



UNIVERSITÄT
DES
SAARLANDES

INSTITUTE OF
LEGAL INFORMATICS

Legal Aspects of AI and the IoT

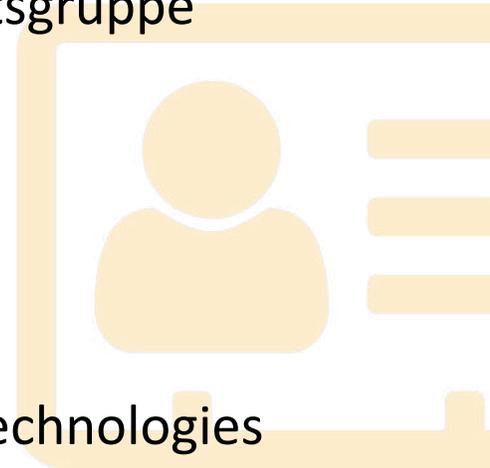
Feb. 13th, 2020 - University of Johannesburg



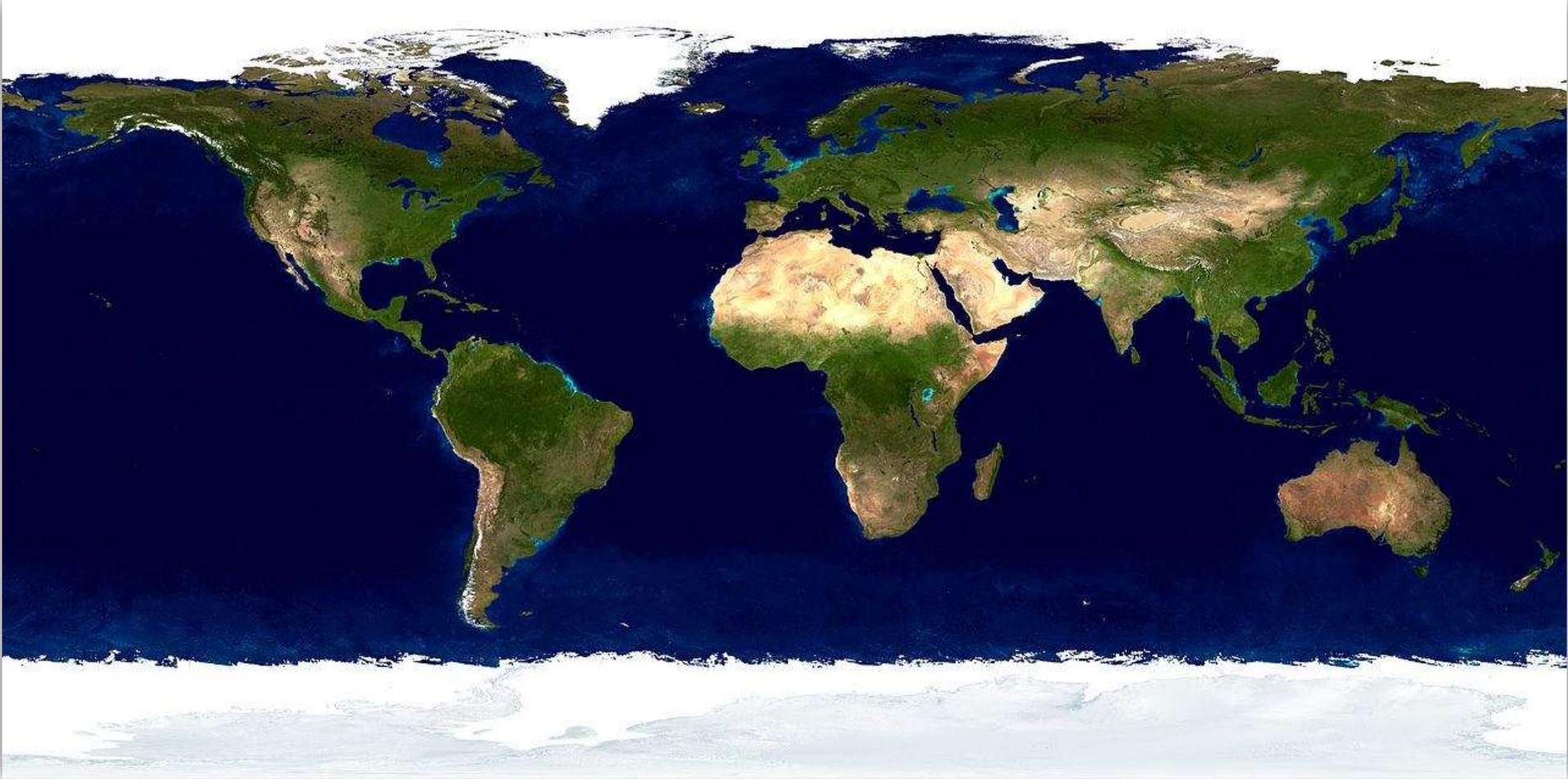
Prof. Dr. Georg Borges



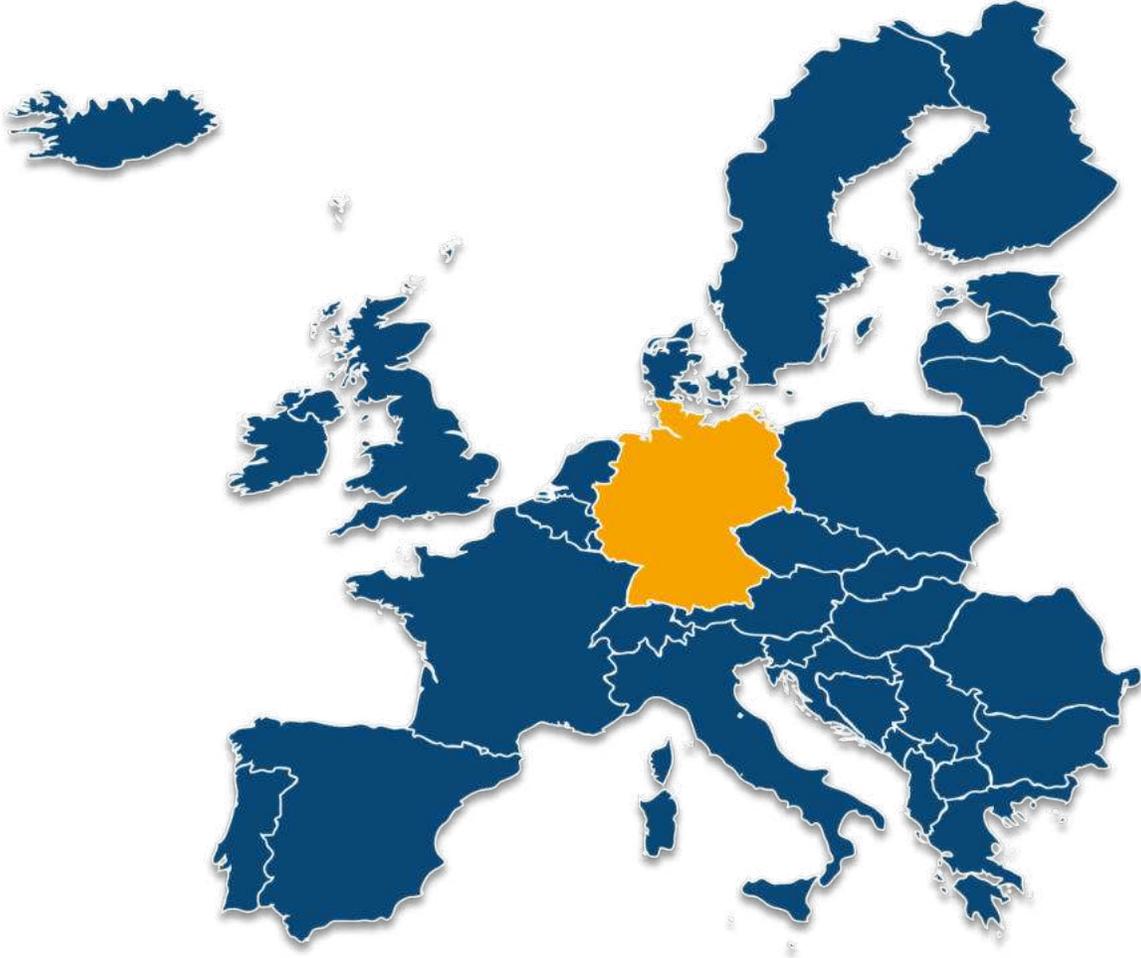
- Professor, Chair of Civil Law, Legal Informatics, German and International Business Law, Legal Theory, Saarland University
- Director, Institute of Legal Informatics, Saarland University
- Judge, Oberlandesgericht Hamm (2012-2015)
- Chairman of the Board, Working Group Identity Protection on the Internet (Arbeitsgruppe Identitätsschutz im Internet, a-i3)
- Member of the Board, EDV-Gerichtstag e.V.
- Member of the Board, Stiftung Datenschutz
- Fellow, Center for IT-Security, Privacy and Accountability (CISPA)
- Member, EU Commission „Expert Group on liability and new technologies, New technologies formation“



Universität des Saarlandes – Saarland University



Universität des Saarlandes – Saarland University



Universität des Saarlandes – Saarland University



Universität des Saarlandes – Saarland University

- Established: 1948
- In Winter Semester 2018/2019
 - Students: 17,000
 - Research associates: 1,245
 - Professors: 279
- International focus, e.g. Law Faculty
 - Europa-Institut
 - Centre Juridique Franco-Allemand
 - Institute for European Law



Universität des Saarlandes – Saarland University

- **Focus in Information Technology**
- Max Planck Institute for Informatics
- Max Planck Institute for Software Systems
- German Research Center for Artificial Intelligence (DFKI)
- CISPA – Helmholtz Center for Information Security
- Institute of Legal Informatics



Institute of Legal Informatics and Faculty of Law

- Established in the 90's
 - Legal Internet Project Saarbrücken
 - German Data Processing Court Day
- Expansion of the Institute since 2014
 - 1st Professor of Legal Informatics 2014
 - Professor of Criminal law with focus on IT 2018
 - Professor of Administrative law with focus on IT 2019
- Planned: Further Expansion 2020
- www.rechtsinformatik.saarland/en



Institut für Rechtsinformatik – Fields of Research

- AI / Autonomous Systems
- Legal Informatics / Legal Tech
- Data Protection
- IT-Security
- Industry 4.0/ Cloud Computing
- Big Data eGovernment / eJustice



Research Projects

- Original rights over learning data for autonomous driving
 - Project: „KI-Plattformkonzept“ (AI platform concept)
- Industry 4.0
 - Project: „Industry 4.0 Legal Testbed“
 - **Legaltestbed.org**
- Explainability of autonomous systems
 - Project: „EIS – Explainable Intelligent Systems“



Educational programmes and outreach

▪ Education

- Master studies „IT and Law“ (LL.M.)
- Focus Area „IT Law and Legal Informatics“
- Summer School „IT Law and Legal Informatics“
- Certificate „IT Law and Legal Informatics“

▪ Events

- Symposia/Workshops/Seminars
- i.e. GDPR! Data protection in practice

▪ Services for the public

- GesetzMobil
- JuraPush, BGH-Push
- IT-Recht.Karriere



Masters programme (LL.M.) „Informationstechnologie und Recht“

- Interdisciplinary teaching
- 12 modules
- Part time studies possible
- Professors as mentors
- Study period: 1 year (~ 2 terms)



Summer School IT Law and Legal Informatics

INSTITUTE OF
LEGAL INFORMATICS
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Home

Topic Areas

Programme

How to apply

Support

FAQ

Information for Participants

Previous

More Information:
www.summerschool-itlaw.org



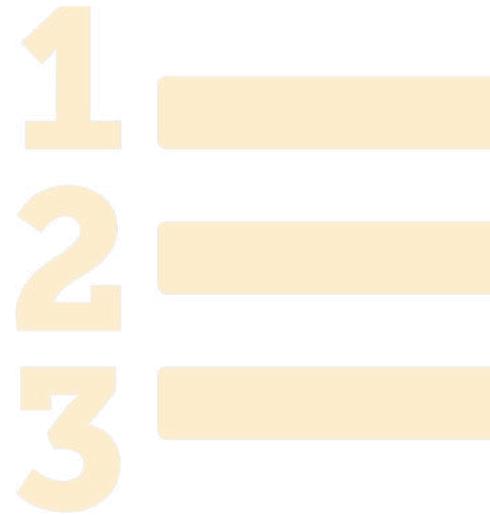
Summer School 2020 IT Law and Legal Informatics

10th to 21st August 2020 – Saarbrücken (Germany)

Following the success of our Summer Schools in 2017, 2018 and 2019, we will again be running an International Summer School at the Saarland University in Saarbrücken. It is aimed at students, researchers and practitioners who are keen to discuss current topics of IT Law and Legal Informatics in an international forum.

Agenda

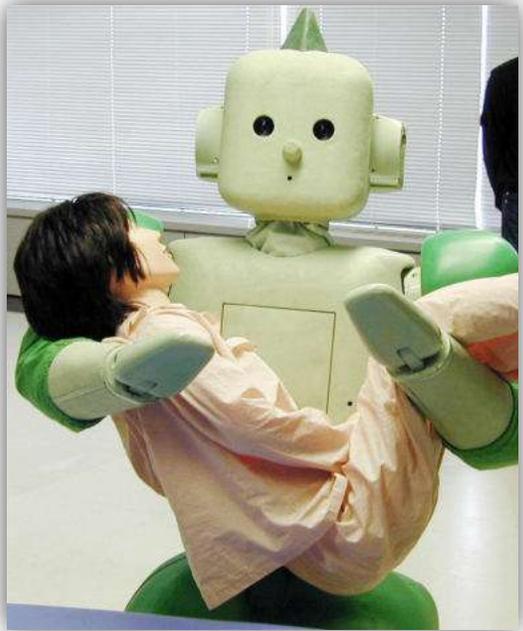
- I. Overview. Legal Issues of AT and the IoT
- II. Machine Contracts in the IoT
- III. Liability for Autonomous Systems
- IV. Conclusion and theses

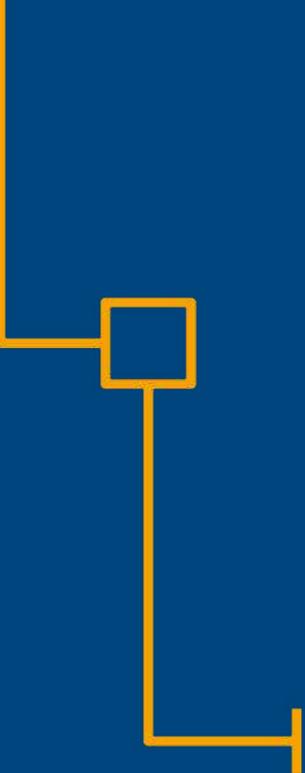




Overview. Legal Issues of AT and the IoT

Emerging Technologies





Overview

**The Call for a
Legal Framework of Autonomous Systems**

The Resolution of the European Parliament

European Parliament

2014-2019



TEXTS ADOPTED

P8_TA(2017)0051

Civil Law Rules on Robotics

European Parliament resolution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL))

The European Parliament,

- having regard to Article 225 of the Treaty on the Functioning of the European Union,
- having regard to Council Directive 85/374/EEC¹,

The Call for a Legal Framework of Autonomous Systems



Brussels, 25.4.2018
COM(2018) 237 final

**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN
PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN
ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE
REGIONS**

Artificial Intelligence for Europe

{SWD(2018) 137 final}

The Call for a Legal Framework of Autonomous Systems

The screenshot shows the OECD website header with the logo and tagline 'BETTER POLICIES FOR BETTER LIVES'. On the right, there are social media icons for email, Twitter, and Facebook, along with a search bar. Below the header is a teal banner with the text 'GOING DIGITAL Making the transformation work for growth and well-being'. A navigation menu contains 'HOME', 'THE PROJECT', and 'BACKGROUND WORK'. The main content area is titled '"AI: Intelligent Machines, Smart Policies", Paris, 26-27 October 2017 > Conference agenda' and includes a note that the complete programme will be available shortly. Under the heading 'Thursday 26 October: AI developments and applications', there are three session boxes:

Session 1. State of AI research	Session 2. AI applications and case studies	Session 3. Close-up on AI in space applications
<p>9:45-11:00</p> <p>This session will introduce the distinctive characteristics of artificial intelligence and machine learning. It will provide an overview of milestones to date in AI development and of expected future milestones. For example, standalone AI is expected to evolve towards networks in which AIs communicate and interact. The session will describe some of the</p>	<p>11:30-12:45</p> <p>This session will illustrate how AI is being applied to make better decisions, reduce costs and improve productivity in a variety of domains. In environmental applications, AI can find complex causalities among environmental variables and optimise resource use.</p>	<p>13:45-15:00</p> <p>In the space industry, new and improved satellite data and signals combined with AI are powering innovative products and services in sectors such as finance, agriculture, land use, and disaster management. In this session, innovative start-ups, space agencies</p>

The Call for a Legal Framework of Autonomous Systems

ZEIT  ONLINE

Algorithmen

Maas schlägt digitales Antidiskriminierungsgesetz vor

Wenn Software allein entscheidet, was mit Menschen passiert, kann das schlimme Folgen haben. Der Justizminister fordert deshalb mehr Transparenz von den Entwicklern.

Von **Patrick Beuth**

3. Juli 2017, 21:38 Uhr / [98 Kommentare](#)



The Call for a Legal Framework of Autonomous Systems

GEFÄHRliche INNOVATION?

Elon Musk warnt vor 3. Weltkrieg durch Künstliche Intelligenz

VON JONAS JANSEN - AKTUALISIERT AM 04.09.2017 - 15:44

Frankfurter Allgemeine



Tesla-Chef Musk hat zwar selbst ein KI-Unternehmen, gehört aber zu den größten Kritikern einer unregulierten Forschung. Sein neues Untergangsszenario ist pessimistischer als je zuvor.



Overview

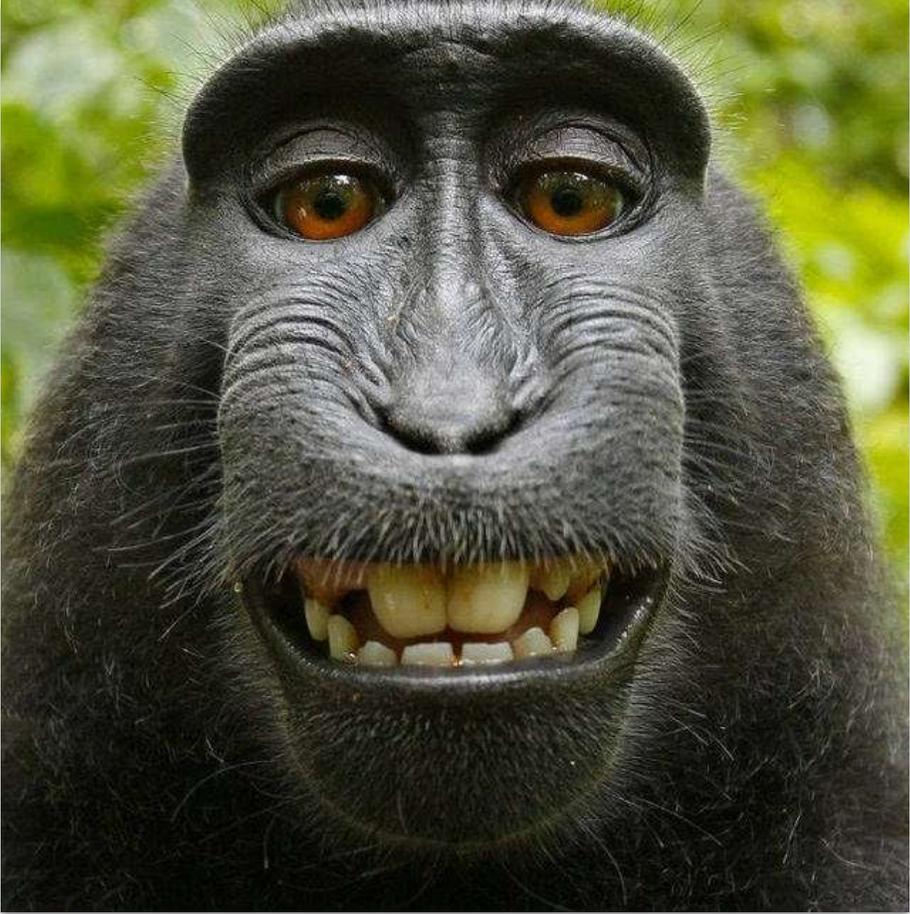
**Legal Challenges posed
by autonomous systems**



Overview

**Legal Challenges posed
by autonomous systems**

Creativity and the creation of something of value



ebay Stöbern in Kategorien Finden...

Zurück zur Startseite | Kategorie: Möbel & Wohnen > Dekoration > Bilder & Drucke

Poster Lächle - Smile - Zeit für ein Selfie - englisch mit Affe 61 x 91,5 cm
★★★★★ Schreiben Sie die erste Rezension.

Artikelzustand: **Neu**
Stückzahl: 6 verfügbar
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Sofort-Kaufen

In den Warenkorb

- Auf die Beobachtungsliste
- ★ Zur Kollektion hinzufügen

1 Beobachter

Neu	Verkäufer in Deutschland	Lieferung in ca. 2-3 Werktagen
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Versand: EUR 4,89 Standardversand | [Weitere Details](#)
Artikelstandort: Cottbus, Deutschland
Versand nach: Deutschland, Österreich | [Ausschlussliste anzeigen](#)

Lieferung: Zwischen **Do, 23. Mrz.** und **Fr, 24. Mrz.** bei heutigem Zahlungseingang

Zahlungen: **PayPal**, Lastschrift, Kreditkarte, Barzahlung bei Abholung, Überweisung, Auf Rechnung | [Weitere Zahlungsmethoden](#)

Ähnlichen Artikel verkaufen? [Selbst verkaufen](#)

Doctrines of Legal Transactions

40 litres
of milk



Responsibility for autonomous systems

The
Guardian

*“... killed by an Uber
self-driving SUV”*

Uber

Self-driving Uber kills Arizona woman in first fatal crash involving pedestrian

Tempe police said car was in autonomous mode at the time of the crash and that the vehicle hit a woman who later died at a hospital

Sam Levin and Julia Carrie Wong in San Francisco



▲ A car passes the location where a woman pedestrian was struck and killed by an Uber self-driving sport utility vehicle in Tempe, Arizona, on Monday. Photograph: Rick Scuteri/Reuters

An autonomous Uber car killed a woman in the street in [Arizona](#), police said, in what appears to be the first reported fatal crash involving a self-driving vehicle and a pedestrian in the US.

Tempe police **said** the self-driving car was in autonomous mode at the time of the crash and that the vehicle hit a woman, who was walking outside of the crosswalk and later died at a hospital. There was a vehicle operator inside the car at the time of the crash.

New Legal Institutions

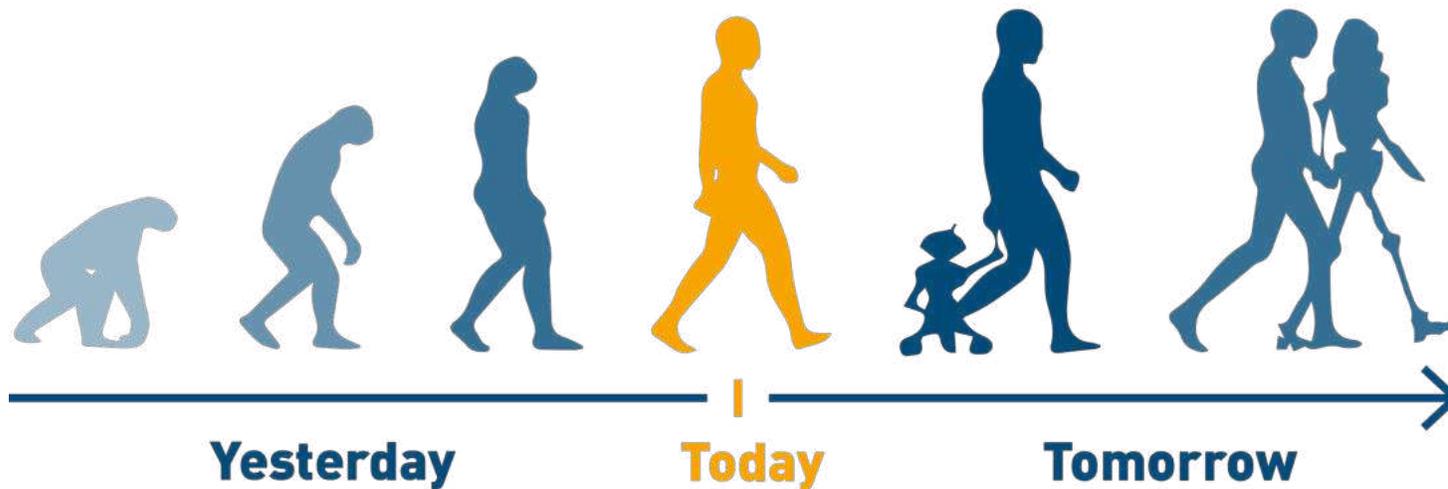
European Parliament resolution (2015/2103(INL)) No. 59

Calls on the Commission, when carrying out an impact assessment of its future legislative instrument, to explore, analyse and consider the implications of all possible legal solutions, such as:

- f) creating a specific legal status for robots in the long run, so that at least the most sophisticated autonomous robots could be established as having the status of electronic persons responsible for making good any damage they may cause, and possibly applying electronic personality to cases where robots make autonomous decisions or otherwise interact with third parties independently;

New Legal Institution

- „Partnership“ of humans and machines?
- Partial equality of autonomous systems and humans



Law Enforcement



Thorben Wengert / pixelio.de



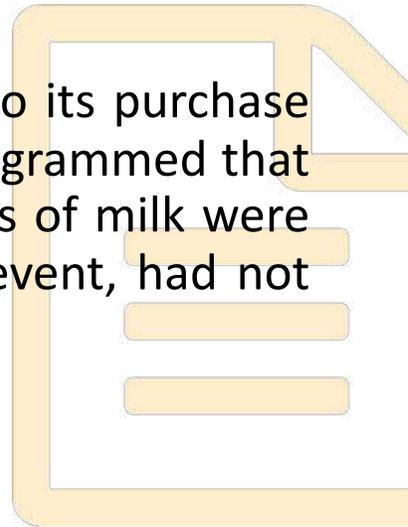
Machine Contracts in the IoT

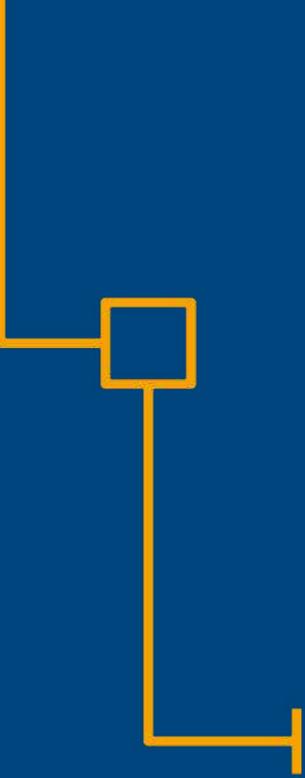
Introduction

Scenario

Granny O invests in a new refrigerator which has an internet connection, computer-aided use recognition and software which is fully configurable and which enables the refrigerator to make repeat orders of goods by itself. In the standard automatic operating mode, which was pre-programmed by the factory, orders are calculated automatically by use of information taken from the internet, from the refrigerator's user's calendar and Facebook profile, inventory and usage as well as general statistical assumptions.

Granny O's tech-savvy grandson E chose and set up the refrigerator although O had agreed to its purchase and the programming of it. However, E made a typo whilst configuring the refrigerator and programmed that there should be 40 (rather than 4) litres of milk in the refrigerator at all times. When 40 litres of milk were delivered, O refused to accept the delivery and said that she had not ordered it or, in any event, had not wanted to order it.





Machine Contracts in the IoT

**Computer Declarations
as Declarations of Intent**

Computer Declarations as Declarations of Intent

- Traditional view: declaration of intent consists of
 - Objective element (the declaration)
 - Subjective element (intention of the Declaror)

- Objective element of a declaration of intent
= declaration in the sense of a perceptible action which, from the objective recipient's perspective, indicates an intention of the Declaror to be legally bound by it.

Computer Declarations as Declarations of Intent

- The intention of the Declarer (subjective element)
 - The intention to act
 - Consciously making a declaration
 - Intention to enter into a legal relationship



Computer Declarations as Declarations of Intent

- **Option 1**

Retention of the intention element

- Intention to act?
- Consciously making a declaration?
- Intention to enter into a legal relationship?

Computer Declarations as Declarations of Intent

- **Oberlandesgericht Frankfurt**

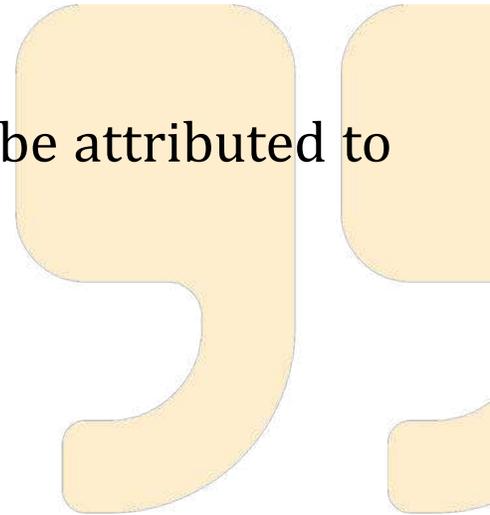
- automatically generated order confirmation from an online shop

“every automatically generated computer declaration originates from a human act which was caused by the Declaror”

“computer declarations are therefore declarations of intent which are to be attributed to the actual user”

- **Intention to act**

- = putting into operation of the system





Machine Contracts in the IoT

Computer Declarations and Mistake

Industry 4.0 Legal Testbed: Legal testing environment and open repository

16. October 2019



**INSTITUT FÜR
RECHTSINFORMATIK**
UNIVERSITÄT DES SAARLANDES



Gefördert durch:



aufgrund eines Beschlusses
des Deutschen Bundestages

Main facts about the project

Consortium

- Fraunhofer-Gesellschaft
 - Institute for Material Flow and Logistics (IML)
 - Institute for Software and Systems Engineering (ISST)
- Saarland University
 - Institute of Legal Informatics (IfR)
- Ruhr-Universität Bochum
 - Horst Görtz Institute for IT Security (HGI)

Funding

- Period: 4 years
- Launch: June 2019
- Budget: approx. 5.5 m euro
- Authority: German Federal Ministry for Economic Affairs and Energy
- Execution: VDI Technologiezentrum

Steering committee

- Martin Böhmer, IML (project manager)
- Prof. Jan Jürjens, ISST
- Prof. Georg Borges, IfR
- Prof. Jörg Schwenk, HGI

Partners



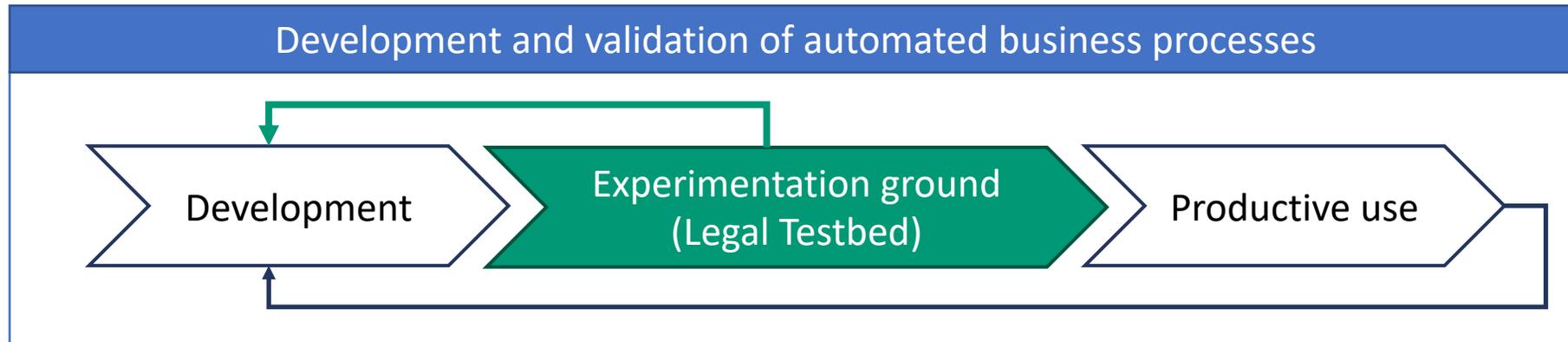
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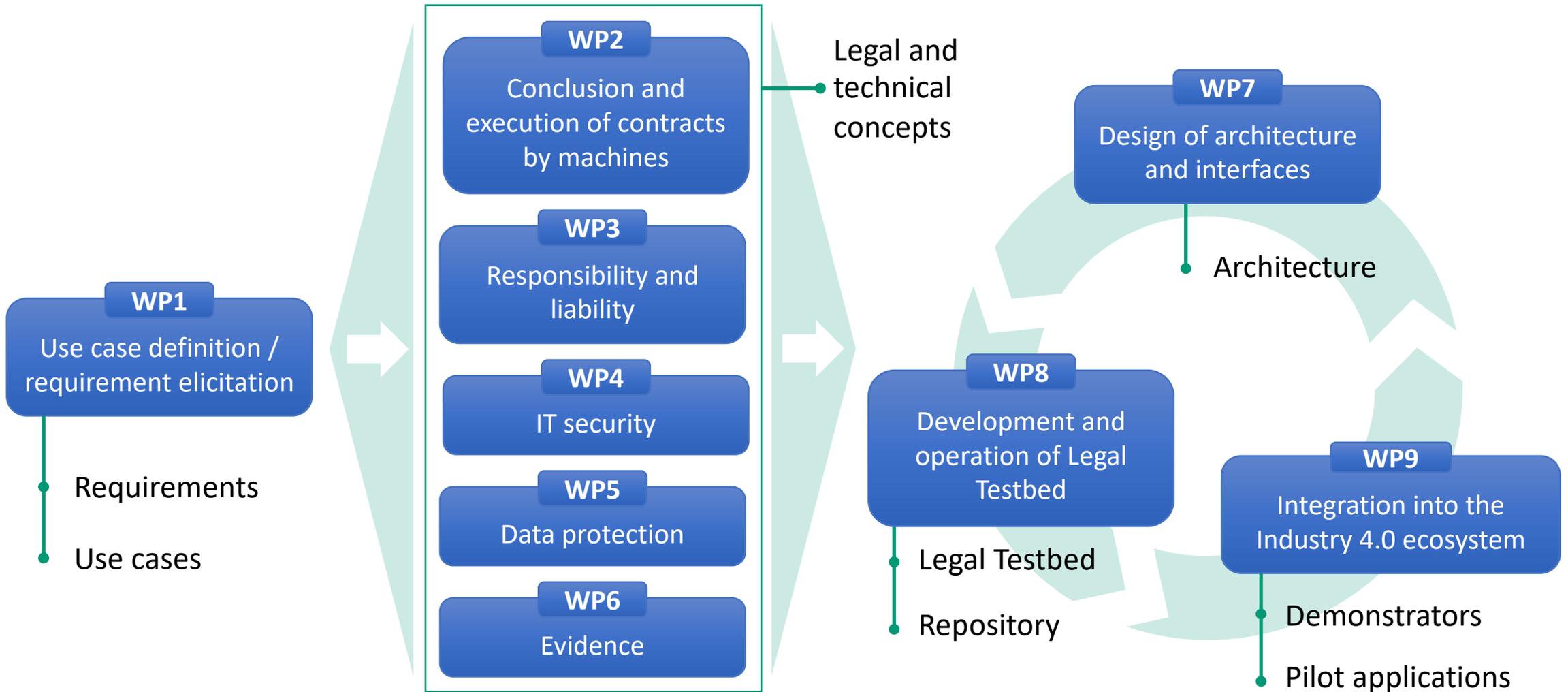
aufgrund eines Beschlusses
des Deutschen Bundestages

Project objectives

- Development and operation of a Legal Testbed as a **digital experimentation ground** for developing and validating automated business processes
- Creation and evaluation of a new cooperation model for dynamic Industry 4.0 value networks
- Derivation and elaboration of recommendations for action for politics and companies regarding new legal standards
- Concept and implementation support for SMEs to offer and make use of (automated) hybrid services



Project plan and key results



Project goal: Development of contract agents



- Design of an automated negotiation process
 - Static contractual framework (General terms & conditions)
 - Defining the negotiable parameters (Price; possible prices; Risk attribution: possible clauses)
- Registration of the possible contents into a database
- Defining the negotiation process
 - Procedure
 - Request by Party A (invitation to tender, inquiry, offer etc.)
 - Response by Party B (offer, inquiry)
 - Response by Party A (inquiry, counter-offer etc.)
 - Assessment of the parameters of a proposed contract (value of offered goods/services; price, risk attribution etc.)
 - Defining strategies for automated negotiations

Project goal: Smart Contracts for Industry 4.0



- Core elements of Smart Contracts
 - Automatic execution of contract
 - Probative documentation of contract content and execution

- Concept
 - Use of blockchain technology for documentation
 - Automated triggering of payment via the blockchain



Liability for Autonomous Systems



Liability for Autonomous Systems



Damage caused by autonomous systems

Responsibility for autonomous systems

The
Guardian

*“... killed by an Uber
self-driving SUV”*

Uber

Self-driving Uber kills Arizona woman in first fatal crash involving pedestrian

Tempe police said car was in autonomous mode at the time of the crash and that the vehicle hit a woman who later died at a hospital

Sam Levin and Julia Carrie Wong in San Francisco



▲ A car passes the location where a woman pedestrian was struck and killed by an Uber self-driving sport utility vehicle in Tempe, Arizona, on Monday. Photograph: Rick Scuteri/Reuters

An autonomous Uber car killed a woman in the street in [Arizona](#), police said, in what appears to be the first reported fatal crash involving a self-driving vehicle and a pedestrian in the US.

Tempe police **said** the self-driving car was in autonomous mode at the time of the crash and that the vehicle hit a woman, who was walking outside of the crosswalk and later died at a hospital. There was a vehicle operator inside the car at the time of the crash.

Responsibility for autonomous systems



Responsibility for autonomous systems

The
New York
Times

*“... that killed
the driver”*

Tesla Says Crashed Vehicle Had Been on Autopilot Before Fatal Accident

By GREGORY SCHMIDT MARCH 31, 2018



A fiery crash killed a Tesla driver last week in California. Tesla said its Autopilot feature had been turned on before the crash. KTVU, via Associated Press

RELATED COVERAGE

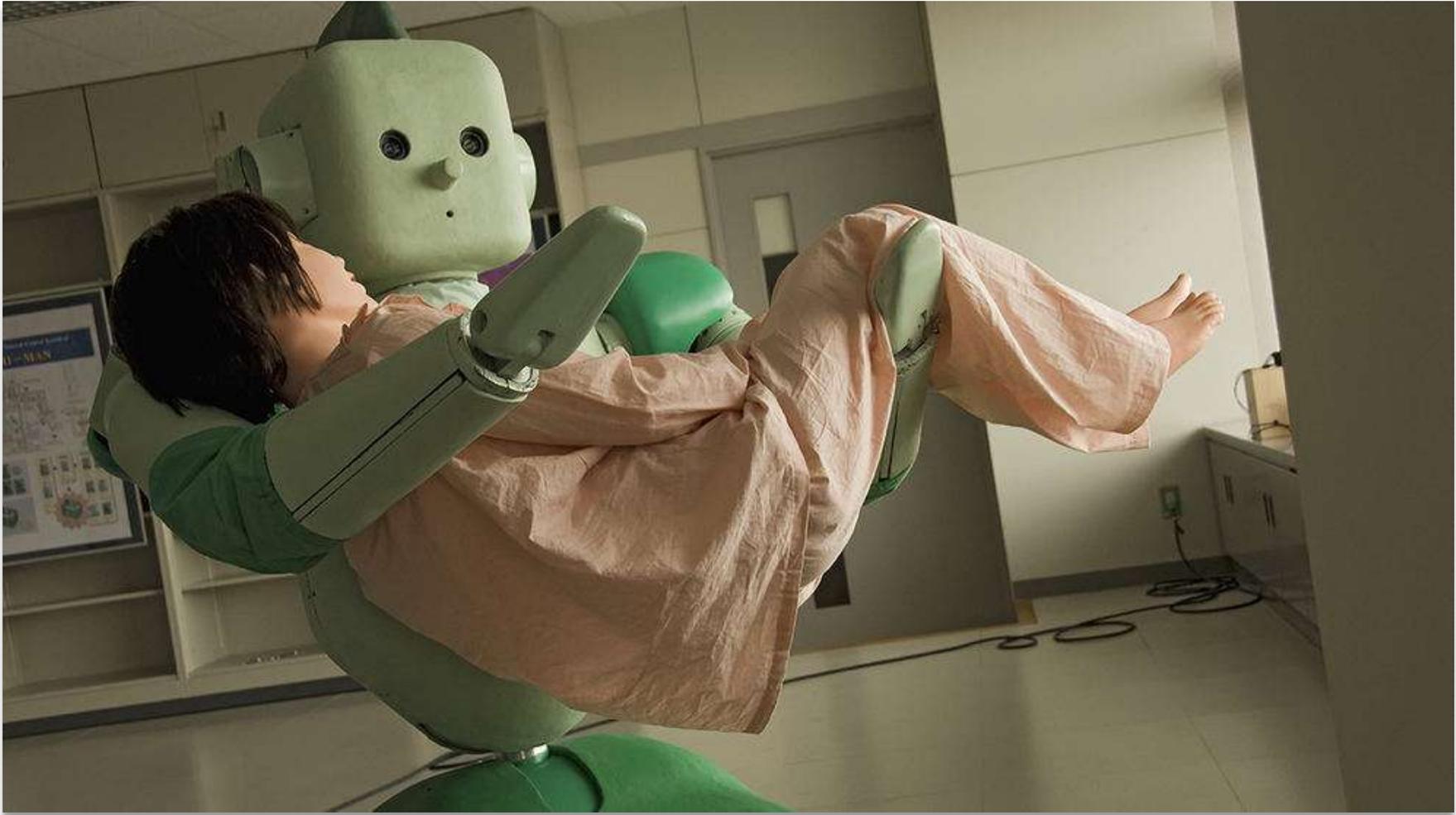


Tesla Looked Like the Future
Ask if It Has One. MARCH 29, 2018

Tesla [said on Friday](#) that its semiautonomous Autopilot feature had been turned on before a [fiery crash](#) of a Model X sport-utility vehicle that killed the driver last week in California, raising more questions about the safety of the company's self-driving technology.

This is the second fatal crash in which the Autopilot system had been engaged, including a 2016 crash in Florida that killed a Tesla driver. The National Highway Traffic Safety Administration concluded that the Florida crash did not result from a flaw in the system, but the agency found that the

Responsibility for autonomous systems



Responsibility for autonomous systems



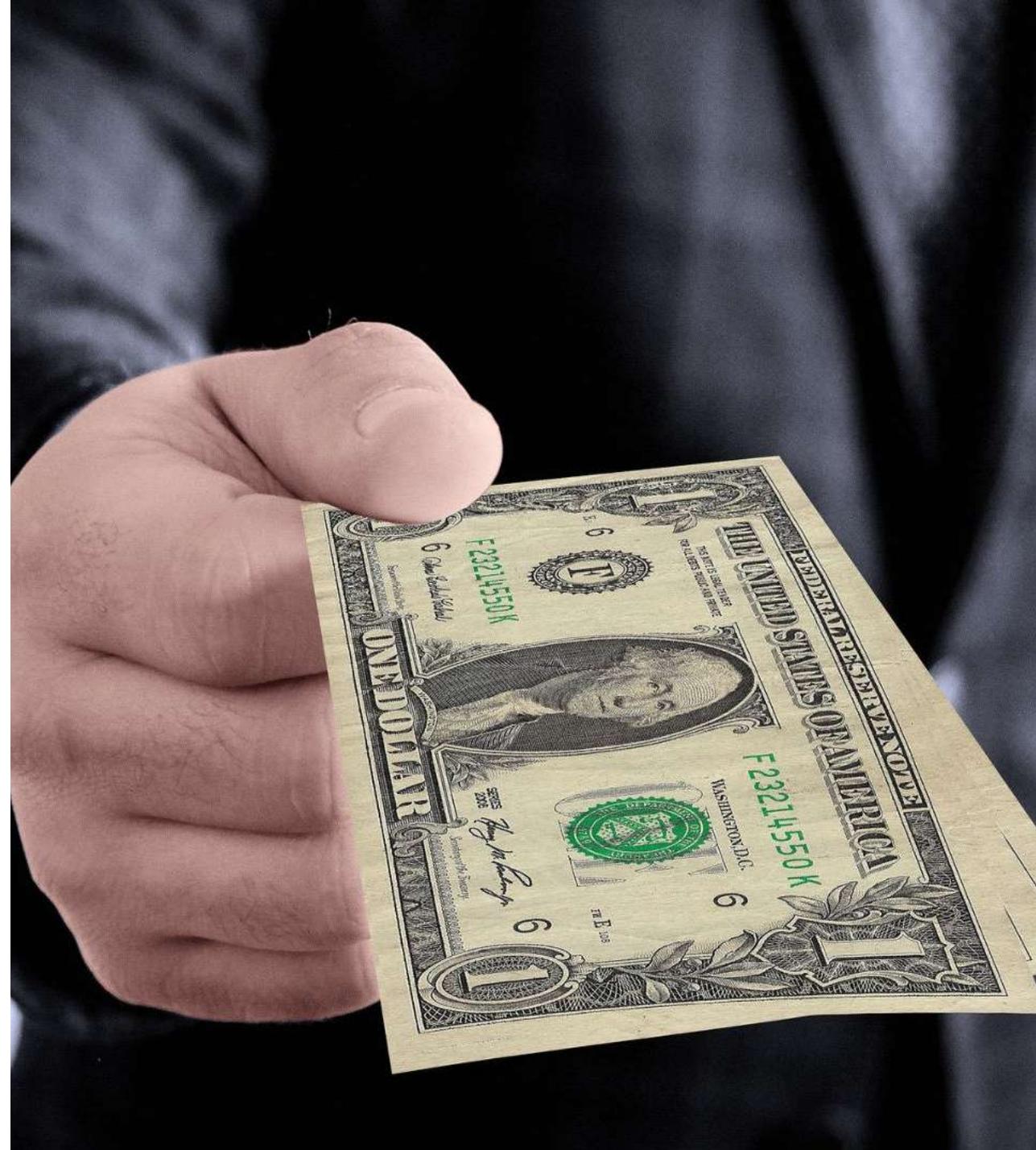


Liability for Autonomous Systems

Compensation of the victim

Protection of the victim

- Principle: Risks arising out of the use of new technologies should not be borne by the victim
- Conclusion: Compensation for damages should be guaranteed



Models of compensation

Compensation funds

- Compensation funds replacing liability
- Compensation funds filling gaps when liable party cannot compensate

Liability

- Fault-based liability
- Strict liability in a broad sense (e.g. product liability; requirement of a violation of a norm, e.g. defect)
- Objective liability (for any damage caused within a defined sphere of risk, e.g. operation of a car)

Conclusion: Need for objective liability to guarantee compensation in some cases

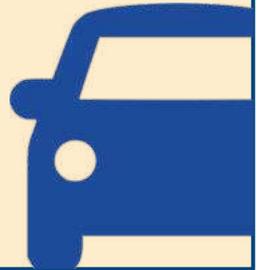
Parties and roles

Producer



Operator

(e.g. registered keeper
of a car)



Seller



User

(e.g. driver of a car)



Liability of the operator

- Thesis:

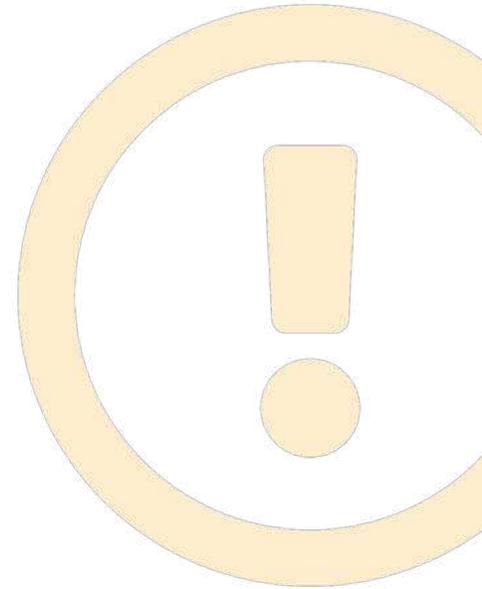
“The operator should be liable to compensate the victim.”

- Rationale:

- The operator benefits from the use of the technology
- The operator is very often best in place to control the risks of the technology
- The operator (rather than the producer) can be addressed by the victim

- Expert Group key finding:

[10] Strict liability should lie with the person who is in control of the risk connected with the operation of emerging digital technologies and who benefits from their operation (operator).





Liability for Autonomous Systems



The responsibility of the producer



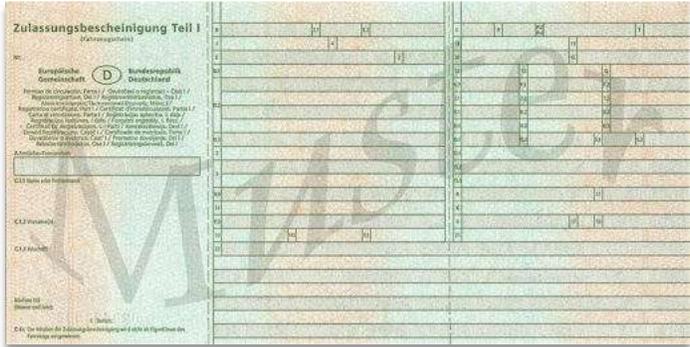
The responsibility of the producer

Liability for Autonomous Cars

Liability for car accidents. Roles and Participants



Driver



Registered Keeper



Insurer



Manufacturer

Liability of the Registered Keeper

Section 7 Paragraph 1 German Road Traffic Law

Liability of the registered keeper, clandestine operation of a vehicle

If, during the operation of a motor vehicle or a trailer to be carried along by a motor vehicle, a person is killed, the body or health of a person injured, or property is damaged, the holder of the vehicle is obligated to compensate the injured person for the damages arising therefrom.

Compulsory Insurance

- **Section 1 Compulsory Insurance Act (Pflichtversicherungsgesetz; PflVG)**
 - The duty of the registered keeper to maintain compulsory insurance
- **Section 115 I 1 No. 1 Insurance Contracts Act (Versicherungsvertragsgesetz; VVG)**
 - The injured party can claim against the insurer directly
- **Section 116 I 1 Insurance Contracts Act (Versicherungsvertragsgesetz; VVG)**
 - Sole liability of the insurer in the internal relationship

Product Liability Law

Section 1 paragraph 1 1st sentence (Product Liability Act; Produkthaftungsgesetz, ProdHaftG) Liability

In such case as a defective product causes a person's death, injury to his body or damage to his health, or damage to an item of property, the producer of the product has an obligation to compensate the injured person for the resulting damage.

- Defect (of the product) and causal link are required to establish liability
- Liability is similar to Section 823 I BGB (German Civil Code)

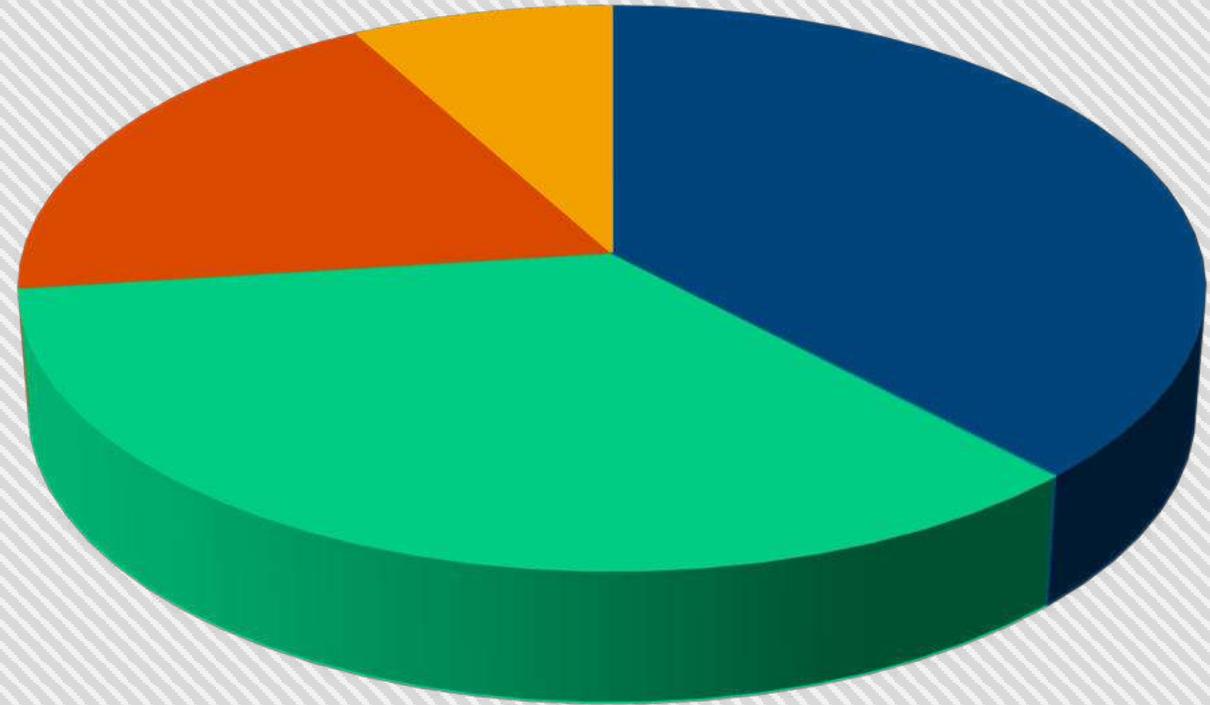
Interim Conclusion

- Regulation of accidents involving vehicles occurs via a system of compulsory insurance
- Focus of liability is on the vehicle's registered keeper
- Producer's liability is of little relevance in practice



Liability for Autonomous Cars

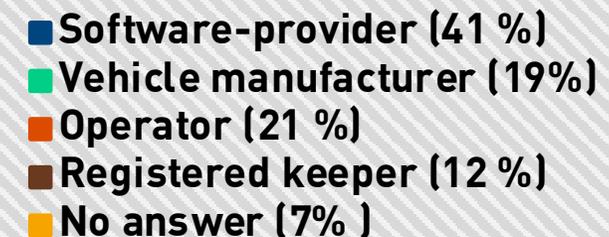
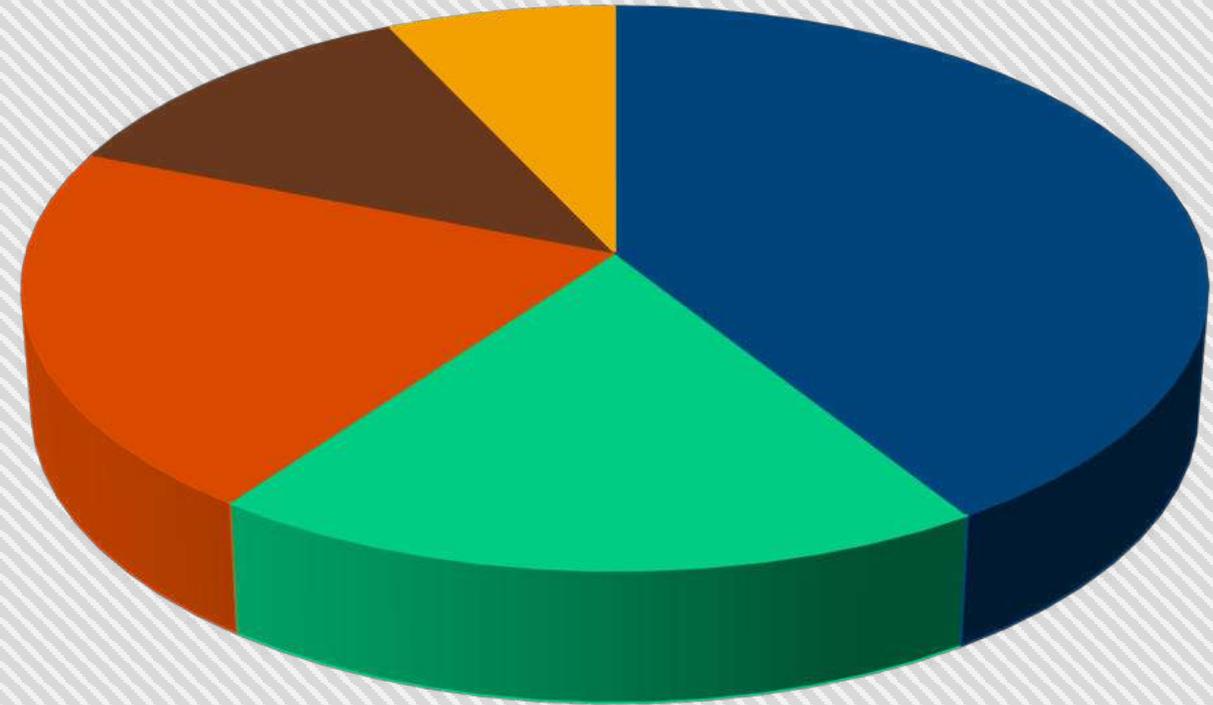
- **Bitkom-Survey** on liability for autonomous vehicles
 - In their opinion, who should be liable in the case of accidents caused by self-driving cars?
 - **1,006 people over the age of 14 years** were asked



- **Software-provider (38 %)**
- **Vehicle manufacturer (35%)**
- **Operator (19 %)**
- **Registered keeper (0 %)**
- **No answer (8%)**

Liability for Autonomous Cars

- **Bitkom-Survey** on liability for autonomous vehicles
 - In their opinion, who should be liable in the case of accidents caused by self-driving cars?
 - Survey of **177 Business** involved in the automobile industry



Fundamental Principles of Objective Liability for Vehicles

Section 7 paragraph 1 Road Traffic Act (StVG) Liability of the registered keeper, joyriding

If during, the use of a motor vehicle or a trailer which is intended to be towed by a motor vehicle, a person's death, injury to a person's body or damage to his health, or damage to an item of property is caused, the registered keeper has an obligation to compensate the injured person for the resulting damage.

- Goals of Section 7 StVG
- Allocation of risk according to controllability
- Protection of the injured party
- Effectiveness of compulsory insurance

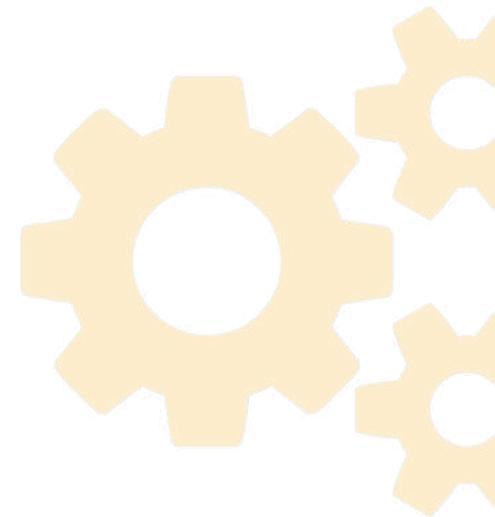
Objective Liability of the Manufacturer de lege ferenda

- **Proposal:**
Introduction of objective liability of the manufacturers of self-driving cars
- **Requirements**
 - Manufacturer
 - Accident must have occurred whilst the vehicle was driving autonomously



Objective Liability of the Manufacturer de lege ferenda

- **Proposal:**
Introduction of objective liability of the manufacturers of self-driving cars
- **Relationship to liability of registered keeper**
 - Liability of registered keeper will remain
 - Joint and several liability of the external relationship
 - Internal settlement between the registered keeper and the manufacturer



Conclusion

- Liability for self-driving cars cannot be solved satisfactorily by de lege lata
- **Solution:**
Introduction of objective liability of the vehicle manufacturer
- Coordination with liability of the registered keeper





The responsibility of the producer

**Liability for Autonomous Systems
in general**

Liability for Autonomous Systems in general



Liability for Autonomous Systems in general

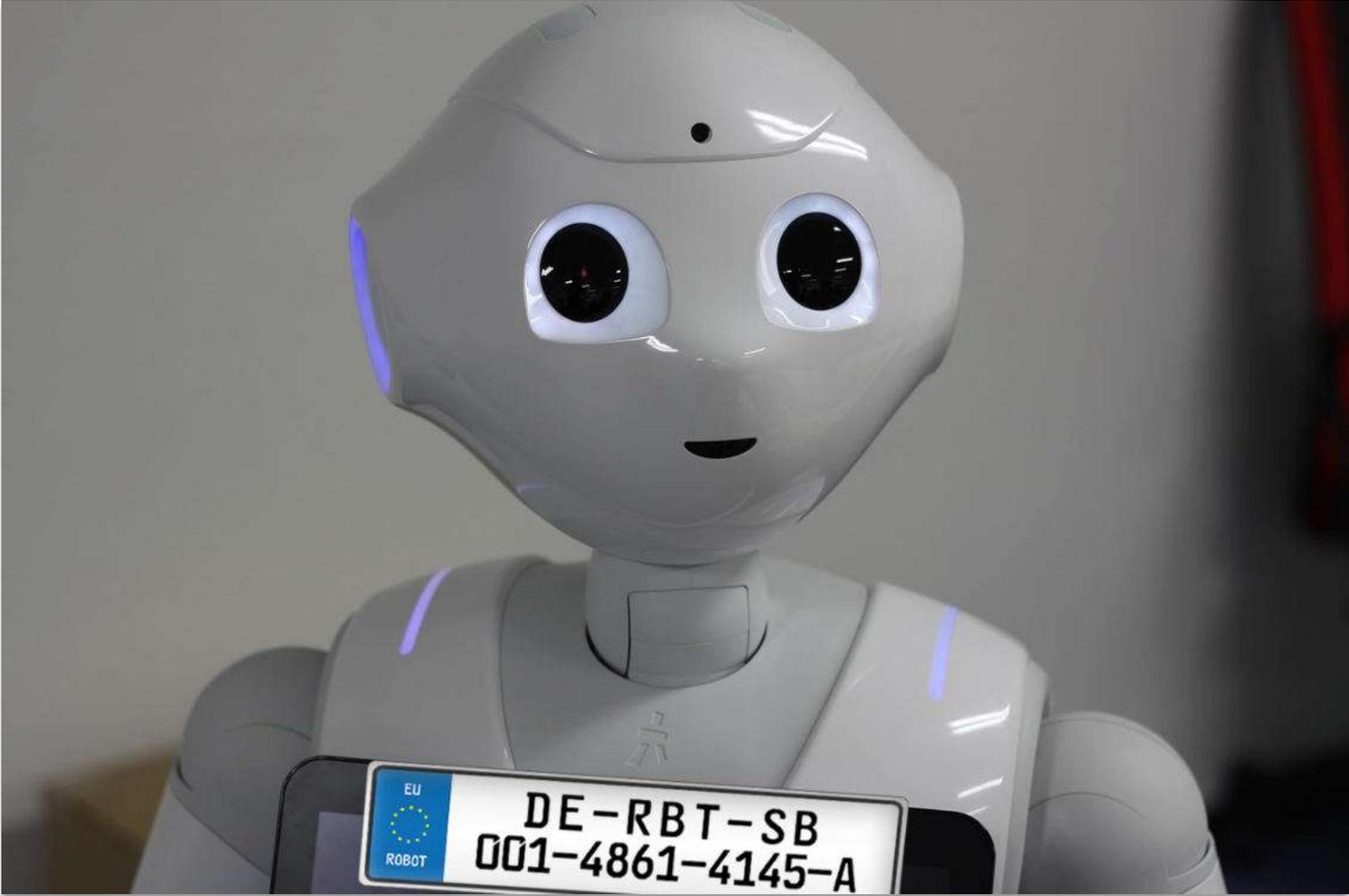


Liability for Autonomous Systems in general

Section 833 German Civil Code Liability of animal keeper

If a human being is killed by an animal or if the body or the health of a human being is injured by an animal or a thing is damaged by an animal, then the person who keeps the animal is liable to compensate the injured person for the damage arising from this. Liability in damages does not apply if the damage is caused by a domestic animal intended to serve the occupation, economic activity or subsistence of the keeper of the animal and either the keeper of the animal in supervising the animal has exercised reasonable care or the damage would also have occurred even if this care had been exercised.

Classification and Registration



Classification and Registration

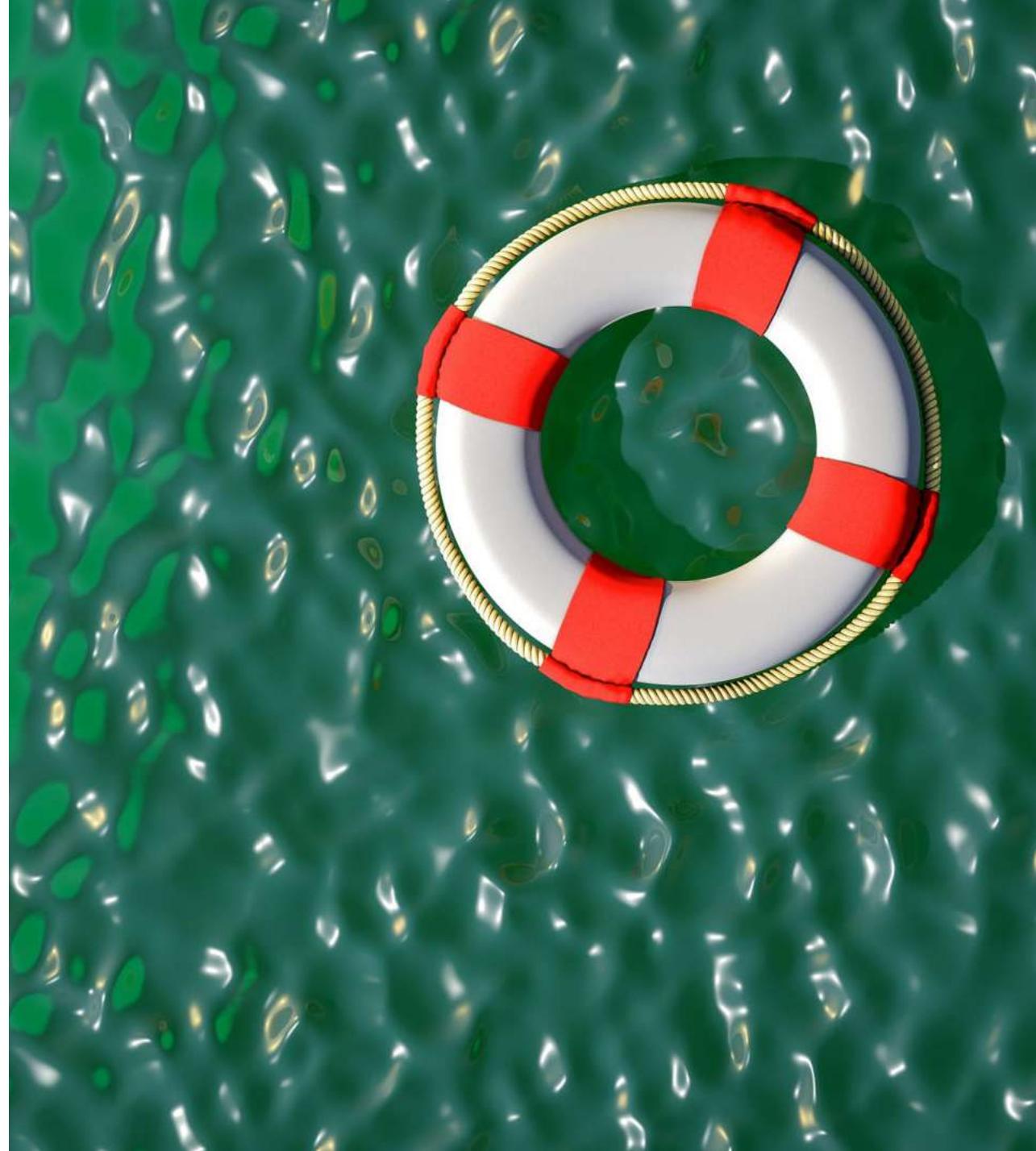
European Parliament resolution (2015/2103(INL)) No. 59

Calls on the Commission, when carrying out an impact assessment of its future legislative instrument, to explore, analyse and consider the implications of all possible legal solutions, such as:

- e) ensuring that the link between a robot and its fund would be made visible by an individual registration number appearing in a specific Union register, which would allow anyone interacting with the robot to be informed about the nature of the fund, the limits of its liability in case of damage to property,

The concept of a second operator

- Goal: Liability rules should incentivise the producer to provide safe products and services
- Challenge: The operator is not necessarily best in place to control the risks
 - „Consumers“ as end users may have little capacity to control risks
 - Producers may have strong control over the use of the product



The concept of a second operator

- Expert Group on liability and new technologies, New technologies formation
- Report from the Expert Group on Liability and New Technologies – New Technologies Formation, Dec. 2019
- Suggestion Producer as a second operator (**backend operator**)
- Expert Group key finding:
 - [11] If there are two or more operators, in particular
 - (a) the person primarily deciding on and benefitting from the use of the relevant technology (frontend operator) and
 - (b) the person continuously defining the features of the relevant technology and providing essential and ongoing backend support (backend operator),strict liability should lie with the one who has more control over the risks of the operation.



The responsibility of the producer



Product liability and Artificial Intelligence

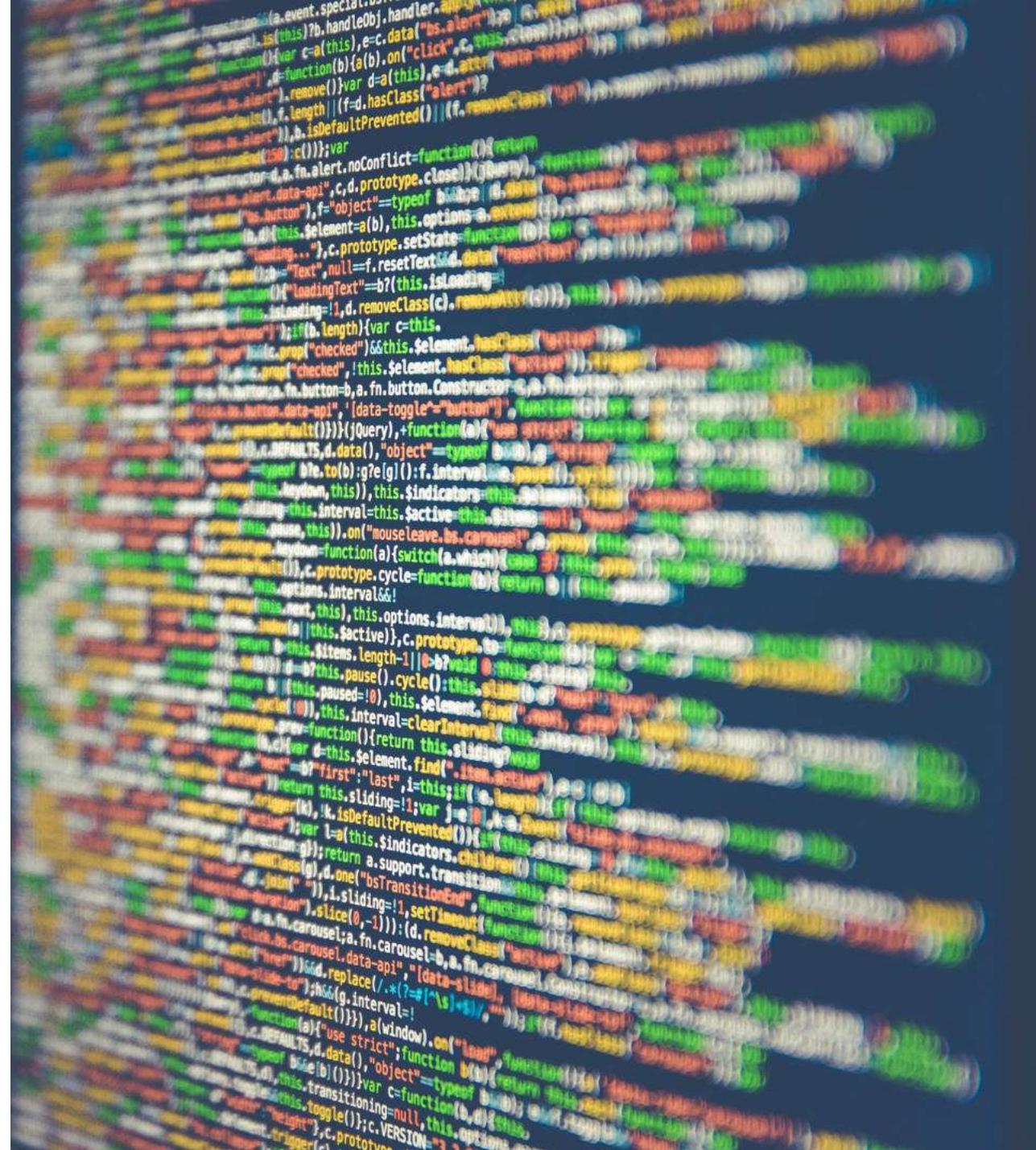
Behaviour as a defect?

■ Question

- Is an individual occurrence of defective behaviour in itself a defect of the product which generated such defective behaviour?

■ Examples

- a driving error by an autonomous car
- an incorrect answer given by a Robo-Advisor



Product liability and Artificial Intelligence

■ Concepts

- Defective behaviour constitutes a product defect
- Defective behaviour is not a product defect
- Autonomous cars are not defective when they are, on average, better than human drivers

■ Monitoring and updating of systems

■ Technical development and defect





Conclusion and theses

Need for further development of the Legal Framework

1. There is a need for a specific legal framework for AI and the IoT,
2. The existing contract law is applicable to automated contracting; it should be amended to adequately assess risks of error made by machines.



Need for further development of the Legal Framework

2. The existing liability system contains gaps and must be developed further.
3. A new system of liability for autonomous systems should be introduced to guarantee compensation for victims.



Need for further development of the Legal Framework

3. Objective liability should be a central element of the liability system for new technology.
 - a) In general, operators of autonomous systems should be liable to compensate victims.
 - b) In addition, objective liability of producers should be introduced in some cases.



Need for further development of the Legal Framework

6. As an element of the liability system duties to adequately train and monitor autonomous systems based on machine learning should be recognised and clarified.





Thank you very much!

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