

# DRM and Blockchain: A Solution to Protect Copyrights in the Digital World?



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In the artistic world, the development of the Internet, while creating a tremendous way for artists to spread their work worldwide and gain in notoriety, created an environment very much in favor of online piracy, which right holders are still trying to circumvent. The development of new technologies made possible the transmission of unlawful high-quality copies of protected works to millions of individuals worldwide in a single click. But technology is also used in combination with the law so that the rights attached to each particular creation can be efficiently protected in the digital world.

To give right holders a way to control the distribution of their work and to measure content usage, digital rights management (DRM) technologies have been developed. As early as 1998, companies from the music industry and other sectors launched the [Secure Digital Music Initiative \(SDMI\)](#), with the goal to both protect the storage and distribution of digital music and protect the interest of consumers. Besides, companies like [Microsoft](#) started investing in the development of digital rights management technology.

To ensure the efficiency of these technical measures that were starting to appear, several countries started implementing laws not only authorizing but protecting DRM. At a global level, the World Intellectual Property Organization (WIPO) adopted the [Copyright Treaty](#). Article 11 of this treaty states that “Contracting Parties shall provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures that are used by authors in connection with the exercise of their rights [...] and that restrict acts, in respect of their works, which are not authorized by the authors concerned or permitted by law”[\[1\]](#).

In the United States, copyright protection and copyright managements systems are protected by the Digital Millennium Copyright Act of 1998, which criminalizes the circumvention of technological measures to prevent copyright infringement[\[2\]](#).

In Europe, a [2001 directive](#) created an obligation for every member State to provide “adequate legal protection” against the circumvention of any effective technological measures which controls access to a copyrighted work[\[3\]](#). In application of this directive, France for example, made it a misdemeanor to knowingly get around a technological protection[\[4\]](#).

But despite this legal protection and the technological efforts that were made, these mechanisms were often circumvented and resulted in a meager protection that hackers could bypass once, before sharing the copyrighted content left unprotected. In addition to not prove very efficient, DRM technologies have been [criticized as liberticidal](#). Consumers who lawfully obtained copyrighted content and were limited in its use were seeing DRM as imposing unfair restrictions. Based on the idea “that basically consumers were not going to put up with DRM anymore”, [Apple stopped using DRM](#) on the contents available on iTunes Stores.

Despite these obstacles, DRM technologies are still used to try to control the diffusion of copyrighted work on the Internet and tech companies are looking for ways to improve them. Recently, the solution that sparked most interest is resumed in one word: blockchain. This new technology, by allowing to embody copyrighted works in a “secure, time-stamped and immutable chain of information,”[\[5\]](#) will make these works unalterable and their further uses very easy to control by the copyright owner, as every usage of a specific content will be recorded in the chain.

On October, 15, 2018, Sony announced his intention to use the blockchain technology in order to make digital rights management more efficient. According to its [press release](#):

*“[T]his newly-developed system is specialized for managing rights-related information of written works, with features for demonstrating the date and time that electronic data was created, leveraging the properties of blockchains to record verifiable information in a difficult to falsify way, and identifying previously recorded works, allowing participants to share*

and verify when a piece of electronic data was created and by whom. In addition to the creation of electronic data, booting up this system will automatically verify the rights generation of a piece of written works, which has conventionally proven difficult. Furthermore, the system lends itself to the rights management of various types of digital content including electronic textbooks and other educational content, music, films, VR content, and e-books”[6].

In other words, blockchain would offer a very performing way to prove ownership and to trace utilization of a copyrighted work online.

Other companies started working on the subject. In the music industry, [Spotify acquired Mediachain](#), blockchain startup which aims to facilitate the payment of musical artists through cryptocurrencies. The goal is to identify which songs were played and to pay the right artist accordingly using digital rights management. The development of these new blockchain based DRM is really encouraging and constitutes a step toward an efficient protection of copyrighted content in the digital world. [According to Rahul Gautam](#), Ernst & Young analyst, “the prospect of being able to manage who has the ability to access that content [...] and where that money should go at the end of the transaction is extremely daunting for existing technologies,” but this goal could be achieved through blockchain[7].

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[1] [WIPO Copyright Treaty](#), Art. 11, 36 I.L.M. 76 (Dec. 20, 1996)

[2] Millennium Copyright Act (Dec. 1998), 17 U.S.C. §§ 1201 et seq.

[3] [Directive 2001/29/EC of the European Parliament and of the Council \(May, 22, 2001\)](#), art. 6

[4] Article L335-3-1 of the French Intellectual Property Code

[5] [Birgit Clark, Blockchain and IP Law: A Match made in Crypto Heaven?](#) WIPO Magazine.

[6] News Releases, [Sony Develops Rights Management System for Digital Content Utilizing Blockchain Foundation](#), SONY (Oct. 15, 2018)

[7] Stacy Nawrocki, [Could Blockchain DRM Stop Digital Film Theft?](#) (Nov. 16, 2017)

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