

BLOCKCHAIN

Introduction

SoftUni Blockchain
Introduction Course In
Partnership with:



BACKGROUND

- Bs in Business Administration (Seattle, WA) 2007
- MSc in Finance and Investment Management (Scotland) 2009
 - Магистър по Физика и Оптиметрия (СУ) 2017
- Оптичен Център и Онлайн Оптика (2009-)
- Евро-проекти в алтернативен туризъм (2011 & 2014) – Вилен Комплекс Никодиа
 - 2 нови Евро-проекта (2017-) в производство и спорт
- Blockchain Investment (2016-)
- Ethereum Mining (2016-2017)

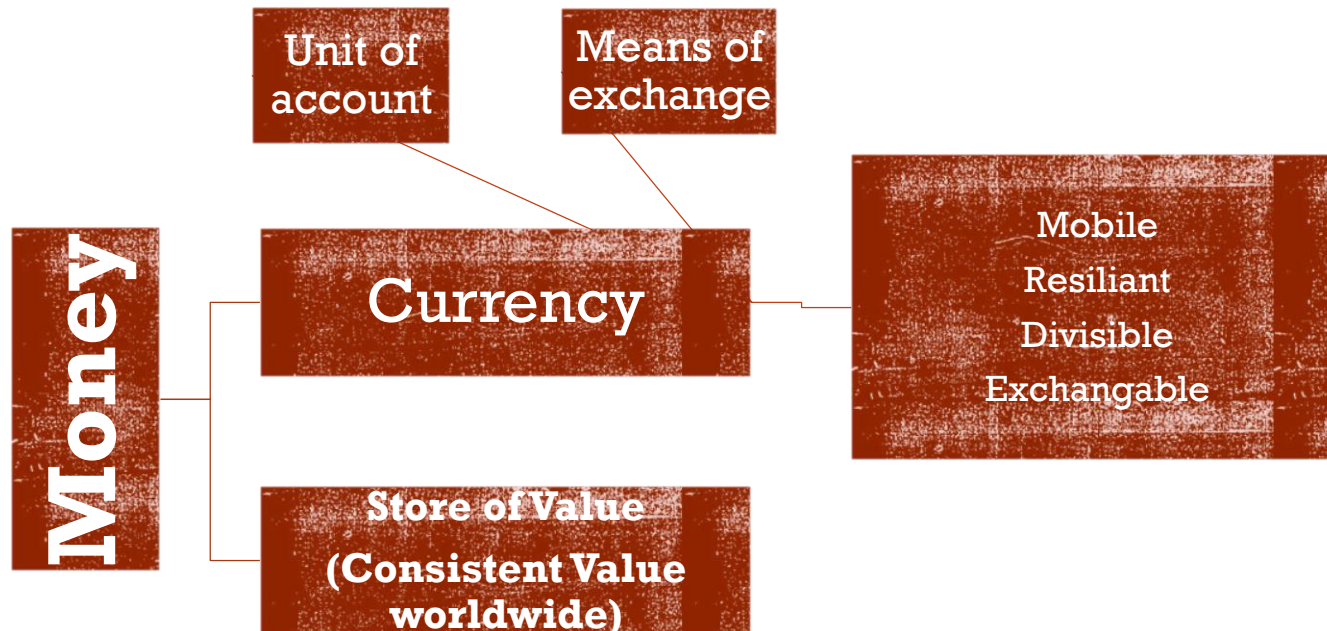


EXPOSURE TO CRYPTO

- Cryptocurrencies (CC)
 - Bitcoin
 - Ether
 - AE tokens
 - Alt Coins
- Use cases
 - Payment method
 - Use within the blockchain (GAS)
 - Speculative investment



CURRENCY, MONEY, BITCOIN ...



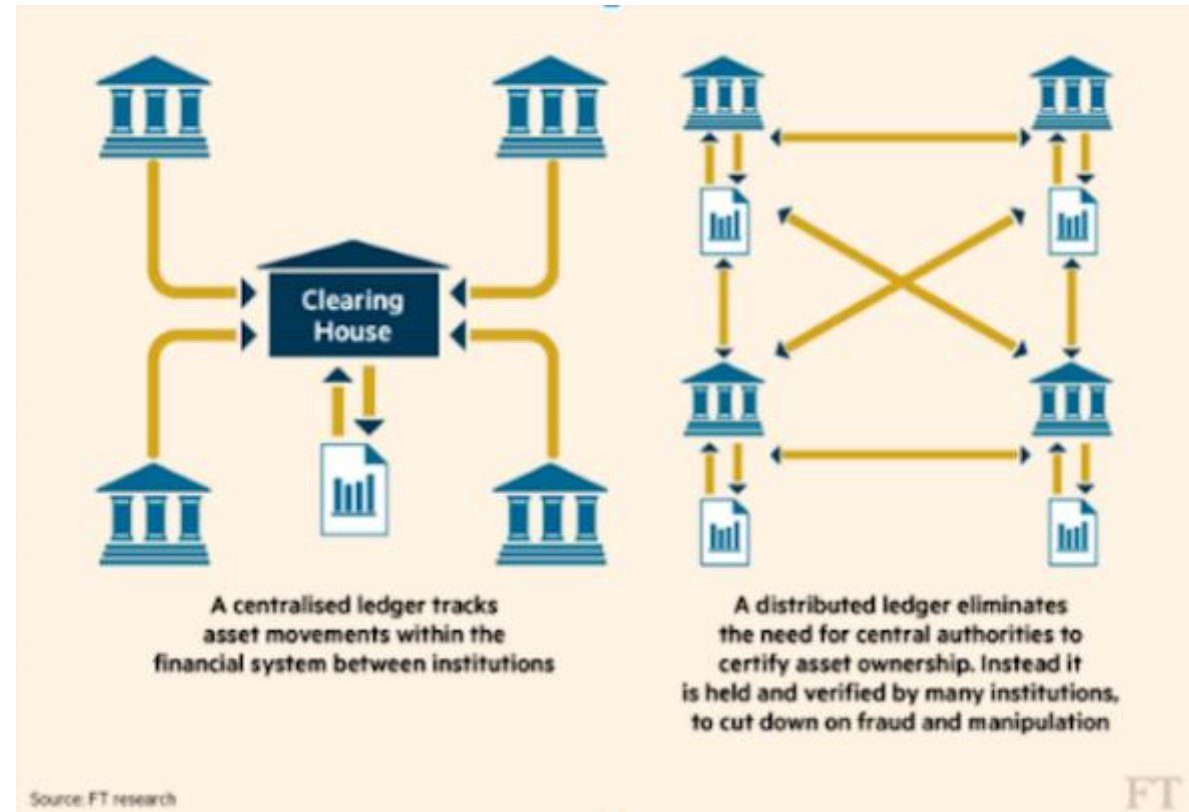
Bitcoin

- No intrinsic/fundamental value
- Not considered a **STABLE** store of value because of price swings
- Not widely used as unit of account
- Used as medium of exchange (not widespread)



DISTRIBUTED LEDGER

To make it simple, if bitcoin is an e-mail; blockchain is the internet.
Blockchain is that technology that enables cryptocurrencies like bitcoins to work.



HISTORY

- *THE CYBERPUNK MANIFESTO (1993 – Eric Hughes - Berkley CA)*

*“We the Cypherpunks are dedicated to building **anonymous systems**. We are defending our **privacy with cryptography**, with **anonymous mail forwarding systems**, with **digital signatures**, and with **electronic money**.”*

In it are described the Vision, System and Ideas of Cyberpunks.

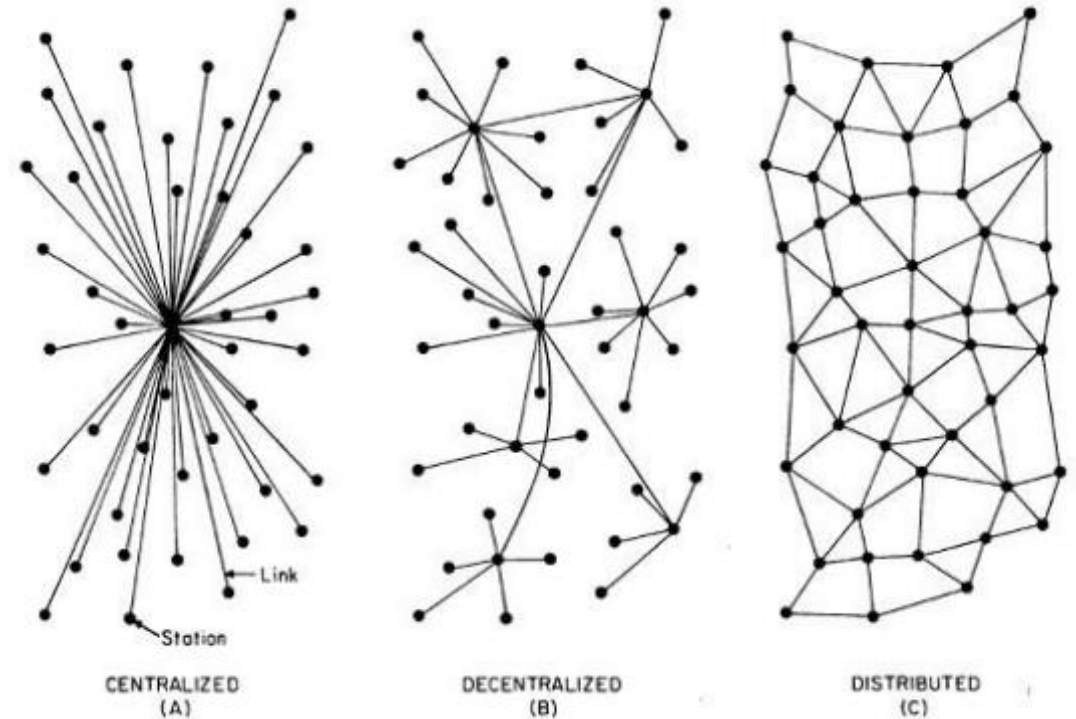
- ***BITCOIN**– S. Nakamoto – (white paper 2008; Инфраструктура - 2009г-)*

*“A purely peer-to-peer version of **electronic cash** would allow online payments to be sent directly from one party to another **without** going through a **financial institution**. “*



MAIN ATTRIBUTES

- *You can try to understand blockchain from two perspectives:*
 - *as the basis for all cryptocurrencies*
 - *financial transaction or as a technology that tackles the issue of trust between two parties.*
- *Double spending problem – Solved!*
- *Eliminates the need of Intermediaries*
- *Transfer of value*



BITCOIN



- Bitcoins are *intended* to be DIGITAL CURRENCY.
- Buyers & Sellers use them to avoid middle men such as banks, VISA, ATMs.
- International currency with no exchange transaction fees.
- There are 21 Million Bitcoins to be mined (Jan 2018 – 80% mined)
- As more people want to buy bitcoins sellers charge more
- Limited regulation – wild price swings and speculation.
- Estimated 30% bitcoins have been lost (private keys)
- Speculators BUY&HOLD in order to increase price

bitcoin:

A bitcoin wallet address looks like this:

1G8qEUVUS8BBSwSWNM4EWR622vUpGtee

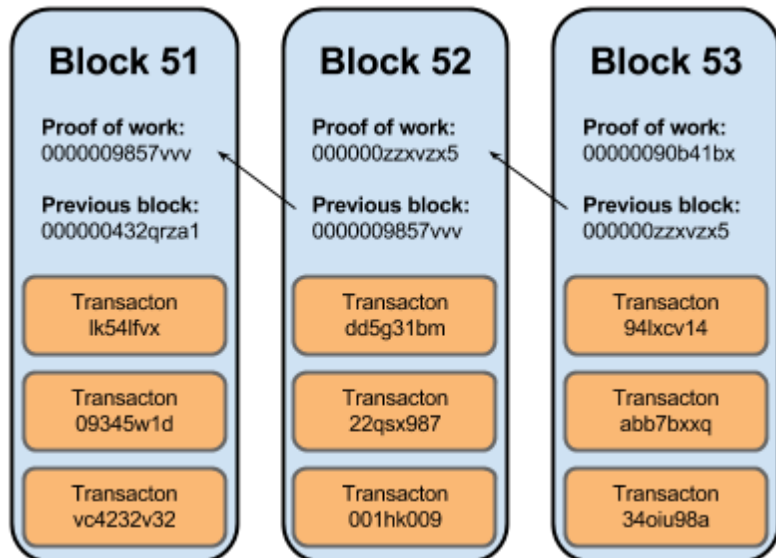


BITCOIN BLOCKCHAIN PROTOCOL

Bitcoin relies on cryptographic protocols.

Public-Private key cryptography is used to give individuals safe, exclusive control of their bitcoin.

Hash functions are used to "link" each block in the bitcoin blockchain, proving an order of events and the integrity of past data.



1. **Transactions – Between users**
2. **Proof-of-work – from the miners**
3. **Previous Reference– to the previous block**



PUBLIC BLOCKCHAINS

This is the real form of blockchain - almost utopian.

1. Power to the people, no banks and all that high-spirited bit.
2. These are open-source and anyone can be a part of it.
3. Everyone has a unique public identity which is anonymous and you can own as many identities as you wish.
4. Each ID comes with a pass key (**private**- almost like your ATM PIN code, only very **cryptic** and much longer) which allows you to transact, participate, view and earn rewards in the form of cryptocurrencies.
5. Examples: **Bitcoin, Ethereum, Aeternity** (to be launched) and many others



PRIVATE BLOCKCHAINS

In simple terms, efficiencies of blockchain within a private company.

- Blockchains where write permissions are kept centralized to one organization. Read permissions may be public or restricted to an arbitrary extent.
- Arguments against: private blockchains, run by private firms, are useless, since they make users dependent upon a third party – the firm managing the blockchain.
- The **Hyperledger** project from the Linux Foundation, and the **Gem Health** network are just several of the different private blockchain projects under development



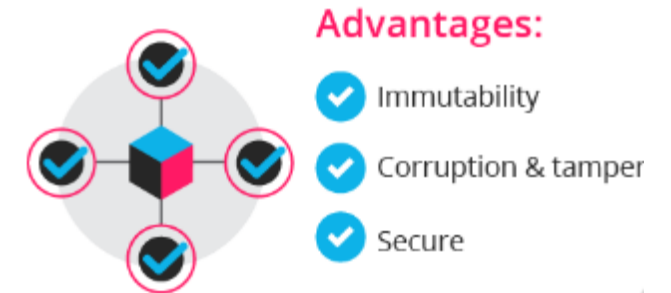
ETHEREUM BASICS

Ethereum is an open software platform based on public blockchain technology that enables developers to build and deploy decentralized applications

Ether– crypto token used within the blockchain

More than a tradable crypto currency – used to pay for running:

- Decentralized Applications - DAPPs
- Execute smart contracts
- Decentralized Autonomous Organization - DAO
- Conduct an Initial Coin Offering - ICO



SMART CONTRACTS AND DAPPS



- **Smart Contracts**

Computer code that can facilitate the exchange of money, content, property, shares, or anything of value. Smart contract becomes like a self-operating computer program that automatically executes when specific conditions are met. CODE IS LAW!

- **DAPPs – Decentralized Applications**

Ethereum enables developers to build and deploy decentralized applications. They are made up of code that runs on a blockchain network, they are not controlled by any individual or central entity.



DAO & ICO

ICO – Initial Coin Offering

- A method used to raise money for new blockchain projects.
- It usually takes place before the launch of a coin's blockchain and involves the public sale of a percentage of the coin's initial supply.

DAO - Decentralized Autonomous Organization

- Consists of one or more contracts and could be funded by a group of like-minded individuals.
- Operates completely transparently and completely independently of any human intervention, including its original creators.
- Owned by everyone who purchases tokens, tokens ONLY act as contributions that give people voting rights, NOT A SHARE OF EQUITY!
- **Difference with ICO** - Funds can **only** be spent when a majority of DAO holders agree to use it in order to improve the economic situation of the DAO.





“aeternity is a new blockchain technology, designed to deliver unmatched efficiency, transparent governance and global scalability”

- **State Channels**

Smart contracts exist only inside off chain state channels. Just in case of disagreement the smart contract code gets enforced by the aeternity blockchain.

- **Decentralized Oracle**

An oracle machine connects public real world data with smart contracts. Oracles are categorically more powerful than Turing-complete computational models.

- **Consensus**

Consensus is achieved via a novel hybrid Proof-of-Work (PoW) and Proof-of-Stake (PoS) algorithm.

- **Unique Governance**

aeternity implements a form of futarchy, where miners vote and value-holders bet to make decisions together.





Yanislav Malahov – Founder

The “Godfather of Ethereum“, worked with Vitalik Buterin on colored coins in 2013. Having exchanged ideas and pursued blockchain endeavors with many of the greatest minds, Yanislav is a true veteran of the blockchain space.



Joel Raymont

Joel is a blockchain geek, seasoned hacker, and international man of mystery. He started his career on Wall St. and brings 25 years of software engineering experience to aeternity.



Marion Vogel

Being intrigued by the magic of blockchain technology since early 2014. Research on the socioeconomic impact, spreading the word and taking care of handling aeternity's operations efficiently is where she performs best.



Nikola Stojanow

As a multi-national Business Development Executive with experience working in Germany, Eastern Europe, MENA, Asia and Pacific, Nikola is the go-to person for Strategy and Business Development.



æternity enables numerous use cases

Access æternity blockchain via the AE token.



HOW TO START USING CRYPTOCURRENCIES

- Open an online wallet
- Open an account in an exchange
- Decide how you want to get involved:
 - MINE
 - TRADE
 - INVEST In ICOs
 - BUILD DAPPS
- Buy an offline wallet!





RESOURCES

ONLINE WALLETS

WWW.COINBASE.COM

WWW.MYETHERWALLET.COM

Exchanges

WWW.POLONIEX.COM

WWW.KRAKEN.COM

WWW.BITTREX.COM

OFFLINE WALLETS

WWW.LEDGERWALLET.COM

WWW.TREZOR.IO



**JOIN US AND GET
INVOLVED!**



ETHERBG