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Autonomously driving cars and the law in Germany

The article informs about the regulation for partly or fully autonomously driving cars in Germany which the legislator enacted in 2017. The new provisions and amendments are discussed in detail. However, the existing liability system for road traffic accidents remains essentially unaltered. Also, the insurance regulation remained untouched. In order to exploit the advantages of the new technology which is not yet fully developed and will be available in future, further legislative steps are needed.

Keywords: Autonomously driving cars, Reform Act in Germany, car holder's and driver's liability, driver's obligations, insurance questions

I. Introduction

All modern cars are equipped with some sort of automatic, for instance, a warning system when the car is too close to the preceding vehicle or the like. This kind of automation is not what is to be addressed here. What is meant here are cars which in any traffic situation drive themselves either still with a supervising driver who takes over when required (highly or half automated car) or fully autonomously without the need of any assisting driver (fully automated or autonomous cars). If self-driving cars in this sense, in particular those without drivers, are to appear on our roads – it is clear that we need legal rules which regulate the conditions under which the use of such vehicles is permitted as well as rules on liability if those cars cause damage to others. As early as in 2017 Germany enacted provisions for highly and fully automated cars and inserted new provisions on this issue into the Road Traffic Act, in German Straßenverkehrsgesetz (StVG), whose first version originated from 1909.¹ The following text presents and discusses this new regime.

1. Act on the Traffic with Motor Vehicles of 3rd May 1909.

II. Some facts

But first, some facts: At present, there are already millions of self-driving, fully autonomous vehicles in use in Germany and elsewhere although not on our public roads. They are used in factories, storehouses etc. for the transport of goods, for doing work in agriculture and for other purposes, for instance mowing lawn. They can be used because their route is clear and can be rather easily programmed. There is no or almost no traffic or other moving hindrance on the route.

Highly or fully automated vehicles on public roads are, however, not in general use yet in Germany, except for test purposes. The newest test is a fully autonomous E-bus in a small town of Birnbach in Bavaria. The bus drives very cautiously with maximum speed of 30 km/h on a short programmed route for the purpose of public transport. So far, no difficulties have been reported with this test bus.² However, one accident with a Tesla test car in autopilot mode causing non-serious bodily injury has been reported for Germany, whereas, for instance, in the USA autonomous test cars were involved in at least three fatal crashes in 2016 and 2018 where two test drivers and a pedestrian died.

For the general admission of fully autonomous cars which are safe and can be bought for a reasonable price it is guessed that still several years of research and development are necessary. For instance, VW estimates that such a car will be available in 2025 at the earliest³ which sounds very optimistic. To develop and program a car that reacts to all possible traffic situations in an adequate way and even better than an experienced human driver is an extreme technical challenge.

However, in the long run, autonomous cars are expected and hoped to avoid serious or fatal accidents or to avoid them at least at a much higher rate than is usual for the present traffic. This would be a very welcome development. For the death-rate on German roads in 2018 was 3,275.⁴ This equals the number of inhabitants of a small town. Presently, the German society accepts that – in the interest of general mobility – each year such a town is eradicated and that in addition a huge number of persons is injured, a considerable part of them with severe and often lasting consequences – in 2018, on German roads 396,018 traffic victims were injured.⁵ The death rate and the rate of injured persons was relatively stable over the last four years.⁶

Also, economic and social advantages are expected. If driverless trucks become available this would save considerable costs for enterprises; at present a driver costs around 50.000 € per year. These costs would become unnecessary. Furthermore, the trucks needed no recreation or sleeping time like at present the drivers. They could drive over night and could thus be faster than at present. This could probably somewhat facilitate the general daily traffic. Furthermore, the demanding and exhausting job of a truck driver would become more or less superfluous.

If one wants to speculate a bit further: fully autonomous cars could also be used to bring children to school, sport or other activity; parents need no longer do this. Transports of ill people to hospitals

2. S. Süddeutsche Zeitung 9th April 2018; Bayerischer Rundfunk 24, 7th October 2019.

3. S. FAZ 5th September 2019, p. 22 (interview with the responsible persons of VW).

4. S. the figures published by the German Statistisches Bundesamt (www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Verkehrsunfälle/inhalt.html).

5. See preceding fn.

6. See fn. 4.

would require no driver (though, as the case may be, a doctor); the same could become true for public bus services etc. Taxi drivers could become superfluous and, and ...

On the other hand, there are specific risks of the new technology, in particular the risk that the technique unexpectedly breaks down or that third persons may influence the driving process from outside through hacking the respective program.⁷

III. Legal issues

1. Admission

In most countries, cars of any kind need a licence which allows their participation in public traffic. If that is the case, the legal system must define under which conditions automated cars can be admitted. This includes for instance the question whether the car is admitted as a fully autonomous vehicle which does no longer need an accompanying driver or as a partially autonomous vehicle which is not allowed to use a public road without a driver.

2. Liability

Probably, the most important aspect is the liability regime for self-driving cars. First, who should be liable? The producer, the car holder/owner or both, any person using the car? Second, should liability depend on fault or be strict? Third, should there be limits/caps with respect to the amount of damages?

3. Insurance

How far is insurance of half and fully automated cars to be dealt with? Are special rules required?

4. Data protection

How about the data which half or fully autonomous cars necessarily produce and collect? The routes of the car and of persons inside can easily be reconstructed. Do they require specific protection against any hacking from outside?

7. See to ethical and legal problems of autonomous driving, e.g., R. Freise, *Rechtsfragen des automatisierten Fahrens*, "Zeitschrift für Versicherungsrecht, Haftungs- und Schadensrecht" (VersR) 2019, no. 2 p. 65 et seq.; A. Grunwald, *Autonomes Fahren: Technikfolgen, Ethik und Risiken*, "Straßenverkehrsrecht" (SVR) 2019, no. 2, p. 81 et seq.; E. Hilgendorf, *Automatisiertes Fahren und Recht – ein Überblick*, "Juristische Arbeitsblätter" (JA) 2018, no. 11, p. 801 et seq.; M. Jänich, P.T. Schrader, V. Reck, *Rechtsprobleme des autonomen Fahrens*, "Neue Zeitschrift für Verkehrsrecht" (NZV), 2015, Vol. 28, no. 97, p. 313 et seq.; U. Lange, *Automatisiertes und autonomes Fahren – eine verkehrs-, wirtschafts- und rechtspolitische Einordnung*, NZV 2017, Vol. 30 (no. 8), p. 345 et seq.

5. Criminal law

Although we are concerned exclusively with civil law here it is clear that also criminal law has to react to the new technology, too. And it should be likewise clear that the car as such cannot be the object of criminal sanctions, except that it may be seized from its owner when used for criminal purposes.

IV. The German response

1. Aim of the recent German reform

The recent German reform aims at the adaptation of the current regime for public road traffic to the technical development of cars which take over the functions of traditional drivers.⁸ The new provisions are intended to regulate the cooperation between the driver and the automated car.⁹ They also intend to secure legal certainty for users and manufacturers of automated vehicles.¹⁰ Since the new provisions do not deal separately with fully autonomous cars (without a driver) it is clear that the reform is a preliminary answer which must be supplemented as soon as such fully autonomous cars will be available.

2. International uniform law

First, one has to start with an international regulation, namely with the Vienna Convention on Road Traffic of 1968 by which Germany has been bound since 1979. The Convention addresses the international traffic for which it codifies uniform rules for driving on roads open to the public traffic. Originally, Art. 8 of the Convention provided only the following (which is still in force): “(1) Every moving vehicle or combination of vehicles must have a driver. ... (5) Every driver shall at all times be able to control his vehicle or to guide his animals.” Furthermore, Art. 13 (1) requires: “Every driver of a vehicle shall in all circumstances have his vehicle under control so as to be able to exercise due and proper care and to be at all times in a position to perform all manoeuvres required of him.” According to this regulation which binds all Contracting States, driving a driverless car is apparently excluded.

However, with effect of 2016, the following new paragraph (5bis) was inserted in Art. 8 of the Convention:

“Vehicle systems which influence the way vehicles are driven shall be deemed to be in conformity with paragraph 5 of this Article and with paragraph 1 of Article 13, when they are in conformity with the conditions of construction, fitting and utilization according to international legal instruments concerning wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles.

Vehicle systems which influence the way vehicles are driven and are not in conformity with the aforementioned conditions of construction, fitting and utilization, shall be deemed

8. See the Reasoning of the Draft of the new provisions of 27th January 2017, BR-Drucks. 69/17, p. 1, 7.

9. Reasoning *ibid.*

10. Reasoning *ibid.* p. 7.

to be in conformity with paragraph 5 of this Article and with paragraph 1 of Article 13, when such systems can be overridden or switched off by the driver.”¹¹

The new provision is aimed at the admission of highly automated and even autonomous cars in the Contracting States.¹² If such vehicles comply with the requirements of international regulations they are also in conformity with the Vienna Convention on Road Traffic. The international regulations which are referred to, are two, namely the UN Regulations annexed to the „Agreement concerning the adoption of uniform technical prescriptions for wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles and the conditions for reciprocal recognition of approvals granted on the basis of these prescriptions” of 20th March 1958 and the UN Global Technical Regulations developed in the framework of the “Agreement concerning the establishing of global technical regulations for wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles” of 25th June 1998. Therefore, under these conditions national law can now allow in principle even driverless cars provided that the international regulations so allow. The international regulations are still reluctant with respect to driverless vehicles. The newest document, the Framework Document on Automated/Autonomous Vehicles of the UN-Economic Commission for Europe of 3rd September 2019,¹³ [which is no binding Convention] seems still to require that a person who can take over the driving function accompanies the car.¹⁴

On the other hand, where the international regulations are not complied with the car must have a driver who can and must take over in case of need. Germany’s recent enactment of additional provisions to the Road Traffic Act takes account of the alteration of the Convention on Road Traffic.

3. Admission of automated cars

One focus of the recent German reform is the definition when automated cars can be admitted to participate in public traffic. The new § 1a StVG is a long and difficult provision which in its English version runs as follows:

“§1a StVG Motor vehicles with highly or fully automated driving function

- (1) The operation of a motor vehicle with a highly or fully automated driving function is permissible if the function is used as intended.
- (2) Motor vehicles with a high or fully automated driving function within the meaning of this Act are those which have technical equipment,
 1. which can control the respective motor vehicle after activation to accomplish the driving task – including longitudinal and lateral guidance (vehicle control),

11. The relevant international legal instruments are: the UN Regulations annexed to the „Agreement concerning the adoption of uniform technical prescriptions for wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles and the conditions for reciprocal recognition of approvals granted on the basis of these prescriptions” of 20th March 1958; the UN Global Technical Regulations developed in the framework of the “Agreement concerning the establishing of global technical regulations for wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles” of 25th June 1998.

12. Partly it is doubted whether Art. 8 [5bis] allows the use of fully automated cars; see Ch. Armbrüster, *Automatisiertes Fahren – Paradigmenwechsel im Straßenverkehrsrecht?*, “Zeitschrift für Rechtspolitik” (ZRP) 2017, no. 3, p. 83

13. Accessible under: www.unece.org/fileadmin/DAM/trans/doc/2019/wp29/ECE-TRANS-WP29-2019-34-rev.1e.pdf.

14. See 4.c) of the cited Framework Document.

2. which is capable of complying with the traffic regulations addressed to the driver during highly or fully automated vehicle control,
3. which can be manually overridden or deactivated by the driver at any time,
4. which can recognise the need for the driver to control the vehicle himself,
5. which is capable of visually, acoustically, tactilely or otherwise perceptibly indicating to the driver the need for personal control of the vehicle with sufficient time before delivery of the vehicle control to the driver; and
6. which indicates a use contrary to the system description.

The manufacturer of such a motor vehicle must declare in the system description that the vehicle complies with the requirements of sentence 1.

(3) The above paragraphs shall only apply to vehicles registered in accordance with § 1 paragraph 1, which comply with the requirements set out in paragraph 2 sentence 1 and whose highly automated or fully automated driving functions

1. are described in and comply with international regulations applicable within the scope of this Act, or
2. have been granted type-approval pursuant to Article 20 of Directive 2007/46/EC of the European Parliament and of the Council of 5th September 2007 establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles [Framework Directive] [OJ L 263, 9.10.2007, p. 1].

(4) A driver is also the person who activates a highly or fully automatic driving function within the meaning of paragraph 2 and uses it for vehicle control, even if he does not control the vehicle himself within the scope of the intended use of this function.”

The provision does not differentiate between highly automated and fully autonomous vehicles. This is relevant for the question whether always a person capable of driving must accompany even a fully autonomous vehicle. Here, para. (2) No. 4 and 5 of the provision are relevant. These paragraphs evidently require that any self-driving vehicle must have a driver. However, some doubts about this requirement are raised by para. (4). This paragraph qualifies a person as driver who merely activates the vehicle even if he or she does not control the vehicle him – or herself. Whether the wording of this definition comprises the case that a parent sends the car with young children to school but him – or herself stays at home is not entirely clear. However, the legislator did not intend such a – certainly possible – interpretation.¹⁵ At present, therefore the use of completely driverless vehicles on German roads is not admitted, except for test purposes.

4. Obligations of the driver

This result is also confirmed by the new § 1b StVG. This provision deals with the obligations of the driver. It reads as follows:

“§ 1b. Rights and obligations of the vehicle driver when using highly or fully automated driving functions

(1) While driving the vehicle, the driver may turn away from the traffic situation and the vehicle control when the vehicle is activated by means of highly or fully automated driving functions

15. See the Reasoning of the Draft of the new provisions, BR-Drucks. 69/17, p. 7; also Ch. Armbrüster, ZRP 2017, p. 83.

in accordance with § 1a; in doing so, he must remain so perceptive that he can fulfil his obligation under paragraph 2 at any time.

- (2) The driver shall be obliged to take over control of the vehicle again without delay,
1. if the highly or fully automated system prompts him to do so, or
 2. if he recognizes or must recognize due to obvious circumstances that the prerequisites for the intended use of the highly or fully automated driving functions no longer exist.”

According to this provision a car must evidently have a driver when moving in traffic situations, even if the car is fully autonomous. If the car runs in fully autonomous mode the driver is the person who activated the autonomous function even if this person does not sit behind the wheel but for instance on the back row of the car. However, the driver or person who activated the car is obliged to take over the driving function immediately if the vehicle requests his taking over or if he recognizes or must recognize that the automated system no longer works in a sufficient way. At least here, it is clear that at present even a fully autonomous car cannot be operated without a driver (except with special licence for test purposes). The driver must constantly be alert to take over the steering of the vehicle. In consequence, there must be a perceptive driver sitting behind the wheel though he or she need not always place a hand on the wheel. All the forecasted advantages of self-driving cars, in particular saving drivers and costs, are – at least presently – not available in Germany.

Moreover, the solution of the existing regime for road traffic accidents that the fault of the driver is presumed¹⁶ remains unaltered. According to the high standard that is usually applied here a driver (who is not necessarily the holder of the vehicle) is probably merely excused if an unforeseeable malfunction of the automated system was the cause of the accident, for instance, did not warn in time. Although § 1b (1) StVG allows that “the driver may turn away from the traffic situation and the vehicle control when the vehicle is activated by means of highly or fully automated driving functions” it is not unlikely that the courts will hold such a driver nonetheless guilty of fault if attention to the traffic situation would have avoided the accident. Since the automated system will regularly record all data, it is likely that generally the proof will not pose problems whether the driver’s conduct or the malfunction of the system caused the accident.

5. Liability

With one exception the German legislator left the general liability regime for traffic accidents unaltered with respect to self-driving cars. The present regime is twofold: on the one hand the general fault-based liability under the German Civil Code (§ 823 BGB) for anybody who caused damage with the vehicle, on the other hand a special – and stricter – liability under the Road Traffic Act. According to this latter regime not only the driver but also the holder of a car – regardless of whether or not it is automated – can become liable for any damage caused through the operation (*Betrieb*) of the car.¹⁷ The holder is the person who generally uses the car in the own interest, has the benefit from its use and can determine when and by whom it is used.¹⁸ Usually, the holder is also the owner

16. See §§ 7, 18 StVG. Under general tort law (§ 823 BGB) the victim must prove the fault of the driver; s., e.g., G. Wagner, in: *Münchener Kommentar zum Bürgerlichen Gesetzbuch* (7th ed. 2017) § 823 n. 85.

17. §§ 7 (1), 18 StVG.

18. See, e.g., BGH NJW 1997, 660.

of the car but ownership is not necessary a requirement for holdership. The driver is the person who actually drove the car when the accident happened. As mentioned above his or her fault is rebuttably presumed.¹⁹

a) The holder's strict liability

Whereas under general tort law regularly only the driver can become liable if he or she caused the accident with fault, under the Road Traffic Act the car's holder is liable in the first line. His or her liability is strict; fault is not required. Only in case of Force Majeure (*höhere Gewalt*) the holder is exempted from liability.²⁰ Force Majeure means an external cause which was unforeseeable and unavoidable, for instance a sudden lightning, an unforeseeable avalanche in a region where this cannot be expected or an intentional criminal act of a third party.²¹ But even a heavy storm which blows a parked trailer against another parked car was not regarded as Force Majeure, in particular because the media had warned a day before.²² It is further necessary that the accident/damage could not have been avoided even by utmost care of an extremely experienced and careful driver. Internal reasons such as the unforeseeable malfunction of the automated system do never constitute Force Majeure.²³ The courts generally allow the excuse of Force Majeure very rarely. Only if the situation is highly exceptional indeed, the Force Majeure defence will be successful.

If two cars collide both holders are strictly liable (§ 7 (1) StVG). However, in that situation each holder is already excused if the accident was an "unavoidable event" (*unabwendbares Ereignis*).²⁴ The difference to the Force Majeure excuse is minimal. An accident is unavoidable if even an ideal driver who reckons with unexpected and faulty behaviour of other drivers could not have avoided it.²⁵ This standard applies only between the holders of the involved vehicles.

b) Contributory negligence and the 'Betriebsgefahr'

Unless the excuse of Force Majeure or of an unavoidable event is applicable, the strict liability regime does not exclude that the victim's compensation claim may be reduced because of contributory negligence.²⁶ Insofar, already the so-called *Betriebsgefahr* can lead to a reduction of damages where the victim's vehicle was involved and even if the victim acted with no negligence.²⁷ The *Betriebsgefahr* is a relevant factor for the assessment of the contributory negligence. The term

19. § 18 (1) sent. 2 StVG.

20. § 7 (2) StVG.

21. See, e.g., BGHZ 105, 135 [a third party deliberately cuts the brake line]; further C. Grüneberg, in: U. Berz/ M. Burmann (eds.), *Handbuch des Straßenverkehrsrechts* [40th del. Oct. 2019] A. n. 41 et seq.; U. Walter, in: *Beck-online.Großkommentar* [BeckOGK] § 7 StVG [2018] n. 150.1 et seq.

22. AG Ottweiler BeckRS 2010, 14527.

23. Also M. Notthoff, *Haftung und Versicherung autonomer Kraftfahrzeuge – Herausforderungen und Besonderheiten*, „Recht und Schaden“ [r + s] 2019, p. 496 [497].

24. § 17 (3) StVG.

25. See, e.g., BGH NJW 1982, 1149 [1150]; BGH NJW 1992, 1684 [1685]; U. Walter, in: *BeckOGK* § 17 StVG n. 15.

26. See §§ 9 and 17/18 StVG.

27. If two vehicles are mutually involved the liability of each holder depends on the circumstances, in particular whether one of them primarily caused the accident (§ 17 (2) StVG). Where the accident was however "an unavoidable event" for the one holder – and also, as the case may be, his or her driver – the other holder is fully liable (§ 17 (3) StVG).

means the danger which the mere operation of the vehicle creates.²⁸ Presently, the *Betriebsgefahr* depends primarily on the kind, relative size and weight of the involved vehicles.²⁹ For instance, a big truck carries generally a higher *Betriebsgefahr* than a small and light car. It has been suggested that the risk which automated vehicles pose should generally justify a higher *Betriebsgefahr* as compared to the *Betriebsgefahr* of traditional vehicles. Where the mere *Betriebsgefahr* of two comparable traditional cars, which are in the same way involved in an accident, would be 50:50, the accident between an automated and a traditional car should lead, so it is proposed, to a relation of 60:40 to the disadvantage of the automated car (respectively its holder).³⁰ The reasoning behind is the higher expectation of safe driving of automated vehicles.³¹ But if indeed automated vehicles reduce the risk of traffic accidents it appears not justified to burden their holders with a higher *Betriebsgefahr*, just on the contrary. Only if an automated car in the concrete situation posed a higher risk than a traditional car is a higher degree of *Betriebsgefahr* justified.

c) General fault liability

Besides the strict liability regime as provided by § 7 Road Traffic Act and the presumed fault liability of the driver (§ 18 StVG), the general fault liability under the central norm of § 823 BGB applies in addition, although in practice the strict liability under the Road Traffic Act is the only relevant basis for compensation owed by the car holder. The reason is that proof of fault is unnecessary here. Similarly, the driver's liability is easier to establish under the StVG with its presumed fault rule than under general tort law where regularly the claimant must prove the defendant's fault.

d) Maximum damages amounts

The mentioned exception where the German legislator changed the existing regime for road traffic accidents is the following: Under the Road Traffic Act maximum amounts apply up to which any damage must be compensated. These caps are regarded as the price for the protection granted by the strict and presumed fault liability under this Act. By the recent amendment, the German legislator doubled the maximum amounts if the damage was due to the highly or fully automated function of the vehicle that caused the damage.

The threshold amounts for these cases are now: 10 million € (instead of 5 million €) for death or bodily injury and 2 million € (instead of 1 million €) for damage to property. The maximum amounts will only play a role where more than few victims are involved. The reason for the different amount for traditional and for automated vehicles has been explained with the lack of experience concerning accidents with the new generation of cars.³² If a fully automated car gets out of control it is not impossible that it may cause damage to many more people than a traditional car would

28. As to the *Betriebsgefahr* of automated vehicles, see U. Gail, *Betrachtungen zur Beurteilung der Betriebsgefahr bei autonomen Fahrzeugen*, SVR 2019, 321. Generally to the *Betriebsgefahr* in road traffic situations s., for instance, U. Walter, in: *BeckOGK § 7 StVG* (2018) n. 88 et seq.; M. Burmann, in: M. Burmann/R. Heß/K. Hühnermann/J. Jahnke, *Straßenverkehrsrecht* (26th ed. 2020) § 7 StVG n. 7 et seq.

29. BGH NZV 2000, 466 [468]; U. Walter, in: *BeckOGK § 17 StVG* (2018) n. 31.

30. U. Gail (fn. 28) 326.

31. U. Gail *ibid.*

32. See the reasoning given for the respective provision in the Draft of the new regulation; BT-Drucks. 18/11300 p. 15.

cause before it can be stopped. The doubling of the maximum amounts follows the justified principle that the first single victims shall not bear unforeseen risks and costs of a new technology.

With the liability of the car holder the already mentioned presumed fault liability of the driver can concur to which the maximum amounts also apply.³³

e) *Concurrence with product liability*

A further field of concurrence is product liability. The manufacturer of an automated car can become liable either under the fault system of the general tort law or under the fault-independent Product Liability Act.³⁴ However, even if a defect of the product “automated vehicle” causes damage, victims will nonetheless approach the holder of the car and not the manufacturer because the holder is strictly liable for any internal defect of the vehicle whereas the manufacturer may raise the defence that either no defect was present when the vehicle was marketed³⁵ or that the defect was a development risk for which it would not be liable.³⁶ Therefore, victims of car accidents usually do not raise claims against car manufacturers. Yet, this is only half the truth on product liability. For the insurance of the car holder which has compensated the victim’s damage has a contribution claim against the manufacturer if a product defect contributed to the damage or was even its exclusive cause.³⁷ However, insofar, regularly the manufacturer’s business or liability insurance will step in.

6. Insurance

The reform Act does not address insurance but affects it indirectly.³⁸ The general scheme remains unaltered that the holder of a car is obliged to take out insurance coverage for the car.³⁹ Without proof of insurance, the administrative authority will not admit the vehicle to take part in public traffic. The mandatory insurance scheme provides for certain minimum insurance amounts which the holder is obliged to contract for.⁴⁰ It is surprising that these minimum amounts have not yet been adapted to the new maximum compensation amounts that the Road Traffic Act provides for damage caused by automated vehicles (10 million € for bodily harm and 2 million € for property damage). The minimum insurance amounts are still lower, namely 7.5 million € for bodily harm and 1.22 million € for property damage. Therefore, damage through automated cars is presently not fully secured by insurance up to the amounts for which holders and drivers can become liable under the Road Traffic Act.

33. See § 18 StVG.

34. The Act implemented the Product Liability Directive.

35. See § 1 (2) No. 1 Produkthaftungsgesetz (Product Liability Act, ProdHG).

36. § 1 (2) No. 5 ProdHG. Partly, the European regulation of product liability as implemented in the German ProdHG is regarded as a special kind of fault-based liability; with respect to automated systems see, e.g., G. Borges, *Rechtliche Rahmenbedingungen für autonome Systeme*, “Neue Juristische Wochenschrift” (NJW) 14, 2018, 977 (980 et seq.).

37. This follows from § 86 Versicherungsvertragsgesetz (Insurance Contract Act, VVG) in combination with § 426 BGB.

38. For some insurance aspects see M. Notthoff, r+s 2019, 496 (498 et seq.).

39. § 1 Pflichtversicherungsgesetz (Act on mandatory car insurance, PflVG).

40. See § 4 PflVG in connection with the Schedule to § 4 PflVG.

7. The protection of data

The last field of regulation was that of data use and protection. Automated cars produce huge numbers of data. In principle these data are not accessible for third parties and third parties have no right to know them. The German legislator, however, introduced rules which authorize the competent authorities to request the transmission of the relevant data for the purpose of sanctioning traffic offences.⁴¹ The relevant data are those on the car's position and the respective time-line.⁴² Moreover, where an accident had happened with an automated car the car holder is now obliged to transmit the relevant data to those persons who need them for claiming compensation or defending against such a claim.⁴³ The legislator further provided that the transmitted data must generally be deleted after six months and after three years if the reason of their transmission was an accident with the automated vehicle.⁴⁴

8. Criminal law

One could have expected that the German legislator introduced also specific criminal sanctions in relation to automated cars, for instance for their unauthorized use or misuse. But this was regarded unnecessary, as presently.

V. Conclusions

The German reform is a first cautious step in respect of the new technology of automated cars. Such cars can be now admitted for driving in public traffic. The reform treats highly and fully automated vehicles alike and requires always a driver who bears the last responsibility for the safe driving of the vehicle. The main advantages expected from the introduction of automated, in particular fully autonomous cars are not available yet. Insofar, the legislator waits with a more generous admission of such cars until further technological progress has been reached.

It is interesting that the existing liability regime for traffic accidents is – in my view rightly – regarded sufficient to cope with the new generation of cars. The car holder is strictly liable for the correct functioning of the automation of his or her car. In addition, any damage through such cars is insured. The interests of traffic victims are sufficiently secured.

Taken together, the recent German reform reaches a reasonable balance between allowing the new technology for cars (as this technology stands at present) and the safety of traffic participants. When the new technology improves and safe driverless cars become available, also further regulation becomes necessary in order to exploit the advantages of the new technology.

41. § 63a (2) StVG.

42. See § 63a (1) StVG.

43. § 63a (3) StVG.

44. § 63a (4) StVG.

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Pojazdy autonomiczne a prawo niemieckie

W artykule omówiono regulacje wprowadzone w prawie niemieckim w 2017 r., dotyczące pojazdów częściowo lub całkowicie autonomicznych. Autor przedstawia nowe przepisy oraz wprowadzone nowelizacje, przy czym wskazuje, że aktualnie obowiązujący system odpowiedzialności za szkody wyrządzone wskutek wypadków komunikacyjnych pozostał niezmieniony, podobnie jak regulacje dotyczące ubezpieczeń. Zdaniem autora – konieczne będą dalsze kroki legislacyjne, mające na celu zapewnienie prawidłowego korzystania z rozwijającej się technologii.

Słowa kluczowe: pojazdy autonomiczne, reforma prawa niemieckiego, odpowiedzialność posiadacza pojazdu, obowiązki kierowcy, pytania o ubezpieczenie

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