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SMART CONTRACTS AND INTELLECTUAL PROPERTY: REVOLUTIONIZING MANAGEMENT AND ENFORCEMENT OF PATENTS, COPYRIGHTS AND TRADEMARKS IN THE DIGITAL AGE

Mehdi EL HARRAK

With the advancement in technology, the use of smart contracts has become increasingly popular in many industries. Smart contracts are self-executing digital contracts with the terms of the agreement between the parties being directly written into code. These contracts are designed to facilitate, verify, and enforce the negotiation and performance of a contract. As the use of smart contracts increases, the issue of intellectual property (IP) rights in these contracts arises. This article explores the implications of smart contracts on IP rights and the relevant international laws that apply.

SMART CONTRACTS AND INTELLECTUAL PROPERTY

Smart contracts have the potential to revolutionize how intellectual property rights are managed and enforced. Smart contracts can be used to manage IP rights by automatically tracking ownership, licensing, and royalty payments. They can also be used to enforce IP rights by automatically triggering penalties for infringement or unauthorized use.

One of the benefits of smart contracts is their transparency. Smart contracts are publicly visible and tamper-proof, which ensures that the terms of the contract are enforced in a fair and transparent manner. This is particularly important in the context of IP rights where ownership and usage rights can be highly contested.

INTERNATIONAL LAWS ON SMART CONTRACTS AND INTELLECTUAL PROPERTY

The use of smart contracts for IP rights is relatively new, and there is currently no specific international law governing this area. However, there are several international laws that apply to IP rights and could potentially apply to smart contracts.

The World Intellectual Property Organization (WIPO) is the United Nations agency responsible for the promotion and protection of IP rights. WIPO administers a number of international treaties, including the Berne Convention for the Protection of Literary and Artistic Works, the Paris Convention for the Protection of Industrial Property, and the WIPO Copyright Treaty.

The Berne Convention provides for the protection of literary and artistic works, including copyrights. It requires that each member state provide automatic protection for works originating in other member states, and it establishes minimum standards of protection. The Paris Convention provides for the protection of industrial property, including patents, trademarks, and designs. It requires each member state to grant patents and trademarks to nationals of other member states, and it establishes minimum standards of protection.

The WIPO Copyright Treaty (WCT) is a special agreement under the Berne Convention that addresses the protection of works in the digital environment. The WCT requires member states to provide adequate legal protection and effective remedies against the circumvention of technological measures used to protect copyrighted works.

These international laws could potentially apply to smart contracts if they are used to manage or enforce IP rights.

1. For example, if a smart contract is used to manage **copyrights**, the Berne Convention and the WCT could apply.

A smart contract can be used to manage copyrights by automatically tracking ownership and usage rights, managing licensing agreements, and enforcing copyright terms and conditions.

Here's how it could work:

- Registration: The copyright owner can register their work with a smart contract, which can record the ownership information and the terms and conditions of the copyright.
- License management: The smart contract can be programmed to automatically manage licensing agreements for the copyrighted work. For example, if a licensee wants to use the copyrighted work, they can negotiate a licensing agreement with the copyright owner through the smart contract. The smart contract can then automatically manage the payment of licensing fees, track the usage of the work, and enforce the terms and conditions of the license.
- Royalty payments: The smart contract can also be programmed to manage royalty payments for the copyrighted work. If the copyrighted work generates revenue, the smart contract can automatically calculate the royalties owed to the copyright owner and distribute the payments to them.
- Enforcement: The smart contract can be programmed to enforce the terms and conditions of the copyright. For example, if someone uses the copyrighted work without permission, the smart contract can automatically trigger penalties and enforce the copyright owner's rights.

By using a smart contract to manage copyrights, the process can be made more efficient, transparent, and reliable. The smart contract can also provide a tamper-proof record of ownership and usage rights, making it easier to enforce copyrights and protect the rights of copyright owners.

2. If a smart contract is used to manage **trademarks or patents**, the Paris Convention could apply.

A smart contract can be used to manage trademarks or patents by automatically tracking ownership, managing licensing agreements, monitoring potential infringements, and enforcing trademark or patent terms and conditions.

Here's how it could work:

- Registration: The trademark or patent owner can register their intellectual property with a smart contract, which can record the ownership information and the terms and conditions of the trademark or patent.
- License management: The smart contract can be programmed to automatically manage licensing agreements for the trademark or patent. For example, if a licensee wants to use the trademark or patent, they can negotiate a licensing agreement with the trademark or patent owner through the smart contract. The smart contract can then automatically manage the payment of licensing fees, track the usage of the intellectual property, and enforce the terms and conditions of the license.
- Infringement detection: The smart contract can also be programmed to monitor for potential infringements of the trademark or patent. By tracking potential infringing uses of the intellectual property, the smart contract can alert the trademark or patent owner to potential infringements and help them take appropriate action.
- Enforcement: The smart contract can be programmed to enforce the terms and conditions of the trademark or patent. For example, if someone uses the intellectual property without permission, the smart contract can automatically trigger penalties and enforce the owner's rights.

By using a smart contract to manage trademarks or patents, the process can be made more efficient, transparent, and reliable. The smart contract can also provide a tamper-proof record of ownership and usage rights, making it easier to enforce trademarks and patents and protect the rights of intellectual property owners.

An attractive title for an article on this topic could be "Smart Contracts: Revolutionizing Trademark and Patent Management and Enforcement."

CONCLUSION

The use of smart contracts for managing and enforcing IP rights is a relatively new development. While there is no specific international law governing this area, existing international laws on IP rights could potentially apply to smart contracts. Smart contracts have the potential to revolutionize how IP rights are managed and enforced, but it is important to ensure that they are used in a manner that is consistent with existing international laws. As technology continues to evolve, it is likely that new laws and regulations will be developed to address the use of smart contracts for IP rights.