



# Blockchain Application Domains & Use Cases for Media & Entertainment

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# Trend : Content Distribution Disintermediation



2007

2012

2014

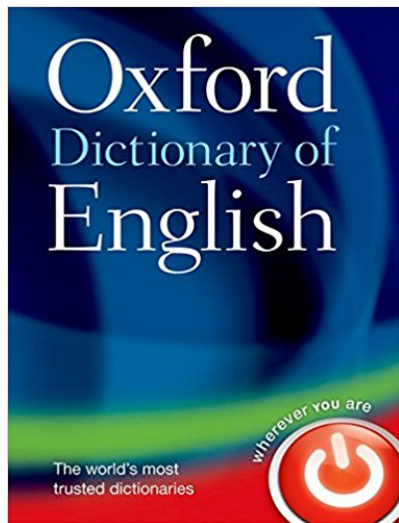
# Trigger : *Rethink Music* Study

2015



*“We encourage the investigation of the use of emerging crypto-currencies, such as Bitcoin, and their underlying technology, **Blockchain**, as new royalty-distribution mechanisms for the music industry.”*

# Blockchain : A definition



*“A system in which a record of transactions made in bitcoin or another **cryptocurrency** are maintained across several computers that are linked in a **peer-to-peer network**.”*  
(Oxford Dictionary)

# Blockchain : Swiss Army Knife for Cross-Sector Needs

Transparency

Identity Management

Interoperability

Disintermediation

Contract Management

Collaboration

Intellectual Property Protection

Rights Management

Trust

Decentralisation

Electronic Payment

Certification

Traceability



1890



2008

# Blockchain : Early adopters for Media & Entertainment

2015



2015 - 2016



2017



2018



# Blockchain Application Domains : Media & Entertainment

Some solutions :

Creative & Productive Collaboration

Intellectual Property Protection /  
Certification

Distribution Disintermediation /  
Actions Traceability

Rights & Identity Management

Contract Management

Electronic Payment /  
Cryptocurrency or Asset



(USD via  
Stripe)

GRMTK  
(Ethereum)

ETH

BTC  
(at the beginning)





# Blockchain Use Case : Certification & Distribution



- Kevin McCoy « City7 » (2015)
- Hash of extrinsic smart contract associated to the work is recorded in Bitcoin blockchain
- Publishing of a certificate for attesting the « authorship » and the « ownership » of the work

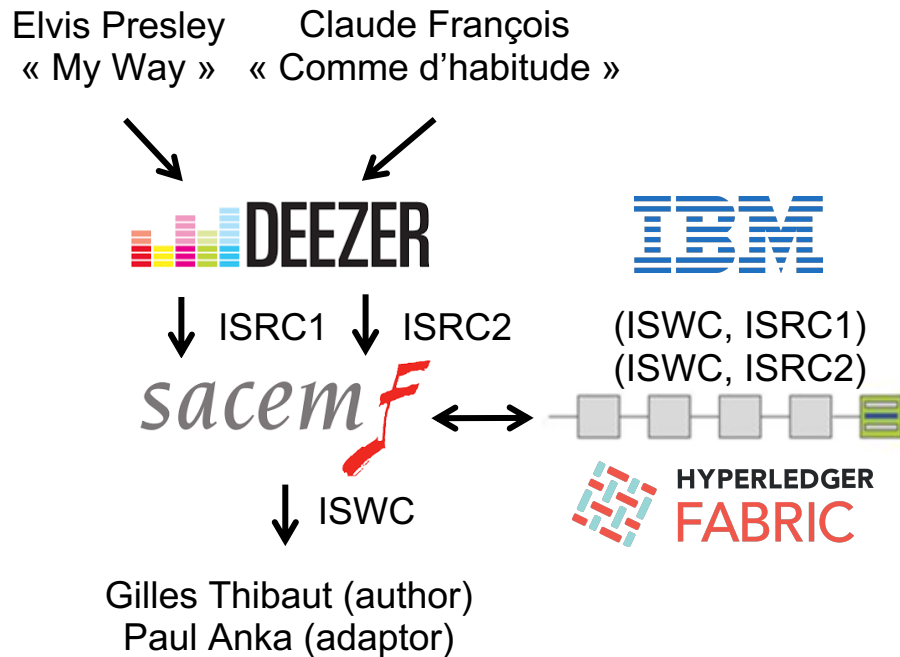




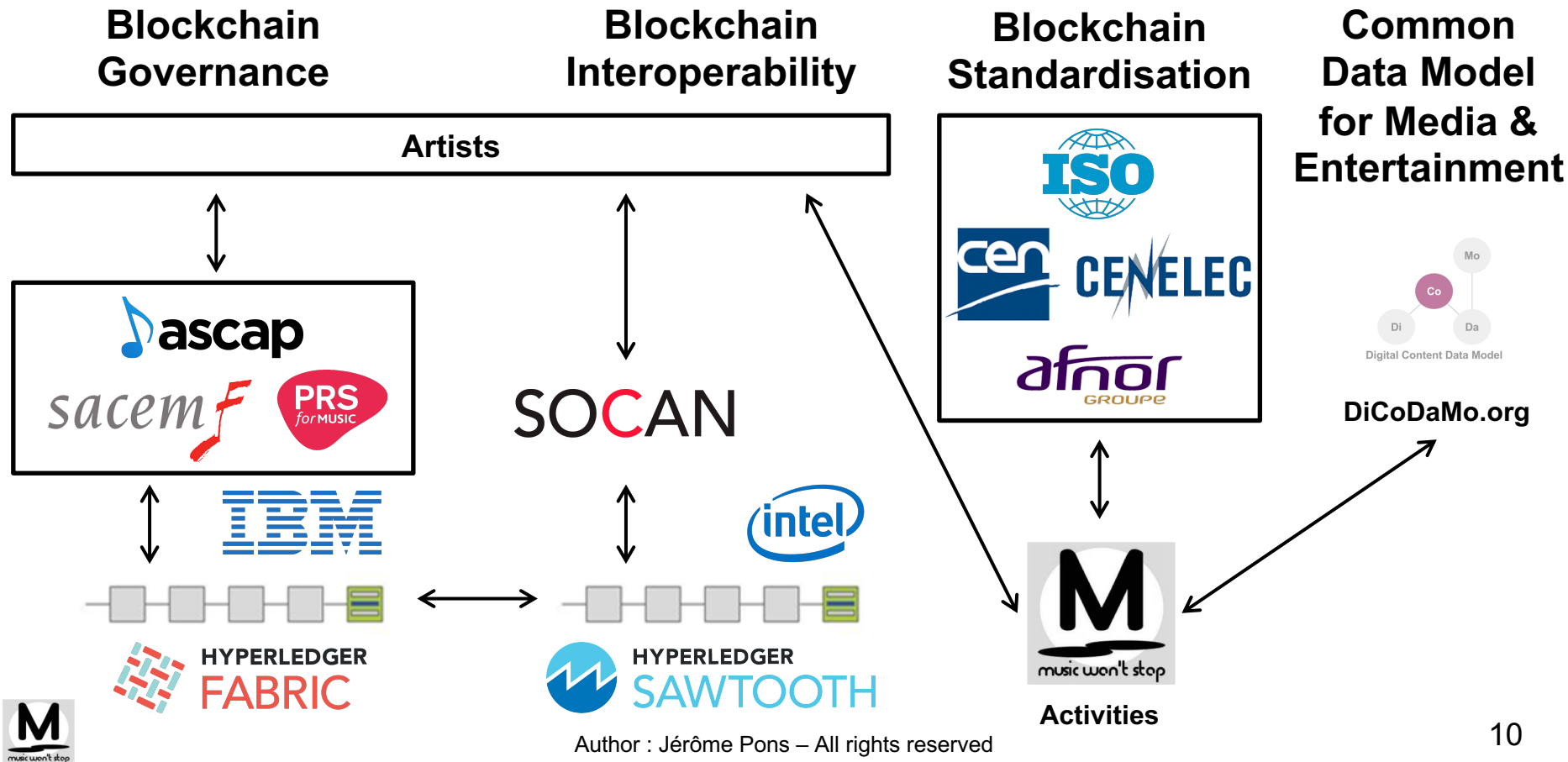
# Blockchain Use Case : Copyright Management



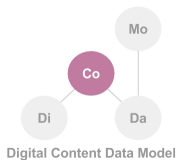
- Identifiers are key for artist payment
- Identifiers are currently stored in different centralised databases
- Smart contracts link identifiers for recorded music (ISRC) and musical work (ISWC) into a blockchain
- Thus simplifying copyright management between streaming platforms and right holders



# Blockchain Stakes : Governance, Interoperability, Standardisation



# Common Data Model for Media & Entertainment : DiCoDaMo.org



- Stands for Digital Content Data Model
- Aims at building a Data Model common to 3 Ecosystems and 12 Activity Sectors of the Digital Content (including 9 Media & Entertainment Sectors) natively integrating blockchain technology
- Work in progress, focusing on Terminology (at most 10 000 Terms), Taxonomy (at most 7-Level Hierarchy) and Ontology (under investigation)

DiCoDaMo's **internal releases** are :

- **V0.14.2** (March 31st 2019) : 6 808 Terms, including :
  - 663 Recorded Music Terms
  - 589 Live Music Terms
  - 593 Cinema Terms
  - 444 Publishing (Book) Terms
  - 416 Graphic Arts Terms
  - 361 Photography Terms
  - 340 Video Terms
  - 280 Print Media Terms
  - 230 Television Terms
  - 213 Radio Terms
  - 158 Display Terms
  - +
  - 145 Telecommunications Services Terms
  - +
  - 271 Video Games Terms
  - 163 Internet and Web Terms
  - 137 Computing and Software Terms
  - +
  - 461 Blockchain & Distributed Ledger Terms
  - 128 Artificial Intelligence Terms
  - 121 Big Data & Data Management Terms

# Blockchain Standardisation : Intellectual Property Protection

## ISO/IEC JTC1/SC29/WG1 JPEG

« Fake news, copyright violation, media forensics [...].  
JPEG has determined that blockchain technology has great potential as a technology component to address these challenges in transparent and trustable media transactions. »

[https://jpeg.org/items/20190419\\_blockchain\\_workshop\\_brussels\\_announcement.html](https://jpeg.org/items/20190419_blockchain_workshop_brussels_announcement.html)



## ISO/IEC JTC1/SC29/WG11 AHG MPEG-21

« Converting MPEG IPR Ontologies [i.e. Media Value Chain Ontology] to Smart Contracts »

<https://lists.aau.at/mailman/listinfo/smart-contracts> &  
<https://mpeg.chiariglione.org/standards/mpeg-21/media-value-chain-ontology>

## ISO TC 307/WG6 Use Cases

« Intellectual Property Management »  
(dedicated section in SG2 report, now under WG6)

<https://www.iso.org/committee/6266604.html>

# Thanks !



## Jérôme Pons

Engineer, graduated from Telecom ParisTech, Jérôme Pons started his career in 2001 at Orange, successively as 3GPP standardisation manager, Orange Media Player project manager (Music Podcasts, Musique Max and Musique Hits), WebTV marketing project manager (OCS) and then InterOperability Testing programme manager.

Entrepreneur, he founded Music won't stop in 2011, a live music production business that diversified in 2013 by developing a consulting activity focused on digital technology and strategy in Media & Entertainment activity sectors.

Specialist of the stakes related to the digital transformation, he published many articles and studies (INA Global, Annales des Mines, AFDEL / TECH IN France, Techniques de l'Ingénieur) related to culture funding, value sharing, metadata-based rights management and intellectual property protection.

Expert in data modelling, he is designing a Digital Content Data Model (DiCoDaMo), common to 9 Media & Entertainment activity sectors and natively integrating blockchain technology, as well as some Digital Content Data Management Tools (DiCoDaMaTo). Specialist of blockchain technology, he devoted himself to digital standardisation since 2016, drives the “architecture and modelling” working group at Afnor and participates to several study groups and working groups (terminology, reference architecture, taxonomy, ontology, use cases, smart contracts, governance and interoperability) within ISO/TC 307 and CEN-CENELEC.

Since 2018, he develops consulting and vocational training activities at Music won't stop, focused on blockchain-based service development within Media & Entertainment activity sectors, teaches blockchain technology to master degree students at Telecom ParisTech, while managing Orange Expert Programme.

## Further readings...

- J. Pons « [Metadata : a major stake for the Music Sector](#) » (INA Global, April 2015, in French)
- J. Pons (main contributor) « [Digital Revolution, a Musical Revolution !](#) »  
(AFDEL / Forum de Tokyo, novembre 2015, in French)
- J. Pons « [Blockchain : a Revolution for Culture Industries ?](#) » (INA Global, March 2017, in French)
- J. Pons « [Blockchains and Smart Contracts in the Culture and Entertainment Business](#) »  
(Annales des Mines, August 2017, in French translated into English)
- J. Pons « [Blockchain : International Standardisation Work Items \(ISO\) - Architecture and Terminology](#) » (Afnor / La Banque Postale, October 2017, in French)
- J. Pons (interview with S. Bretagnolle) « [In the Music \[Sector\], Blockchain Technology could become the Basis of a New \[Business\] Model](#) » (FORWARD, April 2018, in French)
- J. Pons « [Blockchain and artistic creation : blockchain as an efficient copyright management tool ?](#) » (UNESCO, May 17th 2019)