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IP is a journey: blockchain and encrypted storage are your best friends

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For a long time, managing intellectual property (IP) meant filing patents and registering trademarks. Unregistered IP rights were mostly neglected and even registered IP rights were considered a one-time activity and mostly a technical and administrative process. Professionals in charge of IP aimed to achieve very specific goals and then forget about them, except when related annuities were due for payment.

Digitalization changed all that, first subtly and slowly, and now rapidly and boldly.

IP management is a daily practice

Today, high-tech companies and creative businesses alike are well aware that they have to deal with IP and associated risks on a daily basis. This requires a new mindset for all company departments, not just for the IP specialists.

Hiring a new employee from a competitor? Entering into a partnership with the local university? Raising funds from investors? Prototyping and testing with external labs? All these activities, and many others, involve core IP assets and expose the owner to significant threats. From the misappropriation of trade secrets to copyright infringement. Minimizing these risks means taking adequate measures.

Factors driving changes in IP management

Many factors are driving changes in IP management, some are well known, others are less obvious. It is now widely recognized that the accelerated pace of innovation is often incompatible with the slow processes of IP filing and prosecution. Moreover, within a highly competitive global market, increasing employee mobility requires that both technical and legal measures are in place to maintain ownership and control over IP assets.

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However, we may not be aware that entirely new breeds of digital IP assets are emerging that demand a completely new approach to IP management. These include: constantly evolving datasets, thicker layers of know-how beyond the perimeter of related patents, designs inextricably intertwined with software, and many more.

Establishing an innovation timeline with public blockchains and encrypted repositories

The awareness that IP management is a daily task creates demand for new tools. Digital platforms built around public blockchains and encrypted data storage can provide an effective answer to the daily needs of modern innovators and creatives.

At its core, a public blockchain is a global public ledger, independent from any central authority and control. This special registry only contains a list of transactions of the underlying cryptocurrency that powers and secures the blockchain network itself.

They deserve the “public” adjective because anyone can obtain an updated copy of this registry, anyone may add something to the registry by submitting a new transaction to the network, but no one can make changes to it or delete anything from it.

The ability to insert a cryptographic fingerprint of any digital object into a blockchain transaction turns this decentralized ledger of transactions into the perfect registry for certifying IP assets.

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Combining a public blockchain with a versioned and encrypted data repository will lead to the creation of a digital IP management platform that can conveniently prove existence, integrity and ownership of documents, artistic compositions, research data, designs, software, business plans, contracts, and more. Each digital object is permanently timestamped, archived and linked to its owner in an immutable way.

The data storage component is very helpful because digital certificates, whether derived from a blockchain or issued by an authority, are fragile and may only be used in combination with the files used to generate them. Even the smallest change to the originally certified files will eliminate the validity of the certificate as digital evidence. Of course, since most of the data that innovators are interested in certifying are confidential, the data storage solution should also provide the highest level of encryption and ideally, should be engineered in a way that even the storage provider is prevented from accessing the data.

Things are even more complex when you consider the nature of an innovation project. Any innovation project, regardless of its size, goes through many iterations, making it a significant challenge to maintain an encrypted repository with each version of each individual IP asset associated with the corresponding certificate.

Take for example, the launch of a new fashion garment; it starts with a brief and some sketches and it ends with computerized models, marketing plans, pricing strategies, lab tests, and much more. Each file merits protection from inception and throughout its lifecycle.

In this context, the ability to establish an indisputable trail of records that certifies the different stages of the project, the creation of new knowledge, and the investments made, is essential to the effective management and defense of the associated IP rights.

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> “The ability to track the entire life cycle of a right has multiple benefits, including smoother IP right audits and simplified due diligence exercises in the context of IP transactions.”
> *— Dr. Birgit Clark, Baker McKenzie and Ruth Burstall, Johnson & Johnson*
> Crypto-Pie in the Sky? How Blockchain Technology is Impacting Intellectual Property Law,
> Stanford Journal of Blockchain Law & Policy, June 2019

Why you need a blockchain-based IP management system

There are countless situations involving IP assets where digital certificates based on a public blockchain and supported by a solid and private storage system, can be used to address operational issues, introduce best practices and mitigate risks. Here are some such scenarios:

- **Better non-disclosure agreements (NDAs)**
  NDAs constitute the first line of defense in trade secret misappropriation cases and in all situations in which technical and commercial know-how is shared with third parties (employees, investors, auditors, partners, suppliers, …). A blockchain-enhanced NDA can precisely identify the perimeter of the shared confidential data via an annexed blockchain certificate. While no sensitive information will be disclosed, the agreement itself will become much easier to enforce by not being overly broad and by establishing a direct link between the receiving party and specific knowledge items.

- **Risk employees**
  When hiring an employee from a competitor, it is essential to only assign her or him to projects where it is possible to prove that the knowledge with which they are working originated from within the company. A solid chain of records proving the evolution in time of the project would represent the best answer to any accusation of misappropriation.

- **Practical copyright defense**
  A composer sharing her or his music with fellow musicians, recording studios, etc. may enjoy the peace of mind of knowing that they will be able to prove their authorship thanks to their regular registration of their works on the blockchain. Eventually, they will also be able to use those digital certificates to reinforce contractual agreements and licensing schemes. Of course, this situation is not limited to music. Similar scenarios may arise in relation to jewelry, fashion, furniture, graphic design, and other creative projects.

- **Open innovation**
  Anyone running an open innovation initiative knows how important it is to give

participants a simple tool to prove ownership of their contributions ahead of its submission. A blockchain-based platform can solve this and can remove any fear or friction about disclosing information to third parties.

- **Collaboration projects and strategic partnerships**
  Starting an R&D collaboration project with another company or a university? The easiest way to define background, sideground and foreground knowledge for all parties is to register independent contributions, co-results and follow-up developments on a blockchain-registry. The certificates obtained in this way can also be referenced in the contractual frameworks governing the collaboration.

- **Startups**
  By definition, startups are focused on innovation, yet all too often they fail to enact good IP management practice until it's too late. For example, they struggle to create solid proof of ownership of the technology they pitch to investors or they fail to take a clear snapshot of the knowledge in their company when admitting a new co-founder or key employees. A blockchain-based IP management platform, as easy to use as any online storage service, can address such situations and many others, providing significant benefits and ultimately increasing the startup's valuation.

- **Trademarks proofs of use and reputation**
  A certified trail of evidence proving actual use and reputation of a trademark will enable the trademark owner to effectively defend, maintain and renew registered and unregistered trademarks. The blockchain's ability to deal with all kinds of files allows for the registration of very diverse evidence from invoices to the video footage of a public presentation, and from packaging designs and advertising copy to media coverage. With a blockchain-based platform, companies can conveniently maintain a timestamped repository for each trademark.

- **Effective prior use defense**
  In order to successfully defend a product by demonstrating prior knowledge and/or prior use of a certain technology, it is critical to present solid documentation that is valid for and accepted in each market in which the product is sold. The global nature of blockchain certification, and the ability to use it to register core technological achievements, business decisions, pilot projects outcomes, and more, makes prior use defense a viable option even in complex cases.

- **Pitching creative ideas**
  Advertising and communication agencies, architects, designers, are just some of the businesses that are invited to pitch creative and innovative ideas in the context of public and private tenders. However, they are often powerless when it comes to unfair usage of the concepts they have presented. Prior registration of the submissions on a blockchain-registry is a convenient and effective way to deter misuse and, if necessary, claim rights.

Amber is a good metaphor for the blockchain: transparent and capable to preserve things for millions of years. (Photo: AGEphotography / Getty Images)

Conclusions

Things can go badly wrong when IP is not properly managed. Daily news reports are full of stories about disloyal employees stealing trade secrets, large corporations exploiting the IP of startups and small businesses, damages suffered by fashion designers for copyright infringements, and so on.

Today, innovators can complement the protection provided by the traditional IP right system with blockchain-based certifications. Of course, law firms and IP specialists are best placed to educate IP owners and support them in selecting the right tools, establishing best practices and creating new contractual frameworks that leverage these new digital certificates, but blockchain-based certification offers innovators and creators an unprecedented opportunity to protect their interests and it is accessible to everyone.