What is a blockchain? How does blockchain work? Pros and cons of blockchain?

When talking about blockchain there is still much controversy. Some people worry that Bitcoin may be just a bubble, many people believe that technology behind it is a breakthrough, and that technology will continue its path until it is accepted and integrated with the Internet. .

Blockchain is an extremely hot topic globally today. It along with Bitcoin and digital money became a topic of discussion on many newspapers and in people's conversations. However, when talking about blockchain there is still much controversy. Some people worry that Bitcoin may be just a bubble, many people believe that technology behind it is a breakthrough, and that technology will continue its path until it is accepted and integrated with the Internet. .

Even Jamie Dimon, CEO of JP Morgan, who was fiercely opposed to Bitcoin and caused much concern for the digital money community, agreed that DLT technology (distributed ledger technology) technology) has great potential to change the financial industry and other industries. Moreover, JP Morgan and many banks have been testing blockchain for different uses in practice.

So what is Blockchain actually? What areas of life can it be applied to and why is it concerned?

Note: A lot of words and a bit of brain damage, drink a glass of water and put your mind at ease before you're ready to learn about this blockchain technology.

LEARN ABOUT BLOCKCHAIN

1. What is a blockchain?
2. How does blockchain work?
    1. What is Bitcoin?
3. Main features of BlockChain
    1. A distributed database
    2. Blockchain is like Google Docs
    3. Sustainability of blockchain
    4. Transparency and cannot be broken
    5. A network of buttons
    6. The idea of ??decentralization
    7. Security enhancement
4. Where can blockchain be used?
    1. Smart contract
    2. Economic sharing

    3. Expanding capital market
    4. Administration
    5. Check the supply chain
    6. File storage
    7. Predict the market
    8. Protection of intellectual property rights
    9. Internet of Things (IoT)
    10. Identity management
    11. AML and KYC
    12. Securities trading
    13. Neighborhood micro mesh system (Neighborhood Microgrid)
5. Disadvantages of using Blockchain
    1. Very power consuming
    2. Save storage space
    3. Unbreakable also has its disadvantages
6. Blockchain and Internet
7. Does history repeat?

What is a blockchain?

Blockchain is a digital ledger that is divided or easier to understand than a database in a network. The ledger is shared for those who join the network. This shows that in the whole system is not the only one location, a document can be the only authoritative basis, because the same copy of the ledger version is located in many places.

All copies are updated when new data or transactions are written to the blockchain through the consent of everyone involved. The digger is responsible for approving transactions and monitoring the network by solving sophisticated formulas with the help of computers. It is a P2P peer system, eliminating all intermediaries, enhancing security, transparency and stability as well as minimizing human costs and errors.

By allowing the distribution of digital information that is not copied, blockchain technology has created the backbone for a new type of Internet.

In Blockchain Revolution (2016), Don & Alex Tapscott stated: "Blockchain is an undeniable digital ledger of economic transactions, which can be programmed to record not only those Financial transactions that can record everything valuable ".

How does blockchain work?

Blockchain technology is probably the best invention from the Internet itself. It allows exchange of values ?? without trust or evidence. Imagine you and I bet $ 50 for tomorrow's weather in San Francisco. I bet it will be sunny, you bet it's rain. Today we have three options for managing this transaction:

1. **We can trust each other.** Rain or shine, the loser will pay $ 50 for the winner. If we were friends, this could be a good way to bet. However, whether it's a friend or a stranger, it's still not easy to pay the other person.

2. **We can turn the bet into a contract.** With a contract in place, both parties will be more likely to pay, however, if either of them decides not to pay, the winner will have to pay more to cover legal costs and the verdict can take a long time. Especially with a small amount of cash, this does not seem to be the optimal way to manage transactions.
3. **We can resort to a neutral third party.** Each of us gives 50 dollars to a third person, she will give the total amount to the winner. But, she can also escape with all the money. So, we will choose one of the first two options: trust or contract.

Both trust and contract are not optimal solutions. We cannot trust strangers and enforce contracts that require time and money. Blockchain technology is interesting because it provides us with a third, safe, fast and cheap option.

Blockchain allows writing a few lines of code, the program runs on the blockchain, which we both send 50 dollars into it. This program will keep $ 100 safe and check tomorrow's weather automatically on multiple data sources. Sunny or rainy, it will automatically transfer the entire amount to the winner. Each party can check the logic contract, and since it is running on the blockchain, it cannot be changed or stopped. This effort may be too high for a $ 50 transaction, but imagine selling a home or company.

The goal of this section is to explain how blockchain works without discussing deep technical details, but enough for you to have a general idea of ??logic and basic mechanisms.

The most well-known and discussed application of blockchain technology is Bitcoin. A digital currency can be used to exchange products and services, like the US dollar (USD), Euro (EUR), VND (Vietnam) and other national currencies. Use the first application of this blockchain technology to learn how it works.

What is Bitcoin?

A Bitcoin is a Bitcoin's digital currency, like dollars, itself is not worth it. It is valuable because we agree to exchange goods and services in exchange for a greater amount of money under our control and we believe that others will do the same.

To track the amount of Bitcoin each of us owns, the blockchain uses a digital ledger - a digital file - to keep track of all Bitcoin transactions.

LEDGER

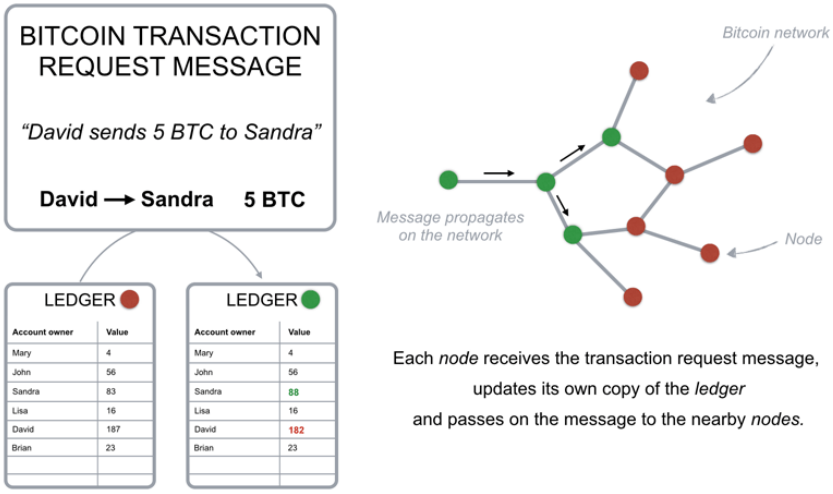
Account owner	Value
Mary	4
John	56
Sandra	83
Lisa	16
David	187
Brian	23
…	…

Bitcoin's digital file has been simplified

This file is not stored on centralized servers, like banks or data centers. It is distributed worldwide through computer networks, both storing data and performing calculations. Each computer represents a node of the

blockchain network and has a copy of the ledger file.

If David wants to send Bitcoin to Sandra, he will issue a network message saying that the amount of Bitcoin in his account will drop to 5 BTC, and the amount of the Sandra account will increase in the same amount. Each node in the network will receive a notification and apply the requested transaction to the copy of the ledger, thus updating the account balance.



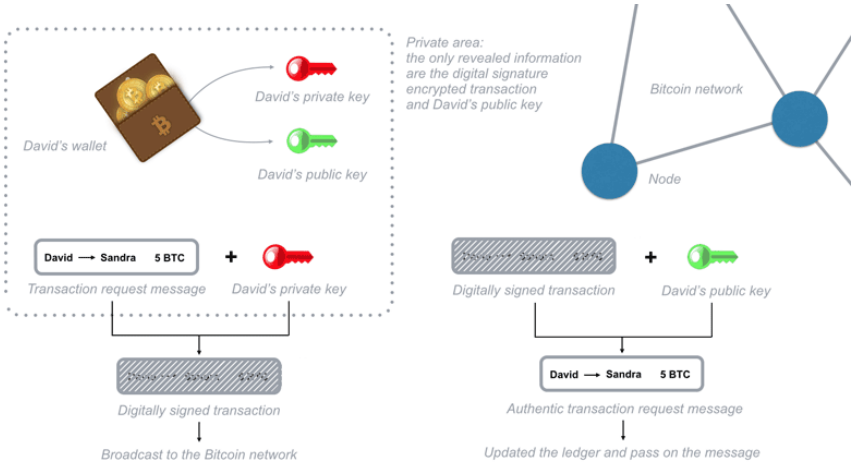
The fact is that the ledger is maintained by a group of connected computers, not a neutral entity like a bank:

1. In the banking system, we only know our own transactions and account balances, on blockchain people can see every other transaction of others.
2. While you can trust your bank, Bitcoin network will be distributed and if there is a problem there is no help to call or anyone to sue.
3. The blockchain system is designed in a way that does not require the trust, safety and reliability obtained through special mathematical functions and code.

To be able to perform transactions on the blockchain, you need a wallet, a program that allows you to store and exchange Bitcoin. Since only you can spend your Bitcoin, each wallet is protected by a special cryptographic method, using a different but connected pair of private keys: a private key (private) and public (public).

If a message is encrypted using a specific public key, only the owner of the paired private key can decrypt and read the message. On the other hand, if you encrypt the message with your private key, you can only use the paired public key to decrypt it. When David wants to send Bitcoin, he needs to deliver an encrypted message with his wallet's private key, so he and only he can use the bitcoin he owns, because David is the person only know his own key needed to open his wallet. Each node in the network can cross-check the transaction request coming from David by decrypting the message asking for his wallet's public key.

When encryption requires trading with your wallet's private key, you will create a digital signature used by the blockchain computers to verify the source and authenticity of the transaction. A digital signature is a text string, the result of combining your transaction request and private key, so it cannot be used for other transactions. If you change a character in the transaction request message, the digital signature will change, so no potential attacker can change your transaction request or change the amount of Bitcoin you are sending.



Simplify digital signature transaction

To send Bitcoin, you need to prove that you own the private key of a specific wallet, because it needs to be used to encrypt the transaction request message. Note that you only broadcast the message after it has been encrypted, so never have to disclose the private key.

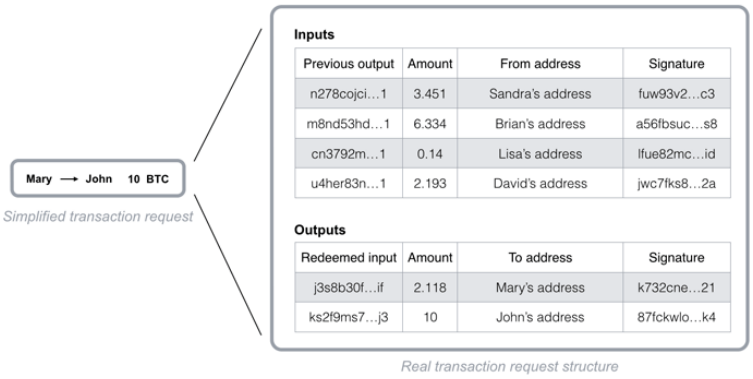
Each node in the blockchain is holding a copy of the ledger. So how does a button know your account balance? The blockchain system does not track account balances, it only records each transaction requested. Books do not actually track the balance, it only keeps track of all transactions sent in the Bitcoin network. To know the balance in your wallet, you need to analyze and verify all transactions that have occurred on the entire network connected to your wallet.

LEDGER

Transactions	Value
Mary ⟶ John	10.000
John ⟶ Lisa	0.345
Sandra ⟶ David	18.4332
Lisa ⟶ Sandra	7.156
David ⟶ Mary	12.3402
Brian ⟶ Lisa	3.029381
…	…

Bitcoin ledger

This balance verification is done by linking to previous transactions. To send 10 Bitcoin to John, Mary must create a transaction request that includes links to previous transactions (received amount) with a total balance equal to or exceeding 10 Bitcoin. These links are called inputs, nodes in the network will verify that the total amount of these transactions is equal to or exceeds 10 Bitcoin and these inputs are not yet spent. In fact, each time you reference the inputs in a transaction it is considered invalid in any future transaction. All done automatically in Mary's wallet and checked again by Bitcoin network nodes, she only sent a 10 BTC transaction to John's wallet using his public key.



Structure requires Bitcoin trading

So, how can the system trust the input transaction and consider them valuable? It checks all previous transactions that correlate with the wallet you use to send Bitcoin through references and inputs. To simplify and expedite the verification process, a special record of unused transactions will be kept by the network nodes. Thanks to this security check, you can't spend twice the amount of Bitcoin you receive.

All code to execute transactions on Bitcoin network is open source, which means that anyone with a laptop and an Internet connection can make transactions. However, if there is an error in the code used to broadcast the relevant Bitcoin transaction request, it will be permanently lost. Remember that because the network is distributed, there is no customer support service to call as anyone can help you recover the lost transaction or wallet password you have forgotten. For this reason, if you are interested in trading on Bitcoin network, you should use the open source and official version of Bitcoin wallet software (such as Bitcoin Core) and to save your wallet's password or Private key to the repository is very safe.

1. How to create and use Bitcoin Wallet, Ethereum Wallet on Blockchain

Main features of BlockChain

A distributed database

Imagine a spreadsheet that is duplicated thousands of times through a computer network, designed to regularly update spreadsheets that you can understand basically about the blockchain.

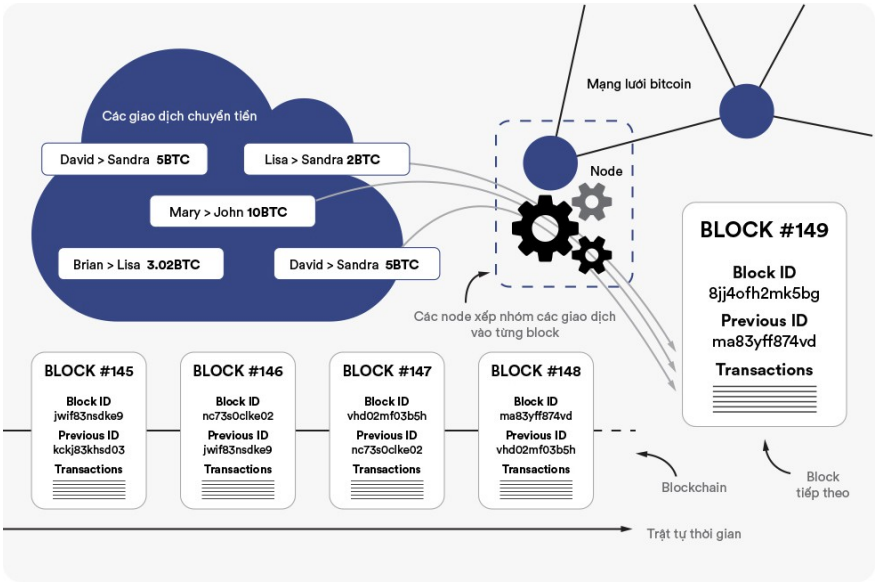
Information held on a blockchain exists as a shared and seamless database. This is a way to use the network with obvious benefits. The blockchain database is not stored in only one location, meaning that records are stored publicly, easily verified. No centralized version of this database exists, so hackers have no chance to attack it. Blockchain is stored by millions of computers at the same time, its data is accessible by anyone on the Internet.

Blockchain is like Google Docs

The usual way to share documents when collaborating is to send a Microsoft Word document to another person via email and ask them to fix it. The problem in this case is that you need to wait until a backup is sent back to be able to view or make other changes, because the editing rights have been locked until the collaborator Your edit is complete. That's how the current database is working. The two owners cannot co-edit a record at the same time. That's how banks maintain balances and transfers, they quickly lock access (or reduce the balance) during a

transfer, and then update the account and reopen access (or refresh). With Google Docs it is different, both sides have simultaneous access to the same document and the only version of that document is always visible to both. It is like a shared ledger, but it is a shared document. The distributed part only works when sharing relates to some people.

Translation from comments by William Mougayar, joint venture adviser, 4x trader, marketer, strategic expert and blockchain expert.



Sustainability of blockchain

Blockchain technology is like the Internet because it has a built-in power. By storing the same blocks of information on your network, blockchain cannot:

1. Controlled by any entity
2. There are no deficiencies, only errors.

Bitcoin was released in 2008, since then, the Bitcoin blockchain is operated, operating without any significant disruption. At this point, any issues related to Bitcoin are due to hacking or poor management. In other words, these problems come from bad intentions and human error, not self-made errors of Bitcoin.

The Internet has proven its durability for nearly 30 years. This is a good track record for blockchain technology as it continues to be developed.

Transparency and cannot be broken

Blockchain networks exist in the state of agreement, automatically checking every 10 minutes. A kind of digital value self-control ecosystem, the network will regulate every transaction that takes about 10 minutes. Each of these trading groups is called a block. Two important properties are drawn from here:

1. Transparency: Data is embedded in the network as a public, public.

2. It doesn't get corrupted: Changing any unit of information on the blockchain means using a large number of computers to overwrite the entire network.

In theory, this can happen. In fact, it does not happen. For example, controlling the system to capture Bitcoin will cause its value to be ruined.

A network of buttons

A network of computational nodes forms the blockchain. The button here is the computer connected to the blockchain network, using the client to perform the task of confirming and forwarding transactions. The button will receive a copy of the blockchain, automatically downloaded when joining the blockchain network.

Together, these buttons create a powerful level 2 network, a completely different perspective on how the Internet can work. Each node is an "administrator" of the blockchain network and automatically participates in the network, the motivation for this participation is the opportunity to win Bitcoin.

The button is also called bitcoin digging, but the term is a bit confused. In fact, each person is competing to win Bitcoin by solving puzzles. Bitcoin is the "survival" of the blockchain ever since it was formed. Bitcoin is only recognized as a small part of the potential of blockchain technology.

There are about 700 digital currencies similar to Bitcoin, there are also many variations of the original blockchain concept currently in operation or under development.

The idea of ??decentralization

By design, blockchain is a decentralized technology. Whatever happens on it is the function of the network. Some important suggestions stem from this. By creating a new way of confirming transactions, aspects of traditional trade can become unnecessary. For example, stock market transactions can be done at the same time on the blockchain, or you can store documents like red books, completely public. And decentralization has become a reality.

Global computer networks use blockchain technology to jointly manage databases, record Bitcoin transactions. That is, Bitcoin is managed by its network and no one is central. Decentralization means that the network operates on a user or P2P basis. Collective forms of cooperation that can be implemented are just beginning to be studied.

Security enhancement

By storing data on its network, blockchain eliminates the risks associated with centralized data. Its network has no vulnerabilities. Meanwhile, security issues on the Internet are becoming more and more complicated. We all rely on the username / password system to protect our identity and assets online, but this system is still more likely to be broken. The blockchain security method uses encryption technology with private / public key pairs. The public key (a long string of random numbers) is the user's address on the blockchain. Bitcoin sent over the network will be credited to that address. Private keys are like passwords, allowing owners to access Bitcoin or other digital assets. Store data on the blockchain and it will not be damaged. This is true, although protecting your digital assets will require private key security by printing out, creating digital wallets to hold like paper money wallets.

Where can blockchain be used?

This list is taken from the article "What Is Blockchain Technology? A Step-by-Step Guide For Beginners" on blockgeeks.com, I have omitted some because it is too long and confusing, here's what remains:

Smart contract

Divided ledgers allow simple contracting, which will be executed when certain conditions are satisfied. Ethereum is an open source blockchain project, built specifically to meet this requirement. However, in the early stages of development, Ethereum has the potential to take advantage of blockchain on a much larger scale.

At the current development level of technology, smart contracts can be programmed to perform simple functions. For example, an arisen transaction may be paid when a financial instrument meets some criteria, with the use of blockchain and Bitcoin technologies that allow automatic payments, without the need for good human participation. intermediary witness.

Economic sharing

For companies like Uber, AirBnB, the shared economy has proved its initial success. However, at the present time, users who want to rent a car sharing service must rely on an intermediary called Uber. By enabling peer-to-peer payment, blockchain opens a new door to direct interaction between parties, resulting in shared economics that truly decentralizes.

For example, OpenBazaar uses blockchain to create eBay on a par with. Download the application to your computer, you can trade with OpenBazaar providers without paying a transaction fee. The protocol's "no rules" style means that personal reputation in business interactions is more important than that of eBay itself.

Expanding capital market

Investment initiatives like Kickstarter and Gofundme are "paving the way" for this emerging peer economy. These websites have shown that people want to have a direct voice in product development. Blockchain takes this work to a new level by being able to create more venture capital for startups.

In 2016, there was a testament to this. DAO (Decentralized Autonomous Organization), based on Ethereum, has raised $ 200 million in just 2 months. Participants who bought DAO were voted on a smart venture investment contract (voting is based on the number of DAO they are holding). The amount of money that the project has received proves that the project is provided without risk assessment. Thus, it can be seen that the blockchain has the potential to open up a new model for economic cooperation.

Administration

By creating transparent and publicly accessible results, distributed database technology can provide full transparency for elections or any other form of exploration. Smart contracts based on Ethereum will help automate the entire process.

Applications such as Boardroom, which allows organizations to make decisions on the blockchain, thereby helping the corporate governance process become transparent, verify digital assets, fairness or internal information.

Check the supply chain

Consumers increasingly want to know how many percent of the truth in companies' product standard claims. Blockchain provides an easy way to confirm that the products we buy are genuine. Transparency comes with a timestamp based on the blockchain of the date, location - for example, on a diamond, which corresponds to the product number.

In the UK, it is possible to examine the origins of consumer goods through the supply chain. Using the Ethereum blockchain, a quality testing pilot project ensures that fish sold in Japanese Sushi restaurants are properly exploited by Indonesian fish suppliers.

File storage

The storage of rights on the Internet brings significant benefits. Distributing data throughout the network helps to protect files from being hacked or lost.

Inter Planetary File System (IPFS) makes it easy to conceptualize how a distributed website can work. Similar to how BitTorrent moves data over the Internet, IPFS eliminates the need for server-client relationships. An Internet is made up of distributed websites that are fully capable of speeding up file transfer and stream time. This improvement is not only convenient, but also a necessary upgrade for web content delivery systems that are currently overloaded.

Predict the market

The accuracy of an event will be higher when there is more and more anticipation about the probability of that event, which has been proven. Unconditional deviations can lead to false judgments. Average comments from predictions will help eliminate those deviations. There were the first applications to apply blockchain in predicting the market. Ví d? nh? Augur, ?ng d?ng d? ?oán th? tr??ng còn ?ang trong giai ?o?n phát tri?n. Nó ??a ra l?i ?? ngh? chia s? v? k?t qu? c?a các s? ki?n trong th? gi?i th?c. Ng??i tham gia có th? ki?m ti?n b?ng cách mua vào nh?ng d? ?oán chính xác. Càng nhi?u c? phi?u ???c mua vào theo d? ?oán ?úng, s? ti?n nh?n ???c càng cao. V?i m?t kho?n ??u t? nh? (ít h?n 1$), b?t k? ai c?ng có th? ??t câu h?i, t?o m?t th? tr??ng d?a trên k?t qu? d? ?oán và thu ???c m?t n?a t?ng s? phí giao d?ch mà th? tr??ng t?o ra.

B?o v? quy?n s? h?u trí tu?

Nh? b?n ?ã bi?t, thông tin k? thu?t s? có th? b? sao chép vô h?n và phân ph?i r?ng rãi nh? Internet. ?i?u này ?ã giúp ng??i dùng web trên toàn c?u có m?t m? vàng n?i dung mi?n phí. Tuy nhiên, ch? s? h?u b?n quy?n thì không may m?n nh? v?y, h? m?t quy?n ki?m soát s? h?u trí tu? và s? ti?n l? ra ph?i thu?c v? h? t? quy?n ?ó. H?p ??ng thông minh có th? b?o v? b?n quy?n và t? ??ng hóa vi?c bán các tác ph?m tr?c tuy?n, lo?i b? nguy c? sao chép, phân ph?i l?i.

Mycelia s? d?ng blockchain ?? t?o m?t h? th?ng phân ph?i nh?c ngang hàng. ???c sáng l?p b?i ca s? kiêm nh?c s ? ng??i Anh, Imogen Heap, Mycelia cho phép nh?c s? bán bài hát tr?c ti?p cho khán gi? c?ng nh? nh?ng m?u gi? y phép cho ng??i s?n xu?t và chia l?i nhu?n cho nh?c s?, ca s?, t?t c? nh?ng ch?c n?ng này ???c th?c hi?n t? ??ng

hóa b?ng nh?ng h?p ??ng thông minh.

Internet of Things (IoT)

N?u ch?a bi?t v? Internet of Things, b?n ??c t?i ?ây nhé (Internet of Things - IoT hay M?ng l??i v?n v?t k?t n?i là gì?). Hi?u nôm na, IoT là vi?c qu?n lý m?ng l??i ki?m soát c?a m?t s? lo?i thi?t b? ?i?n t?, ví d? nh? nhi?t ?? không khí trong nhà kho. H?p ??ng thông minh có th? t? ??ng hóa vi?c qu?n lý h? th?ng này t? xa. M?t s? k?t h? p c?a ph?n m?m, c?m bi?n và m?ng s? t?o ?i?u ki?n trao ??i d? li?u gi?a các ??i t??ng và c? ch? v?n hành. K?t qu ? làm t?ng hi?u qu? làm vi?c c?a h? th?ng và c?t gi?m chi phí theo dõi.

Các nhà s?n xu?t l?n nh?t trong l?nh v?c s?n xu?t, công ngh? và vi?n thông ??u ?ang tranh giành ngôi v? th?ng tr ? c?a IoT. Hãy ngh? ??n Samsung, IBM, AT&T. Vi?c m? r?ng c? s? h? t?ng hi?n có ???c ki?m soát b?i con ng?? i b?ng ?ng d?ng IoT s? th?c hi?n nhi?m v? t? d? ?oán các b? ph?n c? khí ??n th?ng kê d? li?u và qu?n lý h? th?ng t? ??ng trên quy mô l?n.

Qu?n lý danh tính

Nhu c?u xác th?c danh tính trên web ngày càng tr? nên b?c thi?t, nh?t là ??i v?i nh?ng giao d?ch tài chính tr?c tuy?n. Nh?ng gi?i pháp hi?n có ?? ph?c v? nhu c?u này ch?a th?c s? hoàn h?o. V?i blockchain, chúng ta s? có nh ?ng ph??ng pháp nâng cao ?? ch?ng minh mình là ai, cùng v?i kh? n?ng s? hóa tài li?u cá nhân. Nh? trên ?ã nói, trong n?n kinh t? chia s? hay các giao d?ch kinh doanh, m?t danh tính t?t là vô cùng quan tr?ng.

Phát tri?n các tiêu chu?n nh?n di?n k? thu?t s? là m?t quá trình r?t ph?c t?p. Bên c?nh các thách th?c v? k? thu?t, m?t gi?i pháp nh?n di?n tr?c tuy?n ph? quát ?òi h?i s? h?p tác gi?a các cá nhân và chính ph?. Thêm vào ?ó là c?n ph?i ?i?u h??ng h? th?ng pháp lu?t ? các qu?c gia khác nhau và v?n ?? tr? nên khó kh?n theo c?p s? nhân. Th?? ng m?i ?i?n t? trên Internet hi?n t?i d?a trên ch?ng nh?n SSL (khóa màu xanh lá cây nh? trên trình duy?t) cho nh ?ng giao d?ch b?o m?t trên web. N?u blockchain ???c áp d?ng thì m?i vi?c s? tr? nên d? dàng h?n r?t nhi?u.

AML và KYC

Blockchain có ti?m n?ng m?nh m? trong v?n ?? Anti-money laundering (AML) - ch?ng r?a ti?n và know your customer (KYC) - bi?t khách hàng c?a b?n. Hi?n t?i, các t? ch?c tài chính ph?i th?c hi?n quy trình nhi?u b??c, ? òi h?i nhi?u lao ??ng ?? tìm ki?m khách hàng m?i. Chi phí cho KYC có th? gi?m xu?ng thông qua vi?c xác minh khách hàng ??ng th?i nâng cao hi?u qu? giám sát và phân tích.

Polycoin, m?t startup có AML và KYC, liên quan ??n vi?c phân tích các giao d?ch. Nh?ng giao d?ch ???c xác ?? nh là ?áng ng? ???c chuy?n ti?p t?i các b? ph?n liên quan. Tradle, m?t startup khác ?ang phát tri?n ?ng d?ng có tên Trust in Motion (TiM). ???c mô t? nh? "Instagram cho KYC", TiM cho phép khách hàng ch?p ?nh nhanh các tài li?u chính (h? chi?u, hóa ??n ?i?n n??c, vv.). Sau khi ???c ngân hàng xác minh, d? li?u này s? ???c l?u tr? nh? m?t mã trên blockchain.

Securities trading

Kh? n?ng c?a blockchain trong th? tr??ng ch?ng khoán ?ang ???c ki?m tra m?nh m?. Khi th?c hi?n ngang hàng, xác nh?n giao d?ch tr? nên g?n nh? t?c th?i. Nh? v?y, nh?ng khâu trung gian nh? ki?m toán viên, ng??i l?u ký,. có th? ???c lo?i b?.

H? th?ng l??i vi mô lân c?n (Neighbourhood Microgrid)

Công ngh? blockchain cho phép mua và bán n?ng l??ng tái t?o, ???c t?o ra b?i các l??i vi mô lân c?n. Khi các t? m pin m?t tr?i làm cho n?ng l??ng d? th?a, nh?ng h?p ??ng thông minh d?a trên Ethereum s? t? ??ng phân ph?i l? i nó.

Nh?ng b?t l?i khi s? d?ng Blockchain

Blockchain không ph?i là m?t phép màu hay toàn là nh?ng ?i?u quy?n r?, nó c?ng có nh?ng tr? ng?i nh?t ??nh mà trong t??ng lai g?n chúng ta c?n ph?i kh?c ph?c. Nh?ng qu?ng cáo ho?c l?i th?i ph?ng xung quanh blockchain có th? khi?n nhi?u ng??i mù quáng, không nh?n ra s? th?t r?t rõ ràng r?ng, blockchain t?n t?i nh?ng b ?t l?i khi s? d?ng khi?n các ngành công nghi?p ph?i tìm cách gi?m thi?u nó tr??c khi có th? áp d?ng trên quy mô l?n.

R?t t?n ?i?n

Vì m?i blockchain ?ã sao chép chính mình ??n m?i nút trên blockchain nên ?ã t?o ra m?t s? l??ng l?n nh?ng s? d ? th?a. M?i l?n giao d?ch Bitcoin ???c th?c hi?n, nó ???c xác nh?n nhi?u l?n vì có nhi?u nút trên m?ng. Quy trình này s? d?ng r?t nhi?u ?i?n. Các blockchain t? nhân có th? không b? ?nh h??ng nhi?u vì h? có th? gi?i h?n các blockchain ??n m?t s? ít máy tính. Tuy nhiên, n?u là ngân hàng, ph?i x? lý hàng nghìn giao d?ch m?i phút trên toàn c?u, thì ?ây s? là v?n ?? l?n.

T?n không gian l?u tr?

Ngay bây gi?, ?? v?n hành m?t nút trên blockchain Bitcoin, b?n ph?i t?i xu?ng 60GB d? li?u. S? nh? th? nào n?u d? li?u là 1 Terabyte? N?u th? tr??ng Bitcoin phát tri?n m?nh, s? có nhi?u blockchain v?i dung l??ng hàng Terabyte xu?t hi?n trong th?c t?. Khi ?ó, ch? có các trang tr?i máy ch? và nh?ng ng??i th?c s? quan tâm ??n vi?c th??ng m?i hóa ti?n k? thu?t s? quy mô l?n, m?i có th? v?n hành toàn b? các nút. ?i?u này s? t?o ra m?t m?ng l??i t?p trung, v?n ???c coi là m?t s? phân quy?n k? l?.

Tính không th? b? phá v? c?ng có nh??c ?i?m c?a nó

Gi? s? b?n có m?t chi?c ví trên m?ng, b?n b? m?t chìa khóa ch?ng th?c ?? m? ví ?ó. Không có liên k?t ?? reset m ?t kh?u, không có hotline h? tr?. B?n m?t toàn b? s? ti?n trong ví. Không có s? thu h?i. B?n m?t tr?ng.

N?u bi?t cách x? lý d? li?u m?t cách có trách nhi?m, b?n s? không g?p ph?i ?i?u gì? s? ? trên. Ti?n c?a b?n v?n s ? ? trong túi c?a b?n, và t?t nhiên, b?n có toàn quy?n ki?m soát nó. Nh?ng quy?n l?c luôn ?i ?ôi v?i trách nhi?m, ?i?u mà không ph?i ai c?ng hi?u ???c. Nh?ng ng??i nh? th? chính là nguyên nhân khi?n cho 1/4 s? Bitcoin trên trái ??t bi?n m?t mãi mãi.

N?u b?n ??t m?t th? gì ?ó lên blockchain, b?n ph?i th?t ch?c ch?n là mình s? không h?i h?n. Vì giao d?ch m?t khi ???c th?c hi?n s? không th? ??o ng??c, hay làm l?i. Nó s? ? trên blockchain mãi mãi, theo ?úng ngh?a ?en luôn.

Blockchain và Internet

Ngày nay chúng ta có th? phân chia th?i ??i công ngh? hi?n ??i thành hai giai ?o?n ??c bi?t: Tr??c Internet và sau Internet, ?ây là cách mà World Wide Web b? phá v?. S? bùng n? Internet ?ã làm thay ??i cách chúng ta th?c hi?n nh?ng giao d?ch, liên l?c, chia s? thông tin, qu?ng bá kinh doanh, gi?i trí, nghiên c?u,.

B?n s? ngh? r?ng t?t c? m?i th? chúng ta ?ang làm bây gi? g?n nh? là ph?i k?t n?i Internet. Vâng, nhi?u chuyên gia thích suy ngh? r?ng công ngh? blockchain có ti?m n?ng ?? t?o ra m?t cu?c cách m?ng gi?ng nh? Internet ?ã t ?ng.

D??i ?ây là m?t s? khía c?nh c?a blockchain mà r?t gi?ng v?i Internet vào nh?ng n?m tr??c 2000:

1. Các chuyên gia ??ng ý và h??ng chúng ta chú ý ??n blockchain, r?ng nó có ti?m n?ng ?? thay ??i h?u h?t m?i th?.
2. Nh?ng công ty l?n ?ang ??u t? vào blockchain và th? nghi?m nó cho nh?ng tr??ng h?p s? d?ng khác nhau, v?i nh?ng ph?n h?i r?t tích c?c v? kh? n?ng s? d?ng c?a nó.
3. Ng??i ta ??u t? vào h?u h?t các d? án liên quan ??n blockchain. Ví d?, Bioptix, m?t công ty niêm y?t trên NASDAQ ?ã ??i tên thành Riot Blockchain và ngay l?p t?c giá c? phi?u ?ã t?ng lên 20%. ? Anh, m?t công ty ??u t? ?ã ??i tên t? On-line Plc thành On-line Blockchain và giá c? phi?u c?a nó ?ã có lúc nh?y lên ??n 394%.
4. Không có c? s? h? t?ng blockchain ? c?p ?? toàn c?u hay qu?c t?, nh?ng s? thu hút và s? l??ng ng??i lao vào thí ?i?m thì r?t l?n.
5. M?i ng??i không th?c s? hi?u nó là gì, nh?ng h? ch?c ch?n nó có th? thay ??i cu?c s?ng c?a chúng ta.

Li?u l?ch s? có l?p l?i?

M?t s? chuyên gia ?ã ??a ra danh sách dài nh?ng ?i?m t??ng ??ng gi?a hai th?i ??i và hai hi?n t??ng, m?t s? chuyên gia l?i c?nh báo r?ng blockchain có th? s? có k?t c?c gi?ng nh? bong bóng dot com vào n?m 1999, sau ?ó m?i ??t ??n th?i ?i?m chín mu?i khi nó ???c ch?p nh?n r?ng rãi. ?i?u này có ngh?a r?ng, blockchain t?o ?i?u ki?n cho nh?ng tài s?n b? ??nh giá quá cao, có th? gây ra s? ?i?u ch?nh th? tr??ng trong t??ng lai, làm ?nh h??ng ??n nhi?u công ty và toàn b? ngành.

Chúng ta không bi?t tr??c t??ng lai s? nh? th? nào, nh?ng b?t ch?p s? thay ??i, kh?ng ho?ng t? n?m 1999, Internet ?ã không bi?n m?t, nó v?n ti?p t?c con ???ng c?a mình b?ng cách ??nh hình toàn b? ngành công nghi?p. ?i?u t??ng t? r?t có th? c?ng s? x?y ra v?i công ngh? blockchain.

Blockchain th?c s? có th? bi?n ??i th? tr??ng, vì chúng ta có th? ki?m soát ???c m?i giao d?ch, h?p ??ng ho?c b?t k? s? di chuy?n nào trong m?ng. Chúng ta có th? làm cho các giao d?ch và quy trình P2P tr? nên minh b?ch, ???c b?o m?t v?i s? tr? giúp c?a m?t mã, có d?u th?i gian và d? theo dõi. ?i?u này khác v?i Internet ngày nay, n?i các trung gian ?óng vai trò quan tr?ng. Các công ty nh? Facebook, Google, chính ph?, ngân hàng, công ty công ngh? cao ??u là nh?ng trung gian ?nh h??ng ??n thông tin và quy trình trong m?ng Internet. Blockchain lo?i b? nh?ng trung gian nh? v?y vì l?i ích c?a t?t c? m?i ng??i.

Bài vi?t tham kh?o t? các ngu?n:

1. https://medium.com/@micheledaliessi/how-does-the-blockchain-work-98c8cd01d2ae
2. https://blockgeeks.com/guides/what-is-blockchain-technology/
3. https://blog.iqoption.com/is-blockchain-the-next-revolution-after-the-internet/

Read more:

1. What is Bitcoin? T?i sao Bitcoin không ph?i là "ti?n ?o"?
2. This is why 10 years from now, every company will use blockchain
3. Microsoft tung ra Coco Framework d?a trên Ethereum ?? t?ng t?c m?ng l??i blockchain