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BLOCKCHAIN TECHNOLOGY: PATENTABILITY AT THE EUROPEAN PATENT OFFICE

In the collective imagination, the terms "blockchain" and "bitcoin" are inextricably linked, but it was not always this way.

The theory of blockchain was first developed in 1991 by a pair of inventors, Haber and Stornetta, as a technology for guaranteeing the integrity of digital documents. It was not until 2008 that an anonymous inventor working under the pseudonym Nakamoto actually implemented the theoretical concept, coining the term "block chain" and linking it to the bitcoin cryptocurrency. Basically, Nakamoto took the idea of a chain of blocks (whence the term "block chain"), cryptographically protected using time stamps, and adapted it to the financial sector by developing an electronic payment system based on cryptographic proof that enables two parties to make transactions without the need for a third party intermediary and guarantor.

This clarification of the origins of blockchain is essential in the patenting context. This is because to determine whether an invention is anticipated by a patent belonging to someone else or any other piece of prior art it is necessary to carry out a prior art search, and with "blockchain" as the keyword such a search would hardly be exhaustive. In fact, in order to be patentable at the European Patent Office (EPO), an invention must satisfy three conditions: it must be novel, it must be inventive (i.e. it must not be obvious to a person skilled in the art), and it must be susceptible of industrial exploitation. For assessing the patentability of a blockchain invention (i.e. an invention implemented using electronic computers), it must also be kept in mind that the European Patent Convention states that computer programs are not patentable "as such", but can instead be patented if they can make a technical contribution to the state of the art. The latter means that while the source code of an application on a device is generally not patentable at the EPO (although it is protected by copyright), the device or the system comprising the application is patentable at the EPO if it is configured using the source code to carry out a method that is technically inventive, independently of the nature of that method.

A first example of an invention in blockchain technology that the EPO considers patentable is a computer-implemented method for detecting malicious events occurring with respect to a blockchain data structure and a computer system arranged and configured to implement this method.

A second example of an blockchain invention that the EPO considers patentable is a computer-implemented system and method to enable complex functionality on a blockchain while preserving security-based restrictions on script size and opcode limits, where the invention specifically relates to a method of using a plurality of blockchain transactions to execute a computer-implemented task and a computer system arranged and configured to implement this method.

These two examples can be considered patents on core blockchain technology, because they concern the way blockchain works. Core technology is generally patentable at the EPO. In fact, by properly drafting the claims, it is possible to prevent the invention from being considered a pure algorithm (which is excluded from patentability).

A further example of an invention in the blockchain field which the EPO considers patentable is a registry and automated management method for blockchain-enforced smart contracts, where the invention specifically consists of a computer-implemented method of controlling the visibility and/or performance of a contract and a computer system arranged and configured to implement this method. The latter example can be considered a patent on applied blockchain technology, because it concerns the use of blockchain for a specific purpose.

All of the above examples are taken from patents actually granted by the EPO, and show that, as long as the patent application as filed clearly explains how and why the purported technical effect is achieved, or at least contains some comparative examples, the grant of a European patent related to core or applied blockchain technology is certainly possible.

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