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## **LEGAL WRITING IN THE BLOCKCHAIN TECHNOLOGY ERA: E-CONTRACTS**

### **Abstract.**

The paper deals with the problem of validity of legal documents in the modern conditions of the digital era. The differences between two types of a contract created on the blockchain platform – Ricardian contracts and Smart contracts – are discussed. Ricardian contracts are legally binding agreements, while Smart contracts are not. Ricardian contracts are both machine-readable as well as human readable, while Smart contracts are machine-readable but not necessarily human-readable. It is argued that prior to Ricardian contracts, to avoid fraud and conflict in the crypto industry was not an easy task. Ricardian contracts guarantee more security to investors and users of blockchain technology.

**Keywords :- Blockchain Technology, Smart Contracts, E-Contracts, Legal Framework, Digital Signatures**

### **Introduction**

The development of modern technologies has given lawyers an opportunity to make their documents much more secure, easily drafted and effective. The digital agreements or e-contracts are getting more and more popular in the modern legal environment. The most popular digital contracts are considered Smart Contracts and Ricardian Contracts. Both are based on the blockchain technology but have some differences. Let us consider the advantages and disadvantages of these digital contracts.

### **Smart Contracts**

In the blockchain industry, Smart Contracts act as contracts to provide trust during an exchange. You can use these contracts to exchange money, shares, property, and other assets on the internet. You can do that by defining obligations between two parties and executing them through computer code. They are an essential part of the process on the blockchain network where the parties remain anonymous.

The core characteristics of a Smart Contract:

- Executes on its own based on the instructions provided in the computer code
- Self-verifying and auto-enforcing
- Immutable, which means you can't edit the terms
- Cost savings

The only issue with Smart Contracts is that they are not legally binding agreements, which is why, if anything goes wrong, it is hard to prove a

case against fraud or scam in the court of law as it is not a legally binding agreement.

### **Ricardian Contracts**

Ricardian Contract is a form of digital documents that act as an agreement between two parties on the terms and condition for an interaction between the agreed parties. What makes it unique is that it is cryptographically signed and verified. Even when it is a digital document, it is available in a human-readable text that is also easy to understand for people (not only lawyers). It is a unique legal agreement or document that is readable for computer programs as well as humans at the same time. With blockchain platforms, these contracts can now easily hashed, signed, and can be saved on the blockchain.

### **History**

Smart contracts were first proposed in 1994 by Nick Szabo, an American computer scientist who conceptualized a virtual currency called “Bit Gold” in 1998. Ricardian Contracts were initially introduced as part of the Ricardo Payment System back in 1995 by Ian Grigg, who is considered as one of the pioneers of financial cryptography. Ricardo Payment System was developed by Systemics Inc. and called in the honor of David Ricardo, a prominent British economist whose free trade views became public policy in Britain. Ricardo is a three-party payment system common to Internet banking and DGCs. One user pays another user, by settling through a single server trusted by both users to manage value.

Using Ricardo, Systemics and partners have built trading systems, contract markets, secure messaging, and other applications. All these applications derive their underlying security from Ricardo’s secure open transactions.

### **Benefits of Ricardian Contracts**

- Ricardian contracts made some new possibilities on the blockchain networks. Some of its applications as well as benefits include:
- It allows the legally-enforceable transfer of physical assets as well as rights on the blockchain network, which was not possible with Smart Contracts. When smart-contracts were also used for the same purpose, but they can’t legally-enforce the transfer.
- Ricardian Contracts can save effort, costs, and time you may have to invest when a dispute arises. The machine-readable legal contracts are not open to any interpretation, which is the main drawback of human-readable legal contracts. Lawyers can interpret the content based on their liking, which may result in a conflict.
- Ricardian Contracts are a significant step forward in adding more transparency to the blockchain network.

**Ricardian Contracts (RC) vs. Smart Contracts (SC)**

### **Purpose**

SC: Execute the terms of an agreement

RC: Record the terms of an agreement as a legal document

### **Flow**

SC: Automate actions on the blockchain-based applications

RC: It can also automate operations on the blockchain-based applications

### **Validity**

SC: It is not a legally binding document

RC: It is a legally binding document or agreement

### **Versatility**

SC: They can't be Ricardian Contracts

RC: Any Ricardian Contract can be a Smart Contract as well

### **Readability**

SC: Smart contracts are machine-readable but not necessarily human-readable

SC: Ricardian Contracts are both machine-readable as well as human-readable

### **The fundamental differences between Smart contracts and Ricardian Contracts**

- The fundamental difference between both of the contracts on blockchain platforms is the type of agreement.
- One (Ricardian contracts) records the agreement between multiple parties, while the other (Smart Contracts) executes whatever is defined in the agreement as actions.
- Ricardian Contract is a legally valid contract, while Smart Contracts are not. It turns a human-readable legal contract into machine-readable code that can be executed by the software.
- Ricardian contracts can become an important part of agreements on blockchain and can replace Smart Contracts, as they can also act as a Smart Contract at the same time. So, Ricardian Contracts can become the next generation of Smart Contracts

### **Ricardian Contract example**

One of the Ricardian Contract examples is Open Bazaar, an open online marketplace where you can buy and sell everything. This platform currently uses Ricardian Contracts when the two parties exchange goods as a primary tool to track the liability of the parties. Whenever two parties make an exchange on the platform, it creates a Ricardian Contract. It tracks the legitimacy of the legal Contract that multiple parties agree to and signs to proceed further. This makes the platform very secure for users because in the case of scam or breach of contract, one party can have legal document and record to produce in the court of the law.

### **Conclusion**

Ricardian Contracts are a powerful new type of code that can have a significant impact on the trade on the blockchain network, making the process more secure. It aligns the legal agreement and terms as a contract with machine-readable code for execution on the blockchain network.

Blockchain allows us to notarize these contracts, secure them on a blockchain network, and keep a complete reference of the matter.

It can add more clarity to the legal contracts between multiple parties and can save time, cost, and effort as it eliminates the chances of disputes.

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