced by the Ministry for Technological Innovation. For financial reasons the experiment was initially limited only to Salerno.

In 2005 a group of experts "The technical-operational unit for the establishment of the Single European Emergency Number" was created.

The mandate of these commissions expired in the first half of 2006 and the Salerno experiment can now be considered over.

Furthermore, on 10 April 2006, the European Commission began infringement proceedings against Italy for failure to apply EC directive 2002/22/EC, with reference to article 26, third paragraph "information relative to the caller's location"[38].

The Italian Government's reply, as foreseen by article 226 of the EC treaty, was not deemed sufficient by the European Commission, so much so that in October 2006 the infringement proceedings entered a second phase with a new injunction by the Commission to the Italian government.

In 2008 the Gentiloni[39] Decree was introduced, in which the realisation of the 112 project was entrusted to the Police and Carabinieri, excluding the Fire Service (115) and the regional ambulance services (118).

In January 2009 the European Court of Justice condemned Italy for not having initiated the caller's location service.

In order to avoid the European fines Italy will have to overcome the technical and normative problems and ensure the traceability of the calls also at the 115 and 118 call centres.

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[38] The article establishes the obligation for public telephone network operators to put at the disposal of the rescue services, in the measure in which it is technically feasible, information relative to the caller's location and for all calls. Recommendation of the Commission of 25 July 2003 on information processing relative to the localisation of the caller on electronic communication networks for the purposes of supplying location-enhanced emergency calls (E112)

[39] Published in the Official Journal No. 59, 10.3.2008

In February 2009 the government decided to entrust the technical coordination to the Civil Defence so as to harmonise the information platforms of the:

- o Carabinieri (112);
- o Police (113);
- o Fire service (115);
- o Regional ambulance services (118)

and the presentation of a new plan to be presented in Brussels.

At present various hypotheses are being studied, two possibilities of which are summarised below:

- one is a reassessment of the Salerno model, with greater involvement of the ambulance and breakdown rescue service, but which keeps a concentration of the emergency calls in the Police and Carabinieri answer centres, assigning them to first level centres, maintaining the respective systems separate but coordinated;

- a second hypothesis foresees on the other hand the creation of first level centres with mixed personnel coming from existing emergency centres.

Both solutions would require considerable investment to renew and reorganise the operation centres (with the threat of sanctions that would worsen the situation), an extraordinary effort is therefore needed that must be irrespective of interests and bring solutions that draw inspiration from the best practice already existing in the emergencies sector, particularly the ambulance services which receive the greatest number of calls.

2.3.1. *THE EXPERIMENTATION OF THE SINGLE EUROPEAN EMERGENCY NUMBER 112 IN SALERNO*

The project for the single European emergency number 112 in Salerno was coordinated by the Presidency of the Council of Ministers and foresaw the creation of a "super-structural" 112 Operations Centre with respect to the already existing ones, with the centralisation of calls and the handling of requests to the different existing services by means of the present operation centres of the Carabinieri, Police, the Fire Service's Technical Rescue Service (and other bodies) and the Ambulance Service, so-called second level.

Two work groups were set up:

- one Work Group for the introduction of the Single European Emergency Number" (DPCM of 04/08/2003);

- an expert group called the "technical-operational unit for the introduction of the Single European Emergency Number" was created (DPCM 30/06/2005 published in the Official Journal No. 237 of 11-10-2005).

Its mandate ended with the end of the Government of the XIV legislature without seeing the start of the experiment announced for 2006.

The above technical-operational unit achieved results shared by the parties involved in the project, that is:

- realisation and approval of the feasibility study by all the administrations taking part in the project (State Police, Carabinieri, Finance Police, Harbour offices, Ambulance service, Communications Ministry, Communications Watchdog);

- realisation of the Operations Manual, at present in the final stages of approval;

- the definition of the executive project for the Single European Emergency Number 112 service;

- the definition of the system, with the sharing of the telephone operators, land and mobile, which will guarantee the identification of the exact location of the origin of the emergency call from any telephone network and the personal data of the caller;

- the approval of the project by the National IT Centre in the Public Administration

Furthermore, during the preparation phase of the experiment on the 112 in Salerno, through the Ministry for Technological Innovation, Italy adhered to the MoU on the eCall, committing itself to the respect the deadline that foresaw the commercialisation of vehicles equipped with an automatic call system to 112 operation centres in emergencies in 2009.

3. eCall

The eCall is a pan-European service that will operate in all Member States and the European countries taking part in the initiative.

In the event of a serious accident, the in-vehicle sensors automatically set off an eCall. Once initiated, the in-vehicle system makes a vocal connection to 112 and at the same time an emergency message, the minimum set of data (obtained from precise satellite data) and the description of the vehicle is sent by means of the vocal call. The system can also be activated manually.

Even though the eCall has received considerable support from all the interested parties, including the European Parliament, the Member States and general public, the progress has been slow and the initiation of the eCall, foreseen for 2009, has suffered considerable delay.

Over recent years, the Commission has adopted various measures so as to help make the eCall more widespread.

1. It has set up "The eCall Work Group", made up of all the bodies involved[40], in order to draw up reference guidelines and a commercial model for the eCall and to define the role of the public and private operators taking part in the initiative.

2. It has invited all the parties involved, including the Member States and the car industry, to sign an Memorandum of Understanding[41] formulated by the "Work Group" and aimed at guaranteeing the working of the eCall in all the Member States of the EU.

To date 15 Member States have signed the eCall MoU: Austria, Cyprus, Czech Republic, Estonia, Finland, Germany, Greece, **Italy**, Lithuania, Portugal, Slovakia, Slovenia, Spain, the Netherlands and Sweden. Furthermore, 3 other European countries have signed: Iceland, Norway and Switzerland.

Other Member States have expressed their support for the initiative and their willingness to sign the MoU in the short term: Belgium, Bulgaria, Hungary, Luxemburg, Romania and Poland.

The reasons put forward by other Member States for not having signed for the diffusion of the eCall vary but are essentially related to operation costs.

3. It adopted two communications[42] in which the plan of action is defined and the measures for the parties involved are recommended.

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[40] the Member States, the Commission, the communications network operators, PSAP operators, automobile companies, suppliers of equipment, motorway operators, automobile clubs, insurance companies and services provider.

[41] MoU - *Memorandum of Understanding for Realisation of Interoperable In-Vehicle eCall*

[42] COM(2005) 431 of 14.9.2005: Bringing eCall to Citizens and COM(2006) 723 of 23.11.2006: Bringing eCall back on track - Action Plan (3rd eSafety Communication)

4. In December 2008 it adopted the ITS[43], plan of action, in which one of the actions is the support for the diffusion of the eCall and at the same time a proposal for the ITS[44], directive which introduces a juridical body (that is, a regulating committee) to lay down the measures to the Member States, in particular for the harmonious introduction of the pan-European eCall".

The voluntary method adopted in the previous communications, the efforts of the Commission to standardise the eCall and the work with all the parties involved has been insufficient.

In August 2009 the Commission presented a project document [45] illustrating an agreement strategy for all new vehicles circulating in Europe to have an in-vehicle emergency system by 2014 starting from next year, and for the costs of such system to be reasonable. This emergency system can be triggered off automatically, should the passengers not be able to do so.

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[43] COM(2008) 886 of 16.12.08: Action Plan for the Deployment of Intelligent Transport Systems in Europe

[44] COM(2008) 887 of 16.12.08: laying down the framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other transport modes

[45] COM(2009) 434 of: eCall: Time for Deployment

3.1. State of the eCall initiative

3.1.1. ANALYSIS OF THE EUROPEAN PARLIAMENT RESOLUTIONS AND THE COMMUNICATIONS OF THE EUROPEAN COMMISSION RELATED TO THE ECALL

Year	Reference	Title	Main objectives
2003	**Communication from the Commission to the Council and the European Parliament** [46]	**The 1st eSafety Communication** Information and Communications Technologies for Safe and Intelligent Vehicles	In this communication the Commission sets down the actions that it intends to take in order to speed up the development, large-scale deployment and use of Intelligent Vehicle Safety Systems in Europe. The Commission will promote a harmonised, pan-European in-vehicle emergency call (**e-Call**) service based on the location-enhanced emergency call E-112. For this purpose the Commission invites the eSafety Forum to set up a *Working Group* to establish a consensus on the implementation of the pan-European in-vehicle emergency call (e-Call). Furthermore, the Commission encourages industry in establishing data requirements, data transfer protocols, interface specifications and routing and handling procedures for the enhanced in-vehicle e-Calls, and standardisation in ETSI and CEN.

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[46] COM(2003) 542 of 15.9.2003

Year	Reference	Title	Main objectives
2004	**eSafety Forum eCall Driving Group**[47]	Memorandum of Understanding For Realisation of Interoperable In-Vehicle eCall	The aim of the MoU is: - to ensure that the eCall will work in any EU Member State. - to bind the stakeholders in implementing the eCall together on the basis of common approved architecture and interface specifications. To date, fifteen Member States have signed the eCall MoU: Austria, Cyprus, Czech Republic, Estonia, Finland, Germany, Greece, Italy, Lithuania, Portugal, Slovakia, Slovenia, Spain, the Netherlands and Sweden. Three other European countries have also signed: Iceland, Norway and Switzerland. Other Member States have expressed their support for the initiative and their willingness to sign the MoU in the short term: Belgium, Bulgaria, Hungary, Luxembourg, Romania and Poland.
2005	**Communication from the Commission to the Council, the European Parliament, the European Economic the Social Committee and**	**The 2nd eSafety Communication** Bringing eCall to Citizens	In this Communication the Commission sets down the urgent and practical actions needed to launch the eCall. The Commission urges the Member States: - to sign the eCall MoU; - to promote 112 and E112; - to upgrade their PSAPs to handle location-enhanced E112 calls and eCalls;

[47] in-vehicle eCall MoU of 28.5.2004

Year	Reference	Title	Main objectives
	the Committee of the Regions[48]		- to provide adequate location-enhanced emergency services and language support; since the technology is ready and the industry is committed to ensuring the large-scale deployment of the eCall in Europe.
2006	**Communication from the Commission to the Council, the European Parliament, the European Economic the Social Committee and the Committee of the Regions On the Intelligent Car Initiative**[49]	"Raising Awareness of ICT for Smarter, Safer and Cleaner Vehicles"	In this Communication the Commission presents the Intelligent Car Initiative that is composed of 3 pillars: - the eSafety Forum; - the ICT research programme - and awareness raising actions. The Commission, supporting the eSafety Forum, proposes the follow up of the specific actions put forward in the 2nd eSafety Communication "Bringing eCall to Citizens".
2006	**Report on the the European Parliament initiative on Road safety**[50] (Rapporteur: Gary Titley)	Bringing eCall to citizens	In this report the author highlights the existence of a difference between the estimates of the European Commission and those carried out by industry concerning the cost of the in-vehicle eCall system. In this sense, the report asks for a more detailed analysis of the efficiency in terms of costs for each single action to be undertaken to realise the eCall. It is also necessary to study the possibility of a gradual

[48] COM(2005) 431 of 14.9.2005

[49] COM(2006) 59 of 15.2.2006

[50] INI/2005/2011 – reference EP number: A6-0072/2006

Year	Reference	Title	Main objectives
			introduction of the device by means of the combination of systems installed in vehicles and alternative systems such as the use of the driver's mobile telephone and Bluetooth technology, at the same time paying particular attention to the right to privacy of drivers and passengers.
2006	**Communication from the Commission to the Council, the European Parliament, the European Economic the Social Committee and the Committee of the Regions**[51]	**3rd eSafety Communication** Bringing eCall back on track - Action Plan	In this communication the Commission presents two basic actions for the realisation of the eCall system: - the Member States have been given precise tasks and deadlines within which to resolve the juridical, technical and socio-economic problems still existing to then be able to continue with the realisation of the infrastructures needed for the working of the 112 number, E112 and the eCall system; - industry is urged to renew its commitment to the eCall system. Moreover the Commission will start negotiations with car industry associations with a view to a voluntary agreement for the introduction of the in-vehicle eCall devices.
2008	**European Parliament**	Towards Europe-wide Safer, Cleaner and Efficient Mobility:	The European Parliament highlights: - the need for the Commission

[51] COM(2006) 723 of 23.11.2006

Year	Reference	Title	Main objectives
	resolution of 19 June 2008 [52] **on the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions**	The First Intelligent Car Report	to further develop the regulatory framework for a complete standardisation of the normal emergency calls (112) as well as the eCall (E112) at a European level; - the need for the definition by the European Telecommunications Standards Institute of an open European standard for the introduction of eCall services at European level; and confirms its support for the eCall MoU.
2008	**Communication from The Commission** [53]	Action Plan for the Deployment of Intelligent Transport Systems in Europe	In the plan of action, the Commission identifies six priority intervention areas and for each sector of intervention are identified a number of specific actions. One of the actions is relative to the support of the implementation of the eCall.
2008	Proposal for a **Directive of the European Parliament and of the Council** [54] presented by the Commission)	laying down the framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other transport modes	The general objective of this proposal is to create a framework to speed up and coordinate the deployment and use of the intelligent transport systems installed on road vehicles, including the interfaces with other modes of transport (ITS). The draft directive, furthermore, introduces a juridical instrument (that is, a regulating committee) to set down measures to the

[52] P6_TA(2008)0311 19.6.2008
[53] COM(2008) 886 of 16.12.08
[54] COM(2008) 887 of 16.12.08

Year	Reference	Title	Main objectives
			Member States, in particular for "*the standardised introduction of the pan-European eCall*".
2009	**Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions**[55]	'eCall: Time for Deployment'	In this Communication the Commission makes a last call to all EU countries to speed up voluntary implementation of the new in-vehicle communication technology eCall. The European Commission stresses that the implementation of the eCall needs the full collaboration of the car and telecoms industries, as well as national administrations in all EU countries that must ensure that their emergency services are equipped to handle eCalls. To find a solution to this deadlock, the Commission is considering three possible policy options: 1. not intervening and leaving the introduction to market forces; 2. supporting voluntary introduction by industry; 3. or mandating introduction through regulatory measures.

[55] COM(2009) 434 of 21.08.09

3.1.2. *ITALIAN REGULATIONS RELATED TO THE ECALL*

The eCall is a voluntary non-compulsory initiative and therefore at present there is no set of regulations relative to the emergency service like there is for the single European emergency number 112.

Below are given the Italian regulations and the existing Conventions of the Italian Concessionaire companies, which must be considered in the definition of the eCall service.

- **New Highway Code – Legis. Decree 285/1992[56]**:

Art. 14. Powers and duties of motorway companies:

1. In order to guarantee the safety and mobility of the traffic, motorway companies provide for:

    a) the maintenance, management and cleaning of the roads, fixtures and furniture, as well as facilities, plants and services;

    b) the technical checks of the efficiency of the roads and their relative fixtures;

    c) the affixing and maintenance of the correct sign system.

2. The motorway companies also provide for:

    a) the issuing of authorisations and concessions in accordance with the article;

    b) the referring to the police of any infringements of the provisions foreseen in the article and other norms relating to it, together with the rules set out in the authorisations and concessions.

3. For the roads under concession the powers and duties of the owner of the road foreseen by this code are exercised by the concessionaire, unless it be otherwise established.

- **Conventions:**

o Between Concessionaire Companies and ANAS[57],:

The Italian motorway network is entirely under ANAS which to a large extent entrusts the construction and running to concessionaire companies by means of special conventions that lay down:

    o the length of the operation;

    o the rights and duties of the concessionaire;

    o the criteria to be applied for toll fixing.

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[56] Published in the Official Journal, 18.05.92

[57] Anas - *Azienda Nazionale Autonoma delle Strade* – manages the Italian road and motorway network of national interest

The management of the motorway network includes all those activities aimed at ensuring the safety of the motorway network under management, traffic control and assistance, the collection of tolls, information, and all the ordinary and extraordinary maintenance, extension and modernisation of infrastructures etc.

Besides the management of the motorway network in the strict sense of the word, the concession concerns all the services made available to network users of which some are entrusted as a sub-concession by the concessionaire (for example, refreshment services and refuelling in the service areas) while others are guaranteed under licence in which case certain requirements are necessary and verified by the concessionaire (in the case of motorway breakdown services).

o between Concessionaire Companies and the Ministry of the Interior for the execution of Road Police services:

The conventions specify the tasks that are under the responsibility of the Road Police (mobility, intervention at accidents, police operations concerning the protection of roadway patrimony etc.) and the duties of the concessionaire (supplying of consumer goods necessary for mobility; supplying and maintenance of vehicles; the availability of premises for offices and staff accommodation).

o between Concessionaire Companies and Companies, Bodies, to complete the vehicle breakdown services, ambulance services (118), fire service and special services (dangerous goods handling);

o between Concessionaire Companies and fire service or still Civil Defence

3.2. A comparative analysis of the eCall implementation in the European Union Member States

3.2.1. QUESTIONNAIRE TO THE EUROPEAN COUNTRIES ON THE ECALL INITIATIVE

Below is a synthesis of the accident management procedures along the motorway network manage by the European concessionaire companies resulting from the questionnaire resulting from the questionnaire (see Annex 1) presented to the Coper III and completed by some of the members belonging to Asecap (Austria, Croatia, France, Ireland, Poland, Portugal, Slovenia and Spain).

In Annex 2 it is possible to see the complete version of the questionnaires.

The aim is to gather the information necessary to draw up a complete framework describing the resources and procedures adopted by the European concessionaire companies in the road accident management.

European Countries Asecap Members Km in operation	The state of implementation of eCall	
	The problems encountered by the motorway operators	The organization of the emergency management along motorway network
Austria ASFINAG 2.103,7	The current eCall standards developed by CEN do not foresee a role for motorway operators in the value chain of eCall. In other words, as the eCall is foreseen today, road operators will not get any direct information from it.	Generally 3 scenarios can be considered <u>Notification via emergency booths at the roadside:</u> The phone call is connected to the competent control centre. In the case of an emergency, the information is passed to emergency units. Up to the moment that these units reach the scene of the incident, the control centre operator leads the accident management procedures. <u>Notification via mobile phones:</u> In the case that an incident is reported directly to the emergency units, the respective unit, for example the police, coordinates the accident management procedures. Road operators are informed and involved on a case to case basis. <u>Accident detection in the traffic management centre:</u> If an accident is detected in the traffic management centre, the operator leads the management procedures involving emergency units if needed. If emergency units are involved, they take over the responsibility for the management.

European Countries Asecap Members Km in operation	The state of implementation of eCall	
	The problems encountered by the motorway operators	The organization of the emergency management along motorway network
Croatia [58] HUKA 1.198,7	Work units are networked together and the 112 Centre can receive voice calls, SMS messages or fax. Regarding the cooperation of motorway operators with the Centre, it can be said that Motorway Traffic control centers cooperate very well with local 112 centers, informing them about traffic accidents via fax and coverage scheme provided by the latter. Unfortunately, communication still exists that does not provide an adequate level of atomization, which does not represent such a big problem for the motorway network as for the road networks that do not have ITS systems or SOS telephones.	Possible motorway/tunnel accidents

Emergency management table:

Report to:	Accident with injuries and fatalities		Accident with fire		Accident with material damage	
Traffic police	red	red	red	red	red	red
Firemen department	grey	grey	grey	red		
Ambulance	red	red				
Road patrol units	red	grey	red	grey	red	grey
112 Center	orange	orange	orange	orange	orange	orange
Info center	blue	orange	blue	blue	blue	orange
HAK(Croatian Auto Club)	orange	blue	orange	blue	orange	blue
Technical unit manager	red	red	red	red	red	red
Road inspector	orange	orange	orange			
Environment control department			orange	blue		
Toll collection						
WEB /Info portals	green	purple	green	purple	green	purple
Director of Motorway maintenance subsidiary	red	yellow	red	yellow	red	yellow
Regular maintenance department manager	red	yellow	red	yellow	red	yellow
Traffic control department manager	blue	blue	blue	blue	blue	blue
Other roads						

[58] Asecap member, not yet EU member

European Countries Asecap Members Km in operation	The state of implementation of eCall	
	The problems encountered by the motorway operators	The organization of the emergency management along motorway network
		LEGEND █ Mobile or fixed phone █ Fax █ e-mail █ USW █ WEB █ VMS – portals █ SMS message
France ASFA 8.522,4	The Ministry of transport is not in favour of the e-call system as defined by the Commission. It considers that it is not cost effective to have it mandatory in the vehicles, considering very few gain in safety compared to the price of the equipment. The Ministry says that other equipments could be of higher effects. But Ministry agreed private systems using private answering platform. This private service (ex PSA -Public Safety Answering- Peugeot- Citroen) concerns accidents and breakdown assistance as well.	Accidents: the police is in charge of answering to the emergency call and then manage the call to the other participants (medical and garage); the motorway company is informed simultaneously. Breakdowns: the emergency call is received and managed by the motorway company (TCC – Traffic Control Centre-)
Ireland ITIA 146,0	The eCall does not exist as a deployed service anywhere in Europe. From a motorway operator perspective, if the PSAPs could automatically alert traffic management and control centres, then automatic incident alert could be provided in a cost-effective manner. A more joined up approach involving eCall could allow more effective incident	Local authorities already have emergency plans in place. In the light of a rapidly changing network, The National Roads Authority has undertaken a review of Incident Management in liaison with Local Authorities, the Garda Siochana (Irish Police) as well representatives of the other Emergency Services. It is expected that this project will be

European Countries Asecap Members Km in operation	The state of implementation of eCall	
	The problems encountered by the motorway operators	The organization of the emergency management along motorway network
	management plans and strategies to be developed.	completed by early 2010. The Garda Siochana will remain paramount in the implementation of all emergency procedures.
Poland Autostrada Wielkopolska 235,0	As of 22 September 2009 Poland has been willing to sign the agreement – eCall Memorandum of Understanding Launching the eCall system requires close cooperation between authorities, vehicle manufacturers and mobile network operators. It will be necessary to ensure adequate equipment for rescue services at 112 service centres.	The motorway is equipped with an emergency roadside telephone system connected with the Motorway Management Centre, which makes it possible to identify the emergency message and initiate the necessary rescue actions. **Principles of the rescue service on the Motorway** • Rescue service on the motorways is one of the tasks of the National Fire fighting and Rescue Services. • Rescue actions on motorway shall be performed pursuant to rescue plans drawn up by the Concession Company. • Rescue actions within the service shall be performed by units of the National Fire fighting and Rescue Services and other entities included in the rescue plan of the motorway. **Tasks of the National Fire fighting and Rescue Services Units** • Providing of first aid in accordance with the procedures for emergency and disaster medicine. Fire fighters shall have certificates issued by the commissions established by the provinces, *etc..* **Police tasks** • Identification of the kind of event / accident and initiation of rescue

European Countries Asecap Members Km in operation	The state of implementation of eCall	
	The problems encountered by the motorway operators	The organization of the emergency management along motorway network
		actions. • Notification of the National Fire fighting and Rescue Services units or other services and rescue entities about the event / accident. • Traffic management at the site of the event, *etc..* **Tasks of public health care institutions** • Providing first aid in case of emergency, accident and disasters by emergency care departments (Emergency), in accordance with uniform treatment procedures, at the site of the event and during transportation to hospital, *etc..* **Concessionaire Company's tasks** • Cooperation with the National Fire fighting and Rescue Services units, the Police and other services and entities in the organisation of motorway safety. • Marking of the site of the accident. • Cooperation in the limitation and cleaning of the effects of accidents and transport disasters and fires, *etc..* **Tasks of the provinces local government and government administration** • Organisation of a uniform communication system between all rescue entities. • Rescue coordination in pile-ups, disasters and natural disasters and other situations exceeding the possibilities of normal services operating on the motorway.

European Countries Asecap Members Km in operation	The state of implementation of eCall	
	The problems encountered by the motorway operators	The organization of the emergency management along motorway network
Portugal APCAP 1.721,3	eCall today it is not implemented in Portugal. eCall shall be implemented on the E-112 platform at a later stage, not yet defined.	Motorway operator supervises the operations after identifying in detail the situation, but basically it signals the local so that new vehicles may flow safely and, in case of material damages, Maintenance Company responsible is informed to act according to level of services pre-defined contractually. Road police is the first to be informed in detail so that it allows the road police to request the involvement of the sanitary assistance (112), in case injured people is involved, and/or the fire brigade, if dangerous goods are involved or people is closed inside the vehicles. Road police is also responsible for managing the traffic, namely for cutting it, if necessary. The fire brigade is also called by the concessionaire in case liquids are spread along the pavement and the Concessionaire has no means to clean it. During all the period of the accident a Concessionaire representative is always on-site. When safety and security conditions are re-established, local concessionaire representative leaves the local and centrally the event is closed.

European Countries Asecap Members Km in operation	The state of implementation of eCall	
	The problems encountered by the motorway operators	The organization of the emergency management along motorway network
Slovenia DARS D.D 552,4	At the present the system eCall is not implemented.	Emergency management is carried out with SOS telephones beside the motorway – every 2 km and in the tunnels. Telephones are connected with the motorway regional control centre.
Spain ASETA 3.334,5	Not enough accuracy of the GPS signal in order to detect the exact position of the vehicle. The emergency services of toll operators are usually limited to maintenance services. Police, ambulances and fire fighters are not managed by toll operators but by public authorities. Even though the coordination between toll operators and public authorities is very closed, there are still problems regarding the responsibilities and protocols for implementing the eCall. The implementation of eCall at National Level must guarantee a mutual coordination between the public service (E112) and the toll operator because the toll operator is the only responsible for traffic management on the motorway. Without this coordination, Toll Operator might not offer a correct service in terms of traffic management Within the framework of a national project called OASIS, some tests are planned on several toll motorways. No details of these tests are available for the moment.	When there is an accident on a toll road, there are different possibilities: 1) The detection of the accident comes through the toll operator (detected by cameras, SOS, user calls directly to the Motorway Control Centre…). a) In the case of a small accident and can be managed by our maintenance staff, the necessary actions are taken by the toll operators. b) In the case of a serious accident, the toll operators coordinate their actions with the public emergency services which are in charge of the evacuation of people. Toll operators focus their actions on traffic management (signals, maintenance staff…). 2) The accident detection comes through public authorities (a user calls the 112 number,…) a coordinated action is taken by the public emergency services and toll operators (as point b)

4. The handling of road accidents by the Concessionaire Companies along the Italian toll motorway network

4.1. The role of the Italian concessionaires in improving road transport safety.

The Italian toll motorway network consists of over 5.694,2[59] and is managed by 24 concessionaire companies[60], grouped together in the AISCAT[61], association, with human, technical, technological and organisational resources that ensure the best safety conditions, both in terms of prevention and speedy intervention in the event of an accident.

The users' safety has been and continues to be the main priority for the Italian concessionaires and this finds confirmation in the level of investments dedicated to improving the safety conditions of the network and accident first aid activities.

In this perspective, besides the work of prevention being planned and the maintenance of infrastructures, the Italian concessionaires have being paying the greatest attention to improving the efficacy and efficiency of the rescue activities needed following a road accident. The pursuit of this objective has always gone along the following guiding principles:

- using the most advanced technologies (video cameras, traffic sensors, weather sensors, variable message panels and other ITS systems) for the control and management both of the infrastructure and vehicle flow;

- allocating resources to the specific activity of traffic assistance so as to speed up the first intervention in the case of an accident which, as is well known, is decisive in reducing both the traumatic consequences for the people involved and the risk of being involved in other accidents from oncoming traffic;

- increasing the know how acquired over time which has made it possible to draw up plans and operational procedures for efficient synergic plans of action that meet the safety needs for the rescuers, the oncoming traffic and the people involved in the accident.

Their considerable commitment in the field of road safety by the concessionaire companies, in terms of invested resources and daily management, has continued to guarantee excellent results for some years now, as shown by the noticeable and

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[59] Source: Aiscat in figures - 2008

[60] Until 31.11.09

[61] AISCAT: - *Associazione Italiana Società Concessionarie di Autostrade e Trafori* – an association set up in 1966 by the Italian concessionaire companies with the task of gathering and comparing the experiences and needs common to its members

constant improvement of all the main indicators, increasingly bringing the sector closer to the full achievement of the community objectives aimed at halving road victims by 2010[62].

The Italian concessionaire companies consider these results, the fruits of continuous specific interventions on their networks and the implementation of innovative technological and procedural solutions, a further stimulus to increase the efforts made in the safeguard of human life.

Below are given respectively in Table 1 and Table 2 the human and technological resources employed by the concessionaires to maximise traffic safety on their toll motorways.

Table 1 – Safety and Mobility Conditions

Concessionaire Companies	n	24
Toll Motorway in Operation	Km	5.694,2
Road Police stations	n.	54
Road Police human resources	n	3.608
Road Police vehicles	n.	638

Source: AISCAT in figures 2008

Table 2 - Technology

Traffic control centres	n.	35
Video Cameras	n.	4.431
Variable Message Signs	n.	1.871
Weather Stations	n.	488
Ice Detectors	n.	318
Fog Detectors	n.	124
S.O.S Posts	n.	7.070
Third lane dynamic	Km	42

Source: AISCAT in figures 2008

The constant shared commitment of the concessionaires is reflected in the statistics that see the motorway network as the safest infrastructure with a growing trend in time. In fact, the fatality rate (number of deaths/vehicles km) shows a considerable decrease, such as to be in line with the objective established in the EU's White Paper on Transport

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[62] COM(2001) 370 of 12.9.2001 – White paper "The European transport policy until 2010: the moment of choices"

of a reduction of the number of deaths in road accidents of 50% by 2010, as can be seen in Figure 1.

Figure 1- Evolution of the death rate on the toll motorway network in Italy (1980-2008)
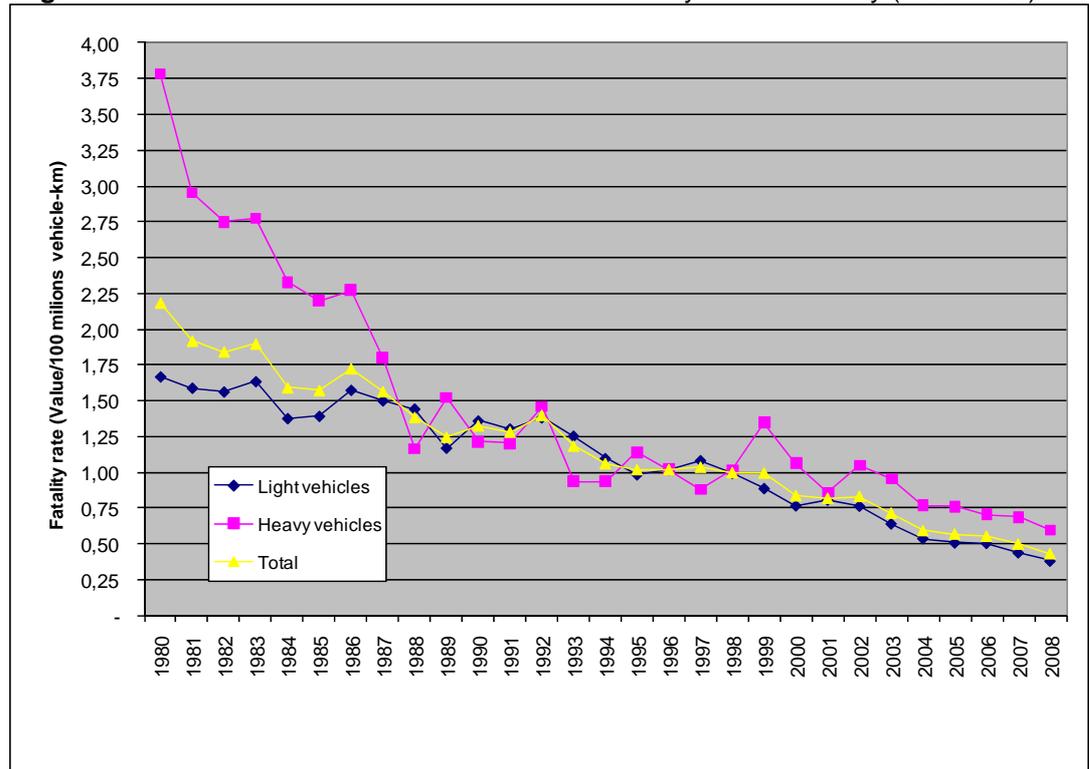
Source: AISCAT

Considering the positive results achieved, it is necessary that the implementation of the eCall bears in mind the specificities of the system and finds forms of adaptation that do not create inefficiencies that could have repercussions in a worsening of the safety conditions of motorway mobility.

It is indispensable to foresee an introduction of the eCall on motorways that is integrated with and safeguards as much as possible the technologies and procedures already in use.

Moreover, it is necessary to consider the existing normative limitations[63] that define the responsibilities and the competences of the players involved in the management of motorway companies, above all in accidents.

[63] See § Italian regulations related to the eCall

4.1.1. ACCIDENT INTERVENTIONS: THE RESOURCES

Specialised operators of the concessionaire companies, Road Police forces, technological devices, specific intervention procedures, software and hardware systems that cooperate 24 hours a day in the shared procedure to ensure fluid safe traffic conditions.

The accident handling body is represented by the 35 Traffic Control Centres, operational 24 hours a day, which collect traffic information, weather conditions and sudden changes in weather on the roads, among which reports of accidents, contacting and coordinating all the resources and the operators involved in emergency management (Road Police patrols, assistance and rescue centres, etc.)

The Traffic Control Centres coordinate all the activities of:

 – control of infrastructures and traffic;

 – user assistance and rescue;

 – information to the user;

and are in close contact with the Motorway Operation Centres of the Road Police which coordinates the road patrols regarding all the activities of:

 – traffic control and management;

 – road accident management;

 – traffic regulating measures.

In fact, the Traffic Control Centres of the motorway company have a fundamental role of coordination, particularly in the exchange of information, sending the information received - from ITC apparatus, from operative staff on the road, from services and users on the road – to:

 – the users:

 o by means of the PMV;

 o and radio channels;

 – the organisation:

 o to the competent company departments;

 o to the external rescue services.

Below Flow diagram 1 describes the accident management process

Flow diagram 1 – accident management process
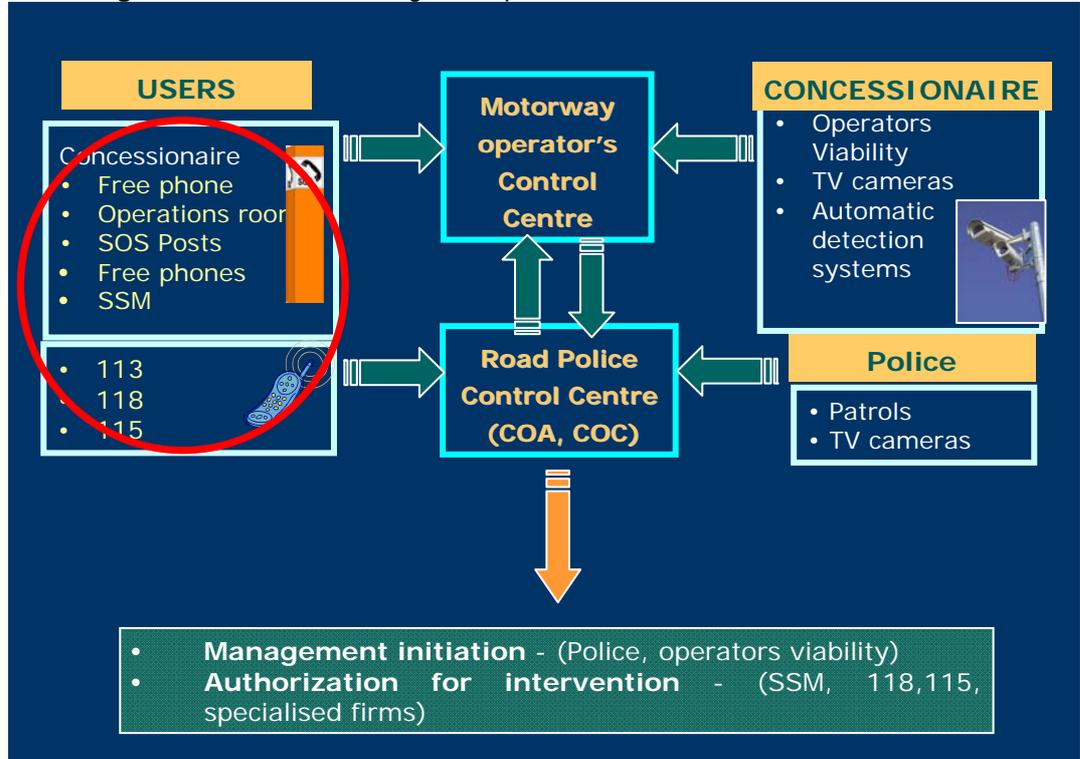
Since all the requests for intervention (Viability Auxiliaries, Police, Ambulance, breakdown, fire service or other) should go through the Traffic Control Centres, it is continuously updated on what is happening on the road and is therefore able to efficiently coordinate the necessary services (reports, information to the user, pre-alarm to personnel, organisation of possible traffic deviation and closing of roads etc.).

The main resources that are under the Traffic Control Centres and which carry out emergency services are:

- *The traffic assistance service* of the concessionaire, which with specialised [64] personnel patrols the road and intervenes to guarantee conditions of safety and traffic fluidity giving backing to the Road Police. Among the activities carried out, the assistance service intervenes in accidents dealing with:

  o all the activities needed to clear the carriageway and the gathering of data to be recorded, in the case of accidents without injury to persons

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[64] Since 1998 in accordance with a Protocol undersigned by the Ministry for the Interior and AISCAT, the professional figure of the 'Ausiliario della Viabilità' was created to carry out the necessary activities to guarantee safety and fluidity in motorway traffic

o auxiliary activity together with the organs of the Road Police, in accidents with injuries to persons or anyway in which the people involved need the intervention of the Road Police.

- *Road Police*, a special branch of the State Police which, by virtue of conventions[65] stipulated at ministerial level with the concessionaire companies, carries out exclusively the work of Road Police[66] which on the rest of the Italian road network can be carried out by other police bodies[67].

  In this particular case, as far as accidents are concerned, the Road Police deals with their reporting, the preparation and deployment of services to regulate the traffic and cooperates in the ambulance and breakdown rescue services.

  The communications between the Road Police and the Traffic Control Centre is guaranteed by the Motorway Operations Centre, to which in many cases the communications coming from the Road Police patrols are sent to.

  In some cases these communications are directly managed from the locally competent motorway subsection (unit of the Road Police dedicated in exclusive to the service on a specific stretch of the network); consequently the same subsection manages the Road Police patrols operating on the stretch of competence.

- *Breakdown service, carried out by specialised personnel of companies that have a* convention with the concessionaire and which is responsible to giving assistance to the user with a broken down vehicle (tow, transport, repair, refuelling), ensuring a series of requirements and measures among which the obligation to interface with the Traffic Control Centres that authorise the rescue team to intervene and the respect of directions of the Road Police. The breakdown service is guaranteed with suitable means for the rescue of light vehicles (cars or vans up to 2.5 t) or heavy or medium heavy vehicles (weighing over 2.5 t) according to specific interventions.

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[65] The conventions specify the duties of the Road Police (responsibility for viability, accident intervention, police operations concerning the protection of motorway patrimony etc.) and the obligations of the concessionaire company (supply of materials needed for viability activities; supply and maintenance of vehicles; the providing of premises, offices and rooms for personnel

[66] Art. 11 lists the duties of the Road Police as being:
a) the prevention and verification of road infringements;
b) the reporting of road accidents;
c) the setting-up and deployment of traffic regulating services;
d) traffic safety guidance;
e) protection and control of road use;
f) cooperation in rescue operations in general
g) collaboration in traffic surveys.

[67] Art. 12 of the Highway Code sets down that the execution of road police services, besides being the responsibility of the Road Police, a special branch of the Police Force, is also the responsibility of the:
- Police Force;
- Carabinieri;
- Finance Police;
- Provincial police services, within their area of competence;
- Municipal police services, within their area of competence;
- Officers of the Minister of the Interior assigned to road police service;
- Penitentiary police and State corps of Forest Rangers, in relation to institutional duties.

- *Ambulance service, which following established procedures, on call from the Traffic* Control Centre or the Road Police to 118, intervenes with means of transport and expert medical staff (ambulance and/or helicopter) for the transport to hospitals of people who have collapsed or who have been injured in the accident (road, work etc.).

- *Fire service* in the cases in which the seriousness of the accident and the recovery of passengers and vehicles involved requires special means and intervention by professionals as is the case of accidents involving vehicles transporting dangerous goods, the extraction of injured from the wreck of the car, fire or danger of fire, rescue in water etc. …

- *Local Health Authority* and the Regional Agency for the Protection of the Environment in the cases in which the accident may have repercussions also on the health of the users in transit and those who live close to the motorway, for example in the case of accidents involving toxic substances, irritants, or chemical products that can release toxic smoke and vapours etc.;

- *Rescue for dangerous goods handling* is carried out by firms specialised in reclamation of special dangerous goods that, in some case, can also have a convention with the concessionaire company

The improvement of the efficacy of interventions in accidents is also based on the growing use of technologically advanced systems (ITS) which contribute towards ensuring safer mobility, preventing accidents and reducing the negative consequences should they occur.

4.1.2. *ACCIDENT INTERVENTION:THE PROCEDURE*

The accident intervention procedure is initiated by the Traffic Control Centre following:

1. video pictures coming from TV cameras placed along the stretch of road relative to traffic conditions in which accidents are expected or, in some cases, the actual filming of accidents;

2. reports coming from:

   a. automatic alarm systems (software that detects any trouble taking place like the slowing down of traffic, inductive loops etc. ...);

   b. calls from transiting users;

   c. radio communications from the Motorway Operations Centre which, in turn, receives an alert from the Road Police patrols;

   d. radio communications from concessionaire or breakdown service personnel;

   e. radio communications from toll-collectors who, in turn, receive alerts from users leaving the motorway;

   f. SOS Posts.

Unless the alert comes from the Road Police or from the concessionaire's viability personnel who are already at the scene of the accident, in all other cases the Traffic Control Centre is initiated immediately in order to check the truth of the alert. The check of the alert is addressed, besides confirming the accident, to gather the minimum information needed to initiate the rescue coordination, that is:

- the exact location (kilometric, hexametric and direction);

- the traffic conditions (smooth-flowing, slowed down, queue and blocked)

- people involvement and "severity" of such involvement (the number of fatality and injured, specifying how many are trapped inside the vehicle[68] and how many are unconscious[69];

- the conditions and the position of the vehicles involved in the carriageway and consequently the number and type of breakdown vehicles needed;

- the part of the carriageway available for the stream of traffic.

On the basis of this first set of information, the Traffic Control Centre sees to the initiation and coordination of the necessary rescue services:

- for the people involved;

- for the reporting of possible queues created by the accident;

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[68] The Traffic Control Centre alerts the Fire Service
[69] The Traffic Control Centre alerts the ambulance service

- for the traffic control (in some cases using road works signs) ;

- for the restoration of normal road conditions;

and to activating the necessary channels to inform users of possible delays caused by the accident (variable message panels, radio, internet etc…).

Below is shown, as an example, the sequence of activities foreseen for accident management:

Arrival of Road Police and viability staff;

Scene of accident made safe (traffic control in some cases with positioning of road works signs) ;

- Arrival of Fire service and 118, if necessary;

- Rescue of people involved with transport to hospital if needed;

- Accident assessment;

- Arrival of breakdown service;

- Removal of vehicles and cleaning of carriageway;

- Arrival of firms for the restoration of safety conditions or change of carriageway;

- Activation of any change of carriageway .

5. Guidelines for an effective and efficient activation of the eCall in a short time

5.1. SWOT analysis

Below is shown the SWOT analysis carried out on the introduction of the eCall in motorway accident management.

Strengths	Opportunities
- Reduces time needed to send rescue services - Reduces mortality - Reduces seriousness of injured - Reduces external costs	- Speeds up the innovative applications of active safety - Transfer of best practices of motorway sector regarding rescue and other road contexts
Weaknesses	**Threats**
- Does not ensure exact localisation of accident carriageway - Does not ensure exact localisation in zones where cells cover vaster areas - Does not take into consideration the conventions between Concessionaires and the Interior Ministry which entrusts the exclusive competence of managing motorways incidents to the Road Police - Does not take into consideration the needs for integration between rescue services and congestion management following an accident - Does not take into consideration 24 hour surveillance of all motorway competences - Does not take into consideration the competences and the exclusive responsibilities of the concessionaire on stretches of road managed by it	- Duplicates the emergency call - Lengthens the process of gathering information on the accident functional to initiate the rescue services - Absorbs the functional nature of all the "sectorial" (112, 113, 115, 118,…) - Bypasses the emergency numbers of the motorway operator (free-phone, operations room numbers)

Strengths:

- <u>Reduces time needed to send rescue services</u>: the results of the analysis carried out by the E-MERGE project show that by sending the exact coordinates of the place of the accident, the eCall can ensure a reduction in the accident response time, if suitably integrated with the existing management systems.

- <u>Reduces mortality</u>: in the case of serious injuries, a more prompt intervention after the accident can significantly reduce the death rate;

- <u>Reduces the seriousness of injuries</u>: in the case of serious injuries, a more prompt medical intervention after the accident can significantly reduce the seriousness of the trauma;

- <u>Reduces external costs</u>: the reduction of rescue time, that is the quickest intervention by the rescue teams, the Police and motorway rescue service, makes it possible to clear the scene of the accident more quickly. The eCall will thus limit the duration of the traffic jams and will contribute towards to the efficiency of road transport at European level reducing external costs, which in Europe could be estimated at 4 billion Euros[70].

Weaknesses:

- <u>It does not ensure the exact localisation of the carriageway in which the accident took place</u>: in the event in which the carriageways of the motorway network are contiguous, it is rather difficult to know the exact direction of the traffic in the accident.

- <u>It does not ensure the exact localisation of the zones where the cells cover vaster areas</u>: in the case in which other roads run aside the motorway axis

- <u>It does not take into consideration the conventions between the Ministry of the Interior which entrusts the exclusive competence of managing motorway incidents to the Road Police</u>: see footnote 62 of the report.

- <u>It does not take into consideration the needs for integration between rescue services and congestion management following an accident</u>: often the queue caused by an accident, besides hindering the arrival of the rescue services, is the source of further accidents. Therefore, the timely mobilisation of the Viability Auxiliaries and the Road Police is given priority and hence the rapid gathering of information by the Traffic Control Centre.

- <u>It does not take into consideration the 24 hour surveillance of all motorway competences</u>: which is carried out by the Traffic Control Centre, the Viability Auxiliaries and the Road Police.

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[70] Estimated by the SEiSS study.

- It does not take into consideration the competences and exclusive responsibilities of the Concessionaire Company for its own stretches of road: for the authorisation that it must give for rescue services.

Opportunities:

- It speeds up the innovative applications of active safety: the eCall is part of the "Intelligent Car Initiative"[71]. The term "Intelligent Car Initiative" refers to a series of systems based on new information and communication technologies, both in-vehicle and cooperative. Some of these are already in use (ABS, ESC), others are still in the development phase or, like the eCall, is about to be introduced into the market. The introduction of the eCall could therefore speed up the development of other technologically advanced systems fundamental for safety such as: (change of lane warning system, local danger warning system, night vision system, detection of obstacles and anti-collisions system etc …).

- Transfer of best practice in motorway rescue services to other road contexts: the Italian concessionaires have being paying the greatest attention to improving the efficacy and efficiency of the rescue activities needed following a road accident.

Threats

- It duplicates the emergency call: if the eCall is not integrated with the existing procedures.

- It lengthens the process of gathering information on the accident functional to initiate the rescue services: should a procedure for the eCall be drawn up that does not take into account the existing one.

- It absorbs the functional nature of all the "sectorial" numbers (112, 113, 115, 118,…): Carabinieri (112), Police (113), Fire service (115) and regional ambulance services (118), ensure the specific competence, therefore it is possible a loss of "competence" on single aspects typical of emergency.

- It bypasses the motorway company's emergency numbers (free phone, operations room numbers): were it not to take the existing ones into account. It would therefore be advisable to use the motorway company's special emergency numbers and use them as support for the eCall.

Some useful elements have resulted from the SWOT analysis for the implementation of the eCall that guarantee the following characteristics:

- synergy with the existing system typical of Italy;

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[71] COM(2006) 59 of 15.2.2006: On the Intelligent Car Initiative "Raising Awareness of ICT for Smarter, Safer and Cleaner Vehicles"

- efficacy in relation to the results expected;

- efficiency in relation to costs;

- diffusion among motorists.

6. Conclusions

Bearing in mind the features of the motorway networks in concession and the positive results reached under the road safety profile, the development of the eCall will require an effort to harmonise its technical and technological aspects with the logistic and procedural ones used by the motorway operators. In this sense, to be efficient the eCall should:

- o take into account both the existing emergency procedures and the players involved, so as to:

    - optimise the collection and handling of information exploiting even the daily channels;

    - valorise the Road Police/motorway operators synergy (*preferential routine of the call to COA[72] and territorial communication points directly connected to the motorway operators*)

- o reduce passages (interlocutors) characteristic of the intervention initiation process to the minimum;

- o select the emergency calls (verification of eCall automatism).

It would be necessary to differentiate between the manually initiated eCall from the call that goes off automatically in order to be able to handle the "false" calls.

- o increase the MDS[73] (at least for dangerous goods transport having a potential impact on traffic – UN number, Kemler code);

- o training of PSAP personnel and all intermediate centres (in the handling of emergency motorway calls and the eCall);

- o promote the eCall (manual calls) to road users.

It is therefore to be hoped that:

- the implementation of the eCall in the European Union sees the active participation of the motorway companies;

- the European institutions facilitate the direct involvement of the motorway operators in the development of the eCall;

- the introduction of the eCall on motorways foresees the integration and especially the safeguard of already existing technologies and operational procedures;

- the implementation of the eCall shall respect the existing binding regulations that define the responsibilities and competences of the concessionaire companies, especially in the event of accidents;

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[72] COA: - *Centrale Operativa Autostradale* – Operating Motorway Centre
[73] MDS: minimum set of data

- the Road Police has an active role in the development of the 112, E112 and eCall as a principal player in road accident management.

Finally Aiscat wishes to stress the importance of the role of the Concessionaires and the Road Police in traffic management and the safety of the scene of the accident and hopes that this will be taken into account by the EU Institutions when drawing up the eCall procedure.

7. Annex 1: Questionnaire to the European countries about E112 number and eCall initiative

E112

1) How is Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive) implemented in your country?

2) Can you mention any practical/technical examples of 2002/22/EC Directive implementation in your country? If so, can you illustrate the communication channels and procedures needed in order to interface with the motorway operators?

eCall

1) Please briefly illustrate the problems related to the eCall implementation encountered by the motorway operators.

2) Can you list any possible test experiences (if any in your country) of eCall implementation with the involvement of motorway operators?

3) Can you briefly describe the organisation of the emergency management along your country's motorway network, in particular the different roles and competences of each actor involved ("who does what")?

8. Annex 2: Questionnaires

8.1. ▭▭ Austria – ASFINAG

E112

1) How is Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive) implemented in your country?

> **ASFINAG has no knowledge about how all the Articles are implemented in Austria, although this information can be provided on a case by case basis if requested. What can be said is that for example:**
> *** Article 6 (3): is implemented in Austria**
> *** Article 19 (1): is implemented in Austria**
> *** Article 26: 112 is implemented in Austria but to what extent "the caller location information" is known to the authorities managing emergencies should be analysed**
> *** Article 30 (1): is implemented in Austria**

2) Can you mention any practical/technical examples of 2002/22/EC Directive implementation in your country? If so, can you illustrate the communication channels and procedures needed in order to interface with the motorway operators?

> **See answer above - any further information can be provided upon request.**

eCall

1) Please briefly illustrate the problems related to the eCall implementation encountered by the motorway operators.

* **The current eCall standards developed by CEN do not foresee a role for motorway operators in the value chain of eCall. In other words, as the eCall is foreseen today, road operators will not get any direct information from it.**

* **Tunnel safety management operations are in most cases (depending on the location of the tunnel, length, one-way traffic etc.) based on queue detection loops, closed circuit TV with video detection, emergency phones, and other measurement sensors. More specifically, emergency communication is possible via dedicated fixed phones distributed throughout the tunnels every 250 meters and connected to a tunnel safety centre. If these phones are used, the tunnel emergency centre is notified by the position of the caller and the respective video camera image is shown to the emergency centre operator.**

Recently, cellular network coverage has been provided inside the tunnels by using repeaters or dedicated base stations. In case of emergency, drivers prefer to call the emergency authorities (112, 122, 133, 144, etc.) from their mobile phones instead of leaving the cars and using the emergency dedicated fixed phones. As a result, the tunnel safety centre is not notified of the pending emergencies and precious time, in the order of minutes, is wasted before an action is undertaken.

With the implementation of the eCall in the current status quo state of the procedures defined, this situation will be even worse.

The above situation does not only apply to tunnels but also to all categories of roads.

2) Can you list any possible test experiences (if any in your country) of eCall implementation with the involvement of motorway operators?

* **There has been one eCall test performed by a mobile phone operator, by the Austrian Automobile Club in 2006. No motorway operator was involved.**

3) Can you briefly describe the organisation of the emergency management along your country's motorway network, in particular the different roles and competences of each actor involved ("who does what")?

Generally 3 scenarios can be considered

Notification via emergency booths at the roadside:
In the event that road users need support they can ask for support via emergency telephones (booths). The phone call is connected to the competent control centre, where the operators try to identify what the problem is. They already know the position of the caller and can therefore easily send assistance. The language issue is a big one, especially due to the high number of different nationalities (especially Eastern countries) using the Austrian motor and expressways. The operators try to help by contacting touring clubs, for example. In the case of an emergency, the information is passed to emergency units. Up to the moment that these units reach the scene of the incident, the control centre operator leads the accident management procedures.

Notification via mobile phones:
In the case that an incident is reported directly to the emergency units, the respective unit, for example the police, coordinates the accident management procedures. Road operators are informed and involved on a case to case basis.

Accident detection in the traffic management centre:
If an accident is detected in the traffic management centre, the operator leads the management procedures involving emergency units if needed. If emergency units are involved, they take over the responsibility for the management.

8.2. 🇭🇷 Croatia[74] - HUKA

E112

1) How is Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive) implemented in your country?

> **With regard to the transposition of the above mentioned Directive it can be said that the E-112 number is implemented within the 112 Service (being a part of Croatian Protection and Rescue Authority).**
>
> **Along with its operation communication centers (State centre and 20 regional centers) the Service collects and processes information, data and messages 24 hours a day. Citizens, legal bodies, government bodies, civil protection employees and others are then notified if any dangers and their consequences are discovered. The 112 Centre functions as a unique communication center for all kinds of emergency situation. The 112 number can be reached any time day or night, regarding one's location in Croatia. The number is free of charge, and can be dialled from all mobile networks, fixed networks and all types of telephone devices simply by dialling 112.**
>
> **Concerning the other terms of Directive implementation we are not acquainted with the details and for that matter an answer should be sought in the 112 State centre.**

2) Can you mention any practical/technical examples of 2002/22/EC Directive implementation in your country? If so, can you illustrate the communication channels and procedures needed in order to interface with the motorway operators?

[74] Asecap member, not yet EU member

eCall

1) Please briefly illustrate the problems related to the eCall implementation encountered by the motorway operators.

The 112 Centre inherited old communication equipment from 985 centers with no incoming call data or audio recording of calls, analog public ports, and other equipment dating back to more than 20 years ago. Due to these circumstances, it was necessary to come up with a transmission solution – CTI (COMPUTER TELEPHONY INTEGRATED) which would enable data collection of calls and audio recording for possible number abuse, event reconstruction or other. Work units are networked together and the 112 Centre can receive voice calls, SMS messages or fax. Regarding the cooperation of motorway operators with the Centre, it can be said that Motorway Traffic control centers cooperate very well with local 112 centers, informing them about traffic accidents via fax and coverage scheme provided by the latter. Unfortunately, communication still exists that does not provide an adequate level of automisation, which does not represent such a big problem for the motorway network as for the road networks that do not have ITS systems or SOS telephones.

2) Can you list any possible test experiences (if any in your country) of eCall implementation with the involvement of motorway operators?

3) Can you briefly describe the organisation of the emergency management along your country's Motorway network, in particular the different roles and competences of each involved actor ("who does what")?

Possible motorway/tunnel accidents

Report to:	Accident with injuries and fatalities	Traffic accident with fire	Traffic accident with material damage	Wrong way driving	Material damage on facilities and equipment	Equipment and ITS system damage	Dangerous substance discharge	Motorway works	Motorway closing (both roadways)	Traffic diversion to parallel road
Traffic police	Mobile/fixed phone	Mobile/fixed phone	Mobile/fixed phone	Mobile/fixed phone			Mobile/fixed phone	Mobile/fixed phone	Mobile/fixed phone	Mobile/fixed phone
Firemen department	USW / Mobile phone	USW / Mobile phone		Mobile/fixed phone			USW / Mobile phone			
Ambulance	Mobile/fixed phone									
Road patrol units	Mobile phone / USW	Mobile phone / USW	Mobile phone / USW	Mobile phone / USW	Mobile phone / USW	Mobile phone / USW	Mobile phone / USW	Mobile phone / USW	Mobile phone / USW	Mobile phone / USW
112 Center	Fax	Fax	Fax	Fax			Fax	Fax	Fax	Fax
Info center	e-mail / Fax	e-mail / Fax	e-mail / Fax	e-mail / Fax			e-mail / Fax	e-mail / Fax	e-mail / Fax	e-mail
HAK (Croatian Auto Club)	Fax / e-mail	Fax / e-mail	Fax / e-mail	Fax / e-mail			Fax / e-mail	Fax / e-mail	Fax / e-mail	e-mail
Technical unit manager	Mobile/fixed phone	Mobile/fixed phone	Mobile/fixed phone	Mobile/fixed phone	Mobile/fixed phone	Mobile/fixed phone	Mobile/fixed phone	Mobile/fixed phone	Mobile/fixed phone	Mobile/fixed phone
Road inspector	Fax	Fax		Fax			Fax	Fax	Fax	Fax
Environment control department		e-mail	e-mail				Fax			
Toll collection					Mobile/fixed phone / Fax			Mobile/fixed phone	Mobile/fixed phone	Mobile/fixed phone / Fax
WEB /Info portals	WEB / VMS	WEB / VMS	WEB / VMS	WEB / VMS			WEB / VMS	WEB / VMS	WEB / VMS	WEB / VMS
Director of Motorway maintenance subsidiary	Mobile/fixed phone / SMS	Mobile/fixed phone / SMS	Mobile/fixed phone / SMS	Mobile/fixed phone / SMS	Mobile/fixed phone / SMS	Mobile/fixed phone / SMS	Mobile/fixed phone / SMS	Mobile/fixed phone / SMS	Mobile/fixed phone / SMS	Mobile/fixed phone / SMS
Regular maintenance department manager	Mobile/fixed phone / SMS	Mobile/fixed phone / SMS	Mobile/fixed phone / SMS	Mobile/fixed phone / SMS	Mobile/fixed phone / SMS	Mobile/fixed phone / SMS	Mobile/fixed phone / SMS	Mobile/fixed phone / SMS	Mobile/fixed phone / SMS	Mobile/fixed phone / SMS
Traffic control department manager	e-mail	e-mail	e-mail	e-mail		e-mail	e-mail	e-mail	e-mail	e-mail
Other roads										Fax / e-mail

LEGEND:

- 🟥 Mobile or fixed phone
- 🟧 Fax
- 🟦 e-mail
- ⬜ USW
- 🟩 WEB
- 🟪 VMS-portals with text messages
- 🟨 SMS message – OUTSIDE WORKING HOURS

8.3. 🇫🇷 France - ASFA

E112

1) How is Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive) implemented in your country?

> **112 is operational both for fixed and mobile in France and works quite well.**
> **E112 (voice+location) don't work well**
> **Fixe: the name of person and phone number who call is given to the operator**
> **Mobile: nothing automatic. Only by specific demand by fax, the localisation of the mobile cell is given.**

2) Can you mention any practical/technical examples of 2002/22/EC Directive implementation in your country? If so, can you illustrate the communication channels and procedures needed in order to interface with the motorway operators?

eCall

1) Please briefly illustrate the problems related to the eCall implementation encountered by the motorway operators.

> **The Ministry of transport is not in favour of the e-call system as defined by the Commission. It considers that it is not cost effective to have it mandatory in the vehicles, considering very few gain in safety compared to the price of the equipment. The Ministry says that other equipments could be of higher effects.**
> **But Ministry agreed private systems using private answering platform. This private service (ex PSA -Public Safety Answering- Peugeot- Citroen) concerns accidents and breakdown assistance as well.**

2) Can you list possible test experiences (if any in your country) of e-call implementation with the involvement of motorway operators?

> **One Experiment is in due course within the COOPERS Project with thr existing commercial service of PSA -Public Safety Answering-. PSA Peugeot Citroen and ASF[75] experiments a connexion between the PSA data base and the TCC of ASF.**

3) Can you briefly describe the organisation of the emergency management along your country's motorway network, in particular the different roles and competences of each actor involved ("who does what")?

> **Accidents: The police is in charge of answering to the emergency call and then manage the call to the other participants (medical and garage); the motorway company is informed simultaneously.**
> **Breakdowns: The emergency call is received and managed by the motorway company (TCC – Traffic Control Centre-)**

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[75] Autoroutes du Sud de la France

8.4. 🟩 🟧 Ireland - ITIA

E112

1) How is Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive) implemented in your country?

Arising from the Communications Regulation (Amendment) Act 2007, the Department of Communications, Energy and Natural Resources has established the emergency call answering service (ECAS). Following a public procurement process, BT Ireland is to operate the ECAS over the next 5 years. ECAS will include processing of mobile location information. See http://www.dcenr.gov.ie/Communications/Business+and+Technology/Emergency+Call+Answering+Service.htm **.**

2) Can you mention any practical/technical examples of 2002/22/EC Directive implementation in your country? If so, can you illustrate the communication channels and procedures needed in order to interface with the motorway operators?

See answer to question 1. There is no provision for interfacing with motorway operators. 2002/22/EC does not include any specific references to motorway operators.

eCall

1) Please briefly illustrate the problems related to the eCall implementation encountered by the motorway operators.

The eCall does not exist as a deployed service anywhere in Europe. From a motorway operator perspective, if the PSAPs could automatically alert traffic management and control centres, then automatic incident alert could be provided in a cost-effective manner. The impacts of accidents on congestion could be mitigated as motorway operators would be able to react very quickly, VMS could warn motorists that they are approaching the scene of an accident, traffic could be diverted, speed limits could be reduced and lanes closed as required. This could result in improved road safety by timely alerting motorists of approaching danger and through reducing the possibility of multiple collisions. A more joined up approach involving eCall could allow more effective incident management plans and strategies to be developed.

2) Can you list possible test experiences (if any in your country) of e-call implementation with the involvement of motorway operators?

3) Can you briefly describe the organisation of the emergency management along your country's motorway network, in particular the different roles and competences of each actor involved ("who does what")?

Local authorities already have emergency plans in place. In the light of a rapidly changing network, The National Roads Authority has undertaken a review of Incident Management in liaison with Local Authorities, the Garda Siochana (Irish Police) as well representatives of the other Emergency Services. It is expected that this project will be completed by early 2010. The Garda Siochana will remain paramount in the implementation of all emergency procedures.

8.5. Poland - Autostrada Wielkopolska

E112

1) How is Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive) implemented in your country?

To implement Directive 2002/22/EC the Polish Government has amended the Telecommunications Law (the Act of 16 July 2004) by implementing its recommendations on common service to the Polish legislature. Moreover, the Minister of Infrastructure issued an ordinance on detailed conditions concerning the provision of universal service and requirements concerning broadband Internet access service for authorised units.

The scope of the universal service comprises:

1. connection of a single network terminal at the subscriber's main location, exclusive of digital network with service integration, hereinafter called "ISDN";

2. maintaining subscriber line with network terminal (as item 1.) in readiness to provide telecommunication services;

3. domestic and international telephone connections, including mobile networks, also comprising guarantee of fax and data transmission, including Internet connections;

4. provision of information on telephone numbers and making available lists of subscribers;

5. provision of facilities for the disabled;

6. provision of telephone services with application of public phones.

7. guaranteed access for all end users to publicly available telephone services, charge free contact with rescue forces with application of "112" European emergency number.

The common telecommunications service is provided throughout the country. All necessary technical ventures to render the universal service have been completed. Adequate receiving and dialling calls to 112 emergency number is ensured.

2) Can you mention any practical/technical examples of 2002/22/EC Directive implementation in your country? If so, can you illustrate the communication channels and procedures needed in order to interface with the motorway operators?

Further implementations of Directive 2002/22/EC are regulated by introduced amendments to Acts and Ordinances.

The Act of 6 September 2006 on State Medical Rescue requires the receiving and dialling of calls to the emergency number. Calls dialled to the 112 emergency number are currently received by emergency communication centres, District/Municipal Fire Service Management Posts (for fixed-line telephony) and at District Police Posts (for mobile telephony), whose the task is to receive notifications or redirect them to relevant units of the Police, the State Fire Service or breakdown rescue service.

By way of an Ordinance of the Minister of Internal Affairs and Administration of 17 September 2007 detailed organization of emergency communication centres was regulated.

In addition, by way of an Act of 11 January 2008 new regulations to the Telecommunications Law and to the Act on State Medical Rescue were implemented, ensuring the direction of calls made to the emergency number of the emergency communication centre to territorially adequate services and the systemic provision of information on network terminal location, from which a call is made to the emergency number.

Currently works are in progress on the system target model and the project "All-Polish tele-information network for the purposes of handling the 112 emergency number" is being implemented.

The project is aimed at improving the quality of cooperation between organizational units of the Police, the State Fire Service and the State Medical Rescue in the handling of calls to emergency numbers. The project provides for connecting 868 locations of Emergency Communication Centres and Voivodeship Emergency Communication Centres, as well as the State Fire Service, the Police and the State Medical Rescue to one network and ensuring all necessary tele-transmission and voice communication services in these locations.

The planned completion date of the project is for December 2011.

For particular motorway sections, the conditions for taking action by rescue services are agreed upon with the competent voivodeship chiefs of the State Fire Service and the Police in the motorway design phase. Requirements concerning the principles and organization of conducting rescue actions have been included in agreed Rescue Action Plans for a given motorway section. These plans contain arrangements concerning the notification system of rescue units by the Motorway Management Centre.

eCall

1) Please briefly illustrate the problems related to the eCall implementation encountered by the motorway operators.

As of 22 September 2009 Poland has been willing to sign the agreement – e-Call Memorandum of Understanding
Launching the e-call system requires close cooperation between authorities, vehicle manufacturers and mobile network operators. It will be necessary to ensure adequate equipment for rescue services at 112 service centres.
The e-call system implementation will require the equipping of newly produced vehicles with adequate automatic notification devices.
The equipping of all old vehicles with the e-call system may require longer transitional time due to their relatively high share of road traffic.

2) Can you list possible test experiences (if any in your country) of e-call implementation with the involvement of motorway operators?

So far no eCall implementation tests have been performed with the involvement of motorway operators.

3) Can you briefly describe the organisation of the emergency management along your country's motorway network, in particular the different roles and competences of each actor involved ("who does what")?

The motorway is equipped with an emergency roadside telephone system connected with the Motorway Management Centre, which makes it possible to identify the emergency message and initiate the necessary rescue actions.
Principles of the rescue service on the Motorway
- Rescue service on the motorways is one of the tasks of the National Firefighting and Rescue Services.
- Rescue actions on motorway shall be performed pursuant to rescue plans drawn up by the Concession Company.
- Rescue actions within the service shall be performed by units of the National Firefighting and Rescue Services and other entities included in the rescue plan of the motorway.

Principles of the organisation of rescue action management
- Management of the forces and means of the National Firefighting and Rescue Services for actions and their coordination shall be provided by: Alarm Points of the

firefighting and rescue units, Regional Management Posts of the regional headquarters of the State Fire Service, Voivodeship Rescue Coordination Posts of the province headquarters of the State Fire Service, and National Rescue Coordination Centre of the National Headquarters of the State Fire Service.

- Organisation of the management posts may take place at the site of an event and in the Control Offices and the Central Control Office within O&M Centres – rescue action centre.

Tasks of the National Firefighting and Rescue Services Units

- Providing of first aid in accordance with the procedures for emergency and disaster medicine. Firefighters shall have certificates issued by the commissions established by the voivod.
- Performance of statutory rescue tasks.
- Implementation of tasks with reference to firefighting of the means of transport and motorway facilities as well as of technical, chemical, ecological and medical rescue services, in particular by:
  – analysing and recognising threats,
  – being on standby to perform rescue actions,
  – taking actions with the aim of rescuing people, property and natural environment, limitation and cleaning of the effects of accidents and of transport disasters and fires,
  – first aid shall be performed by the units of the State Fire Service

Police tasks

- Identification of the kind of event / accident and initiation of rescue actions.
- Notification of the National Firefighting and Rescue Services units or other services and rescue entities about the event / accident.
- Providing first aid in accordance with the procedures for emergency and disaster medicine. Motorway police officers shall have certificates issued by the commissions established by the province.
- Taking actions in sudden and extraordinary dangers (breakdowns, accidents, disasters and natural disasters) that require the participation of rescue services.
- Traffic management at the site of the event.

Tasks of public health care institutions

- Providing first aid in case of emergency, accident and disasters by emergency care departments (Emergency), in accordance with uniform treatment procedures, at the site of the event and during transportation to hospital.
- Coordinating medical actions in events of pile-ups and disasters.
- Providing professional medical assistance in hospitals - injury treatment centres.

Concessionaire Company's tasks

- Agreeing with appropriate province headquarters of the State Fire Service on safety conditions, including conditions of undertaking actions by rescue services at the stage of motorway designing.
- Preparation of rescue plans in agreement with appropriate province headquarters and the Team responsible for motorways of the National Headquarters of the State Fire

Service, obtaining a positive opinion from the team responsible for fire protection and rescue service established by the provinces and the Council for Motorways.

- Cooperation with the National Firefighting and Rescue Services units, the Police and other services and entities in the organisation of motorway safety.
- Marking of the site of the accident.
- Cooperation in the limitation and cleaning of the effects of accidents and transport disasters and fires.
- Training of subordinated employees in practical implementation of rescue plan and updating these plans. **Tasks of the provinces local government and government**

administration

- Organisation and supervision of preventive and educational actions in the social and specialist-professional dimension (courses and training the successful completion of which entitles participants to appropriate rescue certificates).
- Organisation of a uniform communication system between all rescue entities.
- Rescue coordination in pile-ups, disasters and natural disasters and other situations exceeding the possibilities of normal services operating on the motorway.

8.6. Portugal - APCAP

E112

1) How is Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive) implemented in your country?

This relates to basic telephone service and not to the different communication services existing today and envisaged the availability of the basic telephone service to all European citizen and the cost supported by incumbent telecom operators that have for many years invested in its fixed infrastructure and wanted to get additional revenues coming from new telecom operators coming to the market.

Portugal has adopted the Directive and Portugal Telecom and the remaining telecom operators have to comply with existing legal framework in accordance with Directive 2002/22/EC.

On E-112 the question is that any call for 112 should be geographically identified to allow the fastest sanitary assistance, meaning that telephone exchanges/switches must clearly indicate the address of the caller. With traditional technology that was easy because there was a physical copper wire connection between the exchange and the telephone set, but nowadays that's no longer true.

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2) Can you mention any practical/technical examples of 2002/22/EC Directive implementation in your country? If so, can you illustrate the communication channels and procedures needed in order to interface with the motorway operators?

Among other examples, I may refer the situation I was involved at Brisatel, a telecom operation from Brisa that afterwards was sold to ONITELECOM a telecom operator controlled by EDP, Electricity Board Company of Portugal, like ENEL in Italy, or ENDESA in Spain, or EDF in France. In that operation we were discussing with Portugal Telecom (PT) about the use of its infrastructure, namely their local loop network (the network between the local exchanges and the users homes) and PT was obliged to publish their costs, upon ANACOM certification, for the other operators like Brisatel to be able to use that basic infrastructure.

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eCall

1) Please briefly illustrate the problems related to the eCall implementation encountered by the motorway operators.

eCall today it is not implemented in Portugal. At this point in time, the E-112 is already implemented. This means all telephone calls to 112 are geographically identified.
eCall shall be implemented on the E-112 platform at a later stage, not yet defined.

2) Can you list possible test experiences (if any in your country) of e-call implementation with the involvement of motorway operators?

There are no experiences of eCall implementation involving Motorway operators in Portugal.
Elements involved in the implementation of the E112 platform have been in contact with APCAP (*Portuguese Tolled Motorway Concessionaires Association*) in order to try to define the most correct system architecture, but no final result exists as far as we know.

3) Can you briefly describe the organisation of the emergency management along your country's motorway network, in particular the different roles and competences of each actor involved ("who does what")?

Motorway operator supervises the operations after identifying in detail the situation, but basically it signals the local so that new vehicles may flow safely and, in case of material damages, Maintenance Company responsible is informed to act according to level of services pre-defined contractually. Road police is the first to be informed in detail so that it allows the road police to request the involvement of the sanitary assistance (112), in case injured people is involved, and/or the fire brigade, if dangerous goods are involved or people is closed inside the vehicles. Road police is also responsible for managing the traffic, namely for cutting it, if necessary. The fire brigade is also called by the concessionaire in case liquids are spread along the pavement and the Concessionaire has no means to clean it.

When entering the data on the information system, automatically, upon the use of adequate filters, information is made available to the Conceding Authority and users on the website.

During all the period of the accident a Concessionaire representative is always on-site. Being terminated the road police, sanitary assistance and fire brigade participation, the involvement of other resources to clean the pavement and/or remove damaged vehicles is controlled by the Control Centre operator and the local representative.

When safety and security conditions are re-established, local concessionaire representative leaves the local and centrally the event is closed, disappearing any reference to it from the website.

8.7. Slovenia - DARS D.D

E112

1) How is Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive) implemented in your country?

The Slovenian status of the e-112 (2008):

112 Emergency Services in Slovenia:
Emergency calls in 112	**(1998)**
Caller locations implemented fully in 2006	**(fixed)**
and 2007	**(mobile)**
Emergency calls for disabled users	**(autumn 2008)**
E-Call	**(2010)**

Information about 112:
On the web: www.sos112.si and telephone operators
web pages
From mobile phones: wap.sos112.si

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2) Can you mention any practical/technical examples of 2002/22/EC Directive implementation in your country? If so, can you illustrate the communication channels and procedures needed in order to interface with the motorway operators?

eCall – some information about plans in Slovenia:

The automatic emergency call to 112 from the vehicle at the accident, triggered by sensors or manually by the switch at any kind of emergency situation.
When triggered – automatic transmission MSD – minimum set of data, sent from a vehicle to a PSAP, Public Safety Answering Point – Notification centre. The MSD contains information about the location and direction of the vehicle, the vehicle itself and its passengers.

eCall Technical data

* **eCall equipment and sensors built in inside the vehicle**
* **Using mobile public network – GSM for communication between the vehicle and PSAP – Notification centre**
* **Satellite system for vehicle location information – GPS or other, not fixed yet**
* **Automatic data communication – sending MSD to the PSAP when triggered automatically by sensors**

Caller location information for 112 calls in Slovenia
* **Caller location information for 112 calls in Slovenia must be available by law – Art. 72. ZOE in all PSAPs by the end of 2008.**
* **All telecommunication operators in Slovenia must make caller location information available in PSAPs by the end of 2008 as the Push System.**

e-call

1) Please briefly illustrate the problems related to the e-call implementation encountered by the motorway operators.

At present the eCall system is not implemented.

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2) Can you list any possible test experiences (if any in your country) of e-call implementation with the involvement of motorway operators?

No.

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3) Can you briefly describe the organisation of the emergency management along your country's Motorway network, in particular the different roles and competences of each actor involved ("who does what")?

Emergency management is carried out with SOS telephones beside the motorway – every 2 km and in the tunnels. Telephones are connected with the motorway regional control centre.

8.8. 🇪🇸 Spain - ASETA

E112

1) How is Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive) implemented in your country?

This directive concerns the rights and obligations of the telecommunication networks users and, in our opinion, it is more focussed on telecommunication operators than on toll road operators.

2) Can you mention any practical/technical examples of 2002/22/EC Directive implementation in your country? If so, can you illustrate the communication channels and the procedures needed in order to interface with the motorway operators?

eCall

1) Please briefly illustrate the problems related to eCall implementation encountered by the motorway operators.

- **Not enough accuracy of the GPS signal in order to detect the exact position of the vehicle.**

- **The emergency services of toll operators are usually limited to maintenance services. Police, ambulances and fire fighters are not managed by toll operators but by public authorities. Even though the coordination between toll operators and public authorities is very closed, there are still problems regarding the responsibilities and protocols for implementing the eCall. The implementation of eCall at National Level must guarantee a mutual coordination between the public service (E112) and the toll operator because the toll operator is the only responsible for traffic management on the motorway. Without this coordination, Toll Operator might not offer a correct service in terms of traffic management**

- **There are many public road authorities (State, autonomous communities, locals authorities…). The implementation of a system such eCall requires a good coordination among them.**

2) Can you list possible tests experiences (if any in your country) of eCall implementation with the involvement of Motorways operators?

Within the framework of a national project called OASIS some tests are planned on several toll motorways. No details of these tests are available for the moment.

3) Can you briefly describe the organisation of the emergency management along your country's motorway network, in particular the different roles and competences of each actor involved ("who does what")?

When there is an accident on a toll road, there are different possibilities:

- The detection of the accident comes through the toll operator (detected by cameras, SOS, user calls directly to the Motorway Control Centre…).

a) In the case of a small accident and can be managed by our maintenance staff, the necessary actions are taken by the toll operators.

b) In the case of a serious accident, the toll operators coordinate their actions with the public emergency services which are in charge of the evacuation of people… Toll operators focus their actions on traffic management (signals, maintenance staff…).

- The accident detection comes through public authorities (a user calls the 112 number,…) a coordinated action is taken by the public emergency services and toll operators (as point b)

9. Annex 3: Glossary[76]

112	Single European Emergency Call Number, introduced by Council Decision 91/396/EEC
ACEA	The *European Automobile Manufacturers Association*, represents the 13 major European car, truck and bus manufacturers in the EU
AISCAT	*Associazione Italiana Società Concessionarie Autostrade e Trafori*: is the Italian Association of Motorways, Tunnels, Bridges and Other Toll Road Concessionaire Companies. Its members manage in total 5700.4 toll km
ANAS	*Azienda Nazionale Autonoma delle Strade* (National Road Authority) – manages the Italian road and motorway network of national interest
APCAP	*Associação Portuguesa das Sociedades Concessionárias de Auto-Estradas ou Pontes com Portagens* (Association Portuguese Concessionaire Companies of Toll Motorways or Bridges), whose members manage in total 1,721.3 km
ASECAP	*Association Européenne des Autoroutes, Ponts et Tunnels à péage* (European Association of tolled motorways, bridges and tunnels). ASECAP is the only European professional association of tolled motorways companies. It gathers and represents 131 organisations that manage more than 25 000 kilometres of toll roads through 17 European countries
ASETA	*Asociación de Sociedades Españolas Concesionarias de Autopistas, Túneles Puentes y Vías de Peaje,* is the Spanish Association of Motorways, Tunnels, Bridges and Other Toll Road Concessionaire Companies, whose members manage in total 3,334.5 toll km
ASFA	*Association des Sociétés Françaises d'Autoroutes et d'Ouvrages à Péage* (Association of French motorway and toll facility companies), ASFA, is a professional organization which promotes the concessionary system for its members. ASFA Motorway network has a length of 8,522.4 km
ASFINAG	*Autobahnen-und Schnellstraßen-Finanzierungs- Aktiengesellschaft* is the Austrian member of ASECAP. ASFINAG plans, constructs, maintains and charges tolls on Austrian motorways and expressways, representing a network of 2,103.7 toll km
Autostrada Wielkopolska	Autostrada Wieilkopolska is the Polish member of ASECAP, whose members manage in total 235.0 toll km

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[76] EU acronyms and definitions are based on – the situation existing at 31.12.2009 -

CARE	*European Road Accident Database: i*s a Community database on road accidents resulting in death or injury, with no statistics on damage, only accidents. The purpose of CARE system is to provide a toll in order to make possible to identify and quantify road safety problems throughout European roads, evaluate the efficiency of road safety measures, determine the relevance of Community actions and facilitate the exchange of experiences in this field
CEN	*Comité Européen de Normalisation"* – European Committee for Standardization
COA	*Centrale Operativa Autostradale* **-** Operating Motorway Centre
COM	*COM documents,* drafted by the European Commission, contain legislative proposals by the Commission, or Communications, Opinions or Reports on different subjects related to the community policies. Very often a COM contains a proposal for a Directive or a Regulation to be adopted by the EU Council and the European Parliament
COPER III	Is the ASECAP Permanent Committee for Intelligent Transport Systems
CoR	*Committee of the Regions.* The CoR is the political assembly that provides the regional and local levels with a voice in EU policy development and EU legislation
DARS	*Druzba za avtoceste v Republiki Sloveniji* is the Slovenian member of ASECAP. DARS constructs, reconstructs, maintains and manages motorways and expressways in Slovenia. DARS has a total network of 552.4 km
Decision	It is one of the three binding instruments provided by secondary EU legislation (article 249 of the EC Treaty). A decision is a law which is not of general application, but only applies to its particular addressee of the decision (be it Member States, companies or individuals). The legislative procedure for adoption of a decision varies depending on its subject matter
DG INFSO	European Commission - *Directorate General for Information Society*

Directive	It is a legislative act of the European Union (article 249 of the EC Treaty), which requires Member States to achieve a particular result without dictating the means of achieving that result. It can be distinguished from EU Regulations which are self-executing and do not require any implementing measures. Directives normally leave member states with a certain amount of leeway as to the exact rules to be adopted. Directives can be adopted by means of a variety of legislative procedures depending on subject matter of the directive. If a Member state fails to implement the directive into the National legislation, or if the National legislation does not adequately comply with the requirements of the directive, the European Commission can initiate legal action against the member state in the European Court of Justice
E112	Location enhanced emergency call. The Universal Service Directive requires all mobile and fixed telephone operators to make available location information for every emergency call. E112 for mobile calls is particularly relevant for eCall.
EasyWay	EasyWay is a project for Europe-wide ITS deployment on main TERN corridors driven by national road authorities and operators with associated partners including the automotive industry, telecom operators and public transport stakeholders
EC	*European Commission.* The European Commission is a politically independent collegial institution which embodies and defends the general interests of the European Union. Its virtually exclusive right of initiative in the field of legislation makes it the driving force of European integration. It prepares and then implements the legislative instruments adopted by the Council and the European Parliament in connection with Community policies. The Commission also has powers of implementation, management and control. It is responsible for planning and implementing common policies, executing the budget and managing Community programmes. As "guardian of the Treaties", it also ensures that European law is applied
eCall	Pan-European in-vehicle emergency call. The emergency call is generated either manually by the vehicle occupants or automatically via activation of in-vehicle sensors when an accident occurs. When activated, the in-vehicle eCall device will establish a 112 call carrying both voice and data about the incident directly to the nearest PSAP
European Council	European Council defines the general political direction and priorities of the European Union. With the entry into force of the Treaty of Lisbon on 1 December 2009, it has become an institution. It comprises the heads of state or government of the Union's member states, along with its President and the President of the Commission

EEC	*European Economic Community*
EESC	*European Economic and Social Committee.* The EESC is a body of the European Union (EU) established in 1957. It is a consultative body that gives representatives of Europe's socio-occupational interest groups, and others, a formal platform to express their points of views on EU issues. Its opinions are forwarded to the larger institutions - the Council, the Commission and the European Parliament. It thus has a key role to play in the Union's decision-making process
E-MERGE	*Enhanced emergency response:* is a project — began work in April 2002 and concluded end of March 2004. Its task was to develop common specifications testing in real-life conditions in six EU countries for the vehicle emergency call at all levels along the service chain and to ensure that the technical, organisational and business structure is available for a Europe-wide take-up of the solution. The consortium — which included partners from the car industry, public authorities, emergency call centres and service providers
EP	*European Parliament.* Is the assembly of the representatives of the 435 million Union citizens. Since 1979 they have been elected by direct universal suffrage and today total 732, distributed between Member States by reference to their population. The European Parliament's main functions are as follows:legislative power: in most cases Parliament shares the legislative power with the Council, in particular through the codecision procedure; budgetary power: Parliament shares budgetary powers with the Council in voting on the annual budget, rendering it enforceable through the President of Parliament's signature, and overseeing its implementation; power of control over the Union's institutions, in particular the Commission
eSafety	Joint initiative of the European Commission (DG Enterprise and DG Information Society), the industry and other stakeholders that aims to accelerate the development, deployment and use of Intelligent Integrated Safety Systems, that use information and communication technologies in intelligent solutions, in order to increase road safety and reduce the number of accidents on European roads
ETSI	*European Telecommunications Standards Institute*
Galileo	The GALILEO satellite radio navigation system, an initiative launched by the European Union and the European Space Agency, is based on a constellation of 30 satellites and ground stations providing information concerning the positioning of users in many sectors including transport

HUKA	*Hrvatska Udruga Koncesionara za Autocestes naplatom cestarine,* is the Croatian member of ASECAP. HUKA is the Croatian association of toll road concessionaires which operates 1.198,7 Km of roads in Croatia
ICT	*Information and Communication Technology*
ITIA	*Irish Tolling Industry Association* is the Irish member of ASECAP. ITIA is the Irish association of Toll Road Concessionaire Companies, whose members manage in total 146.0 toll km
ITS	*Intelligent Transport Systems*
White Paper	A Commission White Paper is a document containing proposals for Community action in a specific area. In some cases a White Paper follows a Green Paper published to launch a consultation process at European level. When a White Paper is favourably received by the Council, it can lead to an action programme for the Union in the area concerned. An example is the White Paper on Transport Policy of 2001, at present under revision with a new document tabled in June 2006
White Paper on Transport Policy	The 2001 White Paper on Transport Policy proposed almost 60 measures designed to implement a transport system capable of restoring the balance between different modes, revitalising the railways, promoting sea and waterway transport and controlling the increase in air transport. The White Paper was providing a response to the sustainable development strategy adopted by the Göteborg European Council in June 2001
MoU	"*Memorandum of Understanding for Realisation of Interoperable In-Vehicle eCall"*
MSD	*Minimum Set of Data*
PSAP	*Public Safety Answering Point,* in charge of responding emergency calls. A PSAP could be a Public Authority or a private service provider operating under the control of a Public Authority
Recommendation	It is one of the two non binding acts mentioned in the EC Treaty (article 249) together with the opinions. Recommendations have no legal force, but are negotiated and voted on according to the appropriate procedure. Recommendations differ from Regulations, Directives and Decisions as they are not binding for Member States, but they have a political weight. In fact Recommendation is an instrument of indirect action aiming at preparation of legislation in Member States, differing from the Directive only by the absence of obligatory power

Regulation	It is a legislative act of the European Union (article 249 of the EC Treaty), which has a general scope, is obligatory in all its elements and is directly applicable in all Member States. Regulations constitute one of the most powerful forms of EU law and must be given immediate force of law in Member States without the need to enact implementing measures
Risoluzione	È uno degli atti con cui il Parlamento indirizza il Governo. Non ha valore formale ma meramente procedurale
SEiSS	*Exploratory Study* on the potential socio-economic impact of the introduction of *Intelligent Safety Systems* in Road Vehicles
TCC	*Traffic Control Centre*
TERN	*Trans-European Road Network.* The function of Trans-European Networks is to create a modern and effective infrastructure to link European regions and national networks. They are essential to proper operation of the common market, since they ensure free movement of goods, persons and services
TMC	*Traffic Message Channel:* system including channel specifically used for transmitting traffic information through Radio Data System
UE	*European Union.* The European Union was created by six founding States on 25 March 1957 (following the earlier establishment by the same six states of the European Coal and Steel Community in 1952) and has grown up to 27 Member States. There have been five enlargements, with the largest occurring on May 1st 2004, when 10 states joined, and the most recent on January the 1st 2007, when Bulgaria and Romania joined
VMS	*Variable Message Sign.* Also known as DMS - Dynamic Message Sign. A sign capable of displaying predefined or freely programmable messages