



DPUB Summit 25 June 2019

# Content Blockchain & ISCC

Sebastian Posth

@posth

<https://posth.me>

# Sebastian Posth

- CEO of **Publishing Data Networks GmbH**  
(Data analytics, digital market research)
- CEO of **Posth Werk BV** ([posth.me](https://posth.me))  
(Consulting on digital innovation and product development)

# Sebastian Posth

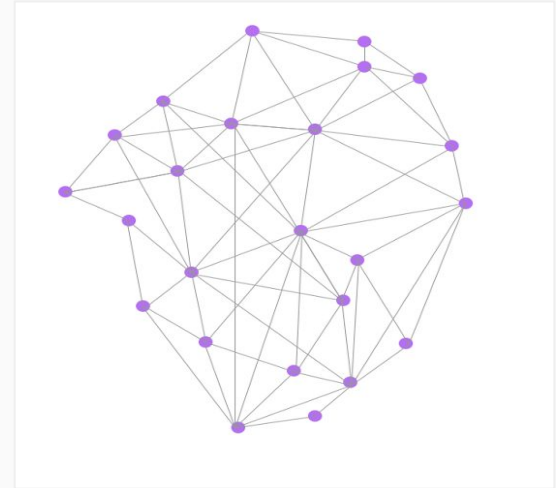
- Co-Initiator of **Content Blockchain Project**  
(from 2016)
- Chairman of the Board of **ISCC Foundation**  
(in the process of legal setup)

# Why should the Content Industry care about Blockchain Technology?

- Blockchain is triggering innovation in almost any industry (banking, logistics, insurance, health ...)
- Also, startups and companies in media publishing are investigating its potential (visual arts, music)

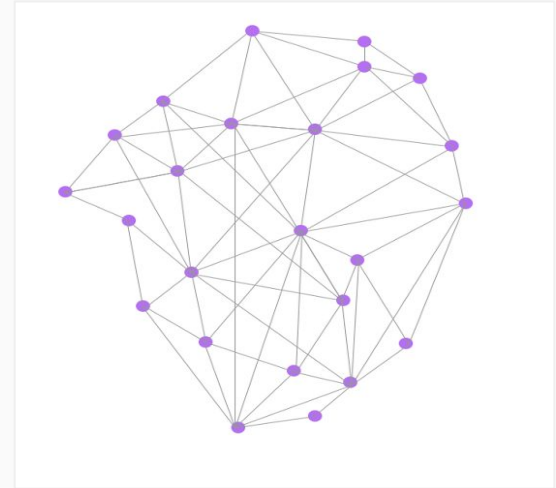
# What is Blockchain? (1)

Blockchain is a decentralized and distributed network for the **validation** and **storage** of **transactions data** (e.g. payments) and other metadata



# What is Blockchain? (2)

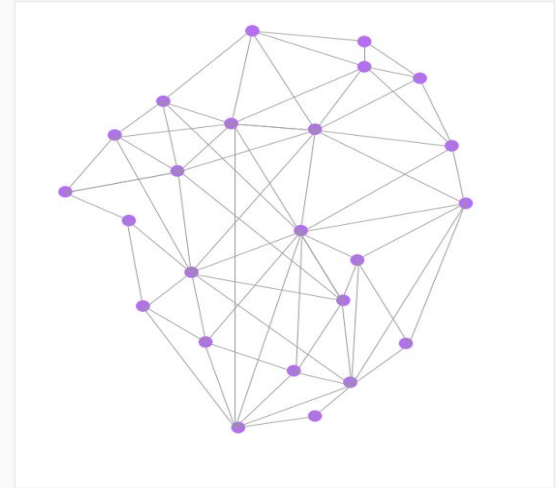
Blockchain enables immutable **payment transactions** and the **transfer of value peer-to-peer** without centralised institutions or platforms (e.g. payment providers)



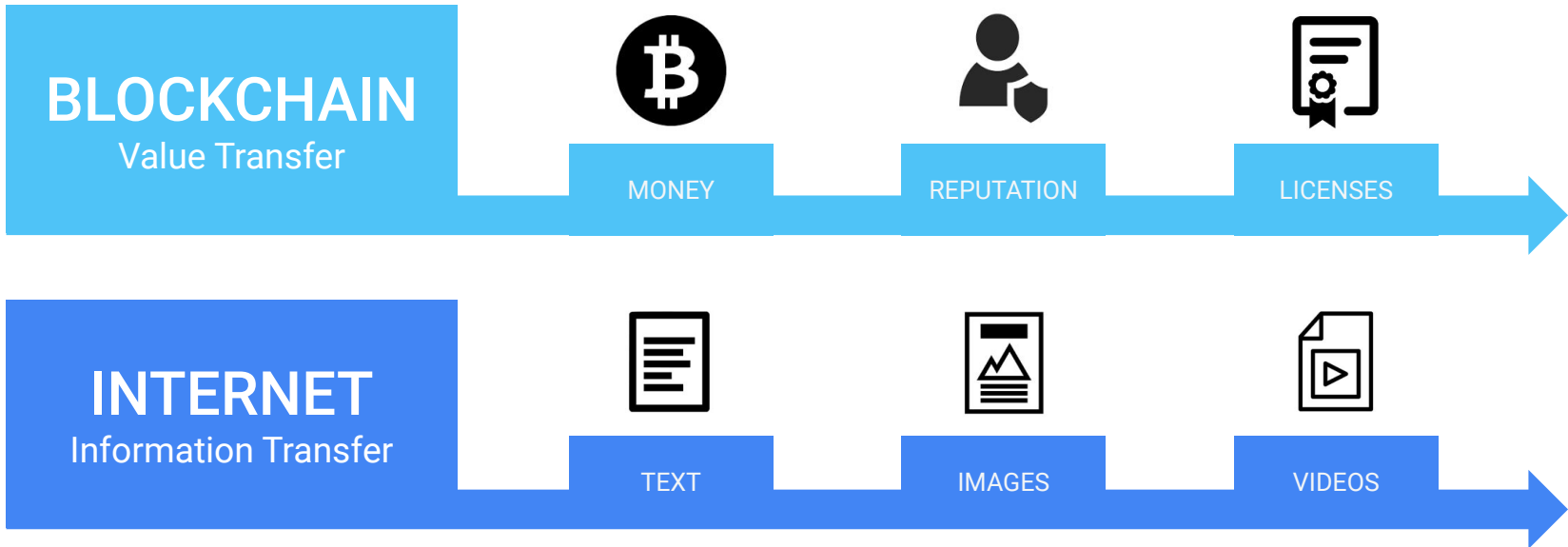
# What is Blockchain? (3)

Not the banks, intermediaries, retailers or other centralized institutions ...

But the **network itself validates and settles transactions** in a distributed and, thus, immutable chain



# Blockchain Establishes a New Layer

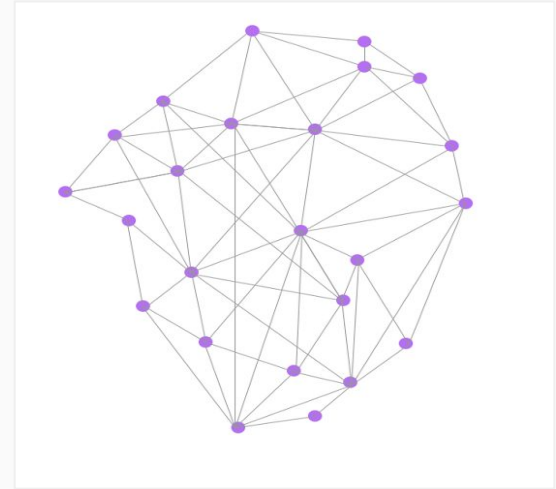




# Blockchain Can be Useful

Doing business in a **decentralized and distributed media environment**

Doing business in a **trustless environment**,  
If you **don't know the parties** you are  
interacting with.



Agreements

Supply &  
demand

User  
Accounts

Agreements

**Rights  
Owner /  
Supplier**



**Customer**

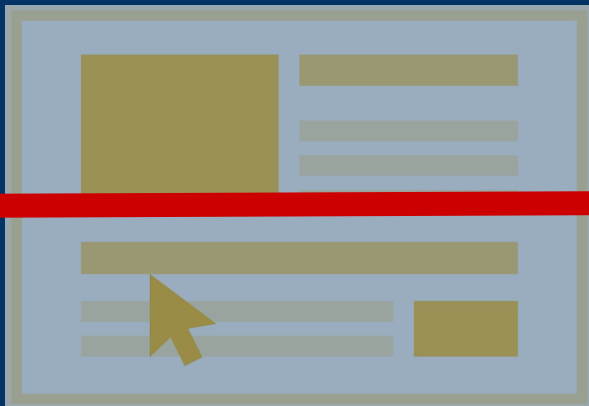
Payments

Fulfillment



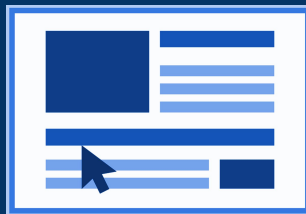
**Rights  
Owner /  
Supplier**

Direct Sales  
P2p Payment



**Customer**

Self-sovereign  
identity  
True digital  
ownership



# Content Blockchain Project - Goal

Developing open standards, technologies and applications that establish **media content as the subject of transactions\*** on blockchains

\* No content is stored on the blockchain



# Suggestion for an Open Layered Blockchain Ecosystem

## Applications Open Innovation



INTERFACES



SHOPS



BUSINESS  
MODELS

## Building Blocks Chain Agnostic Standards



CONTENT  
IDENTIFIERS



SMART  
LICENSES



TRANSACTION  
MODELS

## Blockchain Protocol-Layer Services



DATA  
STREAMS



NATIVE  
TOKENS



ON-CHAIN  
GOVERNANCE



Meta

CCDFPFc87MhdT

Content

CTWAGYJ9HZGj1

Data

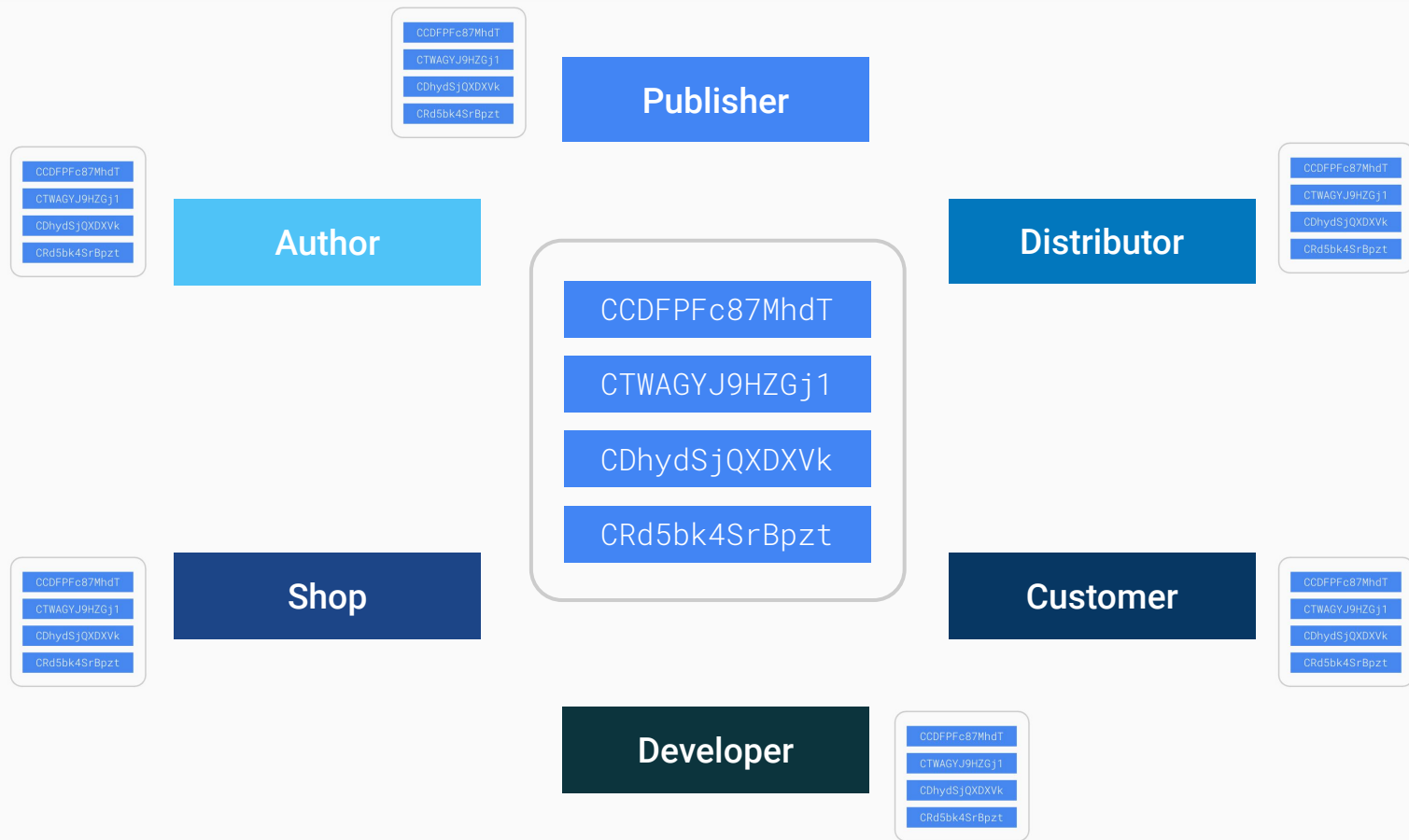
CDhydSjQXDXVk

Instance

CRd5bk4SrBpzt

- The International Standard Content Code is a proposal for a new standard identifier for **digital media content**
- Developed for use on **blockchain**, usable **off-chain/offline**
- Universal standard number for digital files in **different media formats** (text, image, audio, video)
- **Cross-industry standard** (journalism, academic and trade publishing, music industry, etc.)

# Anyone with access to the content will generate the same ISCC





**ISCC**

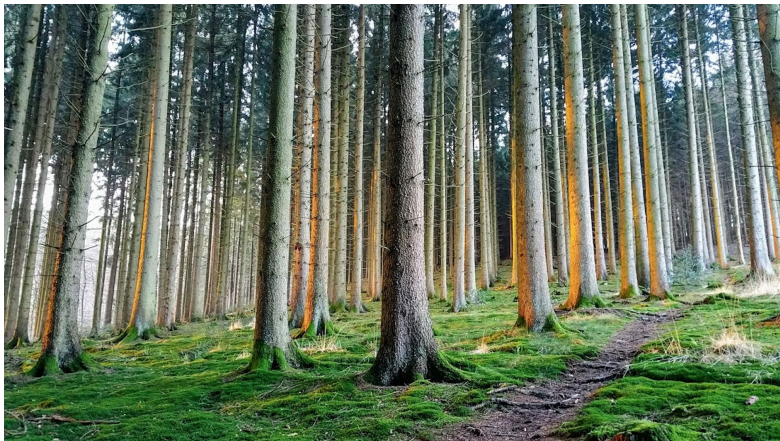
INTERNATIONAL STANDARD  
CONTENT CODE

Y7RDZP9-KI4DIAK-FRP3GF5-SULVNS7

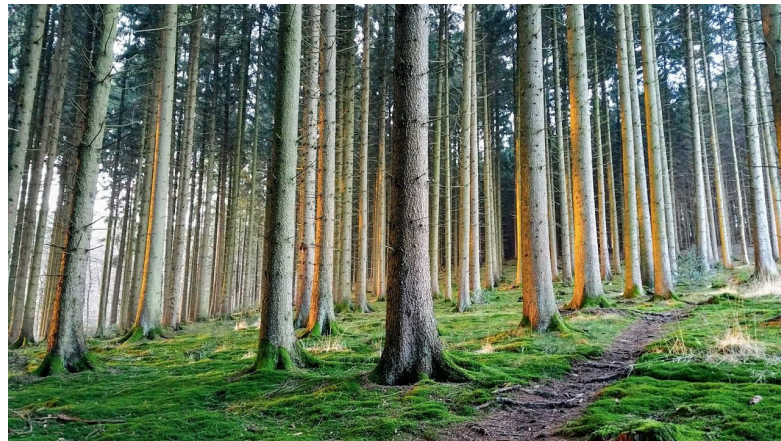
## International Standard Content Code - Built-in Features

- Internal Data Management and Digital Distribution
- Content Versioning
- Related Product Identification
- Granular Content Management
- And a lot more ...





**JPG File** 20161227\_160824.jpg

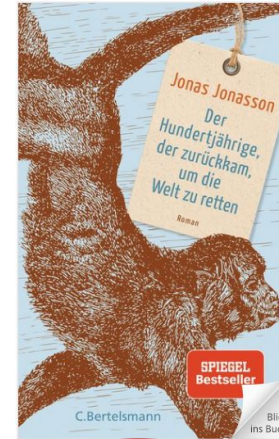


**PNG File** 20161227\_160824.png

	<b>Meta-ID</b>	<b>Content-ID</b>	<b>Data-ID</b>	<b>Instance-ID</b>
20161227_160824.jpg	<b>CCDsTERz4UQV5</b>	<b>CYHsLweYPdvgD</b>	CDMqKBaJ6GcN6	CRWSywYJsmuV1
20161227_160824.png	<b>CCDsTERz4UQV5</b>	<b>CYHsLweYPdvgD</b>	CD8Nq2riHZYFA	CRmPuPvEuwNQ9
Similarity	<b>100%</b>	<b>100%</b>	56.25 %	Unique



Print-Produkt PDF File 9783570103555.pdf



Digitales Produkt EPUB File 9783641231286.epub

	Meta-ID	Content-ID	Data-ID	Instance-ID
9783570103555.pdf	CCYFzp5fuCZ5i	CTW146jkamPhi	CDCXUMP3sG7un	CR2qg9diUSbip
9783641231286.epub	CCYFzp5fuCZ5i	CTW13poWoxkoK	CDiCwHnxCc27y	CRLzb24dPde2w
Similarity	100%	96,88%	56,25 %	Unique



NID - Normenausschuss  
Information und Dokumentation  
AA - Arbeitsausschuss 09

Normungsantrag



ISO/TC 46/SC 9

Preliminary  
Work Item

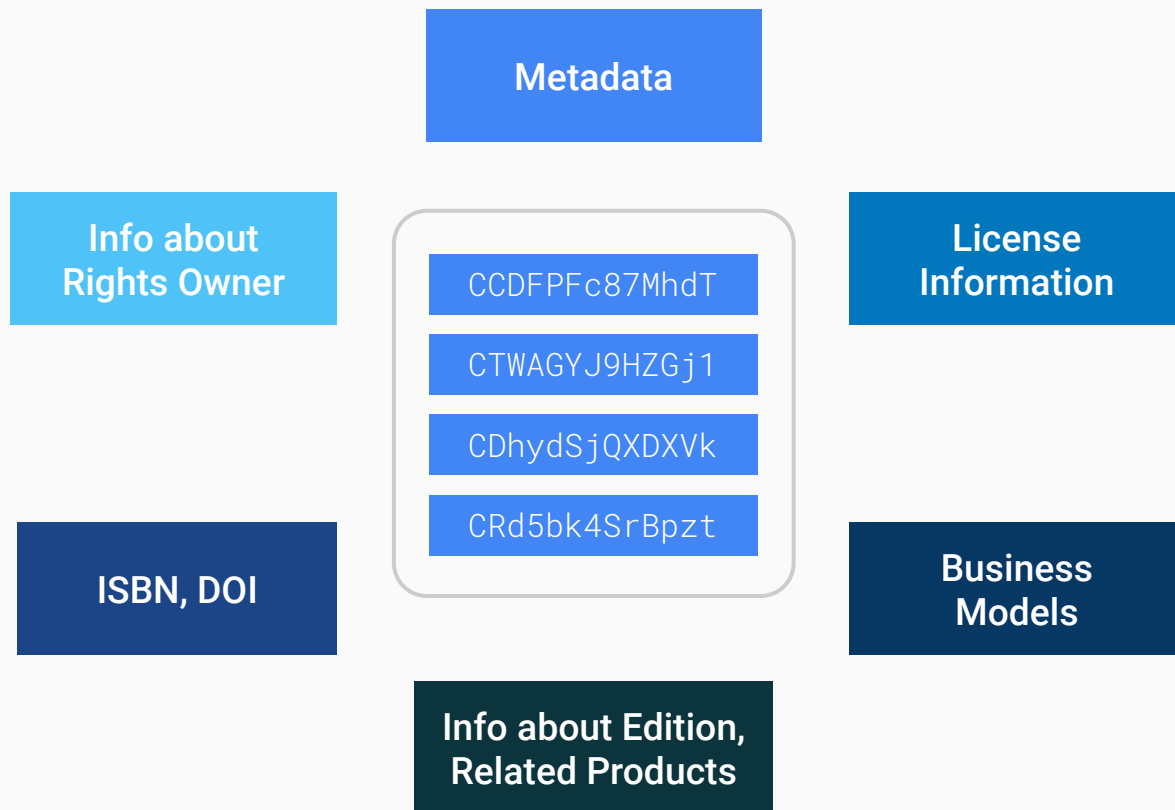




- Change wording for text extraction scope. **Affects: Spec**  
#53 opened 7 days ago by titusz → Version 1.1
- Clarify "Standard Identifier" vs "Standard Content Code" **Affects: Spec**  
#52 opened 7 days ago by titusz
- Support granular similarity hashes for Content-ID **Affects: Code**  
**Affects: Spec** **Type: Feature**  
#51 opened 19 days ago by titusz
- Add and document adjustable parameters for ISCC generation  
**Affects: Code** **Affects: Spec** **Priority: High** **Type: Feature**  
#50 opened 19 days ago by titusz → Version 1.1
- Add specification for unique, owned and authenticated Meta-IDs  
**Affects: Spec** **Priority: High** **Scope: Big** **Type: Discussion** **Type: Feature**  
#49 opened 20 days ago by titusz
- Re-use of existing identifiers as ISCC components. **Type: Discussion**  
#47 opened 20 days ago by titusz
- Elaborate re-use of existing standard identifiers in the bound 'extra'-field.  
**Affects: Spec**  
#46 opened 20 days ago by titusz
- Consider standardized basic metadata fields for existing standard identifiers. **Affects: Spec** **Type: Discussion** **Type: Feature**  
#45 opened 20 days ago by titusz
- Add command line support for reference implementation **Affects: Code**  
**Priority: High** **Scope: Medium** **Type: Feature**  
#42 opened 22 days ago by titusz → Version 1.1
- Add link-checking tests for documentation **Affects: Code** **Priority: High**  
**Scope: Small**  
#41 opened 24 days ago by titusz
- Video-ID - Evaluate (ISO/IEC 15938) Video Signature as source for the Video-ID component **Affects: Spec** **Type: Research**  
#39 opened on 1 Mar by titusz
- Create a PDF version of specification for offline reading **Affects: Tooling**  
**Priority: Medium** **Scope: Small** **Type: Feature**  
#38 opened on 15 Feb by titusz
- Specify QR-Code rendering and parsing for ISCC Codes **Affects: Spec**  
**Priority: Medium** **Scope: Medium** **Type: Feature**  
#34 opened on 4 Feb by titusz
- Investigate bloom filters as metadata for partial content queries  
**Affects: Spec** **Priority: Medium** **Scope: Big** **Type: Feature**  
**Type: Research**  
#33 opened on 27 Jan by titusz
- Fomulate ISCC design principles **Affects: Docs** **Priority: Medium**  
**Scope: Small**  
#31 opened on 27 Jan by titusz → Version 1.1
- Revise text tokenization to better support CJK languages **Affects: Code**  
**Affects: Spec** **Priority: High** **Scope: Medium** **Type: Feature**  
#30 opened on 27 Jan by titusz → Version 1.1
- Add roadmap to specification website **Affects: Docs**  
#29 opened on 23 Jan by sposth → Version 1.1
- Specify procedures for ISCC formal validation **Affects: Spec**  
**Priority: Medium** **Type: Feature**  
#26 opened on 29 Sep 2016 by titusz
- Add interactive Jupyter notebook tutorial/example  
#25 opened on 26 Sep 2016 by titusz



# On blockchains, additional information can be attached to ISCC





Marcus @marcusrg · Mar 17

Cadê o barco de pesca? Where's the fishing boat? (Desconheço o auto da foto, infelizmente. I don't know **who made this** great photo, unfortunately).

Translate Tweet



## Add New Post

Enter title here



Add Media

**B**

*I*

ABC



A





Pluric Group Syncs

# SYNC LICENSING

SUPERVISOR  
Cleared

Sync Music  
EXCLUSIVE  
Back-end  
NON-EXCLUSIVE  
Library Contract  
LICENSE



Sync Licensing For Advertising, Film, TV & Video Games



musai

BESTSELLER  
*Librarium*

L'ESPRESSO

STEFANO BIANCHI



CHEN





# Content-Blockchain.org

## Join the Initiative!

**Sebastian Posth**

posth@iscc.foundation

+31 6 126 76726

ISCC.codes

content-blockchain.org

