Blockchains, Smart Contracts and Copyright: Beyond the Hype

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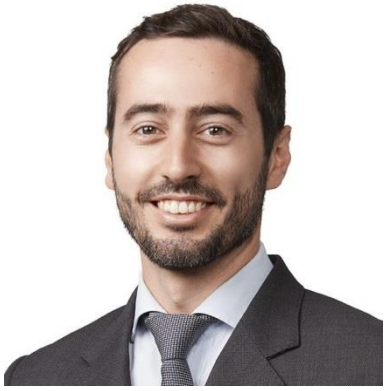

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His research focuses on information law matters, including intermediary liability, intellectual property and the application of copyright in the online environment. He is a member of the Blockchain & Society Policy Research Lab and Managing Editor of the Kluwer Copyright Blog. His publications are available at his institutional page or on his SSRN author page.

Abstract

This presentation refers to research the author is conducting in the context of the ERC-funded Blockchain & Society Policy Research Lab at the Institute for Information Law (IViR), University of Amsterdam. The presentation will examine the impact of blockchain technology on copyright law. Blockchain is the latest wave of digital technology that promises to deliver on the ideal of decentralization. Roughly 20 years after the declaration of the independence of cyberspace and the crypto anarchist manifesto, and 12 years after Yochai Benkler outlined how peer production and web 2.0 would enable a brave new world, many now believe blockchain will empower an open, decentralized, disintermediated, smart, trustless and cryptographic mode of social organization. While one of the goals of decentralized technologies is to operate without needing to adhere to existing legal systems, blockchains face the challenge of being compatible with these systems so as to facilitate wider adoption.

In the copyright domain, different elements may be represented by cryptographic tokens: works, ownership metadata, licensing terms and remuneration. With these characteristics, digital ledger technologies appear to provide a decentralized platform to build and maintain registries of works. Relying on the registries of such tokenized elements, smart contracts may automate and standardize a multitude of copyright-related transactions, for instance those authorizing the use and exploitation of copyright-protected content, and remuneration. Indeed, despite the fact that we are only at the early stages of the application of blockchain technology to copyright goods and services, there is booming deployment of applications in this domain, especially in the online music sector.

From a conceptual perspective, the fundamentals of copyright appear to align well with some features of blockchain technologies – scarcity, trust, transparency, decentralized public records and smart contracts. Authors can publish works on a blockchain creating a quasi-

immutable record of initial ownership, and encode 'smart' contracts to license the use of works. Remuneration may happen on online distribution platforms where the smart contracts reside. In theory, such an automated setup allows for the private ordering of copyright. Blockchain technology, like Digital Rights Management 20 years ago, is thus presented as an opportunity to reduce market friction, and increase both licensing efficiency and the autonomy of creators.

Yet, some of the old problems remain. The presentation will examine the differences between the new, smart-contract-based private ordering regime and the fundamental components of copyright law, such as exceptions and limitations, the doctrine of exhaustion, restrictions on formalities, the public domain and fair remuneration. It will build on the framework set out in a recently published article and dig deeper into the real-word application of different blockchain solutions for copyright-protected content, namely in the online music sector. In doing so, this presentation aims to further our understanding on whether the promise of blockchain can approximate its hype.