

# Internet technology, robotics and law in China

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# Outline of presentation

- Introduction: technology and law
- Legal challenges in *Industrie 4.0*  
– developing legal solutions  
relevant to *Made in China 2025*?
- Internet technology and law in China
- Robotics and law in China
- Summary

# Introduction: technology and law

“The nations of the world are caught up in a revolution, which is bringing about dramatic changes in the way we live and work – and maybe even think”.

Tom Forester in *High-tech Society: Story of the Information Technology Revolution* (1987)

# Introduction: technology and law

- Relationship between law and technology
- Law: organizing and steering the development of technology
- Development of technology: changes required in the substantive law as well as in the procedural law

## Legal Challenges in Industrie 4.0 – developing legal solutions relevant to Made in China 2025?

- Legal Challenges in *Industrie 4.0*
  - Tort liability
  - IT security, or respectively, data security
  - Data protection and privacy issues
- Developing legal solutions relevant to *Made in China 2025?*
  - Similar project to Industrie 4.0
  - Based on Internet technology such as big data and cloud computing
  - German law used as model for Chinese law with great focus on German developments

# Internet Technology and Law in China

Two examples:

- criminal liability for computer hacking
- cloud computing and data protection law

## **The example of criminal liability for computer hacking**

- Internet: one of the most important human inventions in the 20th century
  - Improving the quality of life
  - Promoting economic growth
- Internet: has opened many doors for criminals to pursue their illicit goals – such as hacking
  - Characteristics of hackers
  - Methods employed by hackers

# The example of criminal liability for computer hacking

- The historical development of the criminal law against hacker crime in China
  - Criminal Law PRC (CLPRC) 1979: no provisions on hacking
  - The CLPRC 1997: § 285, § 286 and § 287
  - The 7th Amendment of CLPRC 2009: two new offences added to § 285
  - The 9th amendment of CLPRC 2015: added provisions § 286a, § 287a and § 287b and criminalized companies under § 285 and § 286

# The example of criminal liability for computer hacking

- The problems in criminal law provisions against hacker crime in China
  - provisions were put into the wrong chapter
    - Now in Chapter 6 “endangering the administrative order of society”
    - Hacker crime – very harmful to society – endangers public security?
  - Contradicts § 285
    - The scope of protection of § 285 subsection 1 includes only state affairs, defence apparatus and sophisticated science or technology
    - But the scope of protection of § 285 subsection 2 does not include these three areas

# The example of criminal liability for computer hacking

- Outlook for the future – a personal view
  - Technological background to Made in China 2025
    - Information society
    - “Big data“ or “data lake“
    - Data: decisively important for Chinese industry
  - Future legislation
    - Much more focus on the protection of data rather than on the protection of computer systems
    - New offenses such as “data espionage“, “interception of data“ and “modification of data“, for details see German Criminal Code (StGB)

# The example of cloud computing and data protection law

- Why Cloud computing?
  - Rapid economic development – firms collect huge quantities of data
  - Question: how to manage and analyse large quantities of data?
  - traditional data collection and storage – no longer able to cope with such large scale data processing tasks
  - Revenue from cloud computing services between 2009 and 2014 (statistics from IDC):  
increased from 1.66 billion EURO to 55.46 billion EURO
  - More than 300 cloud providers in China
    - Alibaba Group, Tencent, Baidu, Sina and Huawei

# The example of cloud computing and data protection law

- Cloud computing and the protection of personal data in China
  - Currently very intensive discussion both at EU level and in Germany
  - But currently no full legal protection of personal data in China
  - On 23.4.2013 the first time official definition of “personal data” was given
  - Draft “China Cybersecurity Law” proposed on 6 July 2015
  - Articles 34 - 39 – cover the protection of personal data

# The example of cloud computing and data protection law

- Key principles in the protection of personal data in draft of “China Cybersecurity Law”
  - Consent of the person whose personal data is gathered (Art. 35, subsection 1)
  - Reasons for collecting personal data (Art. 35, subsection 2)
  - Disclosure of rules for the collection of personal data (Art. 35, subsection 3)
  - Confidentiality obligations of network operators (Art. 36, subsection 1)
  - An obligation [on Internet operators] to provide notice to individuals, as well as reports to competent government departments, in cases where personal data have been leaked (Art. 36, subsection 2).

# The example of cloud computing and data protection law

- Deficiencies in the draft “China Cybersecurity Law”
  - Only six articles refer to the protection of personal data
  - specifically regulates only internet providers
  - Does not contain any provisions stipulating competent independent supervisory authorities or a Data Protection commissioners
- The focus of future legislation
  - take the legislative experience of EU and Germany in the field of data protection as a model: draft an independent piece of legislation
  - establish a supervisory authority and data protection commissioners as in the EU and Germany

# Robotics and Law in China

- Why Robotics?
  - Industrial robots will play an important role in Made in China 2025
  - In 2014 China became the largest consumer market of industrial robots in the world (statistic from IFR)
  - For foreign robot manufacturers in the future
    - China will be an intriguing market due to the enormous demand and government subsidies
    - face risks in the Chinese market because of the unclear and imperfect legal rules for the protection of intellectual property
    - the issue of tort liability for industrial robots has not been sufficiently clarified in current Chinese law.

# Robotics and Law in China

- Solving the case of a robot killing a technician at the VW plant in Kassel using Chinese criminal code
  - § 134 CLPRC
    - If the victim was killed because the robot was incorrectly programmed by the staff responsible for that task - CLPRC § 134 subsection1 applied
    - if company management did not give the victim sufficient training to work safely with the robot, or forced the victim to work with the robot - CLPRC § 134 subsection 2 applies
    - If the victim was killed by the robot because of human error - an accident

## Summary

- The examples of hackers, cloud computing, as well as robotics in China in the context of Made in China 2025, raise a wide variety of legal issues that will intensely occupy Chinese lawyers and politicians in the coming years and decades.
- A number of specific areas of the law urgently require new legislation
- The Chinese parliament will therefore need to integrate the changes both in technology and law. It has to adapt the law to take account of technological developments and it must ensure proper legal regulation of new technologies in order to ensure their safety and rapid introduction.

Thank you very much for your attention!