

10 Considerations For Blockchain Patent Applications

By **Paul Haughey, Brian Olion and Thomas Franklin**

(February 23, 2018, 12:00 PM EST)

A blockchain is a distributed ledger verified and copied across thousands of computers. One analogy is Google Docs, which provides multiple parties access to the same document. Blocks in a blockchain are periodically created (e.g., every few minutes), with each block recording transactions or new data encrypted and signed using public/private keys. The public key is like an address, and the private key is like a password. The blocks typically include a cryptographic hash of the previous block, a timestamp and transaction data. Bitcoin is the most well-known use of a blockchain, but it can also be used for smart contracts (self-executing upon meeting conditions), chain of custody verification (e.g., supply chain), and many other uses.



Paul Haughey

The original blockchain codes, used for Bitcoin and Ethereum (smart contracts), are open source. The companies obtaining the most blockchain patents include IBM, MasterCard and Bank of America. The patents generally relate to improvements in the blockchain processing operations, or new uses of blockchains. Many of the issued patents received first action notices of allowance (this is likely to decrease as the database of patents and applications increases).



Brian Olion

Here are some considerations for filing blockchain patent applications:

1. Patent or Trade Secret?

This is a trade-off for all patent applications. Since blockchain uses are likely to take some time to be adopted, the long wait for a patent may well be worth it. The patents typically cover a particular use case intertwined with blockchain technology to solve a particular problem in a unique way. A patent is often preferred over trade secret protection because blockchain technologies are only trusted when opened to allow the user community to verify sound implementation.



Thomas Franklin

2. Open Source Issues?

Many blockchain projects are fully open source. Open source allows for quick development as the source code is accessible and editable by everyone. In contrast proprietary code is often developed internally, which may lead to slower code development. It is

important to determine not only which part of your blockchain project utilizes open source code, but also the licenses (e.g., General Public License, BSD, Lesser General Public License, etc.) and/or restrictions (e.g. patents, copyrights, etc.) associated with the open source code. These factors may prevent someone from obtaining a patent or even forcing a granted patent to be freely licensed. In the blockchain arms race it may be beneficial to not patent all or certain aspects of your algorithm in order to take advantage of certain open source benefits. However, patent protection is often still available under most open source licensing schemes.

3. Alice Issues

Improvements in the blockchain processing operations are generally directed to how the computers work, and thus should avoid Alice rejections as being abstract. New uses of blockchains may face rejections if the new uses only require a network of standard computers performing standard computer functions without significantly more. Tactics to avoid Alice issues include including in the claims security aspects (e.g., encryption, hashing, digital signatures), networking aspects (e.g. consensus protocols, smart contract protocols), and focusing on any distributed ledger features instead of the transaction features. Limit business and financial terms in the description to avoid going to art unit 3600, which has the highest rate of Alice-based patent eligibility rejections. Argue that the claims solve a problem rooted in computer technology, citing *DDR Holdings LLC v. Hotels.com*, 773 F. 3d 124 (Fed. Cir. 2014).

4. Divided Infringement

A potential issue is divided infringement since, by definition, no one node has control over the others. This can be addressed similarly to client-server systems, by claiming just the steps performed by one node. The case law now allows enforcement against partially infringing actors where there is divided infringement, but this is an evolving area of the law.

5. Design Patents

Just as for other software, a design patent can be obtained for a unique graphical user interface. However, since the technology is in its infancy, the chances of the GUI changing before an actual product appears is significant. Block chain innovation is often opaque from the perspective of the GUI so design protection is rarely an effective block to back-end innovation.

6. Avoid Financial Terms in the Claims

In order to avoid a covered business method validity challenge, avoid financial terms in the claims, and include other uses in the description. It is fairly typical for blockchain to replace some other type of authentication or authorization scheme in a particular use case. Fin tech, health tech and ed tech fall into the business method areas of the patent office, so a focus on the underlying blockchain technology can obtain a more favorable examination.

7. Provisional Application

Oftentimes new blockchain companies will publish documents (e.g., whitepapers) to detail how they implement blockchain technology. A provisional before the publication will preserve the ability to pursue foreign patent rights. With the explosion in popularity of blockchain it is important to emphasize the United States, like most of the world, is a first to file system. This means if two people have the same idea and both file for a patent, it is likely that the one who files for a patent first will be granted the

patent. While this is true for all inventions, with so many blockchain projects being developed it may be important to file a patent application sooner rather than later. In addition, since it may take a long time for blockchain to mature, unlike many software inventions which are obsolete in a few years, a provisional allows getting protection for the 21st year from filing.

8. Mining Existing Applications

If you have a patent application on a process that could be implemented using blockchain, you may want to consider filing a continuation-in-part application with the addition of blockchain functionality.

9. Utilizing PCTs

Blockchain, like the internet, is global. In most cases, anyone around the world may engage and use a blockchain project. Thus a blockchain company should consider global protection via international applications or Patent Cooperation Treaty applications.

10. Don't Forget the Hardware

Although blockchain is technically a software protocol it needs hardware to run. If your system uses some type of novel hardware or novel combination of hardware and software, then patenting the hardware may be just as important as patenting the software.

Paul Haughey is a partner in the San Francisco office of Kilpatrick Townsend & Stockton LLP. Brian Olion is an associate in the firm's Menlo Park, California, office. Thomas Franklin is a partner in the firm's Denver office.

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