



Advancing and Implementing Blockchain in the Legal Industry

BY PIERSON GRIDER

According to Above the Law, 2017's top legal technology word was "blockchain."¹ Over the past year, numerous legal publications have covered blockchain basics, cryptocurrency regulation, and the application of smart contracts, but there hasn't been the same focus on use cases and adoption within the legal industry. This article explores the basics of blockchain technology, identifies legal organizations that are pushing the advancement of blockchain,

and discusses how legal organizations are implementing these technologies.

This is important to Colorado. In June of this year, Governor Hickenlooper created a 12-person council of local political and business leaders to develop a legal framework to support blockchain while protecting Colorado consumers.¹ Additionally, in May of this year, the Colorado legislature passed a bill regarding encryption and blockchain to store sensitive information.²

Blockchain Basics

Because blockchain technology has been discussed in several recent *Colorado Lawyer* articles,³ the following is an extremely simplified explanation.

At its core, a blockchain is a database ("ledger") that records digital transactions. The ledger is duplicated and synchronized across all computers ("nodes") in the network. For a transaction to take place on the ledger, the nodes must come to a consensus and verify the transaction. Because all of these transactions are encrypted, digitally signed, and cannot be altered, the distributed nature of blockchain technology creates intrinsic trust in the network and removes the need for social trust in intermediaries and central authorities.

A good application of this technology is land titles on a blockchain. Currently in the United States, we trust title companies to serve as intermediaries to provide accurate title searches to verify chain of title. This involves time and expense. If chain of title were recorded to the blockchain, there would be an immutable record

trusted by all parties, and title companies would no longer be necessary.

Smart contracts are another blockchain use within the legal industry. Basically, a smart contract is an agreement between multiple parties where conditions and triggering events are programmed into computer code and stored on the blockchain. When conditions of the agreement are satisfied, triggering events automatically execute. Because the agreement is on a blockchain, there is an immutable record of the agreement. Therefore, the parties of the agreement trust that the triggering events will automatically execute when conditions are satisfied.

Consider, for example, credit card offers that promise a sign-up bonus. The sign-up agreement states that if a person spends \$25,000 in the first year, he or she receives 100,000 bonus points. In a traditional agreement, the person trusts that the credit card company will issue the points when the conditions are satisfied. However, credit card companies have failed to issue points because of administrative errors and disagreements over the offer.⁴ When such an agreement is put into a smart contract, there is an immutable record of the agreement whereby these points automatically issue once the conditions are satisfied. Smart contracts are especially useful within industries that have numerous standardized contracts that have many triggering events when conditions are satisfied, such as insurance and shipping agreements.

Blockchain Legal Organizations

Several organizations bring together law firms, legal technology companies, and corporate in-house counsel to collaborate on blockchain issues. Each organization has its own focus.

Global Legal Blockchain Consortium

The Global Legal Blockchain Consortium (GLBC) focuses on creating governance and standards for blockchain use in the legal industry.⁵ With over 140 organizations involved, members are encouraged to collaborate in creating blockchain solutions to improve the business of law. The GLBC is a nonprofit organization that is currently free for organizations to join.

Accord Project

The Accord Project is a member-driven organization focused on creating legal and technical standards for smart contracts.⁶ Lawyers and organizations collaborate through various working groups to establish best practices and legal standards for these contracts.

OpenLaw

OpenLaw is focused on getting lawyers to contribute legal agreements to OpenLaw and creating blockchain-based protocols for the creation and execution of these agreements.⁷ Members use OpenLaw's markup language on these agreements, so these agreements become

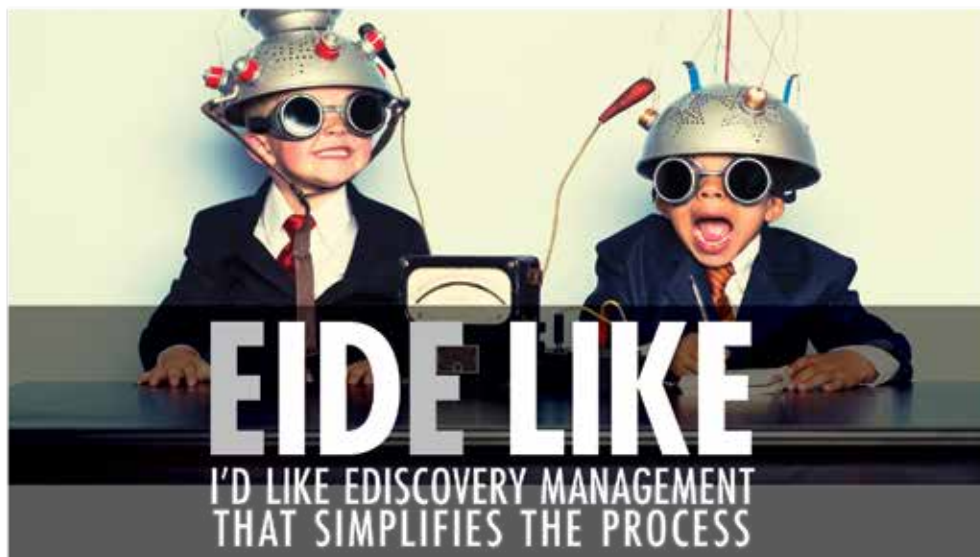
Ethereum-based smart contracts. OpenLaw is a spoke of ConsenSys, which is a venture production studio of the Ethereum network. The Ethereum network is an open-source public blockchain platform where developers can implement decentralized applications and smart contracts.⁸

Legal Organizations Creating Blockchain Solutions

Most real-world solutions for blockchain use in the legal industry involve smart contracts. This is an important technology, but what other solutions exist? For the past year, I've helped GLBC members create blockchain solutions. A few applications I'm familiar with are discussed below.

Integra, Inc.

Integra, Inc., a Denver-based company, created a blockchain network, Integra Ledger, specifically for the legal industry.⁹ As a founding member of the GLBC, Integra made its blockchain network available for other GLBC members to develop on. Integra also created other blockchain solutions, including an Outlook plug-in that encrypts email end-to-end using blockchain technology. Attorney-client confidentiality is a big concern for attorneys, especially when communicating with clients by email. The plug-in automatically encrypts email based on email addresses stored in the Integra blockchain.



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NetDocuments

NetDocuments, a leading cloud-based document and email management company, created a blockchain proof of concept, enabling firms to validate document existence and identity.¹⁰ When a document is generated on its platform, that document is given a blockchain ID from the Integra Ledger. That ID proves the version of the document. Consider having multiple versions of a real estate agreement exchanged between lawyers in your firm and opposing counsel. How can everyone confirm they are working from the same agreement and verify the final agreement in the future? Once a document is created in NetDocuments, it is assigned an Integra ID, and that document can be verified to the Integra Ledger blockchain. If any party at any point in the future wants to confirm he has the final version of the agreement, he can check the document's identity against the Integra Ledger.

ServeManager

ServeManager, a Denver-based company, provides management software for process-serving firms and their clients.¹¹ ServeManager created a proof of concept and added a blockchain feature to its current app. When a process server completes or attempts to complete service in the field, she creates a record of this on the ServeManager app. When this electronic record is complete, the metadata of service of process, such as GPS coordinates and a timestamp, is recorded to the Integra Ledger blockchain. This creates an immutable record that cannot be retroactively changed or spoofed.

The Future of Blockchain

The examples above are just the tip of the iceberg on how the legal industry can benefit from the use of blockchain technology. Industries such as banking, insurance, and supply chain management are leading this effort, investing

in this technology, and experimenting with solutions. It is time for the legal industry to catch up. While collaborative organizations, like the GLBC, play an important role in facilitating blockchain discussion, it is up to individuals and legal organizations to get involved, take action, and create viable blockchain solutions. **CL**



Pierson Grider is a Denver-based lawyer and technology enthusiast. At Integra, he educates, promotes, and develops blockchain solutions with members of the Global Legal Blockchain Consortium. With over 5,000 participants in 40 cities across 22 countries, he organized and managed host locations of the Global Legal Hackathon. Pierson has a wide-range of experience, from representing clients in various legal matters to managing an information technology department of a major nonprofit.

Coordinating Editor: Joel Jacobson, joel@rubiconlaw.com

NOTES

1. Ambrogi, "And the Legal Technology Word of the Year Is . . ." Above the Law (Dec. 11, 2017), <https://abovethelaw.com/2017/12/and-the-legal-technology-word-of-the-year-is>.
2. See www.colorado.gov/governor/news/gov-hickenlooper-announces-boards-and-commissions-appointments-305.
3. Hullett, "Colorado Passes Bill Advocating Blockchain For Gov't Data Protection And Cyber Security," Cointelegraph (May 8, 2018), <https://cointelegraph.com/news/colorado-passes-bill-advocating-blockchain-for-govt-data-protection-and-cyber-security>.
4. See Kintner, "The Blockchain Moment," 47 *Colorado Lawyer* 10 (Oct. 2018), and Popielarski, "Blockchain Research: Bitcoins, Cryptocurrency, and Distributed Ledgers," 47 *Colorado Lawyer* 10 (June 2018).
5. "What Should I Do if a Credit Card Bonus Offer Isn't Honored?" The Points Guy (Sept. 4, 2016), <https://thepointsguy.com/2016/09/credit-card-bonus-isnt-honored>.
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