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Liability for machines in smart homes: Gaps and potential solutions

Simply Smart Workshop
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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)
- Fellow, Hörst-Görtz-Institute for IT Security (HGI)



Institute of Legal Informatics

- Structure
 - 3 Professorial Chairs, Faculty of Law
 - juris-Professor for Legal Informatics
 - Co-operation with University of Luxemburg (Prof. Cole)
- Fields of Research
 - IT Law
 - eJustice, eGovernment
 - Data Protection
 - IT Security
 - Legal Informatics
- **www.rechtsinformatik.saarland**

INSTITUTE OF
LEGAL INFORMATICS
SAARLAND UNIVERSITY



Saarland University

- 6 Faculties, 18,000 students
- Main Focus: Informatics and Information Technology
- Center for IT-Security, Privacy & Accountability (CISPA)
- Institute of Legal Informatics

INSTITUTE OF
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Other Institutes located on the Campus

- Max-Planck-Institute for Informatics (MPII)
- Max-Planck-Institute for Software Systems
- German Research Centre for Artificial Intelligence (DFKI)



Gaps in the liability system for autonomous machines

- Damage resulting from machine-made decisions
- Tort Law:
Liability for breach of duty of care (fault)
 - Liability in areas where a machine acts autonomously?
 - No breach of duty of care by the **user**
 - No breach of duty of care by the **operator**
 - No attribution of a duty of care by a machine

engadget



<https://www.engadget.com/2007/05/31/robot-lawnmower-kills-danish-man-begins-resistance/>

Interim Conclusion

- Liability under Tort law requires a breach of a duty of care
⇒ Autonomous actions by machines are not covered
- Liability under current product liability legislation is hard for consumers to establish; it's applicability to autonomous behaviour is unclear.
- Objective liability (strict liability in a narrow sense) applies in some areas (e.g. cars) but not to machines in general

Thesis

The current system is inadequate.



Potential solutions

European Parliament

2014-2019



TEXTS ADOPTED

P8_TA(2017)0051

Civil Law Rules on Robotics

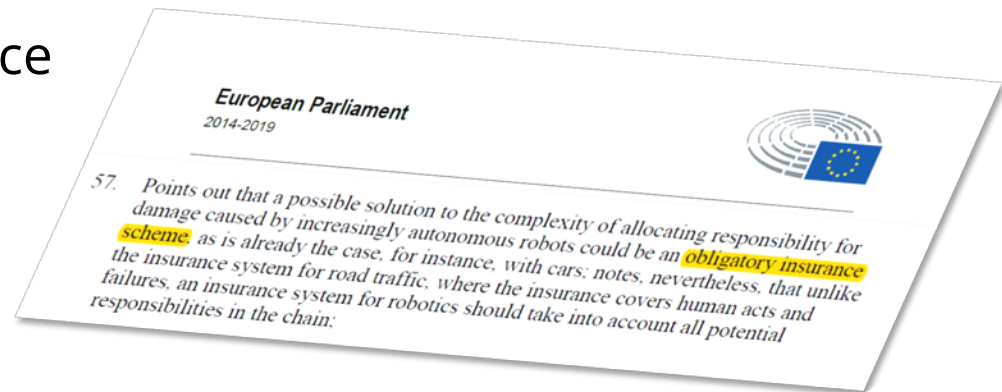
European Parliament resolution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL))

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,
- having regard to the study on Ethical Aspects of Cyber-Physical Systems carried out on behalf of the Parliament's Science and Technology Options Assessment (STOA) Panel

Insurance and Liability funds

- Concept: Compulsory insurance + Liability funds

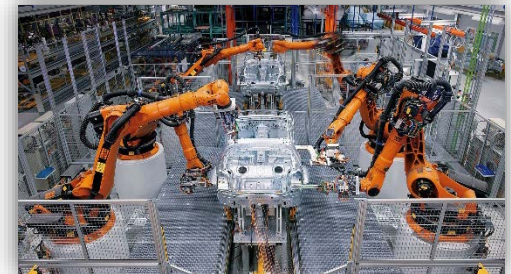


- Requirements:

- Register for autonomous systems
- Risk-specific classification of autonomous systems



Grendelkhan – CC-BY-SA 4.0 (cropped)



ISAPUT – CC-BY-SA 4.0 (cropped)

- Insurability of the risks posed by autonomous systems

New liability system for machine-made decisions



Addressees of liability



Operator



Manufacturer

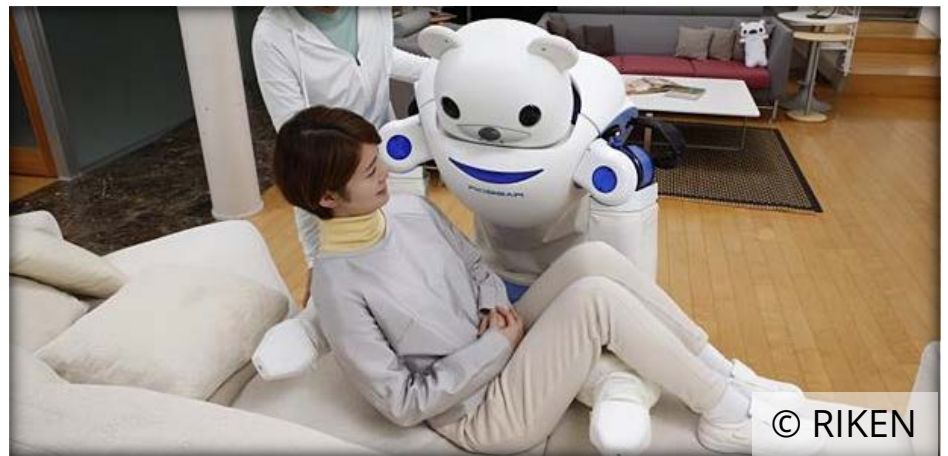
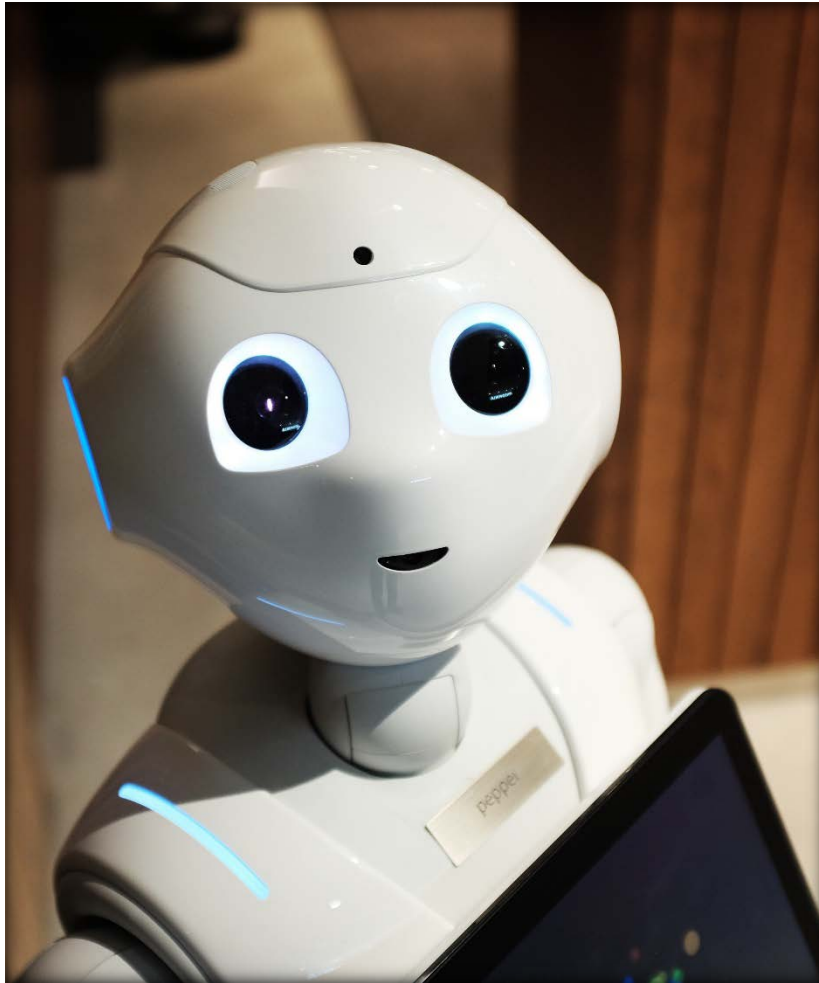


Owner



Fault-based liability
vs.
strict liability

Liability for machines in smart homes



Conclusion

- Further development of the liability system is required
 - New elements: insurance, register, classification
 - Specific liability for machine-made decisions
- Incentives to avoid risk for manufacturers and users
- Possibilities to control risk must be taken into account
- Enforceability of claims under the rules of civil proceedings



Thank you very much for your attention!

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georg.borges@uni-saarland.de

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