Patenting Cryptocurrencies: Challenges and Opportunities

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Meet The Speakers



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Overview

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Webinar | Patenting Cryptocurrencies: Challenges and Opportunities

Over the past few years, cryptocurrencies such as Bitcoin – once the exclusive hobby of hardcore tech enthusiasts – have burst into the mainstream. As more and more traditional financial institutions and investors embrace these technologies, blockchain and cryptocurrency companies are in a race to patent every innovation in hopes that their technology will be the next big thing. But obtaining patent protection on blockchain and cryptocurrency technologies can be difficult, and patent disputes in the fast-growing industry loom on the horizon.

Complimentary Webinar Wednesday, September 29, 2021 1:30 - 2:30 PM ET



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Agenda

- A general overview of cryptocurrency and blockchain technology
- Hurdles in patenting crypto-related technology
- Recent section 101 developments
- Legal considerations to asserting or defending against crypto-related patents





Technology Overview

Crypto in the Mainstream

- An estimated 21 million Americans own Bitcoin
- Venmo now lets customers buy/sell cryptocurrencies
- El Salvador recently became the first country to adopt Bitcoin as legal tender and the Federal Reserve is studying developing a digital currency
- Predicted revenue from blockchain platforms and services expected to rise from \$4 billion in 2020 to \$199 billion by 2030
- Between Q4 2020 and Q1 2021, consumers lost almost \$82 million in cryptocurrency scams





Cryptocurrency Origins



Common Terminology

- **Cryptocurrency:** A digital medium of exchange created and stored electronically in the blockchain that uses encryption techniques to control the creation of monetary units and to verify the transfer of funds. Cryptocurrency has no intrinsic value and no physical form.
- Blockchain: A distributed ledger system wherein collections of data are stored in "blocks" that
 are chained together and spread across a vast peer-to-peer network of computers, each of
 which is known as a "node." Each block contains a unique identifier called a "hash value"
 along with a copy of the previous block's hash value. All information in the blockchain is also
 encrypted using a system of public and private keys that form a digital signature for each user,
 making it virtually impossible to hack user accounts
- NFT: NFT stands for "non-fungible token." NFTs use blockchain technology as authentication (i.e., a digital signature on a blockchain). Each NFT is unique. Each digital token can also be anything—an audio clip, a painting, a video game. If the token is traded, you receive an entirely different piece. The unique nature of the token gives it value, but its value is also tied to the renown or following associated with the creator of the NFT.



NFTs Can Be Worth Millions: Beeple's Everydays

- Digital collage minted exclusively for Christie's, composed of digital pictures captured every single day for 5000 days (approx. 13.5 years)
- First time a major auction house offered a purely digital work with a unique NFT
- First time a major auction house accepted cryptocurrency as a form of payment
- Sold on March 11, 2021 for \$69,346,250







Hurdles to Patenting Crypto Technology

Common Terms Used in the Technology Space

decentralized network machine learning communication device score transaction device score transaction device machine learning model blockchain datum service request location information ledger system transaction information data store user information service provider data block new block digital certificate second device datum collection artificial intelligence datum storage second node hash value peer network digital signature encryption key physical asset blockchain transaction transaction digital asset blockchain transaction mobile device second entity transaction datum transaction datum second portion second user ledger technology transaction datum transaction datum second portion second user ledger technology readable medium target transaction digital asset system storage blockchain network public keylatum structure identity information electronic device client device computing device network node transaction request user profile datum source communication network private key user device user interface control method od graphical user interface storage device data structure network device blockchain node user account Identification information program product blockchain ledger unique ID user datum blockchain technology datum processing method lot device digital identity cryptographic key virtual curren Vinique identifier financial institution unique identifier second computing device node device financial transaction datum processing readable storage medium digital content access control



Common Patenting Issues

Subject Matter Eligibility

- USPTO considers most blockchain patent applications to be software and/or business methods
- Understanding how a proposed solution works can be key to overcoming Section 101 issues

Novelty (Anticipation and Non-Obviousness)

- Origins of cryptocurrency and blockchain technology go back to the late 20th century
- Open-source software is prevalent
- Prior art is rapidly maturing and expanding into new industries



Legal Status Breakdown

Over 48% of blockchain patent applications are still pending





Top 10 Blockchain/Crypto Patent Assignees







Section 101 Developments

PTO's Revised Guidance on the Application of Section 101

Guidance Describes Four Inquiries

- (1) Do the claims recite "any judicial exceptions" including "abstract ideas"?
 - Mathematical concepts, certain methods of organizing human activity such as a fundamental economic practice, or mental processes;
- (2) Do the claims recite a judicial exception, and do not integrate that exception into a practical application?
 - If the claim recites a judicial exception (like an abstract idea), and does not integrate that exception into a practical application

(3) Do the claims add a specific limitation beyond the judicial exception that is "not wellunderstood, routine, conventional" in the field;

(4) Do the claims simply append well-understood, routine, conventional activities previously known in the industry, specified at a high level of generality, to the judicial exception?

USPTO, 2019 Revised Patent Subject, Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019).



Case Study – Ex Parte Steven Charles Davis

- U.S. Patent No. 10,963,881 relates to "the linking of blockchain transactions to privately verified identities, specifically the association of a blockchain transaction to a consumer or merchant associated with a transaction account based on transaction data and stored account profiles."
- The application recognized disadvantages of blockchain transactions, such as long processing time, the payee's inability to identify payor, and sole reliance on electronic credentials to establish ownership to the digital currency.
- The invention addressed such issues by combining the blockchain network and traditional payment network.

Method and System for Fraud Control of Blockchain-Based Transactions



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Case Study – Ex Parte Steven Charles Davis

- Step 1 Claims were directed to one of the four statutory categories of invention e.g., a process, machine, manufacture, or composition of matter.
- Step 2 A Prong 1 The limitations of the claims recite processing financial transactions (e.g., blockchain payment transactions) through collecting and analyzing information for identity verification (i.e., fraud detection), which is fairly characterized as a fundamental economic practice, and which falls into the "certain methods of organizing human activity" category of abstract ideas.
- Step 2A, Prong 2 Practical Application? The claims recite a practical application of the abstract idea. Claims provide the security of standard payment processing systems, and the privacy of block chain payment transactions, to verify a digital signature. The claims recite the explicit use of technologies that cannot be performed by human work or mentally, even given a significant amount of time. Claims require use of both payment network and blockchain with the computer system to ensure the party in the submitted transaction message was a party to the blockchain transaction.
- Ordered combination recited an inventive concept that was unconventional, and presented a solution to a technical problem.



Case Studies – Ex Parte Steven Charles Davis

Takeaways

- The blockchain system can acquire the **advantages of speed**, **security**, **and fraud prevention** of the standard payment processing system.
- To accomplish these improvements the ordered combination of the additional elements links blockchain transactions to privately verified identities.
- Claims provided the security of standard payment processing systems (e.g., by identifying first and second account profiles), and the privacy of blockchain payment transactions (by using a blockchain network to generate an address identifier using a public key), to verify a digital signature stored in data elements of a receiver of the computer system that is part of the account database.





Legal Considerations

Key Technology Areas

Consider key technology areas to understand potential areas for future litigation

Cryptographic Mechanisms	Other Transmission of Digital Information	Information Retrieval	Security Arrangements for Protecting Computers Programs or Data against Unauthorized Activity
Payment Architectures, Schemes or Protocols	Commerce, e.g. Shopping or E-Commerce	Administration; Management	Data Switching Networks
	Finance; Insurance; Tax Strategies; Processing of Coporate Income Taxes	Systems or Methods specially adapted for Specific Business Sectors, e.g. Ulitities or Tourism	



Top Assignees of Key Technologies





Blockchain Technology in U.S. District Court

First blockchain patent asserted in 2008

- MAZ Technologies asserted U.S. Patent Nos. 6,185,681 and 7,096,358 in the Eastern District of Texas
- Accused subject matter was encryption file system software
- At least 35 patents related to blockchain technology asserted in district court
 - Cases filed in E.D. Tex., E.D. Va., D. Del., C.D. Cal., N.D. Cal., S.D.N.Y, W.D. Wash.
- Some asserted patents have foreign counterparts
 - Blockchain technology also litigated in the Netherlands, Brazil, China, and Japan
- 4 cases involving blockchain technology currently pending
 - TecSec, Inc. v. International Business Machines Corp., et. al., Case No. 1-10-cv-00115 (E.D. Va.)
 - ZitoVault, LLC v. Amazon.Com, Inc., et al, Case No. 2-16-cv-00027 (W.D. Wash.)
 - Rady v. Boston Consulting Group, LLC, et al, Case No. 1-20-cv-02285 (S.D.N.Y.)
 - Soteria Encryption II, LLC v. Toshiba America, Inc., Case No. 8-21-cv-01213 (C.D. Cal.)



Lessons Learned from Litigations

- Detecting and proving infringement can be challenging due to the distributed nature of cryptocurrency systems
 - Rule 11 and pleading requirements must be satisfied
 - Many jurisdictions also require early infringement contentions
 - Setting discovery schedule
- Identifying the infringing actor can be challenging and may involve divided infringement theory of liability
 - Asserted claims should be properly vetted and focused on a single actor or controlling entity within the solution
- Early validity challenges
 - Filing petition for *inter partes* review may not result in a stay of litigation



Post Grant Practice Offers Alternative Avenue

- At least six petitions for IPR have been filed on blockchain technology patents that
 have also been asserted in litigation
- IPR is a common tool for defensive strategy but can have benefits for patent holders
 - Focuses invalidity challenges
 - May not result in a stay of the litigation
 - Timing of initial petition is key





Strategies for Preparing for Litigation

Cultivate and maintain your patent portfolio

- Develop a portfolio, whether homegrown or by acquisition
- Benefits extend beyond potential assertion defensive posture, stronger licensing position

Monitor the patent landscape

- Monitor USPTO filings and patent grants to understand the technology developments and potential competitors
- Monitor complaints to anticipate potential litigation
- Monitor post grant petitions to understand potential prior art issues
- Consider standard-setting and patent pledge organizations, licensing opportunities
 - SSOs offer better visibility into changes in the technology and IPR
 - Patent pledge organizations may help mitigate risk of litigation
 - Patent pools can bring together patent holders and implementers, can also pose antitrust risks



Questions?





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Thank You!

Please send your NY CLE forms to mcleteam@fr.com

Any questions about the webinar, contact Makayla Mainini at mainini@fr.com

A replay of the webinar will be available for viewing at http://www.fr.com/webinars

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