



TF-CSIRT
TRANSITS

TRANSITS I

Legal Module

Presenter



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Learning Objectives



What CSIRT activities are covered by laws?

Why does this matter?

What are your responsibilities ?

What do you need to find out?

Session Plan

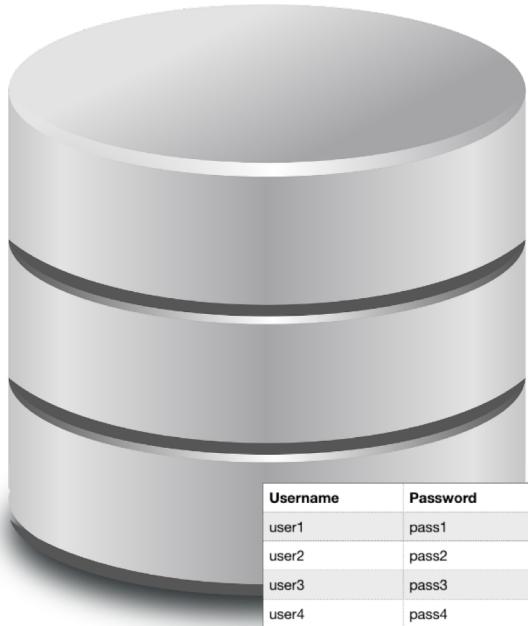


- Introduction
- Which Issues arise when it comes to ...
 1. CSIRTs and the Law
 2. Logging
 3. Looking at Content
 4. Scanning for Vulnerabilities
 5. Takedown Requests
 6. Working with Law Enforcement
 7. Working with Others
 8. Managing Vulnerabilities
- Homework



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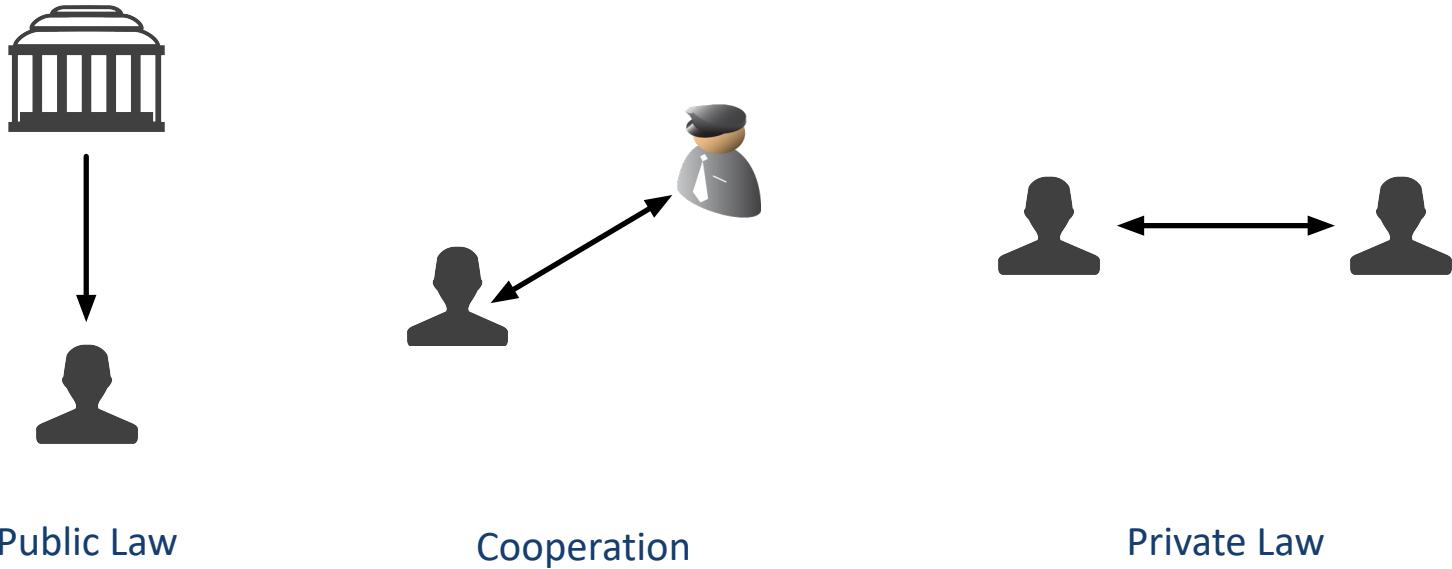
Part One: Introduction



- You receive a Dump with Username / Password.
 - It has been used to access a Site in the “Dark Web”.
 - Users are from your Organisation and others.
 - Police ask for a copy.
-
- What can / should / must you do?
 - ... your CSIRT?
 - ... your Organisation?

Learnings

- Legal issues are going to arise, whether you like or not!
- Old laws, new laws and ICT Laws.
- Different sets of law:
 - Public -> limiting societally bad things such as drugs, firearms, hacking.
 - Private -> on how one party can be required to repair damage it has caused to another.
- Cooperation -> requiring / allowing you to help state entities such as police.

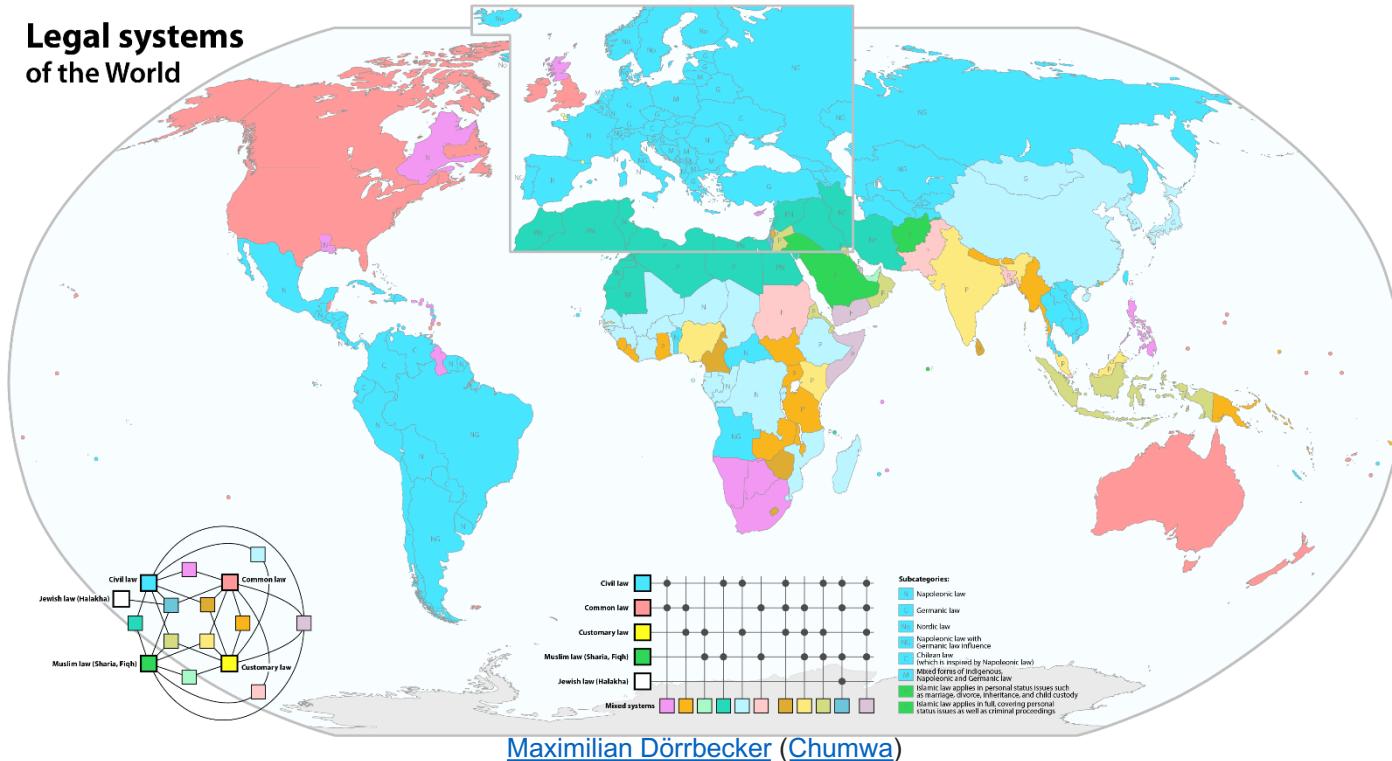


Law differ between countries



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Legal systems
of the World





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Part Two: Scenarios

Discussion 2: Logging



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- “Bad guys” have obtained username / password for some of your webmail users.
 - They are using credentials to send phishing e-mails to other local users.
 - You like to find out who’s compromised.
-
- What logs do you need for investigation?
 - What legal issues arise?

Logging

Learnings



- Logs contain personal data
- Only use logs you need for this investigation
- Process tell you which logs you need
- How long to keep them?

Variability



- EU + some states -> general personal data law (based on GDPR / Convention 108)
- US + some states -> based on sector-specific law
 - Health
 - Teaching
 - Video rentals
 - Financial



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European law (since 2018); influential elsewhere too.

Applies to all processing of personal data (including email/IP/MAC addresses).

Explicitly encourages incident response:

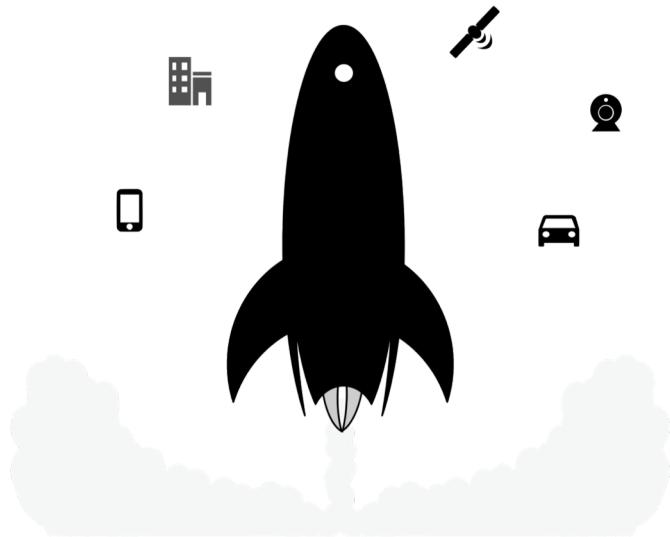
- Implicitly requires it, via breach notification.

Legitimate interest tests:

- Process minimum data required to achieve purpose.
- Ensure benefit of processing justifies risk to individuals.

Key point: Incident Response improves protection of users' personal data & privacy!

Discussion 3: Looking at Content



- A chip vendor for Mobilephones implements Fota Updater.
- The routine sends personal data to chip vendor's IP.
- Data transfer is unencrypted.
- You intercept traffic to specific IP Addresses (to determine scenario and users affected).

- What might you consider?
- What legal issues arise?

Looking at Content

Learnings



- Access to content more protected than access to metadata
- Inspect content only for specific investigations
- Need to implement safeguards
- Specific legislation on telecommunication
- European Convention on Human Rights (Art. 8)
 - Right to respect for private and family life, home and correspondence

Variability



- High as well between countries as between types of network
- Private / corporate vs. public / telecommunication



Discussion 4: Scanning for Vulnerabilities



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- A new DDoS amplification is discovered.
- You as CSIRT like to determine vulnerable devices / services.
- There is a login screen at Port 80.
- You try to access with default password libraries.
- Are your actions legal?

Learnings



- A lot of countries have “unauthorized access” laws
- It might depend on Purpose / Protected / Authorised / Harm

Variability



- High
- Law often unclear even within countries

Discussion 5: Takedown Request



- You receive a complaint about illegal Material on a website
- The website belongs to your constituency
- You've been asked to remove the content and prevent it from being republished
- What do you do?
- What material is illegal in your country?

Takedown Request



Learnings

- Different types are covered by different laws
 - Copyright, Software licensing. Terrorism. Hate speech. Cryptominers. Malware
- Requirements to prevent re-publication are rare but not unknown
- There may be types of material that you are required to report if discovered
- It might be that you are on the other side and like to take down from somewhere else

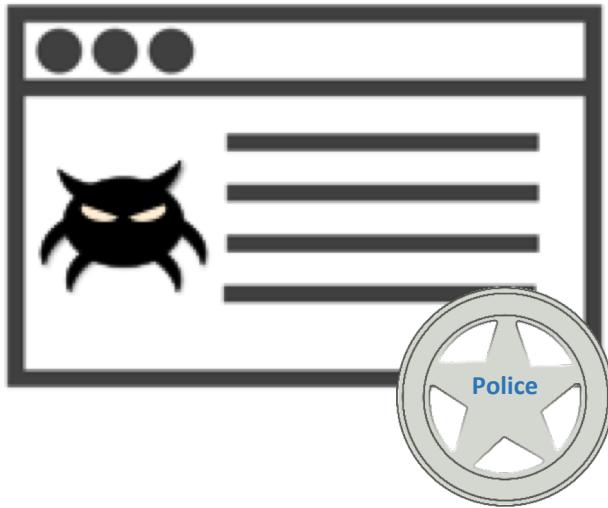


Variability

- High
- Depends on
 - Country
 - Type of material
 - Type of service



Discussion 6: Working with Law Enforcement



- Your Organisation runs its infrastructure in the cloud
 - A Server is compromised and distributes malware
 - The police ask for logs, billing information
 - The police ask for the malware
-
- Are you allowed to give away the data?
 - What changes if the police is foreign?

Working with Law Enforcement

Learnings



- National law may require / allow / prohibit disclosure to law enforcement
- International disclosure may additionally require you to think about
 - Mutual Legal Assistance
 - Cybercrime Convention
 - Bilateral treaties
 - US Cloud ACT
 - EU E-Evidence proposal
- Talk with the Police and your local lawyer

Variability



- Very High
- Based on
 - Countries
 - Types of investigations
 - Types of content

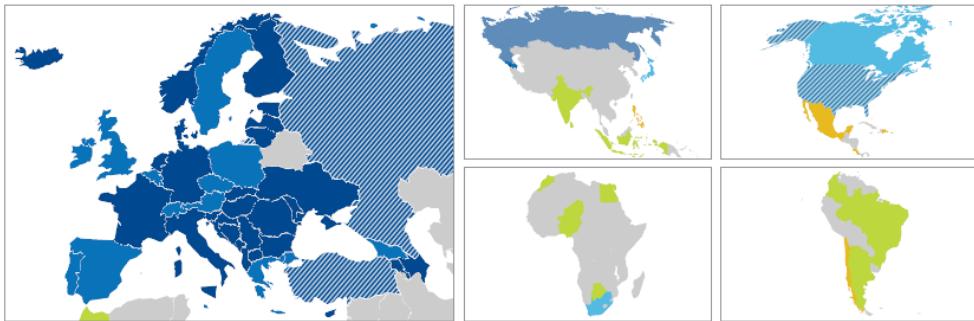


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Cyber Crime Convention (Budapest Convention)



Global reach of the Council of Europe Convention on Cybercrime



Countries party to the Convention

Council of Europe member states

Albania
Armenia
Azerbaijan
Bosnia and Herzegovina
Bulgaria
Croatia
Cyprus
Denmark
Estonia
Finland
France
Germany
Hungary
Iceland

Italy
Latvia
Lithuania
Moldova
Montenegro
Netherlands
Norway
Romania
Serbia
Slovak Republic
Slovenia
«the former Yugoslav
Republic of Macedonia»
Ukraine

Non Council of Europe member states

United States*

Signatory countries

Council of Europe member states

Austria
Belgium
Czech Republic
Georgia
Greece
Ireland
Liechtenstein
Luxembourg
Malta
Poland
Portugal
Spain
Sweden
Switzerland
United Kingdom

Non Council of Europe member states

South Africa
Canada*
Japan*

Countries which did neither ratify nor sign the Convention

Council of Europe member states

Andorra
Monaco
Russia
San Marino
Turkey



Source: Council of Europe.
19th March 2010

Countries that are known to use the Convention as a guideline for their national legislation

Non Council of Europe member states

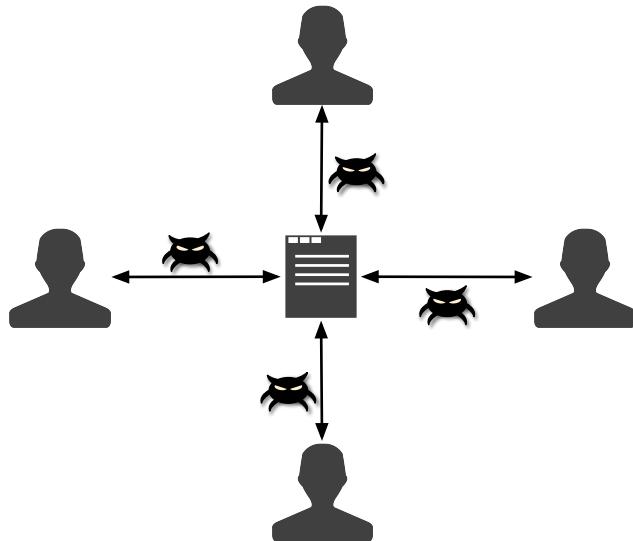
Argentina
Botswana
Brazil
Colombia
Egypt
India
Indonesia
Morocco
Nigeria
Sri Lanka

Non Council of Europe member states invited to accede

Chile
Costa Rica
Dominican Republic
Mexico*
Philippines

* observer countries

Discussion 7: Working with Others



- You analyzed a new piece of malware
- The malware was distributed through E-Mail
- You would like to share:
 - Pattern / Indicators of Compromise with other CSIRTs
 - Malware and infected E-Mails through MISP
- What could be the problem with sharing?
- How could you avoid this?

Working with Others

Learnings



- Risk of sharing must be justified by benefits
- Reduce risks by safeguards such as Traffic Light Protocol (TLP)
- Sharing Malware may raise "Hacking tools" issues

Variability

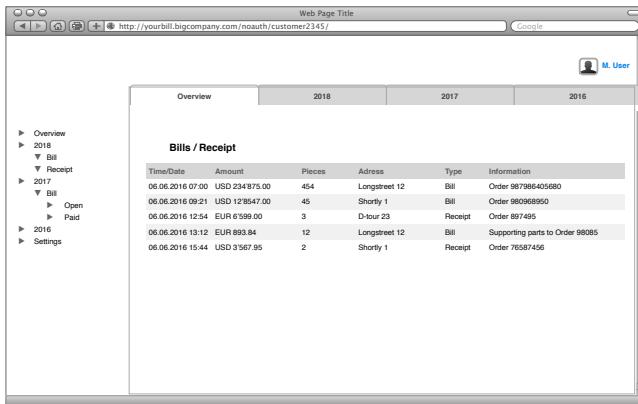


- Data protection / privacy issues relatively standard
- "Hacking tools" understanding might vary



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Discussion 8: Managing Vulnerabilities



- Two weeks ago someone report a vulnerability in your web application
- He used the main E-Mail Address of the organization
- He accessed details of customers by careful choice of URL
- Evidence was a screenshot
- E-Mail routed to corporate lawyers, who threatening to report to the police

- What legal issues arise?
- How could they been avoided?

Learnings



- Researcher appears to have been trying to help the organization
- Legal Department's response treats him as enemy
- Better to have published vulnerability report policy
- Liability might arise to individuals whose data are put at risk by the unfixed vulnerability
- Advanced issues including laws against reverse engineering of software

Variability



- Much of the work in Coordinated Vulnerability Disclosure done by organisations in the Netherlands
- Same approach should be applicable elsewhere





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Part Three: Homework



- Find out who is your legal adviser or who is in charge to support you
- Find out *and record* the law for your CSIRT, e.g.
 - Privacy / Data Protection & Monitoring
 - Scanning / Pentesting
 - Notice and Takedown
 - Rules for working with law enforcement
 - Information Sharing
 - Vulnerability Management / Vulnerability Disclosure Policy

Where to start at home



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- Prepare to recognise and handle legal notices
- Make sure policies & procedures support working lawfully



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**Thank you
Any Questions?**

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