

FAQ: open-source software (OSS)

1. What is the difference between OSS and proprietary software?

- The use, redistribution or modification of proprietary software is prohibited or severely restricted. One of the features of proprietary software is that its source code is not made accessible.
- With OSS, on the other hand, the source code is made available under licence conditions which ensure that the source code is freely available and can be edited by anyone.

2. Can anyone do what they want with my software?

- No. You are still in charge of your source code, but other people can make suggestions of various kinds, such as introducing new features or fixing bugs. Depending on the licence, other people can use your code without any restrictions or they have to acknowledge you or put every change to the code online under the same licence as well.

***Note:** the recommendation issued by the Free Software Foundation is to maintain a proper copyright notice and licence notice in every non-trivial file (more than 10 lines of code).¹*

3. How does OSS differ from other types of “free” licence?

- Many OS licences have certain similarities with other types of licence. This is why it is important to be precise in defining the differences:
 - ✓ **Freeware:** freeware is available free of charge and may also be redistributed. Unlike OSS, however, freeware is usually delivered without source code and people are not allowed to make changes and develop the software.
 - ✓ **Shareware:** this is ordinary proprietary software which is offered free of charge in a test phase. In order to be able to continue using the software after the end of the test phase, the relevant charge must be paid. Shareware is also supplied without source code and may not be modified.
 - ✓ **Public domain software:** this originated in the USA and is based on the principle that copyrights are completely waived. Under German law, however, it is not possible to relinquish copyright, therefore a public domain licence is interpreted as a straightforward right of use in Germany which allows unlimited exploitation of the software.

Here is an example of how to deal with OSS which is offered under a GPLv3.0 licence:

BAM would like to use the “OSTA” software so as to be able to organise and link files on a computer in a clearly manageable way. BAM has various plans as to how it wishes to use the software:

- 1) Usage: the software would be installed on its own PCs and used there to organise its own

¹ https://www.gnu.org/prep/maintain/html_node/Copyright-Notices.html

- files.
- 2) Editing: BAM wants to change the source code of “OSTA” in order to adapt the functions to its own needs (“customise”) and then use the software for its own purposes.
 - 3) Redistribution: having edited and optimised the software, BAM wants to place this version of the software on its website for third parties to download.

The following legal issues must be taken into account by BAM if “OSTA” is licensed under GPLv3:

re 1) Usage

The basic use of the software is in no way restricted by the GPL (section 2 paragraph 1 sentence 2 GPLv3). Usage here means loading the software into the main memory and running the source code. BAM can therefore use the program at will and is not required to take anything else into consideration.

re 2) Editing

BAM is not subject to any restrictions in the editing of the software either (section 2 paragraph 2 GPLv3). It can modify the “OSTA” software as it wishes and use it afterwards without any restrictions.

re 3) Redistribution

The conditions under which BAM may offer the modified version of the software for download on its own website are set out in section 5 GPLv3. According to this, the following conditions must be met when distributing a modified version of the software:

- **Copyright notice:** according to section 5 in conjunction with section 4 GPLv3, the modified version of the software must contain a copyright notice acknowledging the author of the “OSTA” software.

Example for Python:

```
# Copyright (C) 2018, 2019 Max Mustermann <max.mustermann@bam.de> -  
Bundesanstalt fuer Materialforschung und -pruefung  
#  
#This program is free software; you can redistribute it and/or modify  
# it under the terms of the GNU General Public License as published by  
# the Free Software Foundation; either version 3 of the License, or  
# (at your option) any later version.  
#  
# This program is distributed in the hope that it will be useful, but  
# WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY  
# or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License  
# for more details.
```

- **Modification notice:** under section 5 a) GPLv3, the modified version of the software must contain a notice stating that it has been modified and adding by whom and when it was modified.
- **Notice on licensing under GPL:** under section 5 b) GPLv3, the modified version of the software must contain a prominent notice that it is licensed under GPLv3.
- **Legal notices in the software:** anyone purchasing the program must be given information on the legal situation, not only during the purchase transaction but also during the actual use of the program, provided that the program has interactive user interfaces. BAM must

therefore *incorporate* a menu item with legal notices in its modified version.

4. Is OSS always free of charge?

- The source code must be freely available under an OS licence. It is still possible, however, to sell and charge for a compiled executable file, a consulting service or the installation of a new function.

5. What advantages do I have as a programmer to put my source code under an OS licence?

- You are sharing the code with other scientists or programmers in the respective community.
- You can have a DOI number assigned to certain software versions so as to facilitate citation at any given time.
- You are making the work available for future generations.
- You are publicly demonstrating your programming skills, which may be of interest to future employers.
- When selling proprietary software, BAM must guarantee maintenance and support to the customer. If BAM cannot meet this commitment, it is obliged under copyright law to disclose the source code.
- It is also the case that more and more funding programs (e.g. DFG, EU) are stipulating that software must be made available as OSS.

6. Can I integrate OSS into proprietary BAM software without it becoming OSS?

- The question to ask is whether OSS was integrated in the software or whether it was written on the basis of OSS. The conditions set out in the relevant OS licence used will then be dispositive. The copyleft effect is the key factor in this case:
 - ✓ In the case of licences without copyleft effect (known as permissive licences), the respective OSS can be integrated into the proprietary product without forcing a situation whereby this product would have to be distributed under the OS licence of the OSS. It may be necessary to include a copyright notice in your software.
 - ✓ In the case of licences with a strict copyleft effect, such as GPLv2, there is a proviso that processing and reproduction are strictly subject to full disclosure of the new source code.
 - ✓ In the case of licences with limited copyleft effect or those with selection options and special rights, the specific terms of the licence must be examined on a case-by-case basis. The limitation of the copyleft effect often consists, for example, in the fact that the source code of the proprietary parts of the software does not have to be published.

7. Which OS licences make sense in my case?

- This will depend on the type of your program and its intended use. There are OS licences with different restrictions. Some OS licences allow the source code to be reused in proprietary projects subject to acknowledgement. This applies to the BSD License or MIT License, for example. If there is a stipulation that source code modified by others must also be published under an OS licence, this is called the copyleft effect. The copyleft effect applies to the GPL. The BAM Infoportal has explanatory notes on three OS licences which we recommend for our software.
- Another site which may be of assistance in the search for the right OS licence for your own software is choosealicense.com.

FAQ: Open Source Software (OSS) – an excursus on the law

1. What points do I have to consider if I want to license proprietary BAM software as OSS?

- The primary consideration for anyone wanting to make proprietary BAM software available under an OS licence is the preferred type of licence.
- Software enjoys copyright protection² in Germany, and this applies to both the source program and the target program. The scope of this protection is defined in precise detail in sections 69c and 69d of the German Copyright Act (Urheberrechtsgesetz - UrhG): the holder of the rights has the exclusive right to copy, edit, distribute and publicly reproduce the software.
- The author can grant a non-exclusive right of use³ for anyone free of charge. This is even explicitly stated in the so-called Linux clause⁴. This right does not have to be granted in full, but can be limited in respect of place, time or content⁵.
- This means, in principle, that a contract of donation is concluded with each user of the software provided free of charge⁶. Each user is granted a non-exclusive right of use⁷ through the contract of donation although this right is usually limited by certain terms of use. The exact terms of use (= the licence conditions) become part of the contract as general terms and conditions, insofar as they have been effectively included. The licence conditions are then binding. In the case of OS licences, it is common practice to include a resolutive condition in the contract for infringements of the terms of use. Any infringements will then result in the contract becoming null and void and the right of use being rescinded retroactively.

2. What legal consequences do I face if I breach the OSS terms of use?

What claims do I or BAM have if someone violates our OS licence?

- A violation of the OSS licence conditions constitutes an infringement of copyright. This is because the rights of use to OSS are granted under the resolutive condition that the licence terms are not violated. In this case the user will lose the right of use, and you or BAM will be able to assert claims⁸ for injunctive relief, information, compensation and, where applicable, reimbursement of warning notice costs.

What claims do project partners or other third parties have if I or BAM violate OS licences?

- There is a risk of problematic consequences if BAM uses OSS in its products, programming or output and gives them to project partners or other third parties without informing them of this. The project partner or other third parties cannot surmise that they are dealing with OSS. If the project partners or other third parties violate the licence conditions then the holder of the rights can also assert claims against the project partners or other third parties for injunctive relief, information, damages and, where applicable, reimbursement of warning notice costs. The project partners or other third parties will then in turn call on BAM and claim damages from BAM.
- Furthermore, any uncoordinated use of open-source elements (especially those with copyleft effect) in software for project partners or other third parties may constitute a legal

² §§ 2 Abs. 1 Nr. 1, 69a UrhG

³ § 31 Abs. 2 UrhG

⁴ § 32 Abs. 3 S. 3 UrhG

⁵ cf. § 31 Abs. 1 S. 2 UrhG

⁶ § 516 BGB [German Civil Code (Bürgerliches Gesetzbuch - BGB)]

⁷ As defined in § 31 Abs. 2 UrhG

⁸ cf. §§ 97 ff. UrhG

defect⁹ to BAM and serve as a basis for warranty claims by the relevant project partner or the other third party.

Note: when passing on or distributing proprietary BAM software, remember to inform your project partners or other third parties about the use of the OS components. It is advisable to document the use of OSS right back at the programming stage.

3. What rights do I have as a developer of OSS?

- If you work with OSS and add your own source code to it, you are producing your own adaptation and this is protected like an independent piece of work¹⁰. As a general principle, the editor of a piece of software can therefore decide on the product of the adaptation process as on a piece of work produced completely independently.
Note: the original software will remain independently protected. The editor does not acquire any rights to the original software through the adaptation.
- If OSS is combined with other components, however, the resulting work is a collection¹¹. Like adaptations, collections are also protected like independent works.
- If several programmers work on the software, as is usual in open-source projects, the result is often co-authorship of the adapted software. This is the case if each developer makes a creative contribution to the software – however small – and the respective shares in the software cannot be used separately.
- It is not necessary for the contributions to be made jointly or even simultaneously, as long as they fit into the overall concept of the software. In exceptional cases, individual parts of the software can be exploited independently of the rest of the software, therefore these are not cases of joint authorship. The programmers have the sole copyright with regard to their parts of the software and therefore they can basically do with them as they wish. The software in its entirety, on the other hand, is a compound work as defined in § 9 UrhG, and the developers have thereby become partners in a BGB company which is a partnership organised under the German Civil Code (BGB-Gesellschaft)¹².
- As a basic principle, authors have free rein to do with their works as they wish. They are entitled to the entire spectrum of rights under §§ 11 ff. UrhG. With OSS, this freedom does not exist in practice, at least not with OS licences with a strict copyleft effect. In this case, the licence conditions of the original OSS dictate how editors may exercise their copyrights. They are therefore not at complete liberty in this respect. If they violate the terms of use, they risk adverse legal consequences.

9 As defined in § 435 BGB

10 § 69c Nr. 2 S. 2 UrhG in conjunction with § 3 UrhG

11 As defined in § 4 Abs. 1 UrhG

12 As defined in §§ 705 ff. BGB