# REMOTE FORENSIC SOFTWARE

**Do investigators need an instrument to remotely access the computer of a suspect?**

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# STATEMENT

**"Observing private communication (by using remote forensic software) is indispensable for life."**

W. Schaeuble, Minister of the Interior, Germany

## THE CURRENT DISCUSSION

- Some countries do currently discuss if secret services, police and prosecution nee an instrument that enables them to secretly and remotely access computer systems
- Reports about the use of such software in Germany and the US were currently published





## GEMANY

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- The Federal Prosecution requested the permission to use a remote forensic software in criminal investigations
- The Federal Court of Justice refused the request by pointing out that there is no sufficient legal basis for such instrument in the current CPC
- Within the discussion about the need for such instrument it was discovered that such software was already used by the office for the protection of the prosecution.

## GEMANY

- Within the discussion it is important to divide between the authorities that should be enables to use the remote software:
  - Police (prevention of crime)
  - Prosecution (investigation and prosecution of crime)
  - Secret services

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## US

- In 2001 reports pointed out that the FBI developed a keystroke logger hat can be remotely installed on the computer system of a suspect
- In 2007 the FBI requested an order to use a software (CIPAV (Computer and Internet Protocol Address Verifier) to identify an offender that used measures to hide his identity while posting threatening messages

MAGIC LANTERN

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## POSSIBLE FUNCTIONS

The remote software could be used to:

- Search for evidence on the suspects computer
- Preservation of communication data
- Keylogger
- Activation of hardware that can be used for room surveillance
- Identification of the offender

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## SEARCH

- The software could be used to search for illegal content (child pornography, illegal copies of copyright protected artwork, illegal software)
- In general the physical access to computer systems enables more precise forensic analyses (especially maintaining the integrity of the computer system)
- The advantage of a software that is installed via the Internet is the fact that the suspect will often not recognise the ongoing investigation (similar to telephone surveillance)
- Questionable if a secret online installation is possible - Current plans of the BKA regarding the installation are based on physical access to the computer

## PRESERVATION OF COMMUNICATION DATA

- The communication data are in general not stored
- Within classic search procedures the investigator cannot access these information
- An option would be the interception of communication
- This can go along with difficulties if the communication partners use encryption technology
- The software could be used to store these communication data

VOICE OVER IP (www.skype.de)

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## KEYLOGGER

- By using a proper encryption software and an adequate key the offenders can prevent that investigators access stored files.
- A number of countries do therefore restrict the use of encryption technology
- The keylogger could be an option to restrictions of encryption technology as it would enable the investigators to identify the key

PGP (www.pgp.de)

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## ACTIVATION OF HARDWARE

- Installing surveillance hardware in the flat or office of a suspect goes along with the threat of detection
- The secret activation of hardware (microphone, webcam) could enable the observation without physical access to the flat

WEBCAM

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## IDENTIFICATION OF SUSPECT

- If the offender uses means of anonymous communication this can hinder the investigation
- Detecting the “real” IP-address of the offender could improve investigations

JAP

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## SUMMARY POSSIBILITIES

- The development of new technology allows the creation of new instruments
- A remote forensic software could improve the work of law enforcement agencies
- The permission to use the software could prevent broader prohibitions (ban on encryption technology and means of anonymous communication)





## QUESTION

Possible from a technical point of view = necessary ?

## TECHNICAL CONCERNS

- Installation of the software is a great challenge
- Circumventing protection systems might require the cooperation between law enforcement and private businesses
- This goes along with the fear that the maximising computer security is not in the focus of state anymore



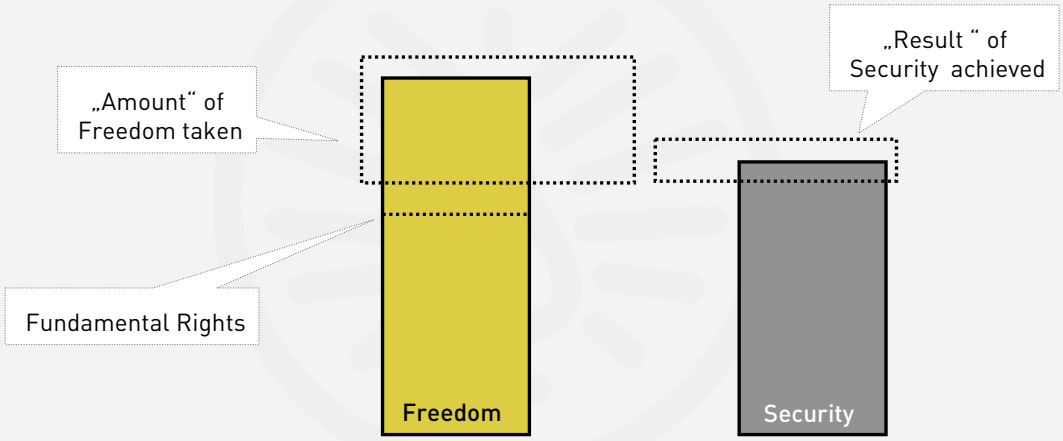


## LEGAL CONCERNS

- Protection of the suspect (retreating room)
- Which crimes justify the use of such intensive instruments?
- Depending on the use (investigation outside the territory) the instrument could violate the fundamental principle of national sovereignty

## LEGAL CONCERNS

- Well balanced adjustment








## LEGAL CONCERNS

- Most Cybercrime have an international dimension
- The current legislative approaches are only a **national approach**
- International investigations require a harmonisation of laws

## CONCLUSION

- There are serious legal and technical concerns regarding the use of such software
- It is not likely that it remote forensic tools will be useful in the majority of Internet cases
- If the instrument is implemented and limited to the most dangerous offences it could prevent the implementation of stricter laws





## CONTACT

THANK YOU FOR YOUR ATTENTION

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