

# A Guide to Free and Open Source Software

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MELANIE GRAF, MLAW

# About me

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***Melanie Graf, [me.graf@unibas.ch](mailto:me.graf@unibas.ch)***

- Legal Counsel in IP
- Member of CCdigitallaw

## Research fields:

- IP in the context of new technologies, especially copyright, patent and data protection
- Free and Open Source Licenses
- Creative Commons Licenses

# Purposes

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- Follow-up to the Free and Open Source Software Podcast
- Discuss and answer questions related to free and open source software
  - please ask questions anytime 😊

# Content of the webinar

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- Computer programs: Source Code and Object Code
- Free and Open Source Software: Definition(s)
- Copyright
- Licensing
- Free and Open Source Software Licenses
- Allowed uses of FOSS
- Obligations and prohibitions when (re)distributing FOSS
- Permissive and Copyleft Licenses
- Price of Free and Open Source Software
- Compatibility of Free and Open Source Software Licenses

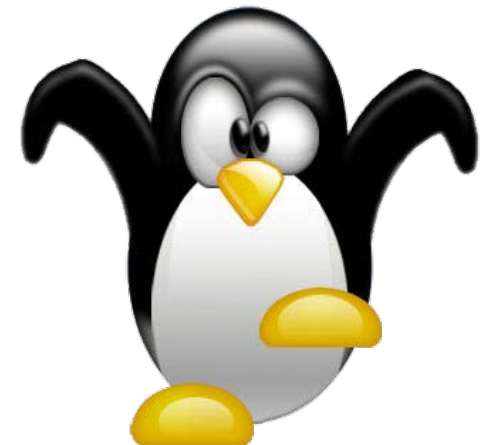
# Free and Open Source Software (FOSS)

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- Users are allowed and able to
  - **Run** the software
  - **Copy** the software
  - **Modify** the software
  - **Share/distribute** the copy and/or modification of the software
- What FOSS programs do you know or use in your daily life?

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- Prerequisites
  - Access to **source code** of the computer program
  - **License** to copy, modify and distribute the computer program
  - **No license fee**

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# What is a Computerprogram?

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“99 bottles of beer on the wall, 99 bottles of beer.

Take one down and pass it around, 98 bottles of beer on the wall.

98 bottles of beer on the wall, 98 bottles of beer.

[...]

1 bottle of beer on the wall, 1 bottle of beer.

Take one down and pass it around, no more bottles of beer on the wall.

No more bottles of beer on the wall, no more bottles of beer.

Go to the store and buy some more, 99 bottles of beer on the wall.”

→ Computer program to generate the more than 200 hundred lines of text of the song 99 Bottles of Beer

# Source Code

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```
#!/usr/bin/env python
# -*- coding: iso-8859-1 -*-
"""
99 Bottles of Beer (by Gerold Penz)
Python can be simple, too :-)
"""

for quant in range(99, 0, -1):
    if quant > 1:
        print quant, "bottles of beer on the wall,", quant, "bottles of beer."
        if quant > 2:
            suffix = str(quant - 1) + " bottles of beer on the wall."
        else:
            suffix = "1 bottle of beer on the wall."
    elif quant == 1:
        print "1 bottle of beer on the wall, 1 bottle of beer."
        suffix = "no more beer on the wall!"
    print "Take one down, pass it around,", suffix
    print "--"
```

**Source:** <http://99-bottles-of-beer.net/language-python-808.html>;  
<http://gerold.bcom.at/>

**Author:** Gerold Penz

**Date:** 23.07.2005

# Source Code

- Understandable for humans
- Modifiable
- Not understandable for computers
- Can be trade secret/know-how (you do not need it to run a computer program)



CC0 image, retrieved from: <https://www.pexels.com/photo/close-up-code-coding-computer-239898/>

# Object Code

- Translated from Source Code
- Zeros and Ones
- Other terms: *machine code* or *binary*
- Executable or understandable for computers
- Not understandable for humans therefore not modifiable
- Reverse engineering very difficult if not impossible



CC0 image, retrieved from: <https://pixabay.com/en/binary-hands-keyboard-tap-enter-2450188/>



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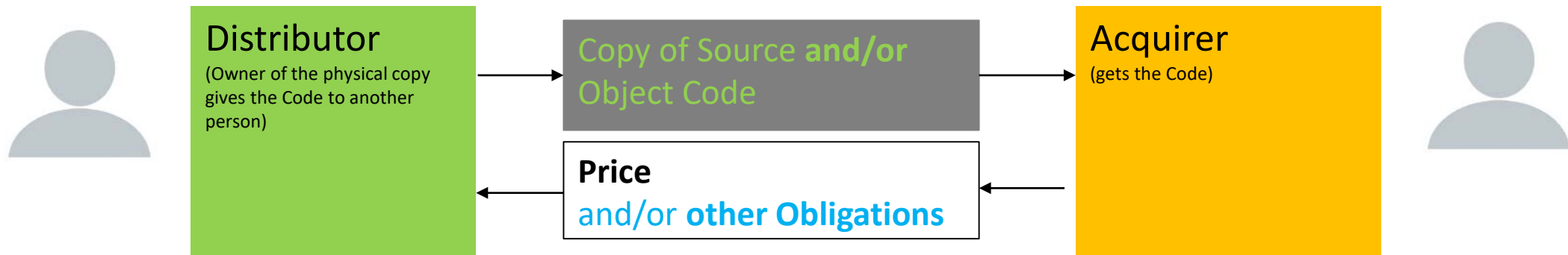


Google Play

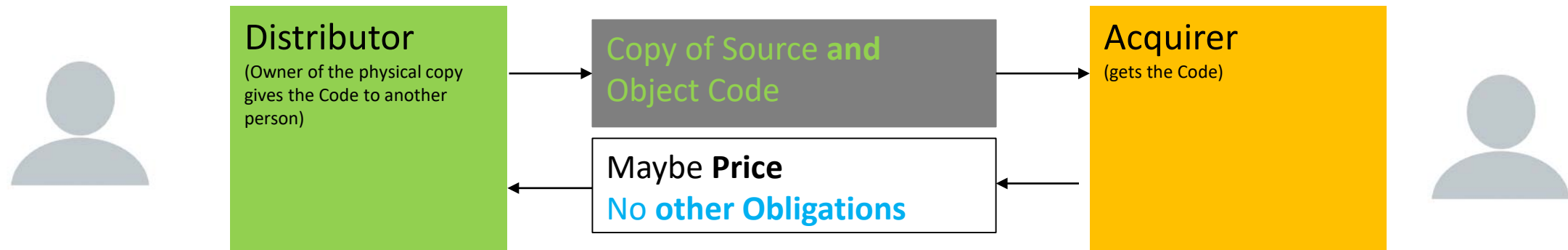


# Transfer of software

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# Transfer of FOSS



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# Copyright and Software

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- Works:
  - «literary and artistic intellectual creations»
  - with an «individual character»
  - for example a computer program (Source Code and Object Code)
- Bundle of exclusive rights to use
  - Right to **copy** the work
  - Right to **distribute** work
  - Right to **modify** the work
  - (Moral rights)
- Owner of the copyrights: Creator or Employer of the Creator



# Question

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1) Is every computer program protected by copyright law?

- a) Only computer programs with an individual character are protected by copyright law
- b) Every computer program is protected by copyright law
- c) Computer programs are not protected by copyright law, because they are not literary and artistic

# Question

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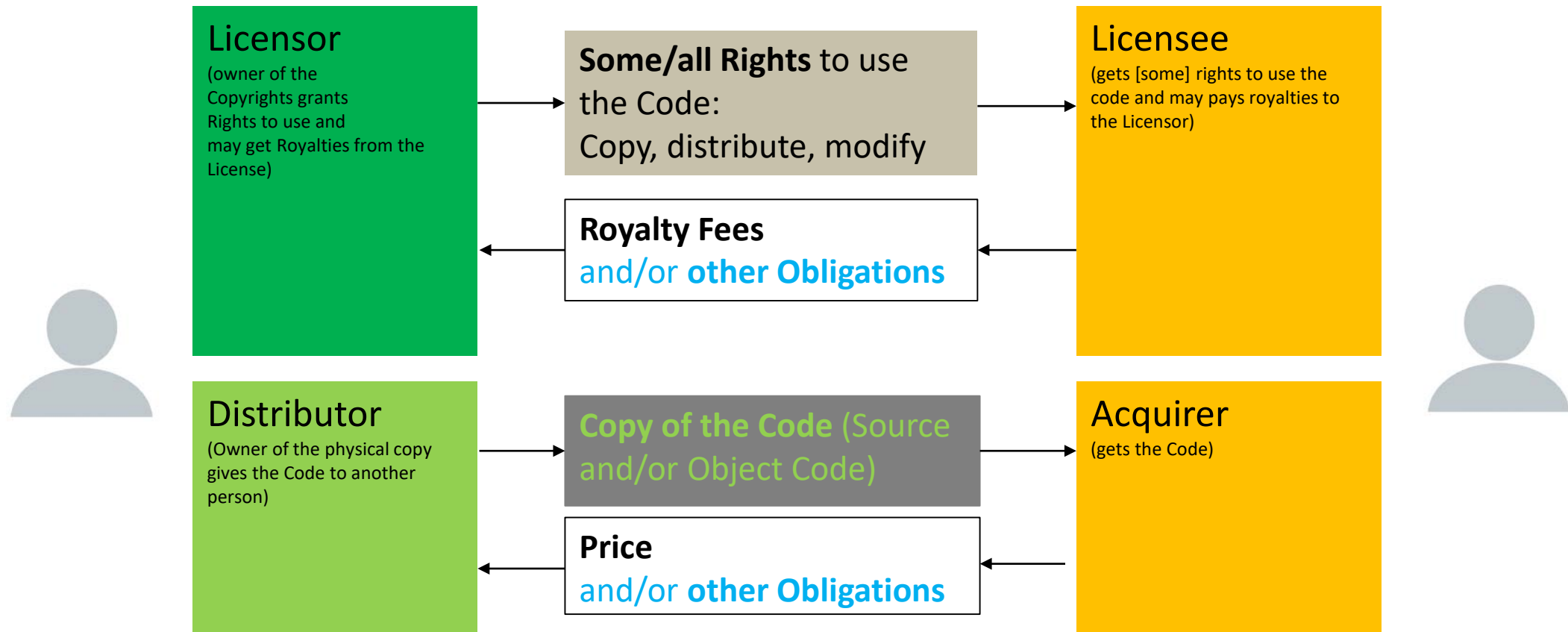
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# Licenses

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- Grant of exclusive rights
- Allows other people to use the exclusive rights
- No license = exclusive use by owner of the copyrights

# Software Licenses



# Question

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1.2) How do you know a computer program is FOSS?

- a) I can download the source code
- b) the computer program is licensed under a FOSS-License
- c) Wikipedia says so

# Question

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# FOSS Licenses' Definition(s)

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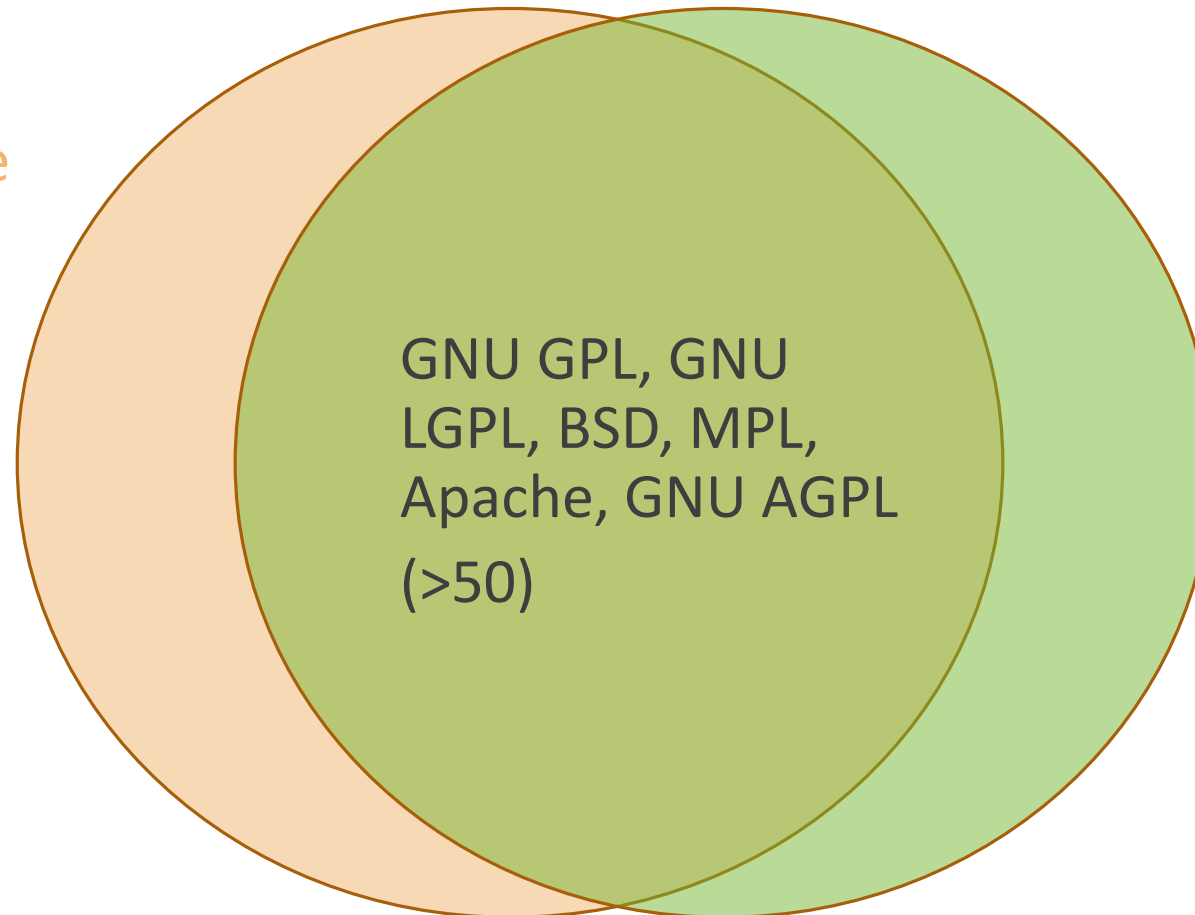
- Free Software (Licenses):
  - Freedom 0 – the freedom to use the work,
  - Freedom 1 – the freedom to study the work,
  - Freedom 2 – the freedom to copy and share the work with others,
  - Freedom 3 – the freedom to modify the work, and the freedom to distribute modified and therefore derivative works.
- Open Source Software (Licenses):
  - 10 criteria, including the right of distribution, the right of creating derivate, etc.

# Free and Open Source Software Licenses

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## Free Software Licenses

List of approved licenses:  
<https://www.gnu.org/licenses/license-list.html>



## Open Source Software Licenses

List of approved licenses:  
<https://opensource.org/licenses/alphabetical>

# Free and Open Source Software Licenses

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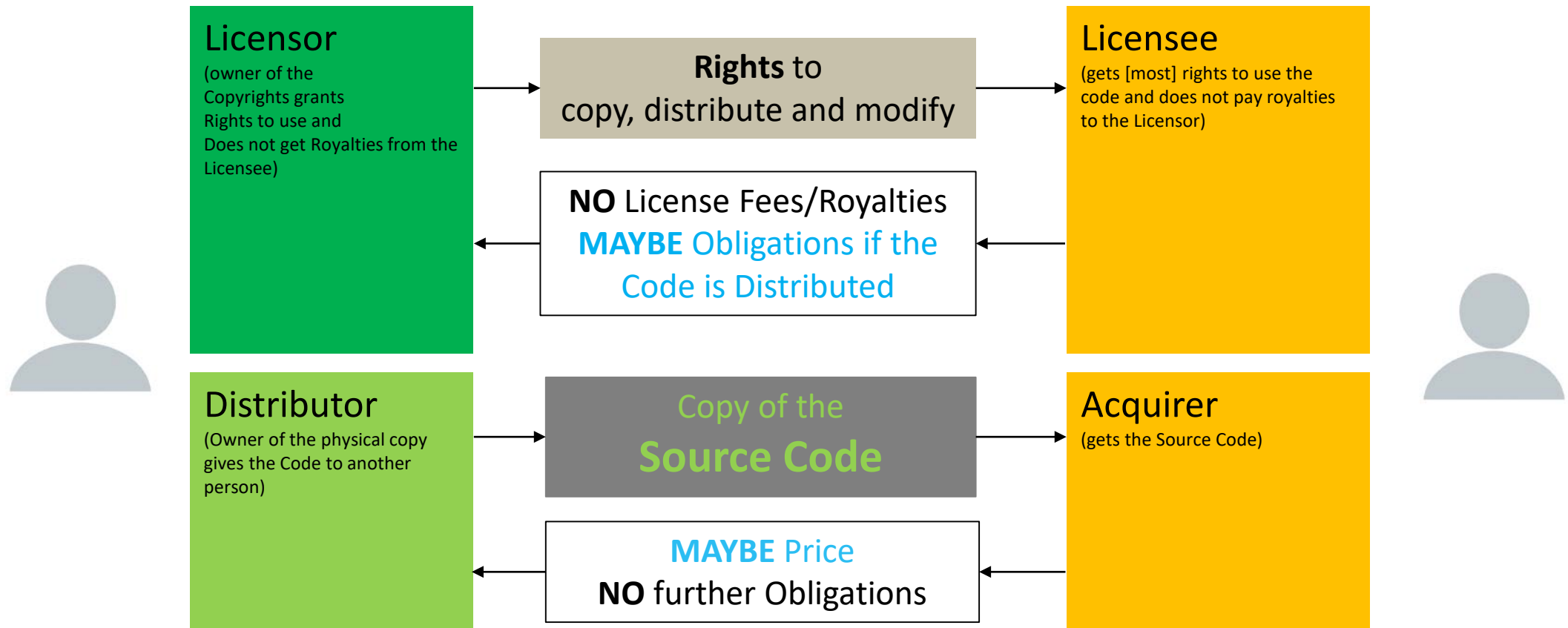
- Content of FOSS Licenses:



The **Licenser** grants

- Access to the Source Code of the Program
- The Right to run the Code
- The Right to modify the Code
- The Right to distribute the verbatim and changed Copies of the Code
- Without claiming license fees for the granted rights (royalty-free)

# FOSS Licenses



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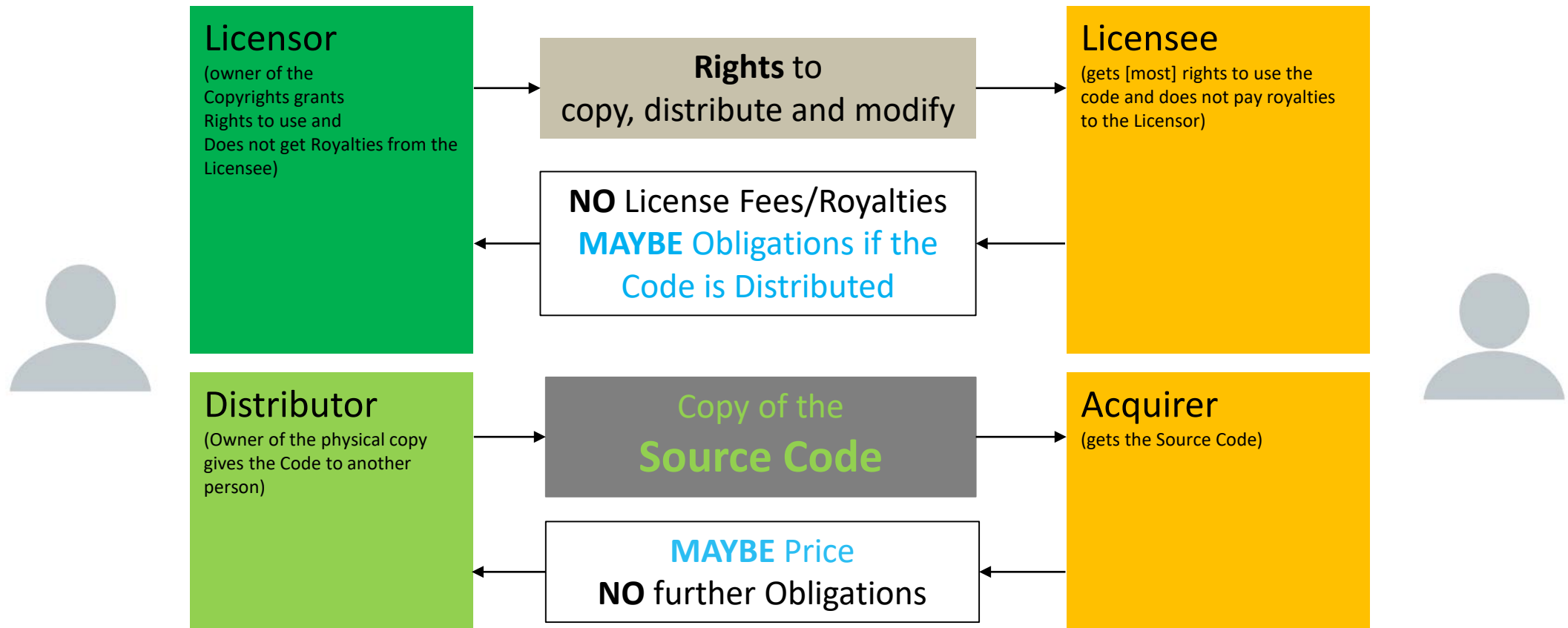
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# FOSS Licenses



# Question

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2) Are you allowed to sell free and open source software for a price?

- a) It depends on the license
- b) No, free and open source software is always free of charge
- c) Yes, you are allowed to sell free and open source software



# Question

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- b) No, free and open source software is always free of charge
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# No further restrictions

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- Users are allowed and able to
  - **Run** the software
  - **Copy** the software
  - **Modify** the software
  - **Share/distribute** the copy and/or modification of the software
- No circumvention through other means
  - Licensing fees
  - Legal prohibitions through contracts (eg. NDA for Source Code, general conditions that prohibit distributions..)
  - Technical barriers (DRM)

# Distribution of verbatim Copies of Code

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- Obligations when distributing copies of FOSS-Code:
  - Attribution
  - Attach or better include license agreement in code[this is how you know it is an free and open source software]
  - Disclaimers and warranties
  - Copyright notices
  - Each FOSS License may be different.  
Eg GNU GPL: access to source code if distribution of object code
- Scope of the term « distribution »



# Questions

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3) Why is it important to keep the license of a FOSS-program intact?

- a) This is not important at all
- b) Its important that receiver of copies of the program get the rights to copy, distribute and modify the computer program
- c) Its important

# Questions

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3) Why is it important to keep the license of a FOSS-program intact?

- a) This is not important at all
- b) Its important that receiver of copies of the program get the rights to copy, distribute and modify the computer program
- c) Its important because it is the only way to know what uses are allowed

# Questions

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4) What happens when you forget to attach a FOSS license to the code?

- a) The computer program will not be free and open source
- b) The receiver of a copy will not be allowed to copy, distribute and modify the computer program
- c) You can get a penalty

# Questions

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4) What happens when you forget to attach a FOSS license to the code?

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# Breach of FOSS obligations

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- Different for each license
- Automatic termination of the license:
  - No right to copy, modify and distribute
  - Copyright infringement!
- Redemption clause



# Questions

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5) What obligations do you have when you run the computer program on your computer?

- a) None, because I do not need a license to use it
- b) None, because I do not distribute it
- c) I have to use a free and open source software license

# Questions

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5) What obligations do you have when you run the computer program on your computer?

- a) None, because I do not need a license to use it
- b) None, because I do not distribute it
- c) I have to use a free and open source software license

# Permissive and Copyleft Licenses

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- Obligations to license modified FOSS-Code when distributing the modified Code:

- NONE (permissive FOSS Licenses)

→ free in your choice on how to license

- SOME (copyleft FOSS Licenses)



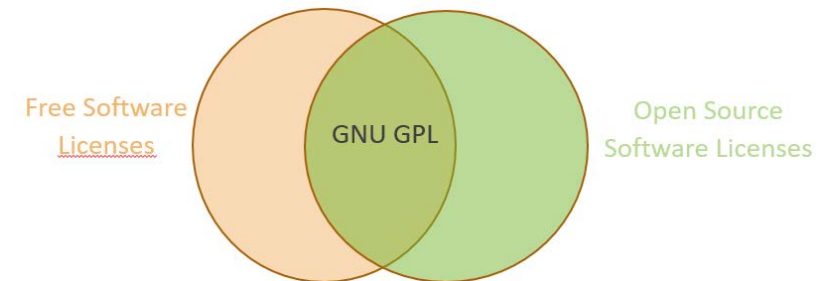
→ Distribution of modified FOSS-Code only under the same or a compatible License

# Copyleft-Clause in GNU GPL v2



Copyleft for:

- «work based on the Program »
  - The Program
  - Derivative work under copyright law
    - A work containing the Program
    - A work containing parts of the Program
    - Modifications
    - Translations into other languages
- Code sections that are distributed as part of a whole



# Copyleft-Clause in GNU GPL v2

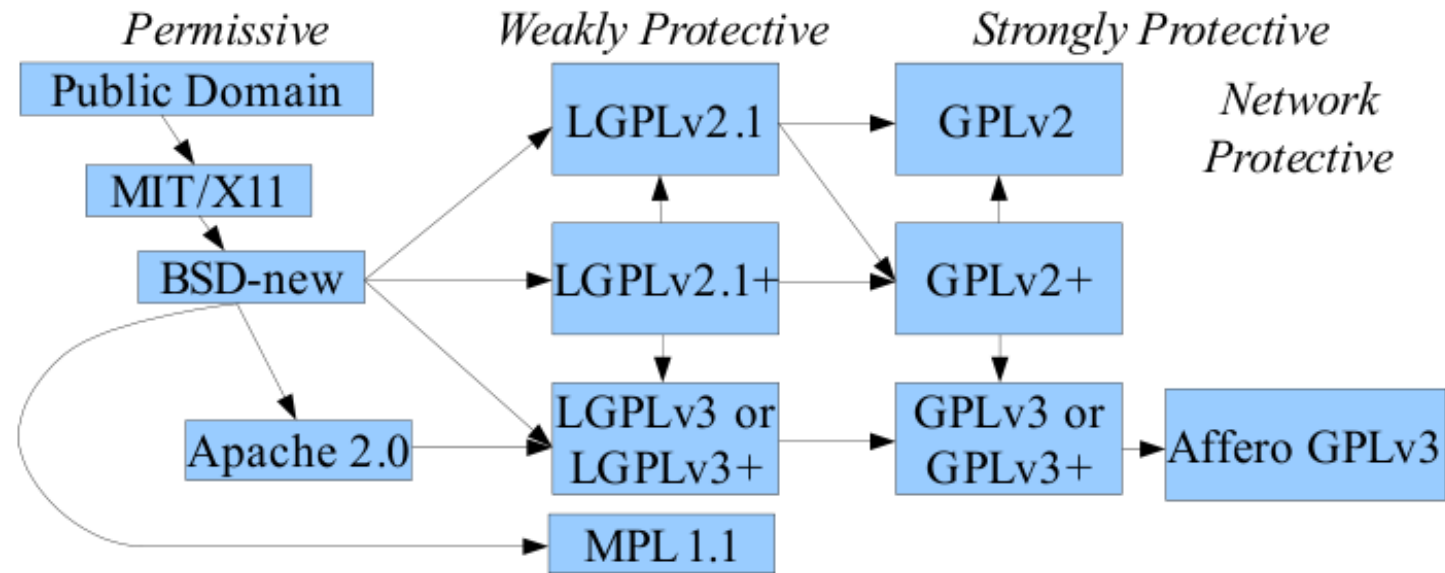
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No Copyleft for code sections:

- Identifiable section of the code
- Not derived from the Program
- Can reasonably be considered independent and separate from the GPLv2-Code
- Section is distributed as a separate work (not necessarily on a different volume of a storage or distribution medium)

# Compatibility of FOSS Licenses



**Source:** <https://www.dwheeler.com/essays/floss-license-slide.html>

**Author:** David A. Wheeler,

**Date:** 27 September 2007

**License:** Creative Commons "Attribution-Share Alike 3.0 License" (<https://creativecommons.org/licenses/by-sa/3.0/deed.en>); the GNU Free Documentation License; or the GNU GPL (version 2 or later)

# Case-study

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You have written a computer program and distributed it under a copyleft free and open source software license.

Now you want to use parts of that computer program in another computer program, but you want to keep the source code of this program closed.



6) Are you allowed to do that?

- a) Yes, because I am the owner of the copyrights
- b) No, because the copyleft license obliges me to grant access to the source code

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# Any questions?

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Feel free to ask 😊

# Synthesis

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## Free and Open Source Software

- two definitions
- many different licenses
- permissive and copyleft licenses

FOSS ≠ without condition

- Comply with the license terms

**→ ALWAYS READ THE LICENSE!**

# Next Webinar: Copyright and Social Media

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- General conditions of use of social media
- Basics of copyright applied to the use of social media
- Publishing a copyrighted work in social media

Save the date!

Tuesday, 26 June 2018, 11:00-12:00

# Thank you for listening!

If you have any questions, please write to:  
[info@ccdigitallaw.ch](mailto:info@ccdigitallaw.ch)