jurisdictions where authors and performers do not have adequate means to catalogue their works, ownership can be hard to prove.

Using Blockchain could be particularly interesting to prove ownership of digital literary and artistic works. Blockchain could provide authors and performers of such works with an immutable, secure and time-stamped\* proof of ownership. Digital works created directly on applications using the technology could be "registered" instantaneously, upon creation.

Potential advantages of using the technology to record copyright are multifaceted: records added to the blockchain cannot be duplicated, manipulated or faked; they are permanent; and information stored can easily be tracked, making it easier to enforce IP rights. Some companies such as Binded (former Blockai), Ascribe, Blocknotary, Copyrobo and KodakOne are already offering authors and performers the possibility to record their digital work on blockchain applications, and services providing proof of existence for any type of work, including copyright, have flourished in recent years.<sup>52</sup> Binded,<sup>53</sup> for example, helps artists claim their copyrights and protect them by allowing them to place their original digital art and photos on Binded's copyright platform. The company creates a timestamp in the blockchain and delivers a copyright certificate as proof of authenticity. Although such companies still have a limited user base for the moment, they offer an interesting pathway for artists and creators wishing to prove ownership of their digital works.

In the case of non-digital works, however, Blockchain can only provide proof of existence, not ownership. Blockchain cannot guarantee the trustworthiness of information entered onto the ledger. It can only guarantee that "on-ledger" information has not been tampered with. Blockchain registration cannot, therefore, solve issues related to unlawful acquisition of creative works. Blockchain registration cannot guarantee that the person who registers the work is the original creator of the work. It only proves that at the time the data was added to the ledger, the work existed – proof of existence – and was in possession of the person who registered it. A physical verification system will still be required. In the case of non-digital works, original works cannot be stored on the blockchain; only the cryptographic\* digest of the work can. As hashing\* creates a fingerprint that is unique to the work it is related to, it is a guarantee of authenticity, but not a guarantee of ownership.

## (ii) Trademarks

For trademarks, ownership rights are acquired by the party that uses or registers a particular sign first (e.g. a word, logo, phrase or design) with a central authority. Proof of first use or registration is therefore key.