Smart contract

Abstract:

Work as Central party between buyer & seller, which is used for digital buying & selling, this system helps the buyer & seller to securely send & receive money when it satisfies some conditions/Milestones, The main problem which this Smart Contract will solve is fraud, & transfer money securely in a cheaper way because it is Decentralized & no taxes & bank involved in it because we Used blockchain Cryptocurrency Technology for this Purpose. Use Smart Contract(eg. Ethureum)and blockchain technology to build a smart contract in an optimal way.
To develop a blockchain smart contract on improving Security and accountability of partnerships and related transfers of resources.
For Example: if we order something the system cut the amount from my Account & Release it only when the Seller fulfills the Milestone which the buyer set at the start, otherwise in case, the Seller was not able to fulfill the Millstone in specific time than the money returned back to the Buyer's Account. we may use java and solidity and may be any other languages to build a smart contract.

Research Questions:

Definition of research questions:

This step is to identify the research questions the study is aiming to answer.

For our study, we defined the following research questions:

RQ1. What are the current research topics on smart contracts?

RQ2. What are the current smart contract applications?

Who Guarantees the Accuracy of a Smart Contract?

Let's return for a moment to the idea of the blockchain.

"The [Bitcoin] blockchain is an incorruptible digital ledger of economic transactions that can be programmed to record not just financial transactions but

virtually everything of value." Blockchain operates in a trustless environment where multiple parties on a network have open and easy access to information. This

potentially leaves the information vulnerable; however, Bitcoin's blockchain implementation employs a distributed network, hash codes, and cryptographic keys

that create an immutable record where tampering is easily detected. This is why blockchain operates well in a trustless environment.

Parties to a Bitcoin transaction don't need to trust each other. The Bitcoin blockchain documents the transaction, period.

So once a smart contract is posted in a blockchain, it is an immutable record where tampering is easily detected.

That's not what we're talking about here. We're talking about what happens when the smart contract is being developed before it's posted to the blockchain and how

we would know the smart contract represents the actual verbal or written agreement between the parties, and their intentions.

Should Smart Contracts Be Banned?

"Some argue that the term 'smart contract' is misleading," state Citlali Mora Catlett and Elias Haase of B9Lab. "There are significant areas in the contractual process that cannot be executed by a smart contract."

There is also a significant misunderstanding about the term; many people believe they know exactly what a smart contract is because they know what the words

smart and contract mean. In fact, smart contracts are nothing more than automated business processes; people engage with smart contracts every day. Setting up an

automatic bill pay rule with your bank is a smart contract that accomplishes a specific task: when a bill comes in from Company A; check the balance in my account; if my account has more money than the bill; send a payment to Company A. The term smart contract has come to imply execution on a blockchain but it is a new means to the same ends as any internal or external automated business process and the same care must be taken in its implementation as is taken when converting from one

system to another (from SAP to Oracle, for instance) or when introducing a new process or control mechanism.

This is not to say that smart contracts do not have their place and are not useful tools for automating transactions or that they should be banned. They certainly do have a beneficial role mostly in common, well-established, and easily verifiable commercial transactions. But until further refinements for the development of smart

contracts are in place, it might be useful especially in regard to complex transactions to consider the legal term Caveat Utilitor—let the user beware!

Are Smart Contracts Legally Binding?

An additional issue resides in the fact that smart contracts can be considered legally binding contractual agreements. Drop a coin in a candy machine. If the candy

doesn't fall into your hand, you potentially have legal recourse against the vendor and machine manufacturer.

In terms of a smart contract, you may have legal recourse against all parties involved in the development and deployment of the smart contract, including the individual programmer if you could show the code was inconsistent with your agreement.

References:

[1] Nick Szabo, "Smart Contracts: Building Blocks for Digital Markets" (1996), http://www.fon.hum.uva.nl/rob/Courses/InformationInSpeech/CDROM/Literature/LOTwinterschool 200 6/szabo.best.vwh.net/smart_contracts_2.html

[2] World Maritime News, August 9, 2018. https://worldmaritimenews.com/archives/258600/maersk-ibm-unveil-blockchain-shipping-solution/.

[3]Nicholas J. Szabo, "Smart Contracts", http://w-uh.com/download/WECSmartContracts.pdf

[4] "PAR Sheet" (Casinopedia), https://www.casinopedia.org/terms/p/par-sheet

Related work:

There are various possible applications where smart contracts can be applied to. Some of these applications are as follows:

• Internet of Thing and smart property :

There are billions of nodes that are sharing data between each other through the Internet. A potential use case of blockchain-based smart contracts is to allow

those nodes to share or access different digital properties without a trusted third party. There are various companies that investigate this use case. For example, Slock.it is a German company that utilises Ethereum-based smart contracts for renting, selling or sharing anything (e.g, selling a car) without the involvement of a trusted third party.

•Music rights management :

Potential use case is to record the ownership rights of a music in the blockchain. A smart contract can enforce the payment for music owners once a music is used for commercial purposes. It also ensures the payment is being distributed

between the music's owners. Ujo is a company that investigates the use of blockchainbased smart contracts in the music industry

• E-commerce:

A potential use case is to facilitate the trade between untrusted parties (e.g., seller and buyer) without a trusted third party.

This would result in reduction of trading costs. Smart contracts can only release the payment to the seller once the buyer is satisfied with the product or service they received .

There are other possible applications such as e-voting, mortgage payment, digital right management, motor insurance, distributed file storage, identity management and supply chain.