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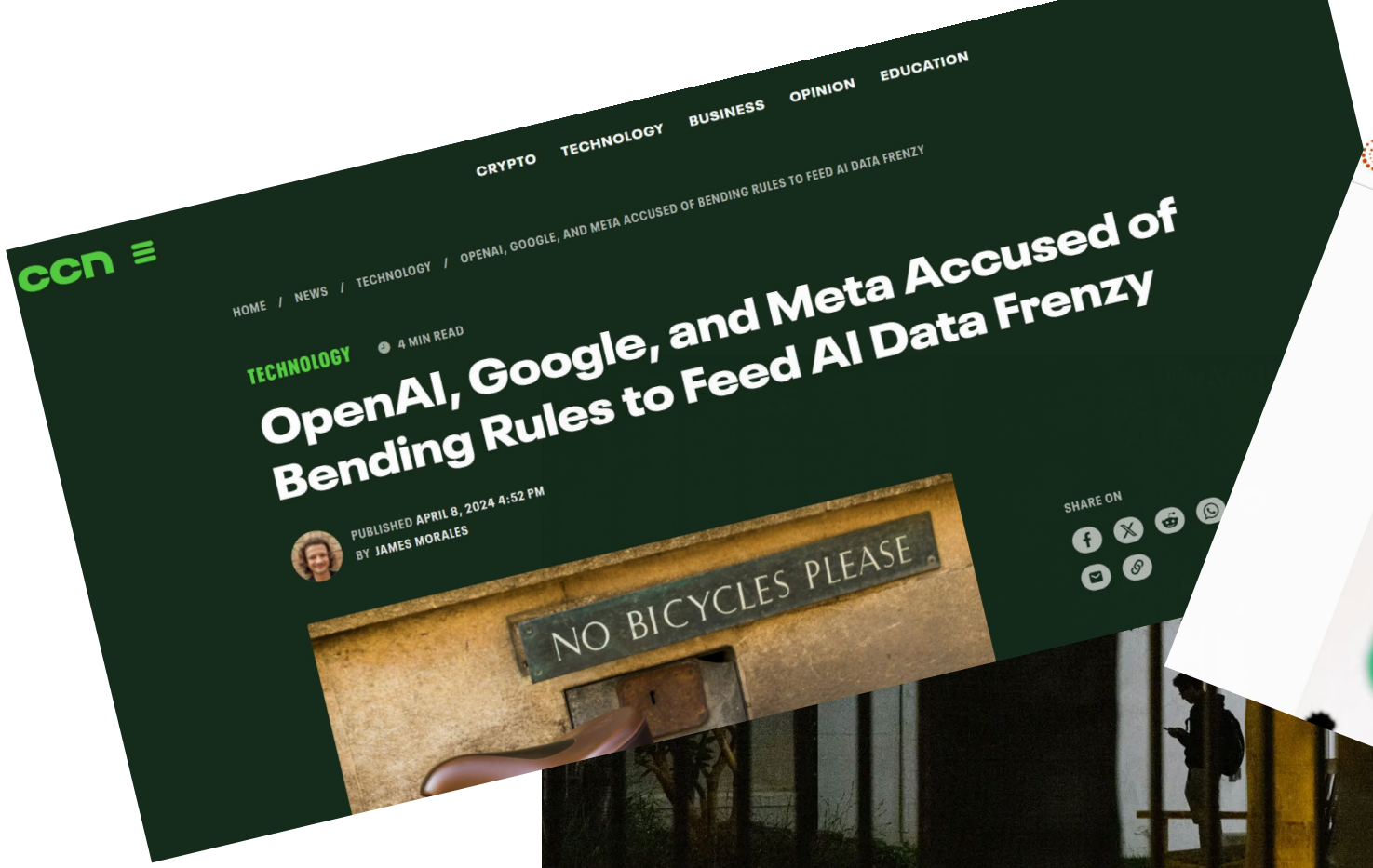
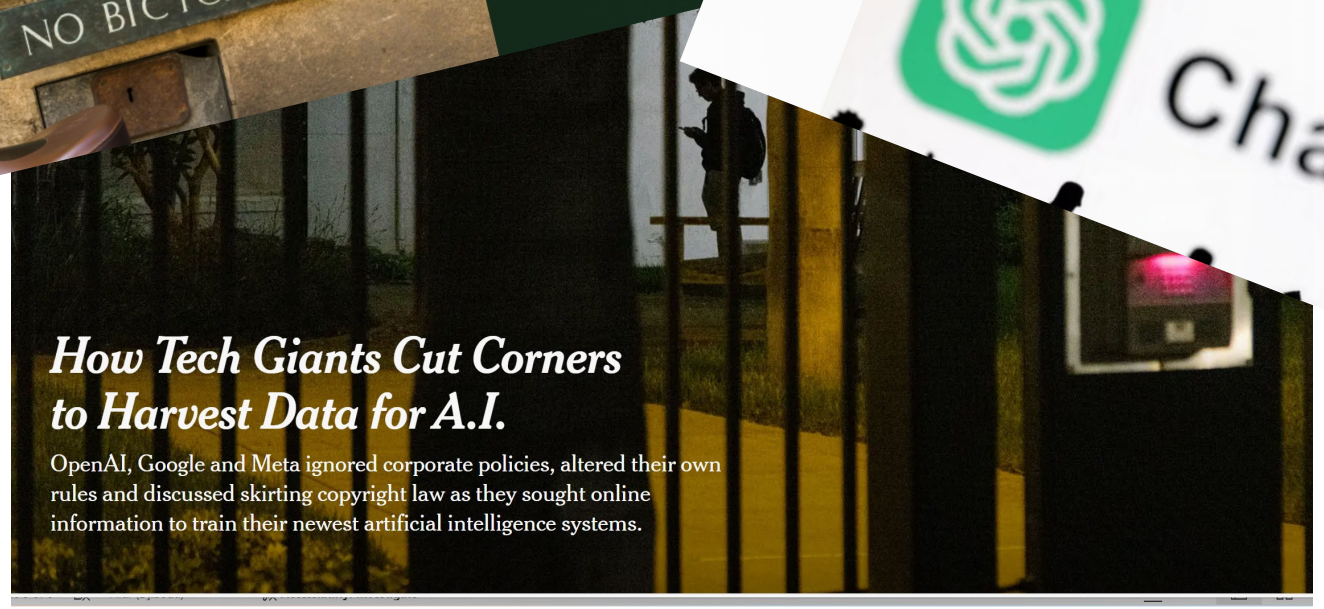
3rd UNESCO OER World Congress

Web Technologies for Open Educational Resources

Beyond Blockchain

Anthony F. Camilleri





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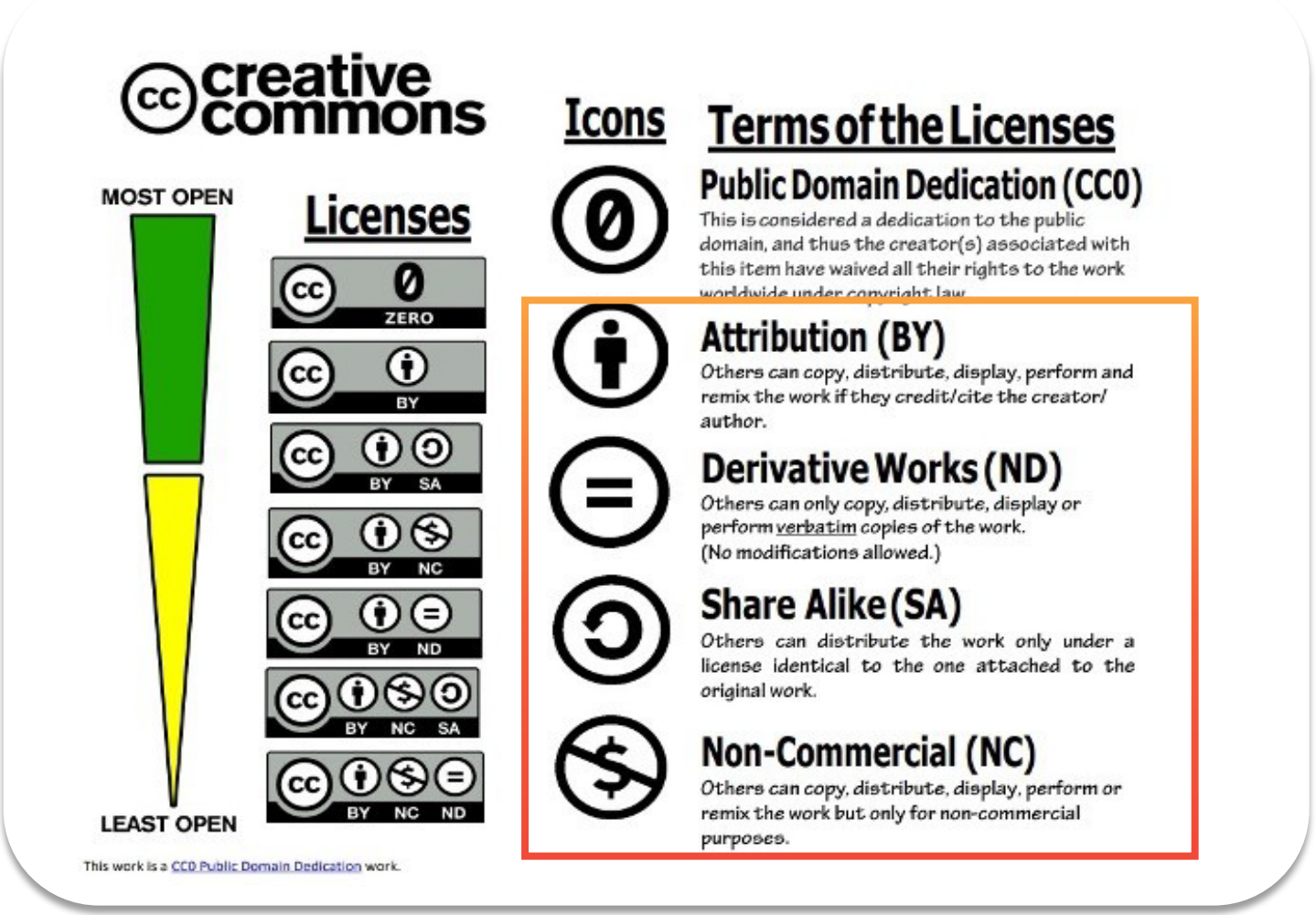
How has this happened?



These Terms are Typically Un-enforcable

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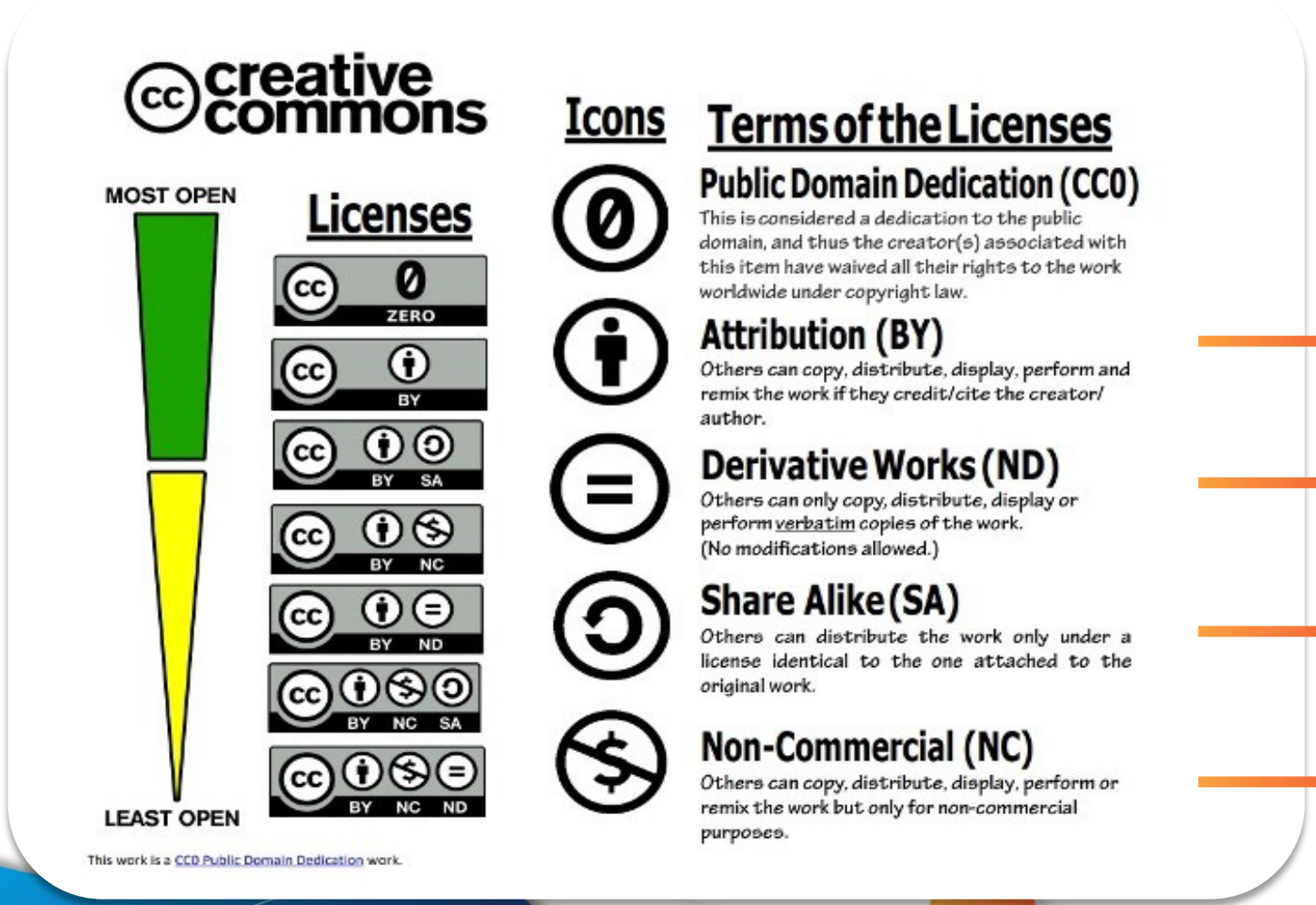
How has this happened?



- How do I permanently link an author to a work?
- How do I know which version is the original?
- How can I trace the ‘licence chain’ between works?
- How do I know who is using the derivative work?

How has this happened?

creative commons

MOST OPEN

Licenses

ZERO

BY

BY SA

BY NC

BY ND

BY NC SA

BY NC ND

LEAST OPEN

Icons

Terms of the Licenses

Public Domain Dedication (CC0)

This is considered a dedication to the public domain, and thus the creator(s) associated with this item have waived all their rights to the work worldwide under copyright law.

Attribution (BY)

Others can copy, distribute, display, perform and remix the work if they credit/cite the creator/author.

Derivative Works (ND)

Others can only copy, distribute, display or perform verbatim copies of the work. (No modifications allowed.)

Share Alike (SA)

Others can distribute the work only under a license identical to the one attached to the original work.

Non-Commercial (NC)

Others can copy, distribute, display, perform or remix the work but only for non-commercial purposes.

This work is a CC0 Public Domain Dedication work.

"On the Internet, nobody knows you're a dog."

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Option A

Create a World OER Registry

There are parallels...

World OER Registry

- Who runs the registry?
- Who funds it?
- Who profits?
- Who decides inclusion criteria?
- How can it be abused?

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Option B

Blockchain to the Rescue

Blockchain to the Rescue

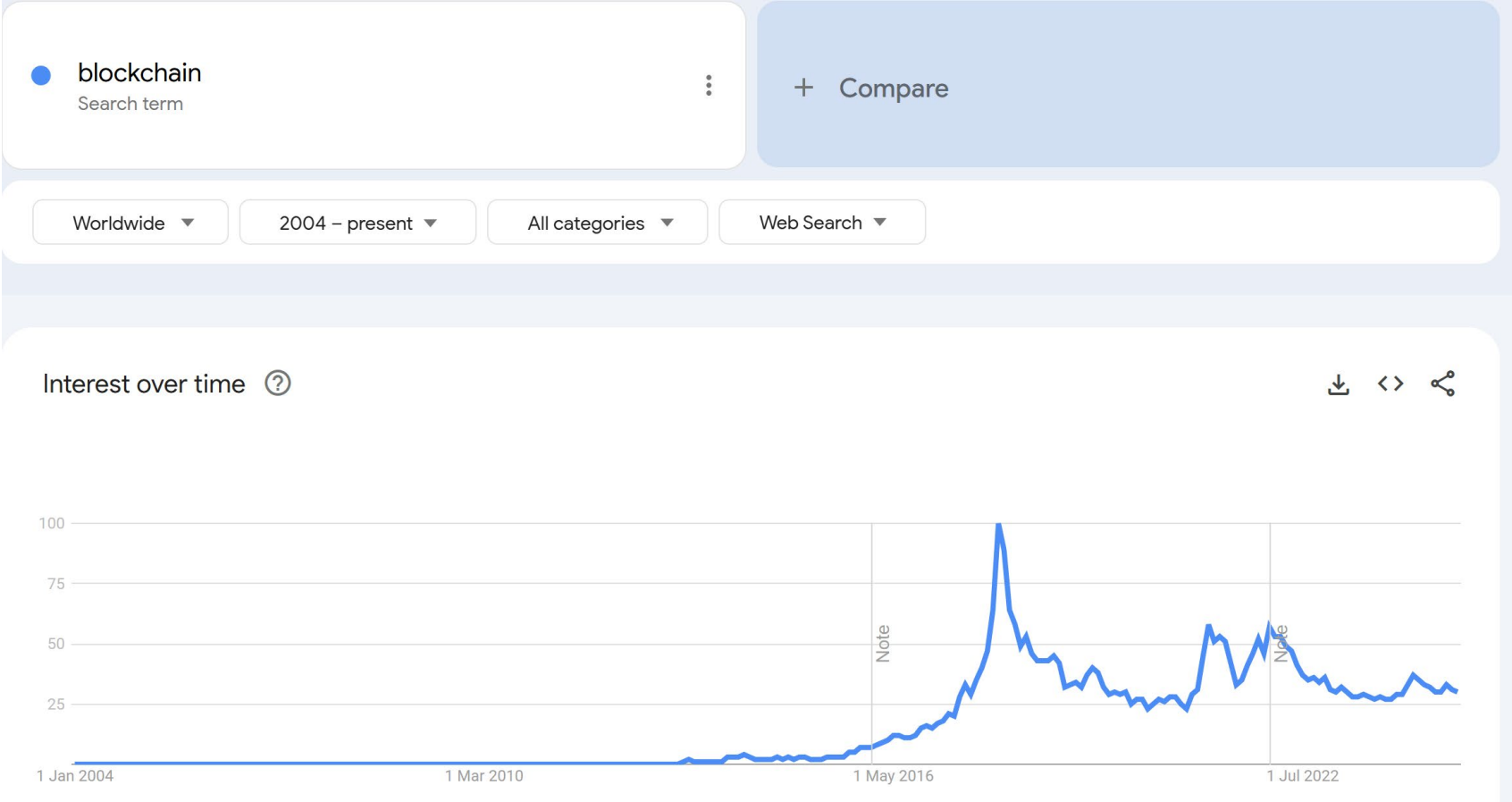
governed by the community

decentralised and resistant to failure

tokenisation allows for credit

attribution and ownership through cryptography

Interest in Blockchain is waning...



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This article is more than **7 months old**

‘He knew it was wrong’: Sam Bankman-Fried sentenced to 25 years in prison over FTX fraud

Judge orders disgraced crypto mogul to forfeit $11bn in assets and says he showed no remorse for his crimes

Most viewed

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John Crace

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‘Stuff of nightmares’ statue of Harry Kane unveiled after five years in storage

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A better option

A Web of OER

Identify newly Published OER

Identify the ‘first publication’ of any digital resource to ensure proper attribution and licencing.

Pinpoint Authors

Link Publications to explicit human beings.

Discover and Re-Use OER Ethically

Respect licence conditions when using, adapting re-publishing.

Track Citations

Use citations to identify the best OER

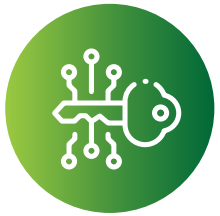
Foundations of the Web of OER

Semantic Web & AI

A move from processing only metadata to processing the data contained within objects.

Identity & Ownership

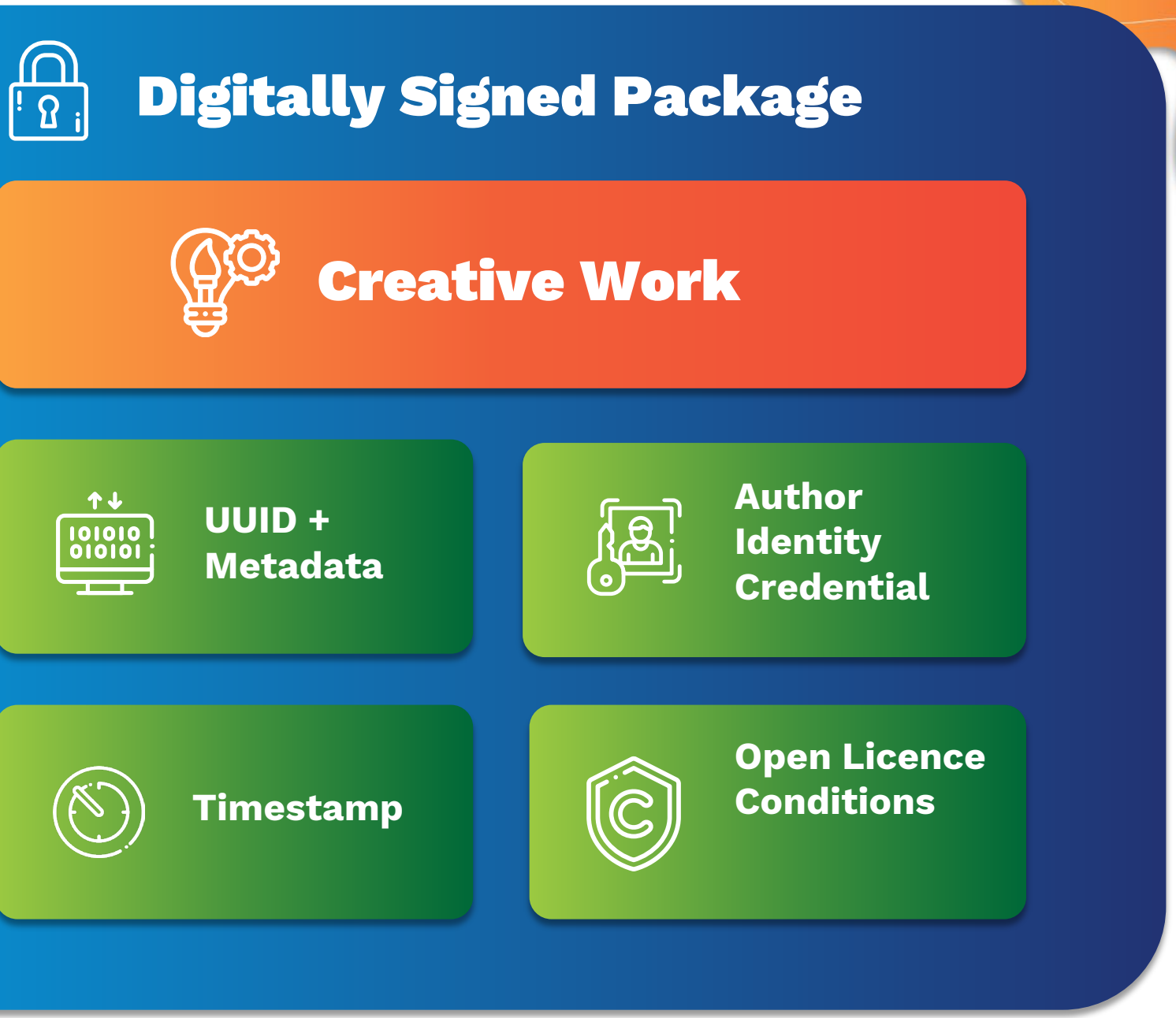
Linking Real-World Identities to Digital Content in a traceable way



Cryptography & Trust

Unique, Digitally Signed, Tamper-Proof Digital Assets.

Architecture of a traceable OER



Verifiable Credentials

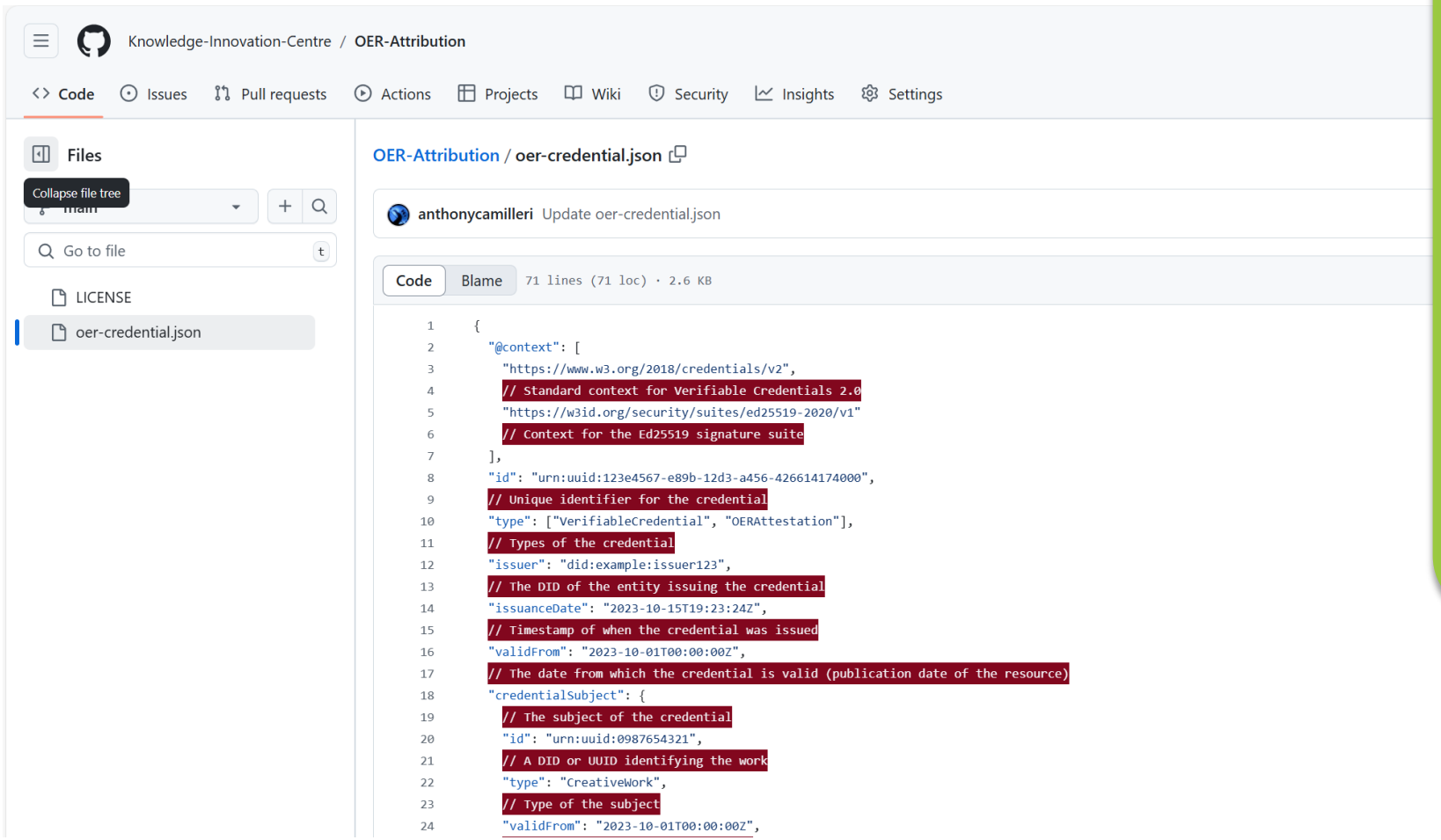
- an open W3C standard
- allow anyone to make a claim about a person or object
- are digitally signed by default
- are timestamped and tamperproof
- are already being widely used in educational contexts
- are 5-star linked open datra

With Verifiable Credentials:

I claim that...

- I made this
- I allow you to use this
- I used another resource
- this is true

This can be done today



Proof of Concept in Code

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Once we can register OER

- authors get credit – and any associated rewards
- content farms and bad content can be banned
- we create incentives for
- we can link content to **human beings**
- AI can quote the original source of a claim
- AI can respect licence conditions

Get the Report

Next Steps

1. We need a global movement on **technology standards** for OER attribution

UNESCO?
ITU?
W3C?

2. We need to create a proof of concept to show off the technology to the world

Contact Me

3. Easy to use ‘OER Registration’ Portal, and integration of ‘Publish’ functionality into major software packages

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Let’s Start the Conversation

Thanks for your attention

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