NEW NEVADA LEGISLATION RECOGNIZES BLOCKCHAIN AND SMART CONTRACT TECHNOLOGIES

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On June 5, 2017, Governor Brian Sandoval signed legislation that provides a framework for the use of blockchain technology and the enforceability of smart contracts under Nevada law. The legislation was passed unanimously by both the state Assembly and Senate, and was intended to keep Nevada ahead of the technology curve. Legislators and entrepreneurs developed the legislation as part of an effort to provide Nevada with economic policies and laws designed to result in two outcomes: large technology companies relocating to Nevada and technology entrepreneurs choosing Nevada as the state in which to start their companies.[1]

The new legislation and the policies it is designed to facilitate present both opportunities and challenges for Nevada lawyers. The advent of blockchain technology is, in many ways, similar to the 1990s when the legal community was forced to work through the legal implications of a new technology called the internet. This article introduces Nevada lawyers to blockchain and smart contract technology, and discusses the new law and its potential impacts on our economy and the way we practice law, whether as in-house or outside counsel.

THE LEGISLATION

The 2017 legislation amends Nevada's Uniform Electronic Transactions Act[2] to add a definition of blockchain as "an electronic record of transactions or other data which is:

1. Uniformly ordered;
2. Redundantly maintained or processed by one or more computers or machines to guarantee the consistency or nonrepudiation of the recorded transactions or other data; and
3. Validated by the use of cryptography."[3]

The revised act also specifies that an "electronic record" includes blockchain.[4] As a result, if a law requires that a record be in writing, the submission of a blockchain that electronically contains the record satisfies the law.[5]

The legislation also made Nevada the first U.S. state to ban local governments from taxing blockchain use; it did so by amending Chapters 243 and 268 of the Nevada Revised Statutes to prohibit a local government from:

a. Imposing a tax or fee on the use of a blockchain;
b. Requiring a certificate, license or permit to use a blockchain; and
c. Imposing any other requirement relating to the use of a blockchain.

The 2017 legislation makes Nevada a leader in the recognition of blockchain and smart contract technology under state law. Other states that have enacted blockchain legislation include Arizona and Delaware. Several other states are considering blockchain legislation, as well.

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To better understand the far-ranging implications of the new legislation, let's start with a brief explanation of why blockchain technology and smart contracts are so revolutionary. When it comes to transactions involving anything of value (*e.g.*, money, stock, intellectual property), parties to the transaction must rely heavily on intermediaries, such as banks, exchanges or attorneys in order to verify and record the transaction. These middlemen add value, because they build trust into the transactional process. However, they also slow down the process, increase costs and subject transactions to error (and sometimes fraud). Blockchain is the technological solution that will increase transaction speed, while simultaneously injecting trust into the transaction, all without need for these intermediaries.

Blockchain is a type of decentralized, electronically distributed ledger that is administered entirely by a computer network. More specifically, it is a database shared among many computers that irrefutably records and verifies digital transactions without the use of middlemen. The distributed ledger has a network of replicated databases that are synchronized through the internet and visible to anyone who has permission to view them. The technology makes intermediaries—the third parties that centralize information and establish trust between contract parties—obsolete.

The mechanics of recording and verifying transactions on a blockchain are actually quite simple. Each time a transaction occurs, the transaction data is grouped together in a cryptographically protected block and is sent to the entire network for verification and recordation. Each transaction, or block, is verified by the network, time-stamped and added to a chain in a linear, chronological order. New blocks are validated transactions that are linked to older blocks, resulting in a chain of blocks that show every transaction made in the history of that blockchain. The entire chain is updated continuously, so that every ledger in the

network is identical, giving each user the ability to prove who owns what at any given time. The information in each block is encrypted, transparent and unchangeable.

Because blockchain technology is created through software code, contracts can be written into the blockchain code. Smart contracts are self-executing contracts with the terms of the agreement between the parties directly written into lines of code. The code and the agreements contained in the code exist across a distributed, decentralized blockchain network. Smart contracts allow trusted transactions and agreements to be carried out among anonymous contract parties without the need for a central authority, middleman, or administrator, or external enforcement mechanism. The transactions are cost efficient, traceable, verifiable and transparent.

The cryptocurrency bitcoin is one of the best-known uses of blockchain technology. But, as we discuss in this article, blockchain technology has applications far beyond bitcoin.

A NEVADA EXAMPLE

Blockchain technology is not reserved for techies in Silicon Valley. Filament, a Reno-based blockchain technology company, makes dumb commercial assets smart, which in turn creates valuable real-time data. The real-time data is the next evolution of commercial business, and it is all done on private blockchains.

Clear as mud, right? Let's use a middle-American wheat farmer as an example. The farmer of yesterday used wind power, silos and tractors to grow and store his wheat without those assets gathering and using data in any meaningful way (*i.e.*, dumb assets). The farmer of tomorrow uses Filament's Internet of Things technology to measure, store and share the collected data in real-time over a private hardware network. For example, a smart tractor asset can inform the farmer if the brakes on the tractor are about to fail. If gas prices are spiking and the network shows available wind power, the farmer can use more power from windmills to reduce operating costs. This also affects the legal world.

In creating private networks of smart assets for its clients, Filament has also created its own blockchain technology that serves as the backbone of its services. This technology allows for smart contracts to be entered into between private parties and executed on the private blockchains. Continuing with the farmer example above, let's assume that the farmer entered into a smart contract with a wheat buyer. The contract states that once the wheat is loaded from the farmer's silo onto the delivery truck, the buyer pays the purchase price to the farmer and a delivery fee to the trucking company. Filament's technology allows the famer's and delivery

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company's smart assets to communicate the critical data to a private blockchain and immediately pay all parties—all before the delivery truck leaves the farm. No human interaction, approval or verification is needed. No exchanging of cash, checks or credit card information is required. The implications regarding how attorneys represent commercial clients are substantial.

THE FUTURE OF BLOCKCHAIN AND ITS IMPACT ON LAWYERS

Blockchain technology has literally endless commercial possibilities that will have wide-ranging effects on our lives and our economy. In turn, the changes will have a tremendous impact on the legal profession. Examples where blockchain technology could cause fundamental changes range from financial services to cryptocurrencies to music streaming to real estate to supply chain management. Even the way we vote and the way our votes are counted or the ways our academic records are created and shared could be impacted by blockchain technology.

The message to Nevada's lawyers is clear. Blockchain and smart contracts are now recognized by Nevada state law, and policies are in place to facilitate the growth of the use of blockchain technology and smart contract enforcement. Nevada is a leader in the field, so the learning curve could be steep, with few precedents from other states. Lawyers need to be cognizant of the new laws, so that they can appropriately advise their clients; for instance, if the clients, or the parties with which they do business, seek to use blockchain technology or smart contracts. In-house counsel are uniquely positioned to advise their clients regarding the implementation of these new technologies, in areas to ranging from legal contracting (a smart contract is still a contract) to compliance, corporate policies (including IT) and adequacy of insurance (including cyber risk policies). As with any new business or process, in-house counsel must stay informed about changes in technology and should work closely with their business teams to assess the impact of these changes on existing business models. Going forward, attorneys knowledgeable about blockchain and smart contract technologies, and their applicable laws and regulations will be in high demand as these technologies continue to evolve and their use becomes more prevalent. **NL**

1. Minutes, Senate Committee on Judiciary, March 30, 2017.
2. NRS Chapter 719.
3. Senate Bill No. 398, Section 1.
4. NRS 719.090.
5. NRS 719.250.

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