



Maak kennis met

Dirkzwager

Advocaten en notarissen

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Introduction

The good news

Legally: no obstacles, only choices:

- Technical: type approval;
- Ethical: programming of software in life-threatening situations, privacy;
- Financial: what level of safety is affordable?

Introduction

The bad news

It's all politics!

- Technical: protection of domestic industry;
- Ethical: time consuming debates;
- Financial: protection by patents, ever changing regulations.

Introduction

What's new?

Basically nothing! All these aspects also apply to manually-driven cars vehicles. However: high degree of interdependence between technicians and regulators.

- There was no internet regulation prior to there being an internet.
- So technicians could shape the internet more or less from scratch.
- Regulators filled the gaps once gaps were found.
- Different with cars: we do have existing regulations regarding vehicles and drivers, no start from scratch.
- How to fit in?

Introduction

Forced marriage: technicians and regulators

Technicians and their companies want to create something that can be used and sold.

- (Forced) willingness to comply with regulations.
- Tension between the desire for uniformity versus innovation: Toyota wants to do better than BMW (and vice versa).

Regulators want to enable innovation, but don't know form or shape of technical developments yet unknown.

- So what should be in the regulations?
- What to do about the combination of present and future capabilities of vehicles?

So where does this forced marriage leads us?

Declaration of Amsterdam, April 14 & 15, 2016:

European cooperation both technical and regulatory.

Type approval

On this subject technicians will be in the lead due to lack of knowledge by regulators.

The Declaration of Amsterdam aims to enable technicians to be “learning-by-experience”.

On a national level we have:

- the WEpods between Ede and Wageningen;
- the platoon-test near Zwolle and
- a recent experiment on the A2 from Amsterdam to Utrecht.

Other countries, one more than the other, have similar experiments. Best practices are hopefully incorporated, but should not put an end to further innovation.

Starting point: driver in charge

The 1968 Vienna Convention states that any means of transportation should have a driver in charge.

- so unmanned cars are illegal,
- cars manned by a drunk lying in the back are illegal,

But: what is “in charge”?

- What is the distinguishing difference between existing techniques as brake by wire and a car operated by remote control?
- Are you allowed to drive your car from the back seat with an X-BOX controller?
- What about features like ABS, brake assist or systems preventing you to change lanes when your car detects another vehicle in your dead angle?
- Can you be in charge by setting the navigation to the designated destination and as such activate the various computer programs and systems?
- Self parking systems: are you in charge?

Liability

At present a driver has to take decisions constantly. If something goes wrong:

- it must be established whether or not the driver obeyed the rules,
- if he didn't, he must have a very good reason not to

For instance: you have to respect the speed limit.

In case of a medical emergency however, the driver may be excused for speeding.

Typical for our present type of regulations is the fact that we have a set of rules, but whether or not these rules should have been obeyed, depends on the circumstances of the given case and has to be evaluated **in retrospect**. That is what a preset computer program cannot be subjected to.

This evaluation in retrospect is applied both in criminal law (punishable) as in civil law (liability for damage occurred).

“Betriebsgefahr”

Taking a car to the road introduces hazards both for yourself as for others. Since it is the drivers´ choice to take a car on the road.

- and therefore moving around with some 1500 kilos of fast moving steel,
- and thus exposing others to the possible risks of physical contact with your car,
- a liability insurance is mandatory for cars,
- if the pedestrian or cyclist injured by your car did make a mistake himself, the medical consequences suffered by the pedestrian or cyclist are influenced by your choice to move around in a vast metal object.

The driver of the car has to pay - at least in part - for damages resulting from an accident between a car and a pedestrian or cyclist. This legal principle is known as the “Betriebsgefahr”.

Computers not flawless

None of us have a computer that functions flawless for, say, 15 years.

- using a self driving vehicle implies the acceptance of a malfunctioning computer,
- and therefore a malfunctioning self driving vehicle,
- also 'Betriebsgefahr'?

Distinction to be made

- Malfunctioning of the computer
- Presets: choices made by the computer as programmed

Malfunctioning computers

The easy part, legally not different from mechanical malfunctioning like non working brakes.

Far more interesting: preset programmes

Is a computer preset, which is wise based on statistics but unfortunate in a specific situation, a fault or an accepted choice?

Take a lane departure system preventing you to change lanes when another car is driving the lane next to you in the same direction, but there is also an object in front your car cannot yet detect, say a car spinning on the other side of a road barrier and likely to end up on your lane. In general, such a lane departure prevention system is good, in these specific circumstances it might not make the best choice.

Anyone liable? If so, why?

Other example, there is a car close behind you and in front of you something pops up...

If you brake hard enough in order not to run that something over, the car behind you will crash into your car with severe consequences. What to do when that something is:

- a dog or a bird,
- a child.

You can argue that human drivers will not be able to take better decisions than computers, but the difference is that drivers' choices can be judged in court in retrospect and computer choices cannot. Nor can you blame the driver for computer settings he had nothing to do with.

You don't want to go to jail or feel responsible for inflicting serious injuries when you had no control over what caused the accident.

If presets are an accepted choice, then accepted by whom?

- the driver for taking the car onto the road?
- the car-manufacturer for installing these presets?
- the software-engineer for choosing these settings?
- The Authorities for type approval of these settings?

Once again just a matter of choice.

Product liability

A wide spread misunderstanding is the suggestion this is covered by product liability regulations.

Already years ago the European legislator introduced a regulation on product liability. This regulation however only applies to objects used in a non-professional setting. So it does apply to a car you own privately, but not to your company car.

Furthermore, this regulation only applies when it is established that there was:

- a fault in the product: so is a preset a fault?
- when it was brought onto the market.

We all know that a computer works well when new, but none of us have a computer working flawless for 17 years (which is the present average lifetime of cars in Holland).

So the regulations on product liability do not solve the problem.

So what does solve the problem?

The easiest way to solve the problem of who is to be responsible as far as civil law is concerned (the compensation of damages caused), is to prescribe by law a mandatory coverage for damages caused with a vehicle. The involvement of the car suffices irrespective of question whether the driver or the car made an error.

This is somewhat familiar to the system we have in Holland with accidents between cars and children under 14 years of age.

Alternative: rules regarding the burden of proof

A black box like used in planes may be part of the criteria for vehicle approval: no black box = no approval for a self driving car.

The black box could be linked directly to the cloud, so that even in case of total destruction of the car and the black box, the data are still available.

The construction of the car could include a system that in case of a malfunction of the black box, the car would not start or come to a controlled - stop.

The good news: manufacturers care about their reputation

Recalls like Toyota had with the gas pedal and the public announcement from Volvo that they will cover all damage caused by their self driving vehicles, will motivate car manufacturers to make their products as good as possible.

Although this is not a legal tool, it serves the same purpose as the risk of liability.

Privacy & Cybercrime

I will not go into these aspects but just point them out briefly as points of interest.

The black box can provide all sorts of parties with data on your driving and whereabouts.

- the manufacturer of the car,
- the insurance company,
- your employer,
- the police,
- your partner.

This easily casus an infringement on your privacy as protected by law.

Cybercrime is en vogue, Teslas have been opened by hackers for instance. Terrorists can make good use of self driving vehicles, as can criminals using such cars to smash a jewelry store.

Verantwoording

In deze presentatie wordt algemene en beknopte informatie verstrekt over een aantal juridisch relevante ontwikkelingen. Niet beoogd is om hiermee juridisch advies te geven voor concrete situaties.

Hoewel veel zorg is besteed aan het opstellen van deze presentatie, aanvaardt Dirkzwager advocaten & notarissen N.V. geen aansprakelijkheid voor de inhoud ervan.

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