Legal Challenges

Asia Pacific Regional Mock Court Exercise on Fighting Cybercrime
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INTRODUCTION
LEGAL CHALLENGE

• Adequate Instruments for Law Enforcement
• Protection of the interest of the user
• Adequate Criminalisation
• No Over-Criminalisation
• Legislation can not solely solve the issues
CHALLENGE: TIME FOR DRAFTING
LAW ADJUSTMENT (GERMANY)
LAW ADJUSTMENT

Tech. Development | Recognised Offences | Adjustment of the Law

1970 | Networks | Hacking
1980 | PC | Software Piracy
1990 | Internet | Illegal Contents
2000 | | Responsibility

Copyright Law | Protection
LAW ADJUSTMENT

Tech. Development | Recognised Offences | Adjustment of the Law

1970 | Networks | Hacking
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Copyright Law | Responsibility | Protection
LAW ADJUSTMENT

Hacking

1980  1990  2000  2010
LAW ADJUSTMENT

1st Legislation on Computer Crime

2. WiKG

Hacking

1980  1990  2000  2010
LAW ADJUSTMENT

2nd Legislation on Computer Crime

1980  1990  2000  2010

Hacking

2. WiKG

41. StÄG
CHALLENGE: COMPLEXITY
Major parts of the every day communication are already based on internet related services.

Access to the **WWW** (world wide web) and the uses of **e-mail** are only two examples.

**Voice-over-IP (VoIP)** and the offer of multimedia content for sale is today available for more than a billion internet user.
• Alternative Communication Systems that could be used in cases of emergency are not able to cover the necessary resources

• Monoculture with regard to major technical components of computer systems, software and network technology
STUXNET

- Malicious software targeting Windows operating system
- Discovered in June 2010
- Specifically focussing on Supervisory Control And Data Acquisition (SCADA)
- SCADA is for example used in Siemens S7 systems that are used to control critical infrastructure such as power plants
SWICH TO COMPUTER DATA

- Additional challenge is the ability to copy information without a loss of quality
- Enables new forms of copyright violations as well as the acquisition of secret information
SWICH TO COMPUTER DATA

- Another consequence of the missing loss of quality during the copying process is the fact that whoever obtains a digital file (consumer) could potentially at the same time become a distributor.

- Especially relevant with regard to file-sharing.

   ![Diagram](image)
AUTOMATE

- Computer and Networks enable offenders to automate attacks
- Within minutes millions of spam mails can be send out without generating high costs - sending out one million regular letters would be very expensive and take days
• Another example for the use of automation is SPAM
• Currently between 60% and 90% of all e-mails are SPAM
• Several billion SPAM e-mails are sent every single day
• Can only work on the basis of automation
AUTOMATE

- Automation enables offenders to generate high profit by committing various offences with rather small amounts each

- Background: Victims that have just lost rather small amounts tend not to report the crime
AVAILABILITY OF INFORMATION

• Information that previously were available only to secret service (e.g. satellite pictures) or from very selected sources (e.g. instructions how to build bombs) are today available via the Internet

• Possibilities to restrict access to such information are limited
AVAILABILITY OF INFORMATION

- Industry can play a role in limiting the negative impact of the availability of information about high level targets.
- Example is the restriction of resolution in satellite pictures.
- Such measures can only have an impact if they are coordinated.
MISSING CONTROL

- Internet was developed as a military network
- Consequences: Strategic and military aspects dominated the development of the technology - not the needs of a global mass communication network
- Resistant against nearly any form of centralised control

Decentralised concept was a necessary element to protect the network against malfunctions caused attacks against single elements. Missing control instruments makes the implementation of investigation routines, that are necessary for a mass communication system difficult.
MISSING CONTROL

Major consequences
• Very few possibilities to protect a territory against attacks from the outside
• Very few possibilities to disconnect a territory from internet services

Additional consequences
• Independence of place of action and place of the result
• International Dimension
INTERNATIONAL DIMENSION

• One of the most fundamental functions of the TCP/IP (Transfer Control Protocol and Internet Protocol) protocols is the identification of the most efficient routing.

• This leads in an nearly uncontrollable way to international dimensions within data exchange processes.
CHALLENGE: DIFFERENCE TO TRADITIONAL CRIMINAL LAW