



Connecting Authorities for Safer Heavy Goods Traffic in the Baltic Sea Region

FRAMEWORK FOR THE APPLICATION OF DIGITAL TACHOGRAPHS IN THE BALTIC SEA REGION

**Legal and practical information for transport enter-
prises and public authorities**

Wolfgang Kersten

Meike Schröder

Carolin Singer

Max Feser

Maren Völkel



Publications
5:2012

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– Legal and practical information for transport enterprises
and public authorities

Wolfgang Kersten
Meike Schröder
Carolin Singer
Max Feser
Maren Völkel

© Hamburg University of Technology
Institute of Business Logistics and General Management
Schwarzenbergstraße 95 D, 21073 Hamburg, Germany

Published by
C.A.S.H.
Turku School of Economics, University of Turku
FI-20014 University of Turku, Finland
www.cash-project.eu

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ISBN 978-952-249-094-0

656.1

EXECUTIVE SUMMARY

This study is produced as part of the C.A.S.H. (Connecting Authorities for Safer Heavy Goods Traffic in the Baltic Sea Region) project, which aims to develop practical solutions to make international road freight transport safer, more predictable and affordable in the Baltic Sea Region (BSR). 13 partner organisations from eight BSR countries have been participating in the project from 2009 until 2012 and mostly represent road police authorities and research institutions.

This report provides an overview of the social and technical regulations with a focus on the digital tachograph in the context of road freight transport. Furthermore, an overview of exemplary European Union-licensed producers of digital tachographs, providers of software for transport companies, as well as providers of control software is given. The report highlights the variety of available products in the market. The selection is not exclusive, but the overview can be used by decision makers as a basis for further research.

In addition, empirical results are presented. They are based on surveys and workshops and have been conducted with the aim to support enforcement activities with the focus on driving and resting hours in the BSR. This report only covers information which is non-confidential and does not harm the enforcement of public authorities by publication. Within the C.A.S.H. project, additional information has been distributed among the project partners.

This report does not raise the claim to be a legal adviser in any way. Furthermore, the report is not legally binding. The legal position should be checked in the legislations or legal advice should be sought.

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LIST OF ACRONYMS

AETR	=	Accord Européen sur les Transports Routiers (European agreement concerning the work of crews of vehicles engaged in international road transport)
BSR	=	Baltic Sea Region
C.A.S.H.	=	Connecting Authorities for Safer Heavy Goods Traffic in the Baltic Sea Region
EC	=	European Community
EEA	=	European Economic Area
EEC	=	European Economic Community
EU	=	European Union
HGV	=	Heavy Goods Vehicle
PDA	=	Personal Digital Assistant
TUHH	=	Technische Universität Hamburg-Harburg (Hamburg University of Technology)
UTC	=	Universal Time Coordinated
VG TU	=	Vilnius Gedimino Technical University
VRN	=	Vehicle Registration Number

1 INTRODUCTION

This study is part of the C.A.S.H. project – Connecting Authorities for Safer Heavy Goods Traffic in the Baltic Sea Region. The C.A.S.H. project is part-financed by the European Union (EU) (European Regional Development Fund) through the Baltic Sea Region Programme 2007-2013. To find out more about the programme, visit <http://eu.baltic.net/>.

In the following, the project and its regional partners will be described.

1.1 Project introduction – C.A.S.H.

The C.A.S.H. (Connecting Authorities for Safer Heavy Goods Traffic in the Baltic Sea Region) project aims at developing practical solutions to make international road freight transport safer, more predictable and affordable in the Baltic Sea Region (BSR). The project intends to do this by:

- improving cooperation between authorities
- harmonizing training of inspection officials
- testing safety equipment and IT systems to be used by relevant authorities

The C.A.S.H. project is due to run for three years, from September 2009 to September 2012. The project will benefit not only the authorities inspecting the traffic through harmonized practices, but logistics business as a whole. The project is co-ordinated by Turku School of Economics in Finland, as part of University of Turku.

The C.A.S.H. project partnership is made up of 13 organisations in eight countries around the BSR (Figure 1), including:

- police and other authorities dealing with road traffic safety
- regional councils
- research institutes



Figure 1 The locations of the C.A.S.H. partner organisations and countries

With about one million road haulage companies in Europe and over 560,000 million tonne kilometres of goods transported annually on the roads of the BSR, road freight transport is big business.

Despite similar regulations, authorities in European countries may apply different practices and equipment to inspect the traffic. This puts additional pressure on road haulage companies which have to comply with regulations when they are already facing the challenges of a very competitive market.

In addition, more than 1,300 fatalities involving a Heavy Goods Vehicle (HGV) took place in the BSR in 2007, equal to 10 % of all accidents.

This is why 13 organisations from eight countries in the Baltic Sea area created the C.A.S.H. project. The project brings together police officers and other authorities inspecting HGV in the Baltic Sea area in order to spread good inspection practices across the region.

To find out more about the project and the different work packages, please visit the project website www.cash-project.eu.

1.2 Regional partner introduction

The following organisations are partners of the C.A.S.H. project:

- *Danish National Police, National Traffic Center, Denmark*
- *Hamburg University of Technology (TUHH), Germany*
- *Hamburg Waterways Police, Germany*
- *Latvian Transport Development and Education Association, Latvia*
- *National Police Board, Sweden*
- *Norwegian Mobile Police Service, Norway*
- *Personal Protection and Law Enforcement Police / Traffic Supervision Division, Estonia*
- *Police of Finland, Finland*
- *Regional Council of Kymenlaakso, Finland*
- *Regional Council of South Karelia, Finland*
- *Regional Council of Southwest Finland, Finland*
- *Turku School of Economics (University of Turku), Finland*
- *University of Turku, Finland*
- *Vilnius Gedimino Technical University (VGTU), Lithuania*

1.3 Objective and structure of this report

This report provides an overview of the social and technical regulations with focus on the digital tachograph in the context of road freight transport in Europe. Short descriptions of the most relevant aspects of the underlying regulations as well as graphics approach this topic in a concisely manner. **The report does not raise the claim to be a legal adviser in any way. Furthermore, this report is not legally binding. The legal position should be checked in the legislations or legal advice should be sought.**

Furthermore, an overview of licensed producers of digital tachographs, software solutions for the use of digital tachographs in transport companies, as well as providers of control software for public authorities involved in checking digital tachographs is given.

Subsequently, empirical results of the C.A.S.H. project are presented. These results are based on surveys and workshops and have been conducted with the aim to support enforcement activities with the focus on driving and resting hours in the BSR. This report only covers information which is non-confidential and does not harm the enforcement of public authorities by publication. Within the C.A.S.H. project, additional information was distributed among the project partners.

Finally, a summary is given.

2 SUMMARY OF EXISTING REGULATIONS

This chapter intends to give an overview of the most relevant regulations for road freight transport. In this context, the main focus will be placed on the legal basis for the introduction and use of digital tachographs. Hereafter, the corresponding rules and the most important regulations will be described in detail. Regulations, which include only marginal changes (e.g., adaptations to technical progress) will be treated secondarily. The same applies to regulations which have been repealed, but nevertheless constitute significant milestones for the current legal situation.

This chapter mainly covers regulations on the European level. For reasons of clarity and comprehensibility, chapter 2 is subdivided into social (2.1) and technical regulations (2.2). The described regulations form the legal basis for the enforcement authorities in the BSR.

All Member States are supposed to align their national legislation with legislation on the European level. For this reason, the report does not describe national differences in legislation. Figure 2 illustrates the area of application of regulations.

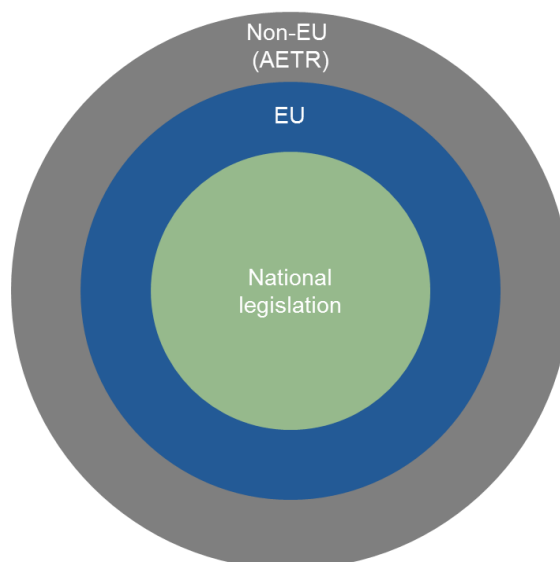


Figure 2 Area of application of regulations

In addition to the European legislation, chapter 2.3 describes the AETR (Accord Européen sur les Transports Routiers – European agreement concerning the work of crews of vehicles engaged in international road transport) agreement which covers neighbouring countries of the EU. In the BSR, this is for example Russia.

2.1 Social regulations in the EU

The social regulations aim at harmonizing provisions related to road transport in the EU. As these regulations have been adapted several times, this chapter will provide an overview of the most important ones. First, Council Regulation of the European Economic Community (EEC) No. 3820/85, which forms the basis for common driving and resting times, will be described. After that, a detailed description of the main provisions of Regulation of the European Community (EC) No. 561/2006 will be stated to give an overview of driving and resting times. In the end, Directive 2006/22/EC gives insights about the enforcement of social regulations.

2.1.1 Council Regulation (EEC) No. 3820/85 – fundamental provision from 1985

Council Regulation (EEC) No. 3820/85 lays down common rules on driving times and rest periods. Regulation (EEC) No. 543/69 and Regulation (EEC) No. 2829/77 form its basis. All of them have the following goal in common: “the harmonization of conditions of competition between methods of inland transport, especially with regard to the road sector and the improvement of working conditions and road safety” (EEC 1985, p. 1). As the regulations for driving and resting times have been slightly changed, this report will give a detailed description of the latest Regulation (EC) No. 561/2006 in the next section.

2.1.2 Regulation (EC) No. 561/2006 – driving times and rest periods

Regulation (EC) No. 561/2006 provides the legal basis for the introduction of the digital tachograph. The aim of this regulation is to reorganize the rules on driving times, breaks and rest periods. It also establishes

the minimum age for conductors (18 years) and driver's mates (18 years respectively 16 years (under certain conditions) (cf. EC 2006, Article 5). This Regulation amends Council Regulations (EEC) No. 3821/85 and (EC) No. 2135/98 and repeals Council Regulation (EEC) No. 3820/85, which has been introduced in chapter 2.1.1 (cf. EC 2006, p.1).

2.1.2.1 Area of applicability

The regulation applies to the carriage of goods by vehicles of more than 3.5 tonnes or vehicles transporting more than nine persons (including the driver) on the road (cf. EC 2006, Article 2).

The regulation is applicable to shipments of road transport within the Community or between the Community, Switzerland and the parties of the European Economic Area (EEA; in the BSR, this is for example Norway).

2.1.2.2 Description of main provisions

The main provisions of Regulation (EC) No. 561/2006 concern the rules on driving times, breaks and rest periods. In the following, several examples will be given to illustrate the main provisions of this regulation (following Anonymous 2007). Figure 3 is the caption for the subsequent figures. Therefore, all boxes with blue colour indicate driving time. The boxes with light green colour illustrate resting time and the orange boxes show all other working time.

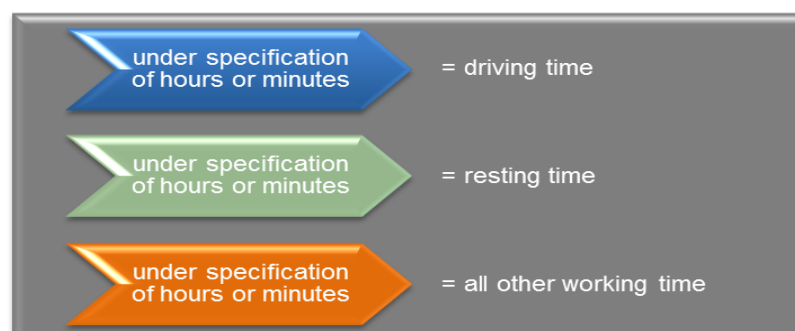


Figure 3 Caption for subsequent figures

Figure 4 illustrates one example how drivers are allowed to split their driving and resting time. The daily driving time is limited to 9 hours by the regulation. After 4 ½ hours driving time, the driver should take an uninterrupted 45-minute break. This break may be replaced by two breaks – one of at least 15 minutes and the other of at least 30 minutes (cf. DSA 2007, p.118).



Figure 4 Daily driving and resting time

The alternative way to drive and rest is illustrated in figure 5.

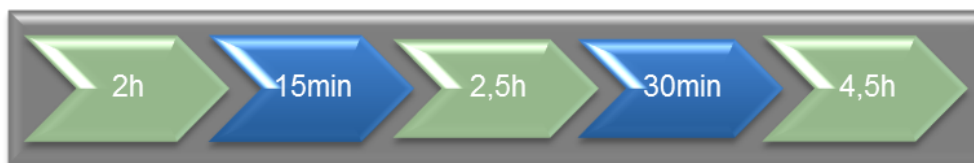


Figure 5 Alternative way to drive and rest

The daily driving time is extendable twice a week to 10 hours at most. Figure 6 shows how the maximum lengths of driving time and the minimum lengths of breaks can be split up in this case.

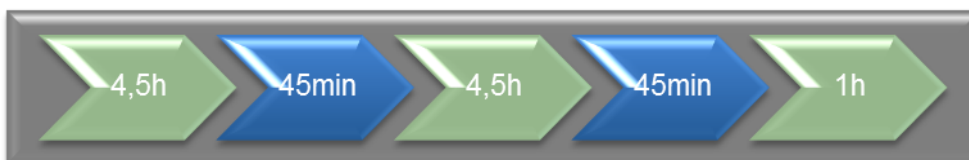


Figure 6 Extended daily driving time

The maximum weekly driving time is 56 hours whereas in two consecutive weeks, the upper limit of 90 hours may not be exceeded. Furthermore, a driver should perform daily and weekly rest periods. The

daily rest period should be at least 11 hours every 24 hours. Figure 7 gives an example.



Figure 7 Daily rest period

The daily rest period can be split into two periods – the first of at least 3 hours and the second of at least 9 hours as illustrated in figure 8.



Figure 8 Segmentation of the daily rest period

The regular daily rest period may be reduced to 9 hours three times a week (without a required compensatory). In figure 9, this is illustrated in the following way: After a steering period, the driver rests for a minimum of 9 hours. Subsequently, the driver does any other activity (all other working time as, e.g. cleaning up the driving cap) for 2 hours before a new period of steering starts.

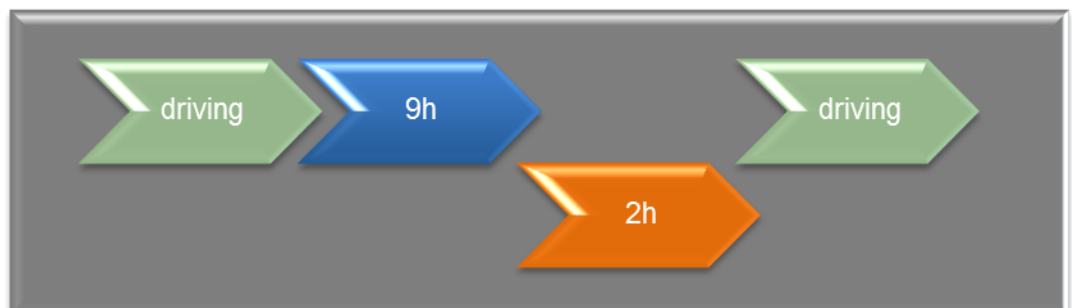


Figure 9 Reduced daily rest period

The weekly rest period of at least 45 hours has to be made between two weekly driving times. It is shown in figure 10.



Figure 10 Weekly rest period

In the case of two or more drivers, within a period of 30 hours, each driver must have a daily rest period of at least 9 hours. During the trip, one of the drivers can have a break while the other one is driving. However, this is not the case for the daily rest period. The compliance of the rest period is only possible together. This regulation is valid only if both drivers are on board of the vehicle. Otherwise, the rules for a single driver apply (cf. DSA 2007, p.119).

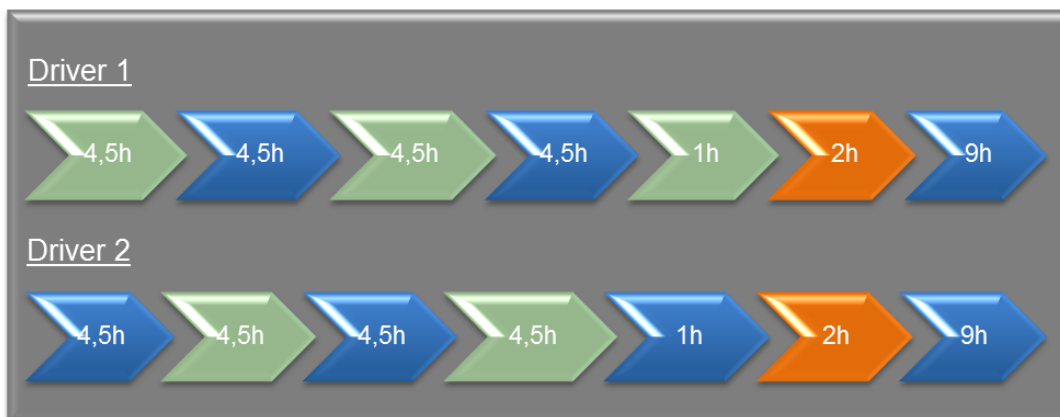


Figure 11 Daily driving and rest periods (two drivers)

Figure 11 gives an example for the daily rest period of two drivers.

2.1.3 Directive 2006/22/EC – enforcement of drivers' hours rules

This directive sets clear rules for enforcing drivers' hours rules, which have been described in detail in the previous chapter. It provides common methods which should be applied for roadside checks as well as

for checks at premises. Furthermore, it promotes mechanisms of co-operation between Member State authorities in charge of road transport enforcement.

This directive emphasizes the introduction of the digital tachograph as this will progressively enable Member States to undertake more effective checks. In addition, it defines modalities for roadside checks. It describes for example how enforcement authorities of two or more Member States should coordinate their checks, in which each authority operates in its own territory.

By signing this directive, the Member States commit themselves to submit statistical reports to the European Commission. Furthermore, Member States are requested to establish a system for the electronic exchange of information. Further information about the implementation of the digital tachograph can be found online (cf. <http://www.eudigitaltachograph.org/DisplayPage.asp?PageId=30>; EC 2006).

2.2 Technical regulations in the EU

To enable public authorities to enforce the above-described social regulations, Directive 2006/22/EC emphasizes the introduction of the digital tachograph. The following regulations give insights into the technical specifications which are necessary to make such a digital device an effective tool for controlling driving and resting times.

2.2.1 Council Regulation (EEC) No. 3821/85 – technical specifications for the tachograph

Until its revision, Council Regulation No. 3821/85 provided the basis for the analogue tachograph, recording driving time, breaks, rest periods as well as periods of other work undertaken by the driver. The annex 1B sets out the technical specifications for the construction, testing, installation and inspection of recording equipment. The aim of this regulation is to help to enforce the rules on driving times as well as rest periods and monitor the driving times of professional drivers in order to prevent fatigue, and guarantee fair competition and road safety.

This regulation has been amended several times due to technical progress. The most important change has been the introduction of the digital tachograph which is supposed to be a more secure and accurate recording and storage device than the analogue tachograph.

2.2.2 Council Regulation (EC) No. 2135/98 – introduction of the digital tachograph

Council Regulation (EC) No. 2135/98 refers to the introduction of the digital tachograph. The aim of this regulation is the replacement of the analogue tachograph by a digital one. The regulation establishes basic provisions for new digital recording equipment with mass memory and smart cards. The new recording equipment shall comply with the technical specifications of Annex 1B of Regulation (EEC) 3821/85 (cf. IHK 2009, p.3). It amends Council Regulations (EEC) No. 3821/85 on recording equipment in road transport and Directive 88/599/EEC concerning the application of Regulations (EEC) No. 3820/84 and (EEC) No. 3821/85 (cf. EC 1998, p.1).

However, the technical basis for the introduction of digital tachographs has been established in Annex 1B of Regulation (EC) No. 1360/2002 (cf. Chapter 2.2.3).

2.2.2.1 Description of main provisions

The mandatory introduction of digital tachographs in EU countries took place on 1st of May 2006 and in the AETR covered countries on 16th of June 2010. Vehicles first registered after 1st of May 2006 must be equipped with a digital tachograph. Vehicles which were registered before 1st of May 2006 but after 1st of January 1996 must be retrofitted with a digital tachograph. This provision applies to vehicles for the carriage of goods with a maximum permissible weight of more than 12 tonnes and to vehicles for the carriage of passengers with a maximum permissible weight of more than 10 tonnes and more than nine seats (including the driver). If the vehicle is first registered after 1st of January 1996 and the existing analogue control unit is defective, there is an obligation to replace the analogue tachograph by a digital one. Furthermore, the transmission of the signals to the recording equipment has to be exclusively electrical (cf. Rang 2008, p.59). Nevertheless, there is no general obligation to retrofit older vehicles with a digital tachograph (cf. EC 1998).

Figure 11 gives an overview of the elements of the digital tachograph. First of all, there are the *components in the vehicle*. The recording device looks similar to a common car radio. It receives its data from a *sensor* which is connected to the crank axle. Each driver has a unique *driver's card* for identification. This card has to be inserted into

the *digital tachograph* for each trip. The digital tachograph has a printing unit, so that the driver can be informed about all recorded information. This information can be analysed by the *fleet operator* as well. To receive this information, it is necessary to use a *company card*. Authorities use a *control card* and are able to receive data, e.g. by *road side checks*. To analyse this data they use special *control software*. In addition, they are also able to control the fleet management of companies.

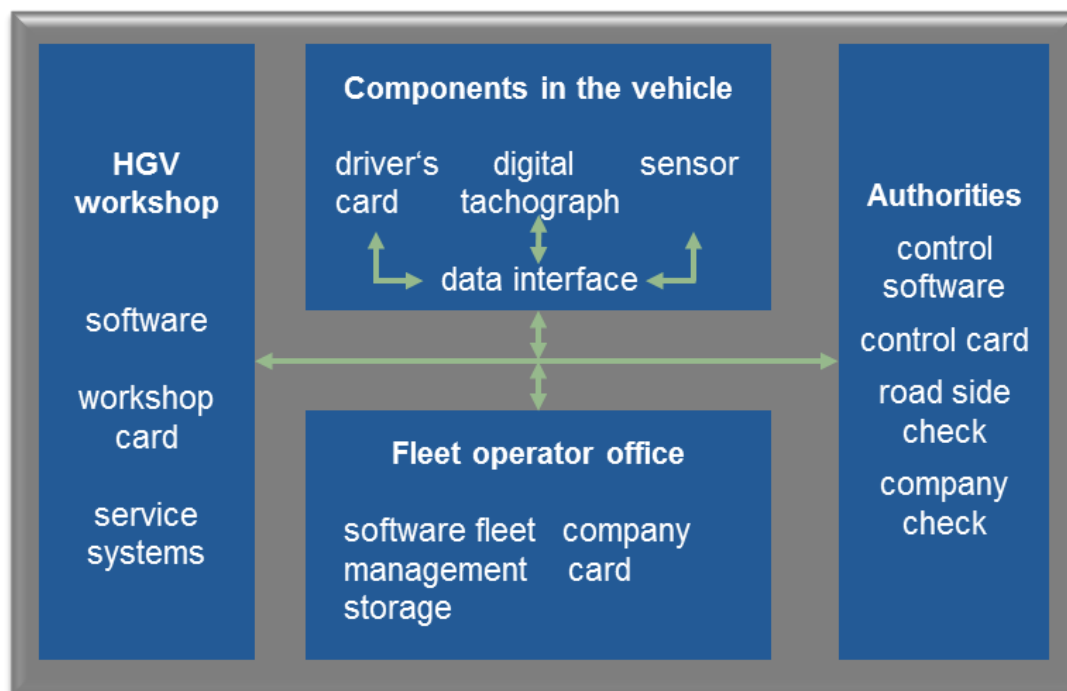


Figure 12 Overview of the elements of the digital tachograph (cf. ERTICO 2002, p.6)

HGV workshops are in charge of installation and maintenance of digital tachographs. They have special *workshops cards*, which allows them, e.g. to calibrate the tachograph.

2.2.3 Commission Regulation (EC) No. 1360/2002 – improving security of digital tachograph

This regulation was passed by the Commission of the European Community in June 2002. It adapts Council Regulation (EEC) No. 3821/85 on recording equipment in road transport for the seventh time due to

technical progress. Annex 1B specifies the technological requirements for licensed digital tachographs with the aim to improve the security of the system as well as the interoperability between the driver's card and recording equipment. The annex is very detailed and covers the following topics (EC 2002, p. 4-7):

- “general characteristics and functions of the recording equipment,
- construction and functional requirements for the recording equipment,
- construction and functional requirements for the tachograph cards,
- installation of recording equipment,
- checks; inspections and repairs,
- card issuing, [and]
- type approval of recording equipment and tachograph cards”.

These detailed specifications are the basis for becoming an EU-licensed producer of digital tachographs.

2.2.4 Commission Regulation (EC) No. 68/2009 – additional vehicle types

In 2009, the Commission of the European Community adapted Council Regulation (EEC) No. 3821/85 for the ninth and tenth time. The major issues of these two regulations will be described here and in the following chapter (2.2.5).

Commission Regulation (EC) No. 68/2009 amends Annex 1B of Council Regulation (EEC) No. 3821/85 by making it possible for a digital tachograph to be installed in M1 and N1 type vehicles. These kinds of vehicles are defined in Annex II of Council Directive 2007/46/EC (EC 2007). A technical adaptor is necessary to use a digital tachograph in such vehicles. Therefore, certain technical specifications have been defined. The underlying objective is to enable the domestic enforcement regimes to control all vehicles that are in the scope of the EU drivers' hours rules. This regulation is limited to those M1 and N1 vehicles, which are put into service for the first time between 1st of May 2006 and 31st of December 2013.

2.2.5 Commission Regulation (EU) No. 1266/2009 – improving the enforcement on technical level

This regulation is in line with a *recommendation on guidelines for best enforcement practice concerning checks of recording equipment to be carried out at roadside checks and by authorised workshops* which has been published on 23rd of January 2009 (EC 2009). One aim of this recommendation is to “improve the detection and prevention of devices used to defraud the digital tachograph system” (EC 2009, p. 2). Manipulations lead to unfair competition, it forces drivers to drive for illegal, longer periods, and ultimately to lower road safety. Therefore, control officers have to be equipped with adequate control devices and software to be able to detect manipulations. Furthermore, they have to be properly trained.

Therefore, the adaption of Council Regulation (EEC) No. 3821/85 by Commission Regulation (EU) No. 1266/2009 refers to the design and security of the digital tachograph. On the one hand, it makes it easier for operators, drivers, and enforcement authorities to use the equipment. On the other hand, it contributes to an improved protection against frauds and provides more accurate recording. Especially the manipulation of digital tachographs by magnets has been emphasized in this regulation.

The introduction of this regulation is planned as follows:

- From 11th of January 2010, changes to the tachograph security mechanisms as specified in the regulation are required;
- From October 2011, a number of technical changes to the design of the tachograph will be introduced. These include amendments associated with the interpretation of Regulation 3821/85, software amendments, new workshop practices, the ability for vehicle operators to program the VRN (vehicle registration number) once using a company card and the ability to change the UTC (universal time coordinated) time without being recorded as a calibration;
- From October 2012, the digital tachograph is required to have improved security features, mainly in relation to protection against the use of magnets which could be used to manipulate the digital tachograph.

The regulation will not increase the number of vehicles which require the fitment of a digital tachograph. Instead, new vehicles registered af-

ter the three implementation dates mentioned previously must use a digital tachograph with the relevant technical modifications.

In addition, the regulation emphasizes the Member States to use a joint system for exchanging electronic data.

2.3 AETR – legal basis for driving and resting outside the EU

The AETR (Accord Européen sur les Transports Routiers – European agreement concerning the work of crews of vehicles engaged in international road transport) establishes rules for international trade. The purpose of this agreement is the determination of driving times, breaks and rest periods in cross-border traffic. It also establishes the minimum age for drivers engaged in the carriage of goods (18 years respectively 21 years (under certain conditions)) and for drivers engaged in the carriage of passengers (21 years) (cf. AETR 2010, Article 5).

2.3.1.1 Area of applicability

Table 1 gives an overview of the countries which are exclusively covered by the AETR (cf. VOSA 2009, p.8):

Table 1 Exclusively AETR-covered countries

Albania	Macedonia
Andorra	Moldova
Armenia	Russia
Azerbaijan	San Marino
Belarus	Serbia and Montenegro
Bosnia and Herzegovina	Turkey
Croatia	Turkmenistan
Kazakhstan	Ukraine
Liechtenstein	Uzbekistan

Other countries which are covered by the AETR fall under the EU or the EEA.

Similar to Regulation (EC) No. 561/2006, this agreement applies to the carriage of goods by vehicles of more than 3.5 tonnes or vehicles transporting more than nine persons (including the driver) on the road

(cf. AETR 2010, Article 2). The rules of AETR are valid for the whole cross-border traffic to or through the AETR covered countries. The AETR takes precedence over EU rules. For this reason, the agreement also applies if any part of the route leads through an EU country (cf. Rompf/Rang/Seybold 2006, p.69).

2.3.1.2 Summary of main provisions

The main provisions of the AETR are described in the 6th amendment to the agreement, which came into force on 20th of September 2010. The purpose of this revision was to harmonize the rules with the prescriptions of Regulation (EC) No. 561/2006 as far as possible. Therefore, the main provisions of the AETR – concerning the rules on driving times, breaks and rest periods – are similar to the provisions of Regulation (EC) No. 561/2006 (cf. Chapter 2.1.2).

The control device shall comply with Council Regulation (EEC) 3821/85 regarding construction, installation, use and testing (see chapter 2.2) (cf. AETR 2010, Article 10).

3 APPLICATION OF THE DIGITAL TACHOGRAPH

Several companies offer products in line with the existing regulations to support the aim to make road transport safer by controlling driving and resting hours. This chapter provides an overview of exemplary EU-licensed producers of digital tachographs, providers of software for transport companies, as well as providers of control software.

The information has been gathered through internet research. The objective of this chapter is to highlight the variety of available products in the market. Decision makers can use this overview as a basis for further research, however this selection is **not exclusive**. Therefore, the collection has to be completed as well as updated by further research.

3.1 Licensed producers

The technological requirements for licensed digital tachographs are specified in Commission Regulation (EC) No. 1360/2002 (see chapter 2.2.3), Annex 1B (EC 2002). Table 2 provides an overview of licensed producers of digital tachographs in the EU.

Table 2 Overview of EU-licensed producers of digital tachographs

Name	Country	Homepage	Products
Delphi Grundig	Germany	http://am.delphi.com/	DG 100
EFKON AG	Austria	www.efkon.com	EFAS
I+ME ACTIA GmbH	Germany	www.smartach.de	SmarTach
Stoneridge Electronics AB	Sweden	www.stoneridge-electronics.com	SE5000
VDO	Germany	www.dtco.vdo.de	DTCO 1381

Detailed information about these producers can be found in appendix 1.

3.2 Providers of software for transport companies

Transport companies face the challenge to fulfil all regulations. Furthermore, they have to cope with the complexity of the existing diversity of national regulations. At least the regulations within the EU are widely harmonised. Transport companies have to plan their routes in such a way that drivers are able to comply with all rules. Table 3 gives an overview of companies which provide software for transport companies to manage these tasks. These products analyse data from the digital tachograph to support routing of fleets.

Table 3 Overview of software providers for transport companies

Name	Country	Homepage	Products
BUYOND GmbH	Germany	www.globofleet.com	GloboFleet Card Control Plus, GloboFleet Card Control
CAL Consult GmbH	Germany	www.caltacho.com	CALtacho
Cargo Support GmbH & Co. KG	Germany	www.cargosupport.de	cargo support [tacho]
DAKO EDV-Ingenieur- und Systemhaus GmbH	Germany	www.dako.de	DiTach, TachoWeb
DIS-Transics	France	www.dis-transics.com	TX-VISIO, TAK-Archiv, VISIO-Truck, VISIO-Arc, TAKoo
Exentra Transport Solutions	Great Britain	www.exentra.co	Smartanalysis, solo plus

Ltd.			
I+ME ACTIA GmbH	Germany	www.smartach.de	D-Store, Tachostore
Infolab	Poland	www.tachospeed.com	Tachospeed
Kienzle Automotive GmbH	Germany	www.kienzle.de	KiARC
Kormack GmbH	Germany	www.kormack-gmbh.de	TachoOffice
NORDSYS GmbH	Germany	www.nordsys.de	rediTAC TachoOffice
Opendtacho.org	Germany	www.digitaler-tachograph.org	Open Source Software
PC NET SERVICE	Poland	www.pcnetSERVICE.pl	TachoScan
RoadSoft	The Netherlands	www.rs-roadsoft.com	RS Packs
Road Tech Computer Systems Ltd.	Great Britain	www.roadtech.co.uk	Tachomaster
SCM Microsystems	Germany	www.scmmicro.com	CHIPDRIVE Driver Card Solution
Softproject AG – TachoPlus	Switzerland	www.softproject.ch	TachoPlus
sz&p Softwarebüro Zauner & Partner	Germany	www.zamik.de	ZA-ARC
Tachman Central	Great Britain	www.tachmancentral.co.uk	EasyTac downloader
TachoEASY AG	Germany	www.tachoeasy.de	tacholog
Tachonova GmbH	Germany	www.tachonova.de	Tachonova T-Software, Tacho Plus, Tachonova Driver Card

			Solution
Transics International	Belgium	www.transics.com	TX-CONNECT, Digitach Archiv, Digitach Synchro
VDO	Germany	www.dtco.vdo.de	TIS

Further information about these companies can be found in appendix 2.

3.3 Providers of control software

As described in chapter 2.2.5, the enforcement of driving and resting hours is an important task. Table 4 gives an overview of control software providers.

Table 4 Overview of providers of control software

Name	Country	Homepage	Product
DAKO EDV-Ingenieur- und Systemhaus GmbH	Germany	www.dako.de	DAKO-TachoTrans
DIS-Transics	France	www.dis-transics.com	O.C.T.E.T.
Infolab	Poland	www.tachospeed.com	Tachospeed
NORDSYS GmbH	Germany	www.nordsys.de	TachoOffice GOV
PC NET SERVICE	Poland	www.pcnet-service.pl	TachoScan Control
Softproject AG – TachoPlus	Switzerland	www.softproject.ch	TachoPlus
sz&p Softwarebüro Zauner & Partner	Germany	www.zamik.de	ZA-AZK, ZA-PSK

Additional information about these companies can be found in appendix 3.

4 EMPIRICAL RESULTS ON THE ENFORCEMENT OF DRIVING AND RESTING HOURS IN THE BALTIC SEA REGION

This chapter will describe the activities within the C.A.S.H. project which had the aim to analyse the pros and cons of used control devices to enforce driving and resting hours within the BSR.

4.1 Survey on used equipment for the enforcement of driving and resting hours

This subchapter is based on a survey – consisting of two parts – which has been conducted within the C.A.S.H. project. A detailed description of the survey as well as the used questionnaire has already been published in the C.A.S.H. report 3:2011 (Kersten et al. 2011).

4.1.1 Methodology of the survey¹

In spring 2010 (March until May), the authors conducted the first part of the survey to analyse the status quo of used equipment in road controls. A supplementary questionnaire – the second part of the survey – was subsequently sent out to the same authorities in order to get more precise answers and to gain more information on the advantages and disadvantages (pros and cons) of the equipment from May until June 2011. The participating authorities in the study are listed in table 5. In total, members of nine authorities from seven countries answered the questions. In addition to the six police authorities who are project partners, the German Landespolizeiamt Schleswig-Holstein, the Lithuanian Police Traffic Supervision Service as well as the State Road Transport

¹ This subchapter represents an excerpt from C.A.S.H. report 3:2011 (see Kersten et al. 2011, pp. 26-27).

Inspectorate under the Ministry of Transport and Communications of the Republic of Lithuania took part in the survey. The supplementary questionnaire was answered by each country once.

The participants in the survey mainly occupied leading positions of units related to the control of HGV. While some participants were traffic specialists or were responsible for the control of HGV, others were experts in the field of dangerous goods.

Table 5 Participating authorities in the survey

Country	Authority
Denmark	Danish National Police
Estonia	Police and Border Guard Board
Finland	National Traffic Police of Finland
Germany	Hamburg Waterways Police
Germany	Landespolizeiamt Schleswig-Holstein
Lithuania	Lithuanian Police Traffic Supervision Service
Lithuania	State Road Transport Inspectorate under the Ministry of Transport and Communications
Norway	National mobile police service
Sweden	National Police Board

The aim of the study was to gather information on used equipment in road controls. In this report, only information regarding the digital tachograph will be analysed. The following questions have been asked regarding driving and resting hours (Kersten et al. 2011, pp. 57-58):

- Which guideline do you follow:
 - On national level?
 - On EU level?
- What kind of equipment do you use?
- Which software (e.g. OCTET) do you use?
- With which software did you gain experience in the past?
- What are the most popular manipulations regarding the tachograph?
- How can you detect such manipulations?
- Are there specific problems concerning the control of driving and resting hours?

Furthermore, the authors collected information about pros and cons regarding all used equipment (hardware and software) in each participating country of the survey. The detailed and partly confidential results are available for all project partners on the C.A.S.H. intranet.

A detailed description of additional used control equipment can be found in C.A.S.H. report 3:2011 (Kersten et al. 2011).

4.1.2 Results of the survey

The participants in the survey gave insights into the used hardware and software to control driving and resting hours. In general, the asked police officers appreciate the digital tachograph as the control of the analogue one was difficult and time consuming. The control of the digital tachograph is usually fast and easy.

Two different kinds of control hardware are in use. Police officers use portable personal digital assistants (PDA) or laptops/personal computers. A PDA has the advantages that it is easy to carry around and it is possible to have such a device on a police motor-bike. The limited options to analyse the data is a disadvantage. Therefore, such a device is preferable for fast pre-tests. Furthermore, police officers reported short battery lifetime as well as that these devices are susceptible to failures.

Laptops/personal computers enable police officers to perform detailed analyses. It is possible to use a so-called “download key” to transfer the data from the digital tachograph to the laptop/personal computer. Such a download key allows the police officers to obtain the data with a minimum of required equipment within the driver’s cab. Download keys help to avoid damages on laptops as these are not designed for outdoor use in many cases. A disadvantage of download keys is that it is easy to forget such control equipment in the checked HGV. Moreover, in some cases the data transfer is time consuming.

Five different kinds of control software have been used in the six BSR countries which answered the questionnaire. This report does not analyse certain software products.

In general, the following functions have been described as advantageous:

- fast evaluation of data,
- good visualization – possibility to address drivers directly,
- multiple language support,

- integration of national standards,
- user friendliness, and
- accuracy of data analyses.

Furthermore, the following functionalities have been reported as disadvantageous:

- slow evaluation of data,
- too detailed visualization of analysed data,
- the absence of national standards (e.g., fines),
- the absence of national limits (e.g., tolerance), and
- high investments.

This itemisation shows that police officers expect that control software programs work fast, enable good visualization, and consider national standards. Otherwise they report these missing functionalities as disadvantageous.

4.2 Equipment testing workshops

Within the C.A.S.H. project, 14 joint exercises were organised from September 2009 until May 2012. These exercises aimed at bringing police officers from the different countries of the BSR together to exchange their knowledge. In each exercise, 20-60 police officers gathered for 2-3 days. Altogether, approximately 600 vehicles were inspected and over 500 police officers participated. Some joint exercises focused on special themes, e.g. the control of digital tachographs. Furthermore, joint exercises were used to organise equipment testing workshops. All participants in joint exercises documented their experiences in feedback forms which have been analysed within the C.A.S.H. project.

The following chapter will introduce an equipment testing workshop which had the focus on digital tachograph control devices.

4.2.1 Methodology of the workshops

In August 2010, a workshop on digital tachograph control devices was organised during a joint exercise which took place in Hamburg, Germany. All participating project partners were asked to bring their control

devices to this workshop to enable an exchange of information and to compare the functionalities of the devices. 17 police officers from six different countries participated in this workshop. It was possible to compare two different PDA systems as well as four different software solutions. The testing took place at an organised roadside check. The results were discussed during a debriefing session.

4.2.2 Results of the workshops

The police officers agreed that it is not necessary to have one unique solution within the BSR. Each tested product has its own advantages and disadvantages. Furthermore, the requirements are different, so that not one solution can be optimal. The requirements for control devices for roadside checks differ for example from those used on motor-bikes.

As national legislations are different, control software should be able to consider national fines. In addition to the analyses of driving and resting hours, it is very useful if control software offers the functionality to analyse data for the investigation of accidents.

One major output of the workshop was the need to counteract manipulations of the digital tachograph. Therefore, control software should consider additional functionalities which support police officers to detect manipulations.

Overall, the workshop participants highlighted the importance of training for police officers which have to control driving and resting hours. The underlying regulations are complex and it is only possible to use the control equipment with adequate and regular training courses.

5 SUMMARY

After a short introduction to the C.A.S.H. project, an overview of the most relevant regulations for road freight transport on the European level was given in chapter 2. Social and technical regulations can be distinguished.

The social regulations deal with driving times and rest periods. The fundamental provision was introduced. Furthermore, a summary of the main provisions regarding driving times and rest periods was given. Several examples illustrated how the social regulations have to be applied in road transport within the EU. These social regulations are the reason for the introduction of the analogue and digital tachograph, due to the fact that there is a need for enforceability. Therefore, it was explained which rules public authorities follow to enforce driving and resting hours within the EU.

Next to the social regulations, the technical ones were listed and technical specifications for the tachograph were described. Furthermore, a detailed explanation of the main provision regarding the introduction of the digital tachograph was given. This included an overview as well as a description of the elements of the digital tachograph. As the enforcement is prone to technical manipulations, a summary of the latest regulations with a focus on the improvement of the security of the digital tachograph was provided.

In addition to the European legislation, chapter 2 contained a description of the AETR, an agreement which covers neighbouring countries of the EU. In the BSR, this is for example Russia.

Chapter 3 provided an overview of exemplary EU-licensed producers of digital tachographs, providers of software for transport companies, as well as providers of control software. It highlighted the variety of available products. Decision makers can use this overview as a basis for further research, but this selection is **not exclusive**.

In chapter 4, the empirical results of the C.A.S.H. project were presented. These results are based on surveys and workshops and were conducted with the aim to support enforcement activities with the focus on driving and resting hours in the BSR.

This report only covers information which is non-confidential and does not harm the enforcement of public authorities by publication. Within the C.A.S.H. project, additional information was distributed among the project partners.

The report does not raise the claim to be a legal adviser in any way. Furthermore, this report is not legally binding. The legal position should be checked in the legislations or legal advice should be sought.

APPENDIX 1. LICENSED PRODUCERS

DELPHI GRUNDIG

Contact:

Beuthener Str. 41
90471 Nuremberg
Germany
Phone: +49 (0)9117030

In 1998, the company Delphi was founded as a subsidiary of General Motors and became self-employed in 1999. Four years later, Delphi acquired Grundig Car InterMedia System and created the brand Delphi Grundig. Today, Delphi Grundig is the world's largest automotive supplier with 150 production plants in 35 countries. Since 2004, the company cooperates with the Semmler GmbH TachoControl (manufacturer of measurements) (cf. <http://delphi.com/contact/>).

EFKON AG

Contact:

Dietrich-Keller-Str. 20
8074 Raaba
Austria
Phone: +43 (0)316695675
Fax: +43 (0)316695675600
Email: office@efkon.com

The company was founded in 1994. The majority shareholder is Strabag, one of Europe's leading construction groups. In 2006, EFKON had 180 employees in Graz (headquarter), 120 employees in the international subsidiaries and 450 employees in global joint ventures. It is certified according to ISO 9001:2000 and ISO 27001:2005 (cf. <http://www.efkon.com/>).

I+ME ACTIA GmbHContact:

Dresdenstr. 17/18

38124 Brunswick

Germany

Phone: +49 (0)531387010

Fax: +49 (0)5313870188

Email: info@ime-actia.de

I+ME ACTIA is a company of the ACTIA Group, the European leader in diagnostics and onboard electronics. It was founded in 1986 and joined the ACTIA Group in 1995. ACTIA is a major supplier for the OEM automotive industry. It is certified according to ISO 9001/EAQF 94, ISO 9002, ISO 14001 and ISO TS 16949 (cf. <http://www.ime-actia.de/>).

STONERIDGE ELECTRONICS ABContact:

Gårdsfogdevägen 18A

168 66 Bromma

Sweden

Phone: +46 (10)4822800

Fax: +46 (10)4822801

Email: info@elc.stoneridge.com

Stoneridge Electronics is part of the Stoneridge Group. It is a leading independent designer and manufacturer of electrical and electronic components, modules and systems. The annual turnover of the Group is approximately \$700 million. Stoneridge has just over 6,000 employees, of whom 550 work at Stoneridge Electronics. The company is the second largest provider of digital tachograph systems, including worldwide systems support (cf. <http://www.stoneridge-electronics.com/>).

VDOContact:

Continental Automotive GmbH

Vahrenwalder Str. 9

30165 Hanover

Germany

Phone: +49 (0)51193801

Fax: +49 (0)51193881770

Email: tachograph@vdo.com

VDO is a trademark of the Continental Corporation. It is part of the division Commercial Vehicles & Aftermarket (CV & AM). CV & AM is the market and technology leader in the tachograph segment. The Automotive Group of the Continental AG is one of the leading automotive suppliers and has more than 80,000 employees in more than 130 locations worldwide (cf. <http://www.vdo.de>).

APPENDIX 2. COMPANY SOFTWARE PROVIDERS

BUYOND GmbH

Contact:

Seekoppelweg 7

24113 Kiel

Germany

Phone: +49 (0)4319799370

Fax: +49 (0)43197993737

Email: mail@buyond.de

BUYOND GmbH is an IT service provider with headquarter in Kiel. The company provides hardware and software solutions for the transport and development sector (cf. <http://www.buyond.de/>).

CAL CONSULT GmbH

Contact:

Fürther Str. 244 a

90429 Nuremberg

Germany

Phone: +49 (0)911952190

Fax: +49 (0)9119521938

Email: info@cal-consult.de

CAL Consult GmbH is an international company with locations in Nuremberg and Ede. The company is specialised in practice-oriented and state-of-the-art IT logistical solutions (cf. <http://www.cal-consult.de/>).

CARGO SUPPORT GmbH & Co. KG

Contact:

Fürther Str. 17 a

90429 Nuremberg

Germany

Phone: +49 (0)9112741420

Fax: +49 (0)91127414290

Email: info@cargosupport.de

Cargo support has two locations (Bielefeld and Nuremberg). The company focuses on the needs of carriers, transport companies and courier services. It provides disposition software and also consulting and training services (cf. <http://www.cargosupport.de/>).

DAKO EDV-INGENIEUR- UND SYSTEMHAUS GmbH

Contact:

Brüsseler Str. 7-11

07747 Jena

Germany

Phone: +49 (0)364159980

Fax: +49 (0)36415998200

Email: info@dako.de

DAKO is a medium sized company with four separate business areas. The department "Speditionen/Transportgewerbe" was founded in 2005. In 2010, DAKO became market-leader with its product TachoWeb which is used by 7,000 firms and in 40,000 vehicles (cf. <http://www.dako.de/>).

DIS-TRANSICS

Contact:

111, Route de Nîmes

30560 St Hilaire de Brethma

France

Phone: +33 (0)466610017

Fax: +33 (0)466610071

Email: info@dis-transics.com

DIS-Transics was founded in 1988. Since 2007, the company is part of the Transics Group. DIS supplies hardware and software solutions for reading, archiving and processing data from analogue and digital tachometers (cf. <http://www.dis-online.com/>).

EXENTRA TRANSPORT SOLUTIONS Ltd.Contact:

Ground Floor
9 Avon Reach
Chippenham
Wiltshire SN15 1EE
Great Britain
Phone: +44 (0)1249463355
Fax: +44 (0)1249463345
Email: contactus@exentra.co.uk

Since 1995, Exentra has been providing hardware and software for many of the leading transport operators and Tachograph Analysis bureaux in the UK and EU. Their software solutions are based on the Microsoft.NET and SQL Server platforms (cf. <http://www.exentra.co.uk/>).

I+ME ACTIA GmbHContact:

Dresdenstr. 17/18
38124 Brunswick
Germany
Phone: +49 (0)531387010
Fax: +49 (0)5313870188
Email: info@ime-actia.de

I+ME ACTIA is a company of the ACTIA Group, the European leader in diagnostics and onboard electronics. It was founded in 1986 and joined the ACTIA Group in 1995. ACTIA is a major supplier for the OEM automotive industry. It is certified according to ISO 9001/EAQF 94, ISO 9002, ISO 14001 and ISO TS 16949 (cf. <http://www.ime-actia.de/>).

INFOLABContact:

ul. Budowlanych 43
43-100 Tychy-Silesia
Poland
Phone: +48 (0)322272602
Fax: +48 (0)327505030
Email: office@tachospeed.com

Infolab is specialized in system developments for transport undertakers. The company is member of Grupa Aktywni. The aim of this group is to support the development of the Polish net and to enhance the need for computer system developments in Polish companies (cf. <http://tachospeed.com/>).

KIENZLE AUTOMOTIVE GmbH

Contact:

Alexanderstraße 37-39

45472 Mülheim/Ruhr

Germany

Phone: +49 (0)208495050

Fax: +49 (0)20849505353

Email: automotive@kienzle.de

Kienzle Automotive GmbH has eight locations in Germany to serve about 1,000 contractually bound partners and more than 8,000 commercial customers. The company mainly deals with sales and service of equipment and systems in the automotive environment (cf. <http://www.kienzle.de/>).

KORMACK GmbH

Contact:

Sorbenstr. 43

20537 Hamburg

Germany

Phone: +49 (0)40471103780

Fax: +49 (0)40471103789

Email: info@kormack.eu

Kormack GmbH is a system supplier for the requirements relating to the digital tachograph, i.e. transmission, evaluation and archiving of all data from the mass memory and driver card. It cooperates with commercial vehicle manufacturers and development companies in the areas of software and hardware (cf. <http://www.kormack-gmbh.de/>).

NORDSYS GmbHContact:

Lange Strasse 1
38100 Brunswick
Germany
Phone: +49 (0)5311209200
Fax: +49 (0)5311209299
Email: info@nordsys.de

NORDSYS GmbH is a supplier to the automotive industry. Their principal areas of activity are: Automotive Embedded, Mobile Software and IT-Systems (cf. <http://www.nordsys.de/>).

OPENDTACHO.ORGContact:

Max-Planck-Straße 35d
76351 Linkenheim-Hochstetten
Germany
Phone: +49 (0)72478009172
Fax: +49 (0)72478009194
Email: info@opendtacho.org

Opendtacho.org is an open source project for the digital tachograph. The aim of this project is the development of an independent, modular application software which complies with legal requirements and is able to monitor and visualise the data of digital tachographs. The project is hosted on BerliOS (cf. <http://www.opendtacho.org/>).

PC NET SERVICEContact:

PC NET SERVICE Stocerz Sp. J.
ul. Modrzewskiego 20
43-300 Bielsko – Biała
Poland
Phone: +48 (0)334965871
Fax: +48 (0)334965871111
Email: biuro@pcnetservice.pl

PC NET SERVICE was founded in 2002. The company provides software for the transportation industry, including appliances to download

digital data and advanced satellite-based vehicle tracking solutions. It is certified according to ISO 9001:2000 (cf. <http://www.pcnet-service.net/>).

ROADSOFT INTERNATIONAL

Contact:

Wibautstraat 150
1091 GR Amsterdam
The Netherlands
Phone: +31 (0)207163899
Fax: +31 (0)208202342

With over 10,000 customers, RoadSoft is a leading company in the digital tachograph sector. The company has an international management team with established know-how in the field of software and road transport legislation (cf. <http://www.rs-roadsoft.eu/>).

ROAD TECH COMPUTER SYSTEMS Ltd.

Contact:

Shenley Hall
Rectory Lane
Shenley
Radlett
Hertfordshire. WD7 9AN
Great Britain
Phone: +44 (0)1923460000
Fax: +44 (0)1923462222
Email: sales@roadtech.co.uk

Road Tech was founded in 1984. The company has about 80 employees in the headquarters at Shenley Hall in Hertfordshire and the offices overseas, including Australia. Road Tech is one market-leader in IT solutions for the logistics sector (cf. <http://www.roadtech.co.uk/>).

SCM MICROSYSTEMS GmbH

Contact:

Oskar-Messter-Str. 13
85737 Ismaning
Germany
Phone: +49 (0)8995955000
Fax: +49 (0)8995955555

Email: sales@scmmicro.de

SCM Microsystems GmbH is part of the Identive Group. The company was founded in 1990 and had 130 employees in 2009. With about 400 distribution partners and customers in more than 50 countries, SCM Microsystems is one of the leading providers of solutions for secure access, identity and exchange (cf. <http://www.identive-infrastructure.com/>).

SOFTPROJECT AG – TACHOPLUS

Contact:

Rorschacherstrasse 189
CH-9000 St. Gallen
Switzerland
Phone: +41 (0)712427070
Fax: +41 (0)712427079
Email: support@tachoplus.com

Softproject AG – TachoPlus has software for companies as well as for enforcement authorities in its portfolio (cf. <http://tachoplus.com/>).

SZ&P SOFTWAREBÜRO ZAUNER & PARTNER

Contact:

Ernst-Leitz-Straße 1
63150 Heusenstamm
Germany
Phone: +49 (0)6104699170
Fax: +49 (0)6104699184
Email: office@zamik.de

Sz&p Softwarebüro Zauner & Partner was founded in 1981 and has two locations (Heusenstamm and Klagenfurt-Viktring). Sz&p has established itself as a market-leader in software solutions for archiving digital tachograph data. It is certified according to ISO 9001:2008 (cf. <http://www.zamik.de/>).

TACHMAN CENTRALContact:

12 Farley Avenue
Harbury
Leamington Spa
Warwickshire
CV33 9LX
Great Britain
Phone: +44 (0)1926612629
Email: enquiries@tachmancentral.co.uk

Tachman Central has over 20 years experience in tachograph analysis. The company provides a full tachograph analysis service that can be adapted to individual requirements. It is also a distributor for Tachodisc products and accessories. Tachman Central is a member of the Hauliers Web Ring (<http://www.return-loads-from.com/>) (cf. <http://www.tachmancentral.co.uk/>).

TACHOEASY AGContact:

Sebastian Tiefenthaler Str. 14
83101 Rohrdorf
Germany
Phone: +49 (0)1803822436
Fax: +49 (0)180382243699
Email: info@tachoeasy.com

TachoEASY AG was founded in 2006. The company offers individual advice and tailor-made hardware and software packages for fleet managers, companies and drivers (cf. <http://www.tachoeasy.de>).

TACHONOVA GmbHContact:

Unterer Dammweg 6
78050 Villingen-Schwenningen
Germany
Phone: +49 (0)77214051790
Fax: +49 (0)772140517918
Email: info@tachonova.de

Tachonova GmbH is a provider of solutions for data management. The company offers professional services for the transport industry, e.g., software for data analysis and data archiving in accordance with legal regulations (cf. <http://www.tachonova.net/>).

TRANSICS INTERNATIONAL

Contact:

Ter Waarde 91

B-8900 Ieper

Belgium

Phone: +32 (0)57346171

Fax: +32 (0)57346170

Email: servicedesk.benelux@transics.com

Transics was founded in 1991 as the R&D department of a company which particularly developed software for the transport sector. In 1997, Transics expanded into the European market. With its 230 employees, the company is one of the European market-leaders in the field of high-end fleet management solutions (cf. <http://www.transics.com/>

VDO

Contact:

Continental Automotive GmbH

Vahrenwalder Str. 9

30165 Hanover

Germany

Phone: +49(0) 51193801

Fax: +49(0) 51193881770

Email: tachograph@vdo.com

VDO is a trademark of the Continental Corporation. It is part of the division Commercial Vehicles & Aftermarket (CV & AM). CV & AM is the market and technology leader in the tachograph segment. The Automotive Group of the Continental AG is one of the leading automotive suppliers and has more than 80,000 employees in more than 130 locations worldwide (cf. <http://www.vdo.de>).

APPENDIX 3. CONTROL SOFTWARE PROVIDERS

DAKO EDV-INGENIEUR- UND SYSTEMHAUS GmbH

Contact:

Brüsseler Str. 7-11

07747 Jena

Germany

Phone: +49 (0)364159980

Fax: +49 (0)36415998200

Email: info@dako.de

DAKO is a medium sized company with four separate business areas. The department "Speditionen/Transportgewerbe" was founded in 2005. In 2010, DAKO became market-leader with its product TachoWeb which is used in 7,000 firms and 40,000 vehicles (cf. <http://www.dako.de/>).

DIS-TRANSICS

Contact:

111, Route de Nîmes

30560 St Hilaire de Brethma

France

Phone: +33 (0)466610017

Fax: +33 (0)466610071

Email: info@dis-transics.com

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INFOLABContact:

ul. Budowlanych 43
43-100 Tychy-Silesia
Poland
Phone: +48 (0)322272602
Fax: +48 (0)327505030
Email: office@tachospeed.com

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NORDSYS GmbHContact:

Lange Strasse 1
38100 Brunswick
Germany
Phone: +49 (0)5311209200
Fax: +49 (0)5311209299
Email: info@nordsys.de

NORDSYS GmbH is a supplier to the automotive industry. Their principal areas of activity are: Automotive Embedded, Mobile Software and IT-Systems (cf. <http://www.nordsys.de/>).

PC NET SERVICEContact:

PC NET SERVICE Stocierz Sp. J.
ul. Modrzewskiego 20
43-300 Bielsko – Biała
Poland
Phone: +48 (0)334965871
Fax: +48 (0)334965871111
Email: biuro@pcnetservice.pl

PC NET SERVICE was founded in 2002. The company provides software for the transportation industry, including appliances to download

digital data and advanced satellite-based vehicle tracking solutions. It is certified according to ISO 9001:2000 (cf. <http://www.pcnet-service.net/>).

SOFTPROJECT AG – TACHOPLUS

Contact:

Rorschacherstrasse 189
CH-9000 St. Gallen
Switzerland
Phone: +41 (0)712427070
Fax: +41 (0)712427079
Email: support@tachoplus.com

Softproject AG – TachoPlus has software for companies as well as for enforcement authorities in its portfolio (cf. <http://tachoplus.com/>).

SZ&P SOFTWAREBÜRO ZAUNER & PARTNER

Contact:

Ernst-Leitz-Straße 1
63150 Heusenstamm
Germany
Phone: +49 (0)6104699170
Fax: +49 (0)6104699184
Email: office@zamik.de

Sz&p Softwarebüro Zauner & Partner was founded in 1981 and has two locations (Heusenstamm and Klagenfurt-Viktring). Sz&p has established itself as a market-leader in software solutions for archiving digital tachograph data. It is certified according to ISO 9001:2008 (cf. <http://www.zamik.de/>).

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This study is part of the C.A.S.H. project - Connecting Authorities for Safer Heavy Goods Traffic in the Baltic Sea Region - running from September 2009 to September 2012.

C.A.S.H. project aims to develop practical solutions to make international road freight transport safer, more predictable and affordable in the Baltic Sea region. The project intends to do this by:

- improving co-operation between authorities
- harmonising training of inspection officials
- testing safety equipment and IT systems to be used by relevant authorities

The project is part-financed by the European Union (European Regional Development Fund) through the Baltic Sea Region Programme 2007-2013.



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