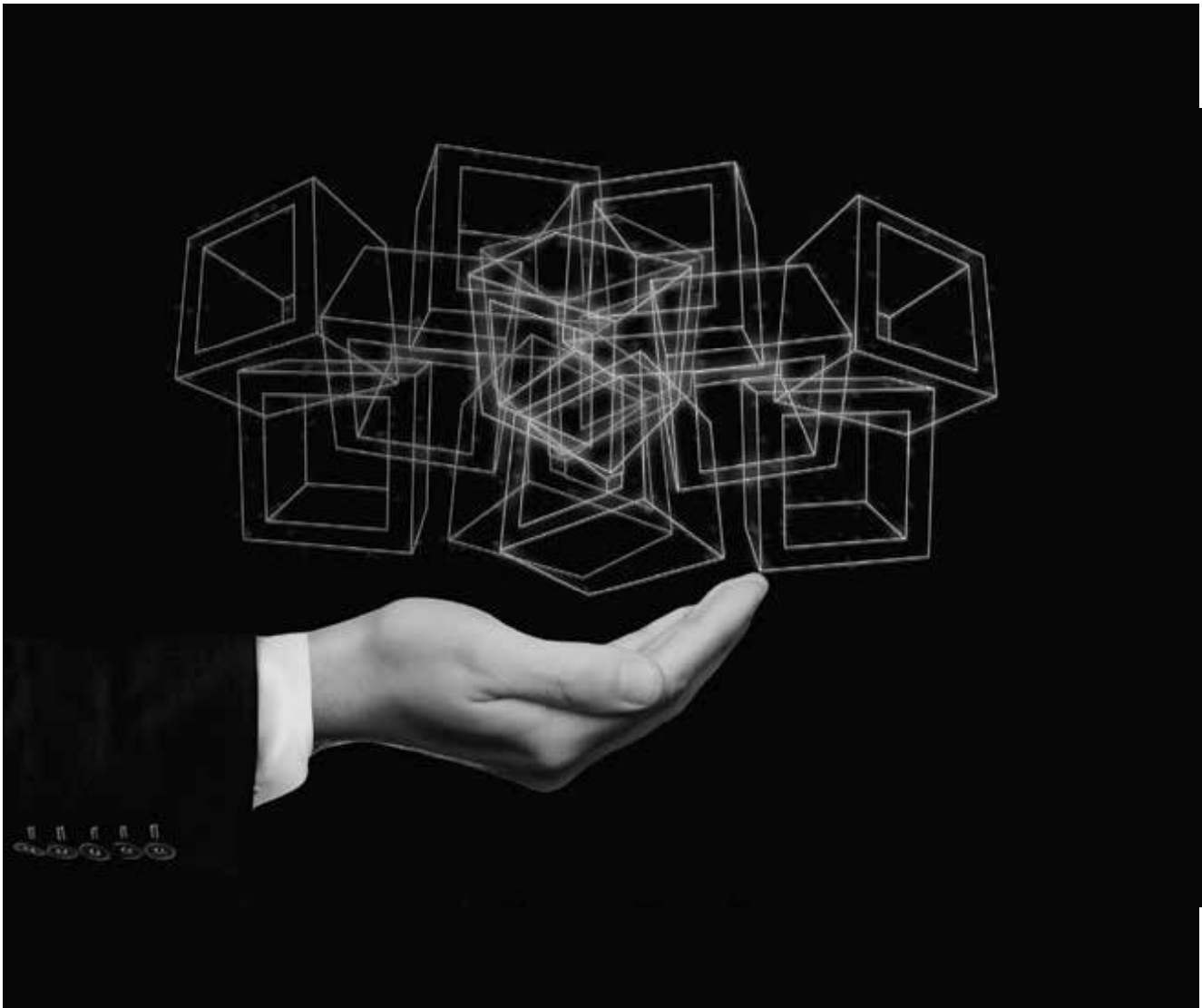


The craft of Blockchain Patenting

Ramya Rao

✉ pcquest@cybermedia.co.in



How can industries claim patents to protect innovative blockchain technology and what are the viewpoints of patent offices across the world?

Primarily proposed as a research project by Stuart Haber and W. Scott Stornetta in 1991, the blockchain concept predates its first widespread application in use as bitcoin almost two decades later, in 2009. In the years since, the use of blockchains has exploded via the creation of various cryptocurrencies, decentralized finance (DeFi) applications, non-fungible tokens (NFTs), and smart contracts.

Bitcoin uses blockchain as a mere means to transparently record transactions in a distributed ledger. But blockchain, in theory, can be used to immutably record any number of data points. For example, it could be used for transactions such as votes in an election, product inventories, state identifications, smart contracts, and much more.

Blockchain essentially is an amalgamation of various technologies. Its various innovative implementations reap benefits like improved accuracy by removing human involvement in verification, cost reductions by eliminating third-party verification, harder to tamper within view of decentralization, and secure, private, and efficient transactions.

The advantages of this disruptive technology have led to an increased filing of blockchain patents. The top ten countries or jurisdictions in the blockchain patent space are China, the United States, Korea, EPO, PCT, Japan, Taiwan, Singapore, Canada, and Australia. China is leading the space with 34,562 granted and pending blockchain applications. The United States is second in patenting with 8,759 granted patents and pending applications. Korea is third with 4,035 granted patents and pending applications in blockchain technology.

Patentability of Blockchain Innovation

Several courts across the world are especially critical of granting blockchain/cryptocurrency-related patent applications in their recent decisions. The basis of such decisions is that the invention is not patent-eligible subject matter since it is directed to a judicial exception. Particularly, in the United States, software and related cryptocurrency patent applications were



RAMYA RAO, Partner, K&S Partners

rejected as “abstract” and found to be simply “organizing human activity” or merely using generic computer functions. Under the requirements of 35 U.S.C. 101, applicants must demonstrate that the technology underlying the software has been modified to achieve a specific result.

Indian Perspective

Theoretically, it has been hinted that blockchain-related innovations may not be patentable because most blockchain-based services are using the same old technology (blockchain) for a new application or use. The essence of blockchain technology revolves around algorithms using mathematical theory and/or computer programs. Algorithms and computer programs may not be deemed inventions in the sense of Section 3(k) of the Indian Patents Act.

Recent patent grants by the Indian Patent Office (IPO) suggest that computer-related inventions are patentable under Section 3(k) if they give a technical solution to a technical problem by providing a practical application or an improved technical impact of the underlying software. This could suggest

that a blockchain-based invention may be patentable if it provides a technical solution to a technical problem and significantly enhances the underlying technology. However, since there is no common guideline of what amounts to an improvement, as of today, patentability may be ascertained on a case-to-case basis at an examiner's discretion.

As per the IPO website, there are approximately 1,446 published patent applications and 27 granted patents in the field of blockchain, in India. Upon analyzing these patents, it was found that a majority of these relate to improvement to the blockchain technology itself, followed by a handful of patents granted for secure network communication and legal systems. Other verticals include agriculture, advertisement, pharmaceuticals, finance, automotive and e-commerce, and the healthcare industry.

A good example is a recent patent grant in April 2022 by IPO which demonstrates how the government is promoting the innovation of blockchain technologies. Patent application 202011044603 is related to a method for improving advertisement efficiency through the implementation of blockchain technology. It is interesting to note that both - the technology used in the invention, blockchain, and the field of application, advertisement, are very complex areas to have patents granted under the computer-related inventions (CRI) guidelines. The invention shortlists a suitable advertisement platform comprising various criteria such as nature of the advertisement, target audience, geolocation, nature of the digital platform, a threshold false activity allowance, etc.

The technical advantages highlighted by the applicant to circumvent non-patentability under section 3(k) were automated assessment of a suitable advertisement platform based on parameters such as a history of impressions, click-through rates, and user traffic on the platform, the validity of the platform and transparency for placement of the advertisement. In addition, the applicant highlighted that since advertisements are placed on selected advertisement platforms, the invention

▼ Theoretically, it has been hinted that blockchain-related innovations may not be patentable because most blockchain-based services are using the same old technology (blockchain) for a new application or use. The essence of blockchain technology revolves around algorithms using mathematical theory and/or computer programs. Algorithms and computer programs may not be deemed inventions in the sense of Section 3(k) of the Indian Patents Act.

requires less hardware space/memory unit and saves significant processing power. Finally, the requirement of hardware components was satisfied by illustrating how the communication is happening between a central server and multiple local servers for the assessment of the digital platform.

Things you must keep in mind

In a general sense, any blockchain innovation which involves improved technological functionality or produces a tangible result can be considered a patent-eligible subject matter.

It is important in patenting blockchain innovation to craft a well-articulated claim set and detailed description that demonstrates how the novel blockchain technology improves computer functionality and/or employs a technical solution to a known technical deficiency. The patent application should include a clear and thorough analysis and description of all systems, subsystems, and components that implement this proprietary process or method. ■

The author is Partner, K&S Partners