



Tutorial: Licenses



Licenses

In this tutorial, common licenses for open data and software are described and their significance for the processing of open geodata is explained..



Introduction

Basic terms

The term "license" is used in everyday life in a wide variety of contexts. The Duden (<https://www.duden.de/rechtschreibung/Lizenz>) defines licenses as "[permission granted for a fee] legally binding (e.g. for the exercise of a trade, for the use of a patent, for the translation or takeover of a work)". A license thus establishes a contract between a licensor and a licensee for the use, for example, of patents, software products or playback rights for music. A license agreement regulates the terms of use in a binding manner. Copyright uses the term "right of use" instead of "license". In copyright law, the copyright symbol © in conjunction with a copyright notice designates a protective right.

The diversity of licensing models and their legal nuances make interoperability and the promotion of openness in society, business, administration and science more difficult. In the Open XX course part, the licenses for open data in OpenGovData were evaluated (<https://learn.opengeoedu.de/openx/vorlesung/open-govdata/formate#formate-und-lizenzen>). Three license families, CC, Deutschlandlizenz and DCAT, dominate, so we will discuss them here.

Free content, also known as open content, is content whose free use and further distribution is permitted by copyright law, e.g:

- Media, e.g. texts, images, music, films, animations and models
- Software: often subsumed under the term Open Source, see Open Source in course part Open XX
 - <https://learn.opengeoedu.de/openx/vorlesung/open-source#open-source>
- Data: see Open Data in course part Open XX
 - <https://learn.opengeoedu.de/openx/vorlesung/open-data#open-data>
- Publications: see Open Access in course section Open XX
 - <https://learn.opengeoedu.de/openx/vorlesung/open-access#open-access>
- Learning and teaching materials: see Open Educational Resources in the Open XX course section.
 - <https://learn.opengeoedu.de/openx/vorlesung/oer#open-educational-resources>

In the following we limit ourselves to free licenses for software and data. An overview for data licenses can be found at <http://opendefinition.org/guide/data/>.

Free Licenses

A free license is a user license that allows the use, redistribution, and modification of copyrighted works. Common licenses are:

- Creative Commons (CC) / generally usable
- GNU General Public License (GPL) / specialized for software
- Open Data Commons (ODC) / specialized for data collections
- Data license Germany / specialized for administrative data in Germany
- DCAT / actually a metadata structure for open administrative data

License overview

In the License Center of the Institute for Legal Issues of Free and Open Source Software (ifrOSS at <http://www.ifross.org/>), licenses for Free Software, Open Source, Open Content, Open Data, and Open Source Hardware are collected and assigned to different license types in order to make them easy to find and characterize. This applies to the following categories:

- Free Software and Open Source Licenses
- Open Content Licenses
- Open Data Licenses
- Open Hardware Licenses
- Other Free licenses
- Similar licenses that do not meet the requirements of the Open Source Definition.


Licenses for data







Creative Commons

Creative Commons (<https://creativecommons.org/>) is a global non-profit organization founded in 2001 to help creators of creative works digitally distribute their creations in innovative ways. Creative Commons does not only apply to data, but is often used for (geo-)data.

Under the buzzword "Some Rights Reserved" Creative Commons offers a number of licenses, which allow an extensive use of the content, but leave certain exclusive core rights to the licensor. All Creative Commons licenses have many important features in common. Each license helps authors (licensors) to retain their copyright while allowing others to copy, distribute, and otherwise use their work - after all, at least in a non-commercial way. Each Creative Commons license also ensures that licensors get the recognition they deserve as authors of the work. It can be used anywhere in the world and is valid as long as copyright protection continues.

These common characteristics represent the lowest common denominator of all CC licenses to which licensors may add additional permissions to determine exactly how their work may be used. A distinction is made between the following licensing models, which are available in different versions (from 1.0 to 4.0):

	Attribution	CC BY allows others to distribute, remix, improve and build upon the work of the data provider, even commercially, as long as the data provider is named. This is the free license after
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		CC 0 and is recommended for the widest distribution of the licensed work.
	Attribution - Share Alike under the same terms and conditions	CC BY-SA allows others to distribute, remix, improve and build upon the work of the data provider, even commercially, as long as the data provider is named and the new works based on its work are published under the same conditions. This license is often compared to "copyleft" licenses in free and open source software. All new works based on the original will be under the same license, i.e. commercially usable.
	Attribution - No Derivatives	CC BY-ND allows others to redistribute the work, both commercially and non-commercially, as long as this is done without modification and completely and the data provider is named.
	Attribution - Non-commercial	CC BY-NC allows others to distribute, remix, improve and build on the work of the data provider, but only non-commercially.
	Attribution - Non-commercial - Disclosure under the same conditions	CC BY-NC-SA allows others to distribute, remix, improve and build upon the work of the data provider, but only on a non-commercial basis and as long as the data provider is named and the new works based on his work are published under the same conditions.
	Attribution - Non-commercial - No processing	CC BY-NC-ND is the most restrictive of the six core licenses. It only allows download and redistribution of the work with the name of the data provider, but without editing or commercial use.
	Kein Copyright (Public Domain)	With CC 0 , the data provider waives (as far as this is possible according to German copyright law) the copyrights for the licensed data or grants full rights of use. This means that works licensed under a CC 0 license can be copied, modified and distributed without conditions. In the case of these works, there is also no obligation to name the data provider.

Open Data Commons (ODC)

Open Data Commons (ODC) as a project of the Open Knowledge Foundation (OKF) deals with legal issues concerning open data/databases and provides license agreements for open data. The best

known form of an ODC license is the Open Database License (ODC-ODbL), which allows the sharing and editing of data/databases for any purpose. As conditions the naming of the authors of the work is required as well as the provision of the new work under the same license. ODbL 1.0 is used for Open Street Map (OSM), which previously used CC-BY-SA. Reasons for the change can be found in the OSM Wiki (https://wiki.openstreetmap.org/wiki/DE:ODbL/Wir_wechseln_die_Lizenz).

Data License Germany

The "Data License Germany" was developed as a recommendation for uniform terms of use for administrative data in Germany and was frequently used in OpenGovData in cooperation with the federal government, the federal states and the central municipal associations. This is available in the current version 2.0 - but 1.0 versions are also used - in two variants:

- „Data License Germany - Attribution - Version 2.0" - obliges the data user to name the respective data provider. The following information should be provided as a source note:
 - The name of the provider in accordance with the requirements of the provider,
 - Note "Data License Germany - Attribution - Version 2.0" or "dl-de/by-2-0" with reference to the license text at www.govdata.de/dl-de/by-2-0 as well as
 - Reference to the record (URI).
- „Data License Germany - Zero - Version 2.0" - allows unlimited further use.

Data Catalogue Application (DCAT)

DCAT (Data Catalogue Application) is an RDF (Resource Description Framework) vocabulary designed to facilitate interoperability between data catalogues published on the Internet. DCAT has been recommended by the W3C since 2014 (<https://www.w3.org/TR/vocab-dcat/>). By using DCAT to describe data records in data catalogues, data publishers increase findability and enable applications to easily use metadata from multiple catalogues. In addition, it enables the decentralized publication of catalogues and facilitates the search for federated data sets across locations. DCAT aggregated metadata can serve as public directory files to facilitate digital preservation.

Based on the DCAT vocabulary, the DCAT application profile for data portals (DCAT-AP) was specified in Europe to describe data sets in the public sector in Europe. The aim is to make it possible to search for data sets across data portals and to make public sector data more searchable across borders and sectors.

DCAT-AP.de is the German adaptation of DCAT-AP and defines the common German metadata model for the exchange of open administrative data in Germany (<http://dcat-ap.de/def/>). This is also frequently used for open administrative data, but is not a license, but a metadata description.

Selected licenses for software

Software as a result of creative work is protected as such - just like books, music and films - by copyright law. A software license is the software manufacturer's agreement to install and use his software on a computer. The licence contains the conditions governing the use of the software, in particular the scope of the licence rights as well as all other relevant restrictions, for example the purpose or place of use and the hardware used. In contrast to commercial licenses for use, which are generally obtained by purchasing the software, simple rights of use are granted to everyone in the case of free and open source software. Grassmück (2004) provides a comprehensive discussion of the subject of "Free Software".

GNU General Public License (GNU GPL)

The GNU General Public License (GNU GPL) tries to preserve the freedoms for the user and demands a "consideration" for the granted rights:

- That the program is not only passed on in its machine language translated form, also called binary, but only together with a version understandable for humans, the source code.
- That modified versions may only be distributed if they are also placed under the GPL. Who does not keep to it, loses his rights again.

This procedure is called Copyleft. The author retains the copyright, and there are clauses that modified and distributed software remains free. The source code must also be provided. GNU GPL is used in the GIS software packages of QGIS (Quantum GIS) and GRASS (Geographic Resources Analysis Support System).

BSD

With BSD licenses (e.g. the Apache license) the author retains the copyright. The license contains the name of the author and often a limitation of liability. Modification and distribution in any form is permitted, i.e. it may also be incorporated into proprietary software. The open database software PostgreSQL has a BSD-like license.

Public freedom

In case of public freedom (German: Gemeinfreiheit, similar to public domain) the author renounces the copyright completely. This means that anyone can do anything with the software, for example integrate it into their own programs, sell it or turn it into proprietary software themselves. Public freedom, however, is not actually a license, but defines a public work as being without property.

Creative Commons has proposed the Public Domain Mark (PDM) as a symbol to display creations that are free of copyright claims and therefore in the public domain.



Web sources

Grassmück, V. (2004): Free Software. Between private and public property. <http://www.bpb.de/gesellschaft/digitales/opensource/63952/buch-freie-software>

Guide to Open Data Licensing - <http://opendefinition.org/guide/data/>

Institute for Legal Issues of Free and Open Source Software with License Server - <http://www.ifross.org/>

Website Creative Commons - <https://creativecommons.org/licenses/>

CC0 1.0 Universal (CC0 1.0) Public Domain Dedication: <https://creativecommons.org/publicdomain/zero/1.0/legalcode>

Data License Germany - Zero - Version 2.0: <https://www.govdata.de/dl-de/zero-2-0>

Data License Germany - Attribution - Version 2.0: <https://www.govdata.de/dl-de/by-2-0>

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Open Database License (ODbL) (v. 1.0): <https://opendatacommons.org/licenses/odbl/1.0/>