

03+04 – Digital Rights

- Just to use Web Jargon, [IANAL](#) (I Am Not A Lawyer), and whatever you read in these slides (especially if you did not have a chance to follow this class, where I comment them) is not and should not be considered as a legal statement or advice.
- If you are interested in legal aspects of online communication, there is a whole class at USI about it (check [here](#)).

What are digital rights?

“... Permissions of individuals legitimately to perform actions involving the use of any electronic device and/or a communications network.”

- Related to existing rights such as right to privacy or freedom of expression/information...
- ... but at the same time involving concepts that have been totally twisted after the advent of digital technologies (think about copyright)

■ ... as built from the landscape ;-)

Accessibility Art **Civic Information** Civil Rights Connectivity
Copyright Copyleft Creative Commons Cyberrights Data Retention
Democracy Development Infrastructure Digital Identity Free
 Infrastructure Free Software Geodata **Hacktivism** Hardware Recycling
ID Cards IP ISPs Independent Media Intellectual Property Licencing
 Linux **Open Source** Open Standards
 Patents Philosophy Politics **Privacy** Publishing Radio **Regulation**
 Sarcasm Small IPS Issues Social Inclusion Software Patents Teaching
 Telecoms **UNIX** Wireless

Main issues (as identified from landscape)

- Copyright
 - Copyleft, Creative Commons, Intellectual property, Licencing, Geodata
- Privacy
 - Cyberrights, Data retention, Digital Identity, ID cards
- Free software
 - Intellectual property, Patents, Open source/standards, Linux/UNIX
- Free information
 - Civic information, Civil rights, Democracy, Hacktivism, Independent Media, Publishing, Radio, Teaching
- Free infrastructures
 - Connectivity, Development Infrastructure, Hardware recycling, Wireless

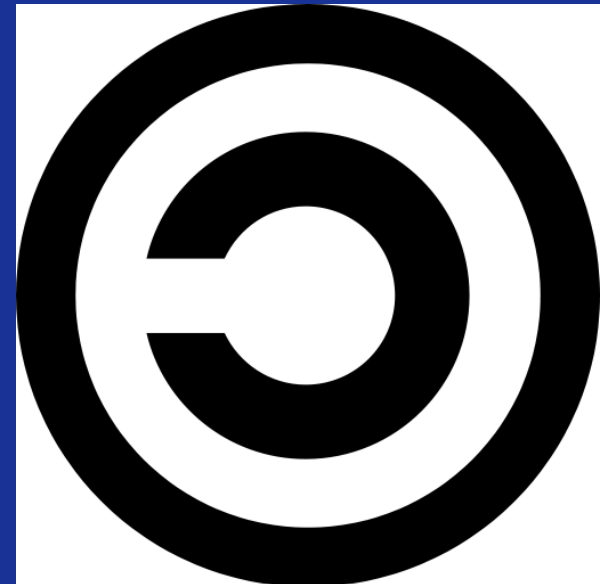
- How are copyright laws able to keep up the pace of new technologies?
- How is copyLEFT able to do so?
 - CopyLeft uses copyright law to offer the right to *copy, modify and distribute* a work, requiring the same rights to be preserved in the derivative versions
- Creative Commons License
 - Between “all rights reserved” and “no rights reserved”
 - A mix of the following:
 - Attribution
 - Share Alike
 - Non-Commercial
 - No Derivative Works

CopyLeft examples

- (some) free software licences
 - (only viral ones, i.e. GPL)
- Creative Commons Share-Alike
 - (cc-sa)

```
; *****  
;  
; TINY BASIC FOR INTEL 8080  
; VERSION 2.0  
; BY LI-CHEN WANG  
; MODIFIED AND TRANSLATED  
; TO INTEL MNEMONICS  
; BY ROGER RAUSKOLB  
; 10 OCTOBER, 1976  
; @COPYLEFT  
; ALL WRONGS RESERVED  
;  
; *****
```

■ **NOTE:** *Strong vs Weak CopyLeft*



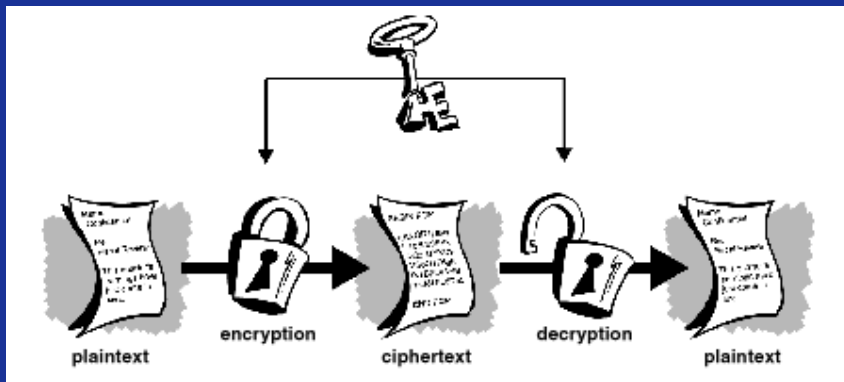
- How much information do we leave on the Internet when we access it? Who knows...
 - the websites we visit?
 - the contents of our emails?
 - our actions IRL? (Yes... technologies can be used to track us **in real life too!**)

- Anonymity
 - While browsing the Web
 - Anonymous proxies and networks (i.e. **Tor**)
 - Throw-away email accounts (i.e. **Mailinator**)
 - While sending emails
 - **Anonymous remailers**
 - PGP to cypher messages (**here** you can find an interesting paper about the history of legal limits on the key size)
 - In real life?

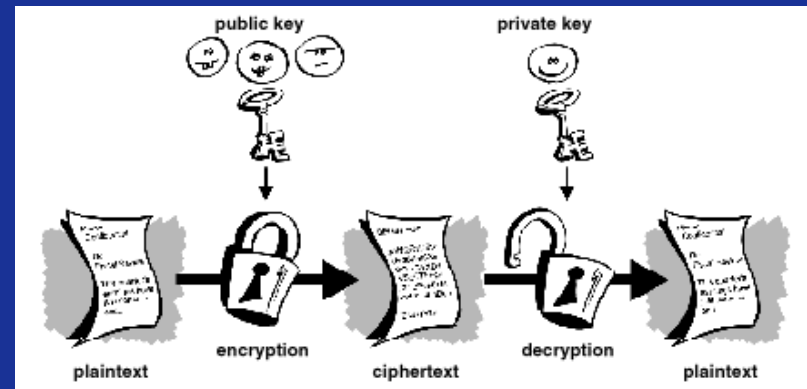
A quick kickstart to Cryptography

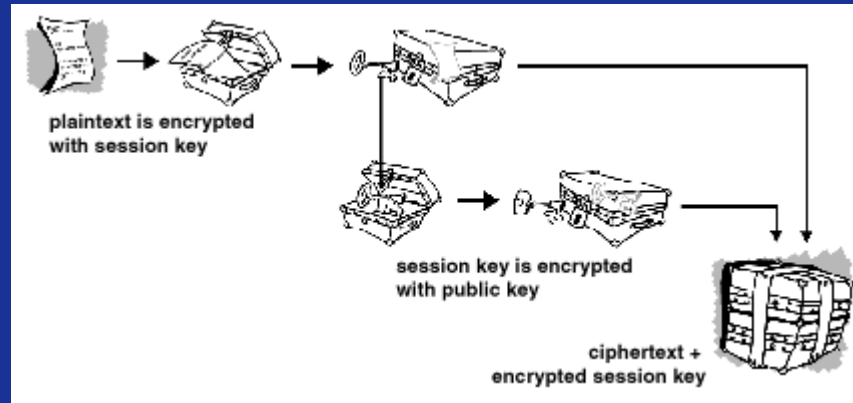
- Check the basics of cryptography [here](#). “Hot” terms:
 - plaintext/cleartext, ciphertext
 - encryption, decryption
 - cryptology, cryptography, and cryptanalysis
 - symmetric vs. asymmetric (or “public”) key encryption

Symmetric

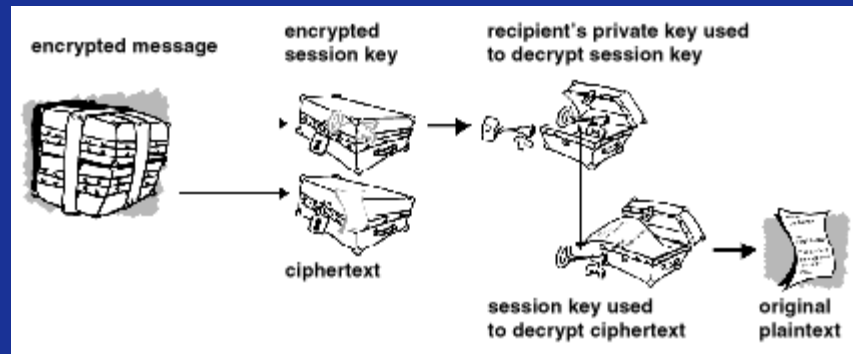


Asymmetric





- A 15-minutes tutorial to encrypt your emails with PGP!!!



Free Software

Free as in “free speech”... not as in “free beer”

- 1983: GNU project (GNU's Not Unix)
- 1985: Free Software Foundation
- 1989: General Public License (GPL)
 - *Freedom to run the program for any purpose.*
 - *Freedom to study and modify the program.*
 - *Freedom to copy the program so you can help your neighbor.*
 - *Freedom to improve the program, and release your improvements to the public, so that the whole community benefits.*



In 1984, at the first Hacker's Conference in Marin County, California, Stewart Brand said

*"On the one hand information wants to be expensive, because it's so valuable. The right information in the right place just changes your life. On the other hand, **information wants to be free**, because the cost of getting it out is getting lower and lower all the time. So you have these two fighting against each other."*

Since then, the "information wants to be free" sentence has been used many times, with different acceptations.

“Information wants to be free” can be interpreted in different ways

- Freedom to distribute information

- freedom of expression (i.e. against *ensorship*)
- independent media (i.e. [IndyMedia](#))
- anonymous publishing (i.e. [WikiLeaks](#), [Freenet](#))

- Freedom to access/share information

- standard, open formats (i.e. [OpenStreetMap](#))
- (anti) Digital Rights Management (see [Aaron Swartz's case](#))

- **DRM** is a term used to describe a set of technologies that can be used to control (limit) the access to digital content and devices
 - ... however, FSF foundation **suggests** to call it “*Digital Restrictions Management*”
- Examples:
 - CSS on DVD movies (cracked with **DeCSS** by Jon Lech Johansen in 1999)
 - Windows Vista's *Protected Media Path*
 - Sony's DRM technology for audio CDs, which installed DRM software (and a rootkit) on users' computers without their consent
 - Internet music, such as iTunes
 - Some ebook formats (copying, sharing, printing are limited). Amazon.com can remotely delete ebooks from its customers' Kindles

- Free (or low cost) internet
 - See: [Wireless community networks, gwifi](#)
 - ... Legal issues?
- Old hardware reuse
 - With [open source software](#) (search for [software equivalents](#))
 - For general or [ad-hoc](#) tasks
 - ... Software/compatibility issues?

■ Bibliography:

- Cory Doctorow: “[Content](#)” (selected essays)
- Cory Doctorow: “[Little Brother](#)” (fiction book)
- Mike Godwin: “[Cyber rights: defending free speech in the digital age](#)”
- Sam Williams: “[Free as in Freedom: Richard Stallman's Crusade for Free Software](#)”

■ Some Web references:

- <http://www.openrightsgroup.org/>
- <http://pws.winstonsmith.org/>
- <http://www.olografix.org/>
- About CopyLeft licences, see Eric Steven Raymond's “[Licensing HOWTO](#)”
- Davide Eynard: “[Crittografia e Statistica](#)”
- [How PGP Works](#)
- ESR: “[The Cathedral and the Bazaar](#)”