Creative Commons licenses and Open/FAIR data

- The legal perspective -

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Approach of the presentation

- Provide **guidance** on three questions:
  1. How do I achieve **Open Access/Data/Science** in a legal sense?
  2. What **tools/licenses** do I use to **provide Openness**?
  3. How do I **implement** legal tools to achieve Openness and FAIRness?

AGENDA

1	The core principles: On Copyright, Openness and FAIRness
2	Protected works and unprotected data
3	How to achieve Openness for protected or unprotected material
4	How to choose and implement your license

Copyright

- “Data” in the broader sense is often **material protected** by copyright

- Copyright protection means: In general, **any use requires the consent** of the copyright owner

Openness according to the Berlin Declaration on Open Access

1. Make science **freely accessible and reusable** for everyone, free of charge and with as few technical and legal barriers as possible.
2. **Means** of achievement:
   - Freely accessible online **publication** of the material in an Open Access repository in standard formats (**access**)
   - Granting **reuse rights**, allowing the material “to be **copied, used, distributed, transmitted, and publicly disseminated, as well as to create and distribute adaptations** of it in any digital medium and **for any responsible purpose**, provided the authorship is correctly attributed” (**reusability**)

Openness according to the Berlin Declaration on Open Access

- Note: **Open = freely accessible and freely reusable.** Open **is not synonymous with cost-free!** Mere **cost-free access is not equivalent to Open** Access (otherwise almost the entire Internet would be OA).

FAIRness according to the FAIR Guiding Principles

1. Findable: Data should have unique identifiers and be described with rich metadata to make it easy to locate.

2. Accessible: Data should be retrievable using standard protocols, even if access requires authentication.

3. Interoperable: Data should use standardized formats and vocabularies to work seamlessly with other datasets and tools.

4. Reusable: Data should be well-documented, licensed, and described to allow use in different contexts.

Copyright, Openness and FAIRness

- The **purpose of copyright** is to prevent uncontrolled free use and distribution.
- Openness and FAIRness aim at free and mostly **unhindered /unrestricted reusability**
- Copyright intends the **exact opposite** of Openness (i.e. free reusability)!

Openness of protected works and unprotected data

- How Openness/FAIRness is implemented in legal terms **depends** on the **copyright status** of the material:

- To make copyright-protected material **freely reusable** they must be **“made open“**
  - ☞ **Publish** them under an open content licence

- **Unprotected** material is in the public domain and **per se "open"**
  - ☞ **Mark** them as PD and grant access (**make them publicly available)**
  - ☞ **Refrain** from using **ambiguous and/or restrictive** ToU

In a nutshell

Protected material needs to be licensed, unprotected material is open *per se (*but should be marked as public domain)

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Copyrightability

- **Protectability** depends (among others) on the **type** of material
- Copyright differentiates between:
  - **Works:** literature, software, music, films, graphics (a human creation)
  - **Data, facts and information:** Metadata, raw data, research findings, geolocations, news content (existing facts)

Copyrightability: The definition of “work” (subject-matter)

- Copyright protects **works** = original creative **human-made achievements**
- **Not human-made** = not protectable is the **content of the work**:
  - **Facts** and research **findings** (information), laws of nature, algorithms, **metadata**, raw data, geodata
  - Cultural **styles**, general **concepts** (e.g. concept for a course, a study)
  - Machine-generated creations **(AI)**

Works and content of works

Examples

Protectable	Non-protectable
Research paper (wording)	Findings presented in the paper
Report on a case study (wording)	Data generated in the research
Song (composition)	Tones, tonality, rhythms, style
Software (program code)	Programming language, algorithms, conceptual approach

The public domain

- Findings, data and information that are not copyright protected are in the **public domain**
- Works that are **no longer protected (© expired)** or are **not original enough for ©** are in the public domain

The public domain

- PD = **no ownership or property**, **no allocation** to any person or legal body
- = free to use by anybody without any (copyright related) restrictions or obligations (not even: attribution, crediting)
- A general **“data property” does not exist** (not even for personal data)
- The use of **certain kind of data can be restricted** by other norms (like personal data, trade secrets etc.)

PD as a fundamental principle

- Copyright on the content of works, data and information would lead to **information monopolies**
- Copyright protection = generally **no use without consent**
- Facts and information **must be free** to protect numerous fundamental freedoms:
  - Freedom of research
  - Freedom of information
  - Freedom of speech
  - Freedom of art
  - …

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Openness for copyright protected works

To "**open**" copyrighted content, copyright restrictions **must be actively removed** by **publishing the material under a public license** (such as Creative Commons)

Open Content Licenses

- Open content licences place copyrighted content under a free use regime **without waiving copyrights**
- Use is permitted **free of charge, re-use is broadly permitted** without individual consent
- **Open Content License ≠ Public Domain Declaration**. The © remains effective (a license - grant of use rights - needs an underlying copyright to be valid)

Openness for unprotected content and data

- What is in the public domain **cannot be licensed** through open content licenses!

- **See sec. 8.a CCPL4**: “For the avoidance of doubt, this Public License does not, and shall **not** be interpreted to, reduce, limit, restrict, or **impose conditions** on any use of the Licensed Material that **could lawfully be made without permission** under this Public License.”

- **And it would not make sense**: An open content licence **imposes restrictions and obligations** on downstream uses – i.e. it **limits** the freedom of the public domain

Open content licenses in accordance with the Berlin Declaration

- The Berlin Declaration demands that:
  - ☞ The material may be **freely copied, shared, republished, even in modified form**
  - ☞ The material may be used **for any responsible purpose** (not only research)
- Non commercial (**nc**) and no derivatives (**nd**) licenses are **not compatible** with the Berlin Declaration's OA definition!

Open access/open science compatible licenses

- **Compatible** with the Berlin Declaration are **permissive licenses** that do not restrict the re-use, like:
  - CC BY
  - CC BY-SA
  - MIT, BSD
  - CC0

Legal tools suitable for public domain material

- Public domain tools for unprotected material:
  - PDM (Creative Commons Public Domain Mark)
  - Alternatively: CC Zero (often the better choice)

CC Zero: The „Leatherman“ among the license tools

- CC0 is a PD declaration **and** a license
- **Three-tier-approach:** If the PD declaration does not work under the applicable law (because, e. g., of unwaivable moral rights like in Slowenia or Germany) fallback options come into play

CC Zero vs. PDM vs. no license info

- This makes CC0 ideal if the protection status of the material is unclear (protected? public domain?). The rights owner hereby states that the material shall be in the public domain

- Note: Even if public domain is a legal status that does not have to be declared: Not giving any indication is unfavourable - most people do not know the concept of public domain and what it means for downstream uses!

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How to choose and implement your license FAIRly

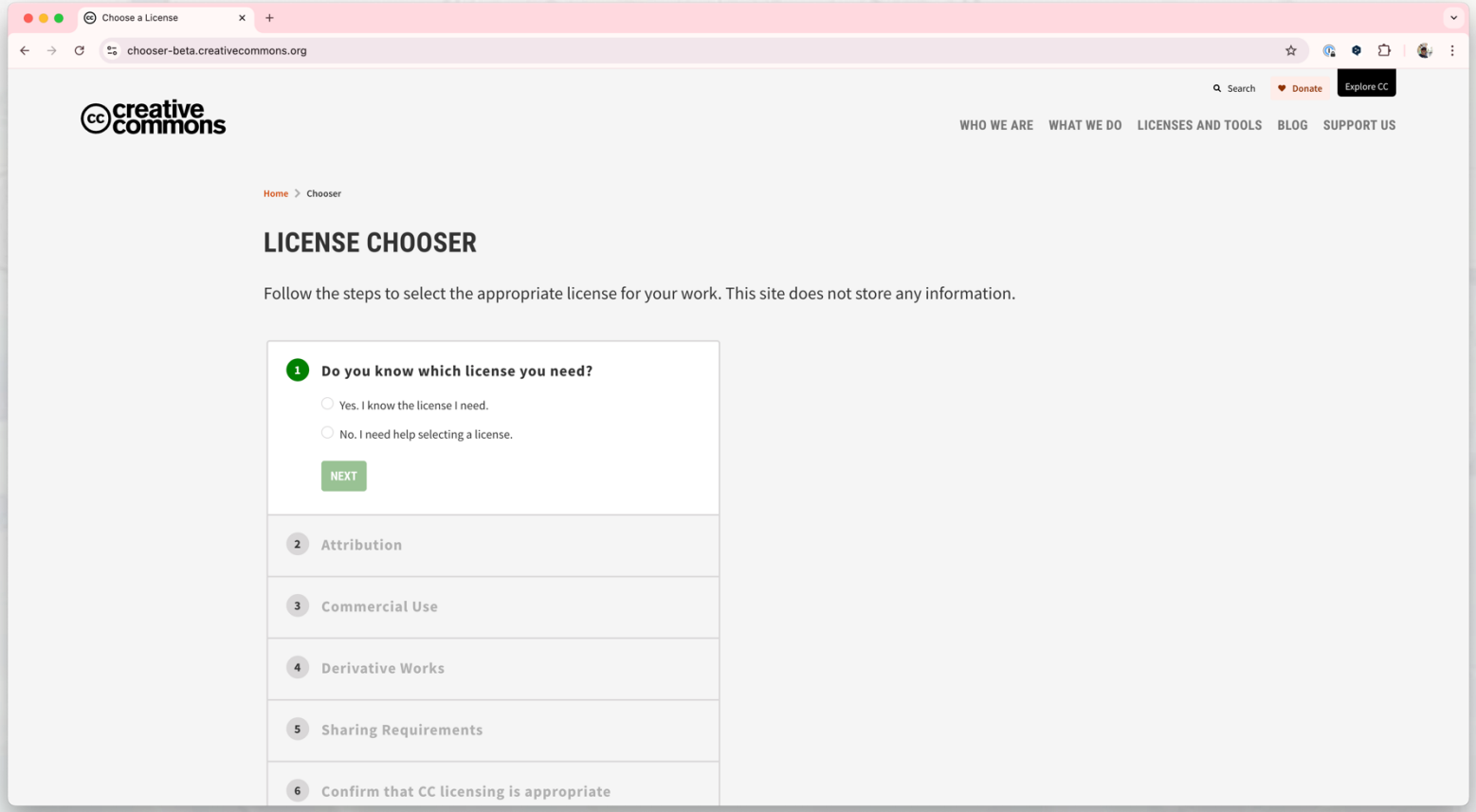
- **FAIR Guiding Principles** R1.1.: (meta)data are released with a clear and accessible data usage license

- "The conditions under which the data can be used should be clear to **machines and humans**."

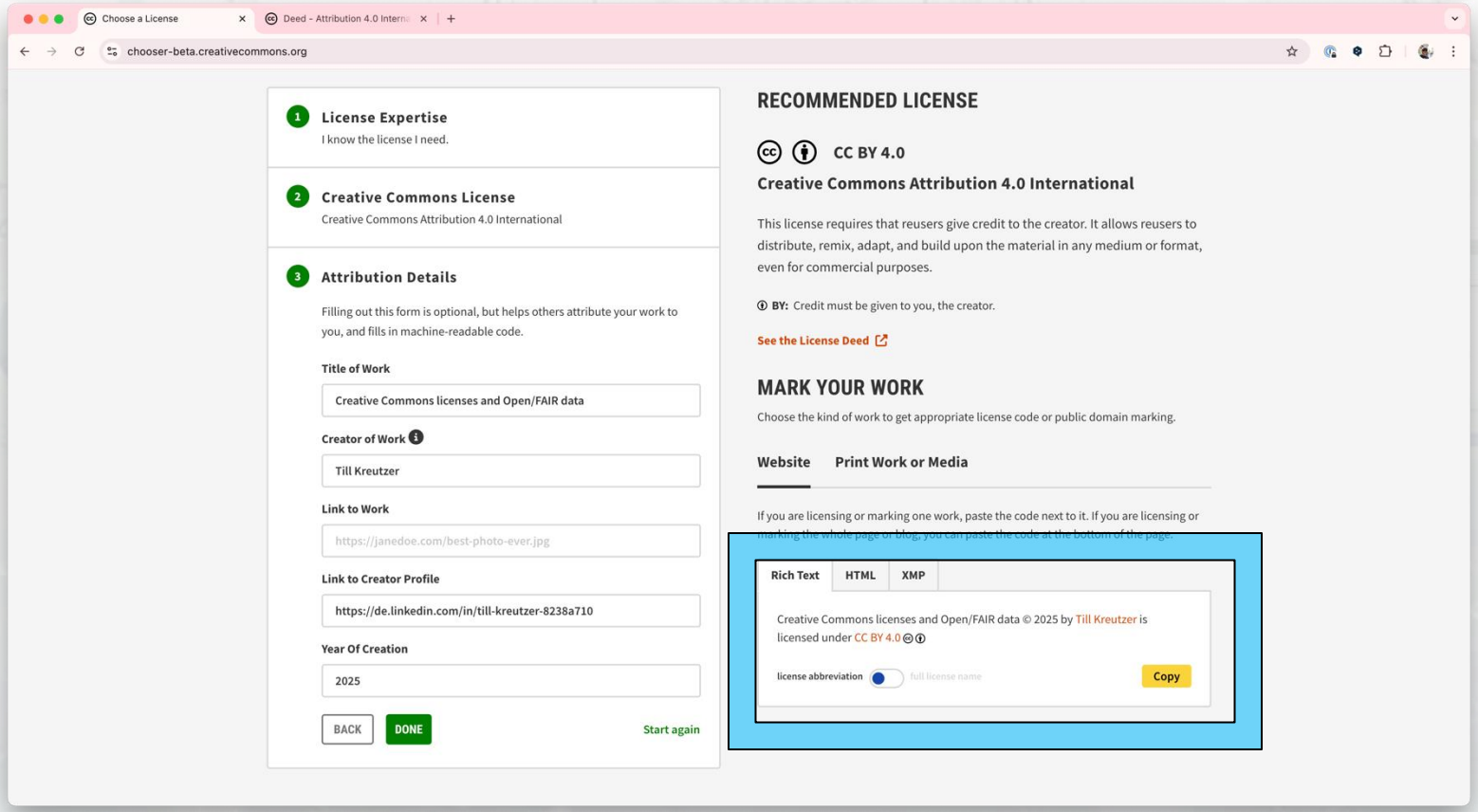
- Machine-readability requires **technical implementation** of the license

- The **Creative Commons "License Chooser"** generates all license information automatically

CC license chooser



CC license chooser

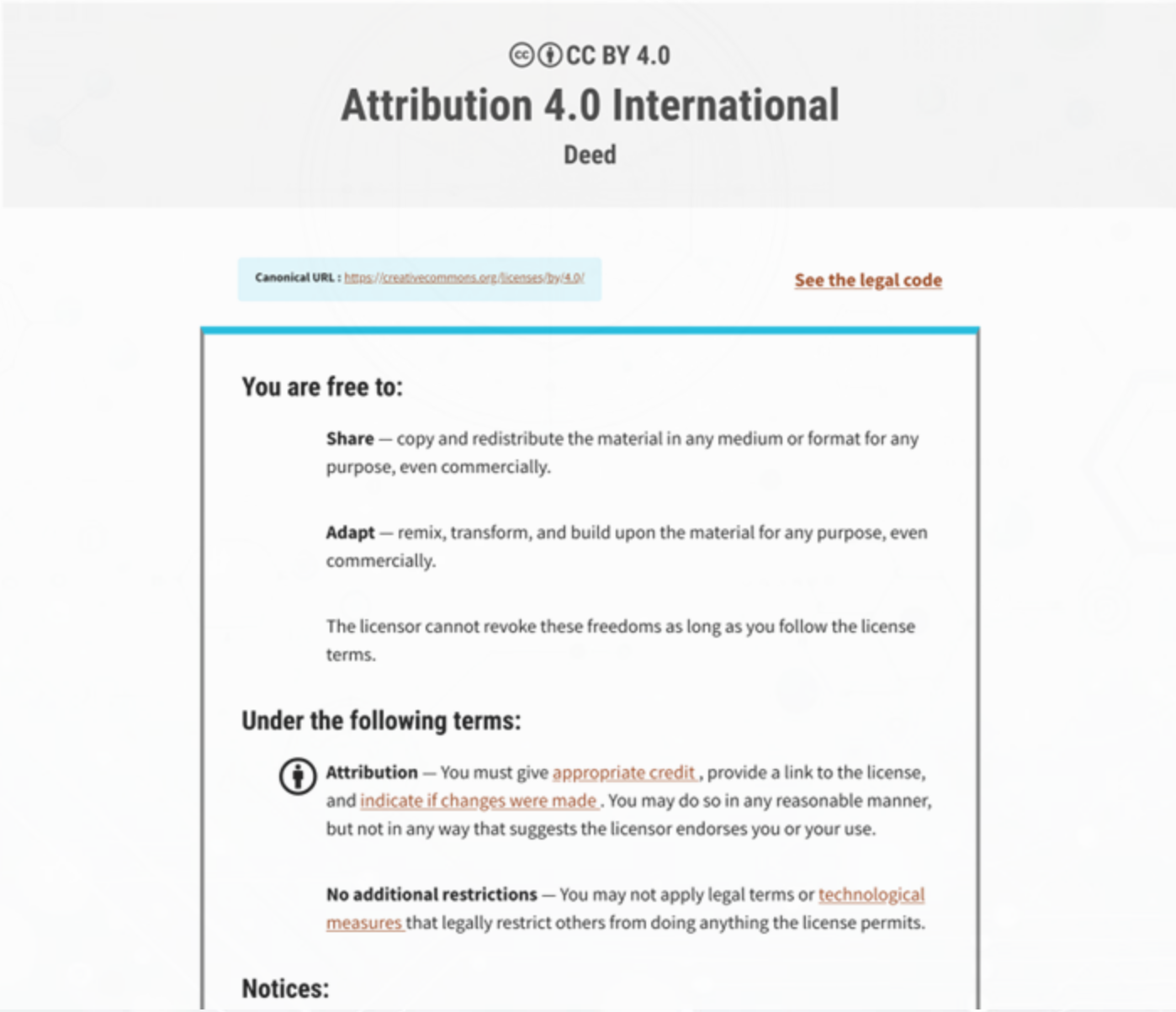


The CC license layers

iRIGHTS law

The human readable version (“License Deed”)

iRIGHTS law



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Deed

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See the legal code

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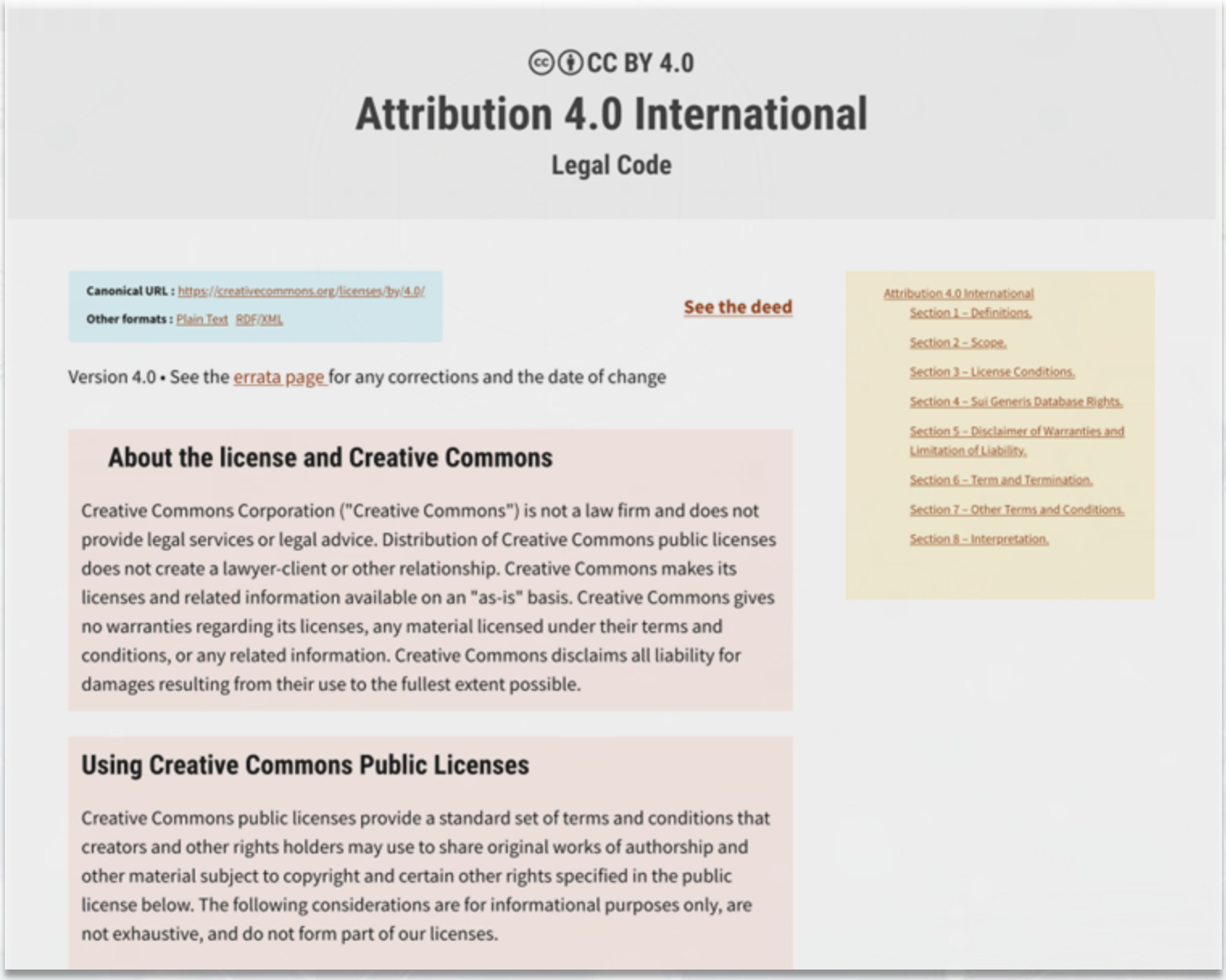
Notices:

The Legal Code



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Legal Code

Canonical URL : https://creativecommons.org/licenses/by/4.0/

Other formats : Plain Text RDF/XML

See the deed

Version 4.0 • See the errata page for any corrections and the date of change

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The machine-readable code in HTML

```
<p xmlns:cc="http://creativecommons.org/ns#" xmlns:dct="http://purl.org/dc/terms/"><span property="dct:title">Creative Commons licenses and Open/FAIR data</span> by <a rel="cc:attributionURL dct:creator" property="cc:attributionName" href="https://de.linkedin.com/in/till-kreutzer-8238a710">Till Kreutzer</a> is licensed under <a href="https://creativecommons.org/licenses/by/4.0/?ref=chooser-v1" target="_blank" rel="license noopener noreferrer" style="display:inline-block;">CC BY 4.0<img style="height:22px!important;margin-left:3px;vertical-align:text-bottom;" src="https://mirrors.creativecommons.org/presskit/icons/cc.svg?ref=chooser-v1" alt=""><img style="height:22px!important;margin-left:3px;vertical-align:text-bottom;" src="https://mirrors.creativecommons.org/presskit/icons/by.svg?ref=chooser-v1" alt=""></a></p>
```

The machine-readable code

- **Semantic Functionality:** Licenses can be understood and applied by electronic systems, not just read at the syntax level (**machine-understandability**)
- **ccREL and RDF Framework:** Creative Commons developed the “CC Rights Expression Language” (ccREL), implemented using the Resource Description Framework (RDF), allowing structured license data to be embedded and interpreted within HTML.
- **Common uses** include embedding metadata on webpages (enabling browsers to display license status) and supporting rights management in search engines, databases, and the Semantic Web.

The machine-readable code: RDF

iRIGHTS law

Turtle — Kopieren

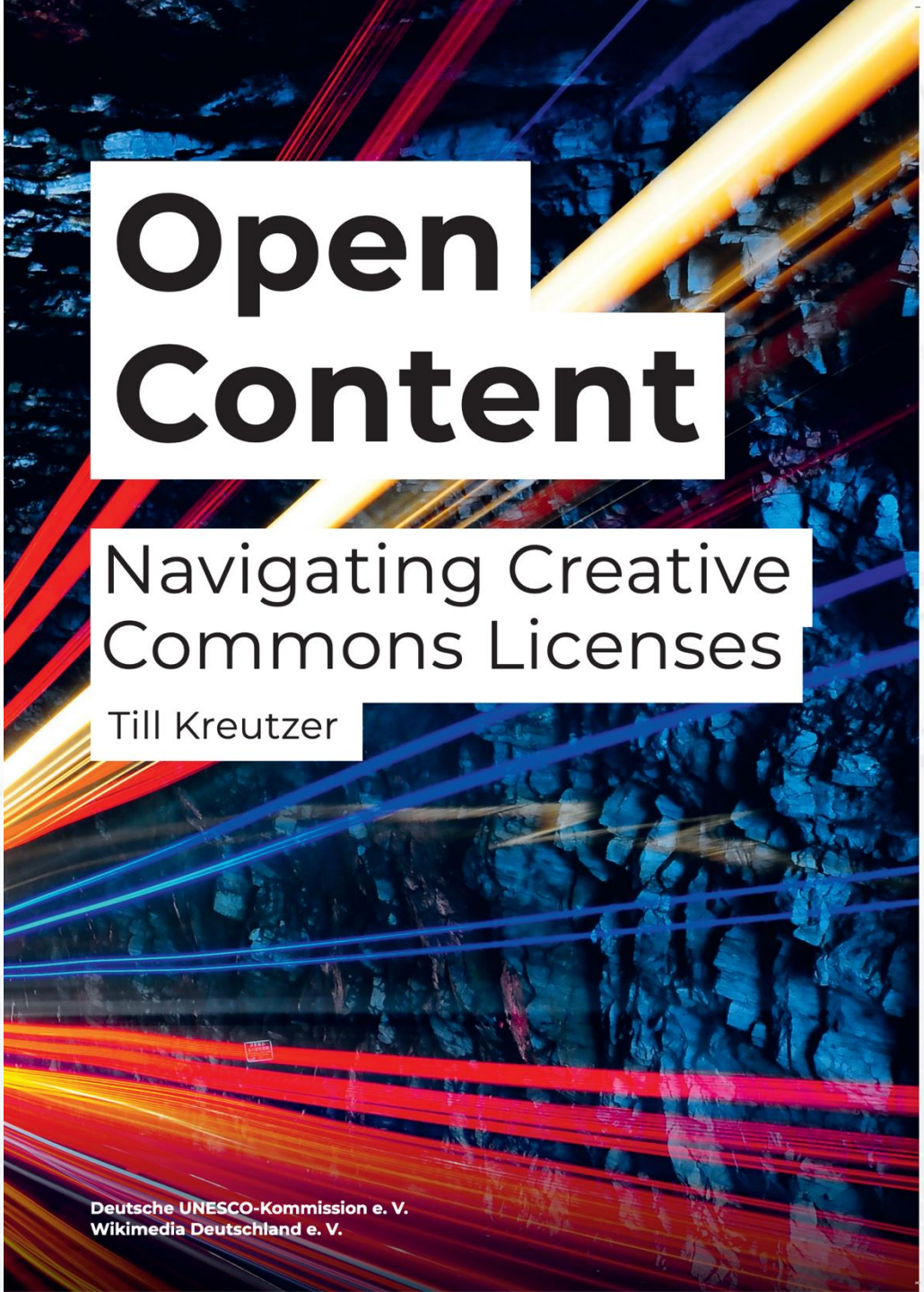
```
@prefix dct: <http://purl.org/dc/terms/> .
@prefix cc: <http://creativecommons.org/ns#> .
@prefix : <http://example.org/> .

:CreativeCommonsLicensesAndOpenFAIRData
    dct:title "Creative Commons licenses and Open/FAIR data" ;
    dct:creator :TillKreutzer ;
    cc:attributionURL <https://de.linkedin.com/in/till-kreutzer-8238a710> ;
    cc:attributionName "Till Kreutzer" ;
    cc:license <https://creativecommons.org/licenses/by/4.0/?ref=chooser-v1>
```

Explanation:

1. **Prefixes**:
   - `dct:` and `cc:` represent the Dublin Core Terms and Creative Commons namespaces, respectively.
   - `:` is a placeholder for your custom namespace.
2. **Triples**:
   - The subject `:CreativeCommonsLicensesAndOpenFAIRData` represents the resource being described.
   - Properties like `dct:title`, `dct:creator`, and `cc:license` describe its attributes.
3. **Values**:
   - Literal values are provided in quotes (e.g., the title).
   - URLs (e.g., LinkedIn profile and license) are enclosed in `<>`.

FAIRifier and other tools to FAIRify Metadata and license info

- FAIRifier was an online tool based on OpenRefine to prepare datasets and convert them into RDF (Resource Description Framework) format
- Project is deprecated and was replaced with a **new implementation:** Openrefine metadata extension
- Alternative: Try **Copilot and other AI** to generate RDF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DOI: https://doi.org/10.15460/HUP.211

Q&A

Thank you for your attention!