

Autonomous systems and privacy

Berthold Haustein

Chair of Dr. Dr. Eric Hilgendorf – University of Würzburg

Instead of an introduction

„In face of the rapid and dramatic technological change it is necessary to take the requirements of data protection into account as early as possible since technological systems often include hidden and irreversible dangers. Therefore it is important to identify and analyze possible problems in the field of data protection already during the development of new technology instead of subsequently correct them with a lot of effort in time and work.“

Peter Schaar,

Bundesbeauftragter für den Datenschutz und die Informationsfreiheit

German Federal Commissioner on Data Protection and Freedom of Information

(eig. Übersetzung)

Contents

1. Robotic and data protection

What relevance has the issue?

2. The law and data protection

Privacy Law in the EU and Germany

3. Data protection and technology

Privacy by design

4. The law and the future

Need for change in Privacy law?

5. Discussion

1

Robotic and data protection

What relevance has the issue?



Robotic and data protection

What relevance has the issue?

Translation:

New images at the wheel

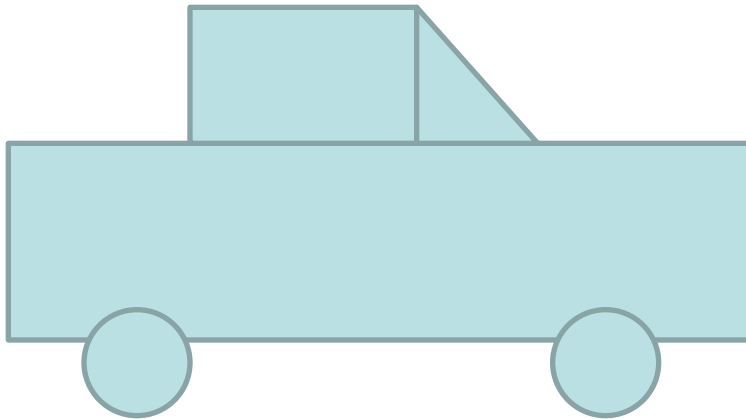
At the push of only one button the world can be seen from a new perspective. Cars are increasingly equipped with cameras and make the driver almost a TV-Director.



© Land Rover

Robotic and data protection

What relevance has the issue?



Example

A car uses modern navigation technology including cameras. The pictures are saved on a „black box“, so that in the case of an accident it can be understood what happened. The car is used for business purposes.

A pedestrian is filmed by the navigation device.

Robotic and data protection

What relevance has the issue?



Example

An industrial robot uses cameras for his tasks and is overviewed by cameras.

A worker is in the environment of that robot.

Robotic and data protection

What relevance has the issue?

Does the robotic device deal with personal data automatically? If yes, privacy law can be applicable.

YES **There is general relevance of the subject.**

BUT **Whether in a certain constellation privacy law needs to be complied with depends almost totally on the actual case.**

2.

The law and data protection

Privacy Law in the EU and Germany

The law and data protection

Privacy Law in the EU and Germany



Directive 95/46/EC

on the protection of individuals with regard to the processing of personal data and on the free movement such data

implemented by



Bundesdatenschutzgesetz (BDSG)



Landesdatenschutzgesetze

Only governs data protection law for the institutions of public administration of the sixteen states.

The law and data protection

Privacy Law in the EU and Germany

Directive 95/46/EC

25 October 1995



What was the reason for passing the Directive in 1995.

The law and data protection

Privacy Law in the EU and Germany

Directive 95/46/EC

25 October 1995



Recital 4

Whereas increasingly frequent recourse is being had in the Community to the processing of personal data in the various spheres of economic and social activity; whereas the progress made in information technology is making the processing and exchange of [...] data considerably easier;

The law and data protection

Privacy Law in the EU and Germany

Directive 95/46/EC

25 October 1995



Recital 6

Whereas, furthermore, the increase in scientific and technical cooperation and the coordinated introduction of new telecommunications networks in the Community necessitate and facilitate cross-border flow of personal data;

The law and data protection

Privacy Law in the EU and Germany

Directive 95/46/EC

25 October 1995



What is the goal of the Directive?

The law and data protection

Privacy Law in the EU and Germany

Directive 95/46/EC

25 October 1995



Article 1 Paragraph 1

In accordance with this Directive, Member States shall protect the fundamental rights and freedoms of natural persons, and in particular their right to privacy with respect to the processing of personal data.

The law and data protection

Privacy Law in the EU and Germany

Directive 95/46/EC

25 October 1995



What is within the scope of the directive and the BDSG?

The law and data protection

Privacy Law in the EU and Germany



Dir. 95/46/EC

Art. 3 Paragraph 1

This directive shall apply to the processing of personal data **wholly or partly** by **automatic means**, and to the processing otherwise than by automatic means of personal data **which form part of filing system** or are intended to form part of a filing system.



BDSG

§ 1 Abs. 2 Nr. 3

Dieses Gesetz gilt für die Erhebung, Verarbeitung und Nutzung personenbezogener Daten durch (...) **nicht-öffentliche Stellen**, soweit sie die Daten unter Einsatz von **Datenverarbeitungsanlagen** verarbeiten, nutzen oder dafür erheben oder **die Daten in oder aus nicht automatisierten Dateien** verarbeiten, nutzen oder dafür erheben, es sei denn, die Erhebung, Verarbeitung oder Nutzung der Daten erfolgt ausschließlich für persönliche oder familiäre Tätigkeiten.

Directive 95/46/EC

25 October 1995



What is “personal data?”

Article 2 (a)

'personal data' shall mean any information relating to an identified or identifiable natural person ('data subject'); an identifiable person is one who can be identified, directly or indirectly, in particular by reference to an identification number or to one or more factors specific to his physical, physiological, mental, economic, cultural or social identity;

The law and data protection

Privacy Law in the EU and Germany



The law and data protection

Privacy Law in the EU and Germany



The law and data protection

Privacy Law in the EU and Germany

Directive 95/46/EC

25 October 1995



What is the main systematic approach of the Directive?

The law and data protection

Privacy Law in the EU and Germany



Dir. 95/46/EC

Preventive ban subject to permit

Article 7

Member States shall provide that personal data may be processed only if...



BDSG

Verbot mit Erlaubnisvorbehalt

§ 4 Absatz 1

Die Erhebung, Verarbeitung und Nutzung personenbezogener Daten sind nur zulässig, soweit dieses Gesetz oder eine andere Rechtsvorschrift dies erlaubt oder anordnet oder der Betroffene eingewilligt hat.

The law and data protection

Privacy Law in the EU and Germany



Is the processing of data lawful?

Has the subject given his consent?

YES

Lawful

The law and data protection

Privacy Law in the EU and Germany

www.iit-berlin.de/autonomik/ws-november2

International Workshop on AUTONOMICS and legal implications

Date: 2012, 02nd of November
Venue: Federal Ministry of Economics and Technology, Berlin
Participation: The participation is free of charge.


*Gender
 Title
 *Firstname
 *Lastname
 Phone
 Fax
 *E-Mail
 *Organisation
 Street
 ZIP
 City
 Autonomik-Project

I agree to be listed in the participants list*

Yes
 No

Your data will be stored and processed in the context of the organised event, considering the provisions of data protection law.

Your data will be stored and processed in the context of the organised event, considering the provisions of data protection law.


 Ausgabe August 2012


Forum Technische Bildung

Forum Technische Bildung
 weitere Informationen

Aktuelles


[Publikation](#)

iit perspektive 10/2012



[Publikation](#)

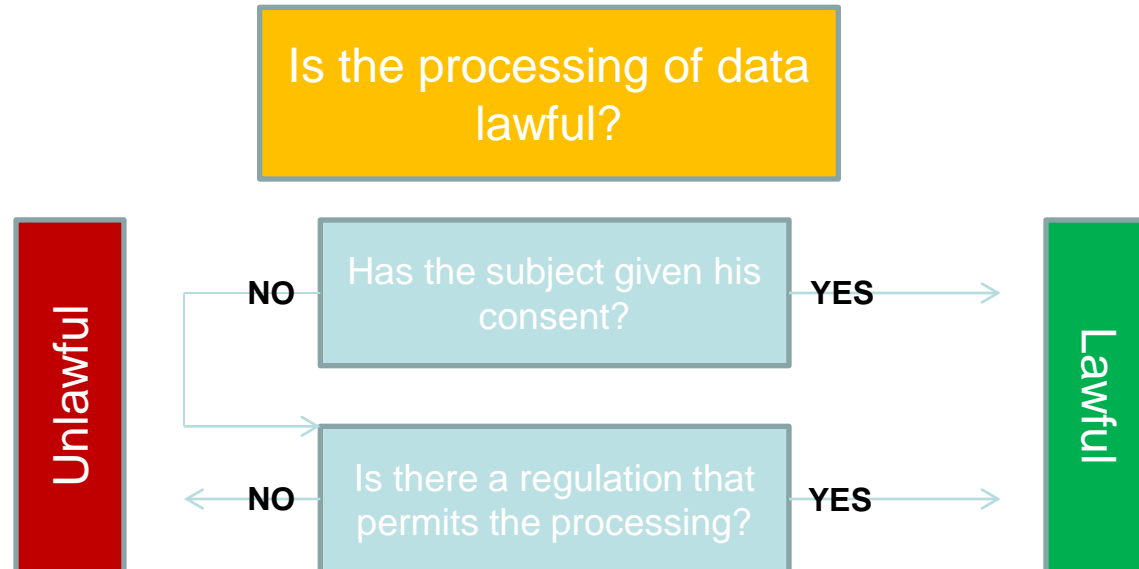
**ANIS Report Indonesia:
 Summarising Report of the
 Determinants of the Indonesian
 Innovation System**



„Your data will be stored and processed in the context of the organized event, considering the provisions of data protection law.“

The law and data protection

Privacy Law in the EU and Germany



The law and data protection

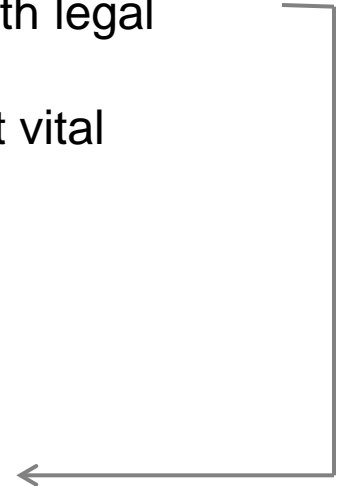
Privacy Law in the EU and Germany



Possible Reasons for permission:

- Processing is necessary for the performance of a contract
- Processing is necessary for compliance with legal obligation to which the controller is subject
- Processing is necessary in order to protect vital interests ...

Especially important in regard to security and safety regulations!





Examples from the beginning

Is there a relevance in regard to privacy law?

Are the examples within the scope of the Directive/the BDSG?

Is there a consent?

Is there a permission?



The law and data protection

Privacy Law in the EU and Germany



Is there a relevance in regard to privacy law?

Personal data of workers or pedestrians can be processed by the device.





Are the examples within the scope of the Directive/the BDSG?

This depends on the question whether there is automatic processing involved. This will often be the case.





Is there a consent?

The consent needs to be expressed unambiguously. This may be the case for the worker. But is certainly not for the navigation device.



The law and data protection

Privacy Law in the EU and Germany



Is there a permission?

This depends on the laws of the respective country. It is possible that there are rules for security and safety for working with machines such as the robot.



The law and data protection

Privacy Law in the EU and Germany



Case 1:

A car with an autonomous navigation system (accidentally) films a pedestrian. The data is needed to navigate the car and is therefore processed. The data is stored for 30m in a black box.

Case 2:

A surveillance robot is moving on the area of a company. The data is not stored but sent wirelessly to a control-room where it can be accessed and seen.

This robot has a set course on the area and navigates automatically but without using the video data but only acoustic and sonar information.



Case 1:

Since the data is used for the navigation there is an automatic processing of the data involved. The personal data of the person are also needed for that process because the car needs the information about tallness, stature or possible handicaps in order to slow down in a dangerous situation. This case possibly lies within the ban subject to permit of the BDSG.

Case 2:

Since the data is only captured and seen but neither stored nor in any other way processed or worked with this example states not necessarily a case for the BDSG.

(Although there is a § 6b that governs the surveillance of public area.)

3.

Data protection and technology

Privacy by design

Two parts of data protection

May personal data be processed **at all**?

If, how may personal data be processed?

Datensicherheit
data security

Article 7 of the directive

Article 17 of the directive

Article 17 of the directive

Security of processing

1. Member States shall provide that the controller must implement appropriate technical and organizational measures to protect personal data against accidental or unlawful destruction or accidental loss, alteration, unauthorized disclosure or access, in particular where the processing involves the transmission of data over a network, and against all other unlawful forms of processing.

Having regard to the state of the art and the cost of their implementation, such measures shall ensure a level of security appropriate to the risks represented by the processing and the nature of the data to be protected.

Two parts of data protection

May I proceed personal data?

YES

How may I proceed the personal data?

The security of the processing of personal data has no impact whatsoever on the question whether or not one may process the data at all!

Data protection and technology

Privacy by design

„Privacy by Design does also include the idea, that systems are build and planned in a way, that the amount of processed personal data is minimalized.“

Peter Schaar,

Bundesbeauftragter für den Datenschutz und die Informationsfreiheit

German Federal Commissioner on Data Protection and Freedom of Information

(eig. Übersetzung)

Privacy by design needs to focus on both parts of data protection!

4.

The law and the future

Need for change in Privacy law?

The law and the future

Need for change in Privacy law?

Is there a need for change?

On the one hand...

Privacy Law as it is today focusses on single acts of the processing of personal data. This enables it theoretically and conceptionally to deal with any imaginable constellation including autonomous technological systems as long as the system can be redirected to a judicial entity.

The law and the future

Need for change in Privacy law?

Is there a need for change?

On the other hand...

Modern autonomous technological systems tend to collect an incredible amount of personal data. They use cameras to navigate in an unknown environment, communicate via internet or simply scan the persons that are working with them in order to function.

This leads to new challenge for privacy law, not necessarily qualitatively but quantitatively.

The law and the future

Need for change in Privacy law?

Three ideas...

1) The European directive states that personal data may be processed in order to comply with national law.

This should now be used in order to allow personal data to be processed if it is for security and safety reasons. So if regulations on the security and safety of the usage of autonomous systems are formulated, it should be kept in mind, that they can and should be embellished in a way that they provide a permission in terms of privacy law for the processing of personal data.

The law and the future

Need for change in Privacy law?

Three ideas...

2) In time there should be a regulation that governs the usage of personal data in the process of autonomous navigation.

This should be embellished in a way that it allows the processing of personal data as long as it is not or stored or only stored for a certain period of time and only in order to investigate accidents.

The law and the future

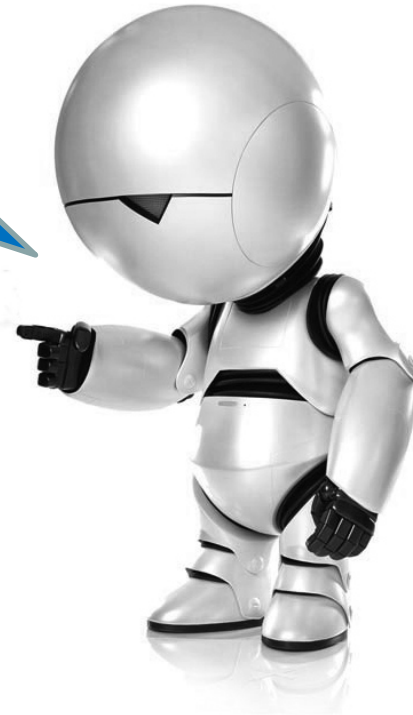
Need for change in Privacy law?

Three ideas...

3) In (even more) time privacy law should be evaluated taking into account that autonomous technological systems may not be retraceable to a legal entity such as a natural person or a company in every situation.

If data is processed by such system in a way that can be neither predicted nor controlled by the owner or user of this system he should not necessarily be held accountable for the processing.

**Thank you very
much
for your
attention!**



5. Discussion