

WELCOME TO THE FIRST

ETHEREUM IASI MEETUP

ORGANISERS ✂

▶ Paul Razvan Berg

- ▶ Contributor to Ethereum, on its codebase and many forums
- ▶ Absurdist at ChronosProtocol.Org – a money-streaming project
- ▶ Twitter [@PaulRBerg](https://twitter.com/PaulRBerg)

▶ Razvan Apostu

- ▶ Founder of VanSoftware.Ro, a software development company
- ▶ Designer, developer and computer science student at FII - UAIC
- ▶ Twitter [@razgraf](https://twitter.com/razgraf)

**WE ARE NOT ABOUT
SPECULATION**

The Ethlasi Peeps

...THEN, WHAT IS IT ABOUT?

- ▶ Fostering interest in blockchain development and research, with a focus around Ethereum
- ▶ Encouraging entrepreneurial peeps to build their businesses on top of a blockchain
- ▶ Organising educational events and workshops

WHAT IS CRYPTOCURRENCY?

- ▶ Digital money secured by cryptography and economic theory
- ▶ Cryptography = “bastard” child of computer science and maths
- ▶ Mainly centered around number theory and prime fields



WHY DO WE NEED CRYPTOCURRENCY?

1. Digital, it's the "native" currency of the Internet
2. Global, low costs of transaction
3. Trustless, not controlled by one single party



Leo Weese 獅 草地

@LeoAW

Follow



Bitcoin is just a massive conspiracy to teach you about economics, finance, politics and computers.

4:48 AM - 10 Nov 2018

1,249 Retweets 4,856 Likes



112

1.2K

4.9K



WHAT IS BLOCKCHAIN?

- ▶ The technology underpinning Bitcoin and most cryptocurrencies out there
- ▶ It literally means a chain of blocks; these blocks store data about who owns what
- ▶ Yet, there are so much more than just a database; blockchains are international economies

Ledger

From	To	Amount
Alice	Bob	15
Jon	Ann	3
Bob	Ryan	30
Bob	Danny	10

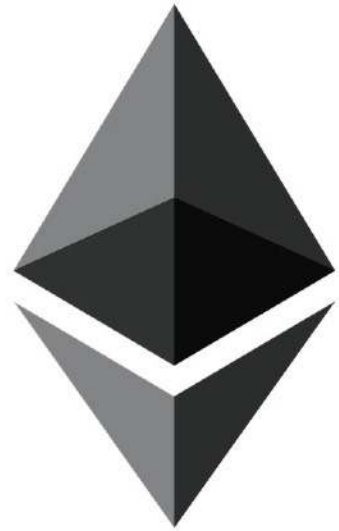
Blockchain

From	To	Amount
1JCe8z4jJVNXSjohjM4i9Hh813dLCNx2Sy	3Nxwenay9Z8Lc9JBiywExpnEFiLp6Afp8v	15
3Nxwenay9Z8Lc9JBiywExpnEFiLp6Afp8v	2oetdNuZUqQHPJmcMDDHYoqkyNVsFk9r	3
2oetdNuZUqQHPJmcMDDHYoqkyNVsFk9r	1JCe8z4jJVNXSjohjM4i9Hh813dLCNx2Sy	30
2oetdNuZUqQHPJmcMDDHYoqkyNVsFk9r	3Go3ggs8pFnXuHVHRytPCq5fGG8Hbhx	10

OKAY DUDE, BUT...

WHAT IS ETHEREUM?

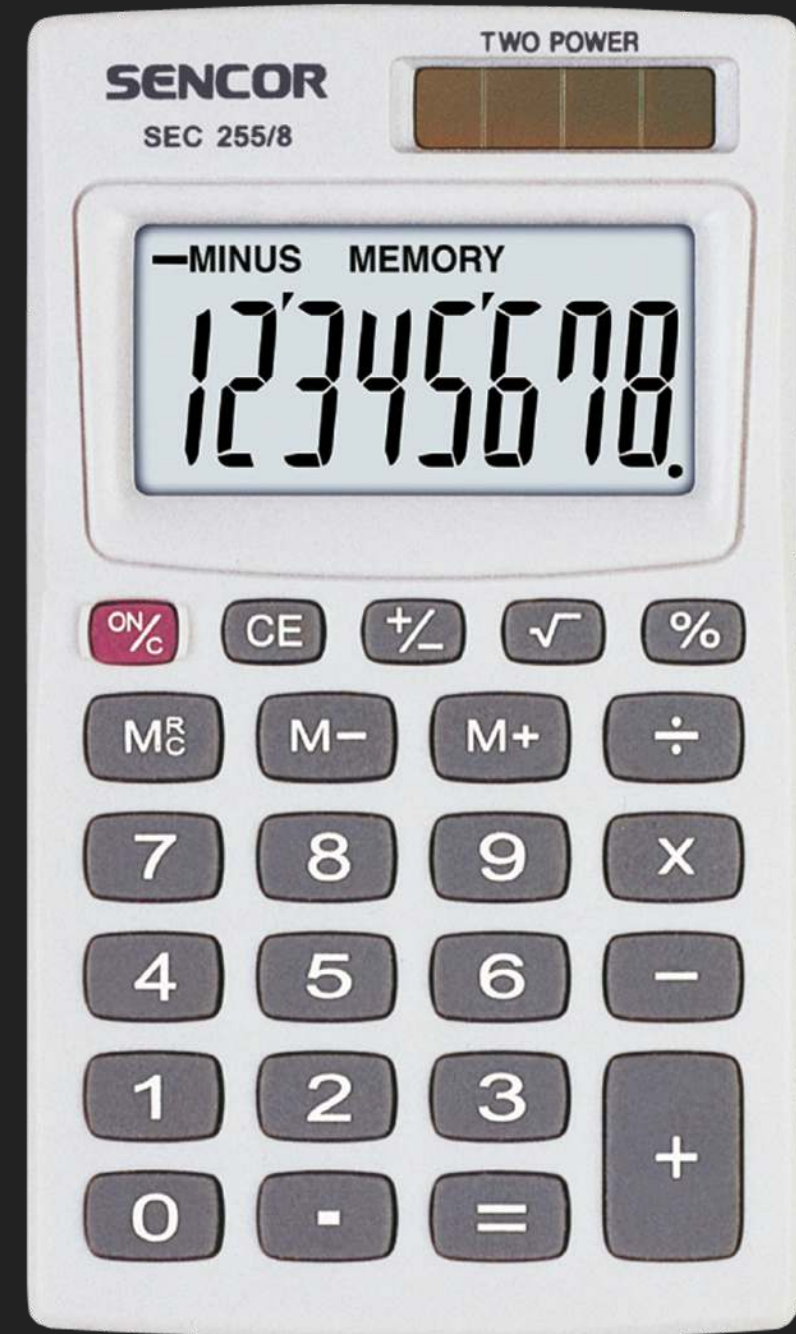




ethereum

COMPARING BITCOIN TO ETHEREUM

- ▶ Most blockchain protocols, including Bitcoin, were developed like this:



ETHEREUM IS DIFFERENT

- ▶ The first of its kind, Ethereum serves as a platform for distributed computation
- ▶ Decentralised applications can be built on top of that
- ▶ In computer science parlance, Ethereum is “Turing-complete”



Ethereum

From	To	Data
0x52bc44d5378309ee2abf1539bf71de1b7d7be3b5	0x5379718a93F46d9d2E8ac2e355f2087b6C43C010	Value: 15
0xe0Cd84c2FfE0e86C29556DF4efBA65f86E864627	0xfe02a56127affbba940bb116fa30a3af10d12f80	Value: 3
0x27dcf986BC1151B39CeadD53660e4AF56B0D5f84		Code: <pre>contract Escrow { function f() { ... } }</pre> 0x2oetdNuZUqQHPJmcMDDHYoqkyNVsFk9r
0x40cA1a9ddc9840D19bB679D85cC0DFe9De985fd5	0x2oetdNuZUqQHPJmcMDDHYoqkyNVsFk9r	call f();

SMART CONTRACTS

- ▶ Tamper-proof chunks of code deployed on the blockchain
- ▶ Anyone can interact with the contract logic and storage
- ▶ Developers have to pay for deployments

KEY CONCEPT: TRUSTLESSNESS

- ▶ By far the most important feature
- ▶ Emphasis on the fact that everyone can interact with the contract at any point in time after deployment
- ▶ Compare it to Facebook's API: you need permission, they can shut you down anytime they want, banned in some countries

CREATE YOUR OWN CURRENCY

- ▶ In the right, you can see the ERC20 token standard
- ▶ Takes a few minutes to deploy
- ▶ Compatible with all of the Ethereum wallets out there
- ▶ Money has become a primitive tool like fire

```
pragma solidity ^0.4.24;

import "openzeppelin-solidity/contracts/ownership/Ownable.sol";
import "openzeppelin-solidity/contracts/token/ERC20/ERC20Mintable.sol";

contract MyToken is Ownable, ERC20Mintable {
    string public constant name = "MyToken";
    string public constant symbol = "TKN";
    uint8 public decimals = 18;
    uint256 public totalSupply = 10000 * 10**uint(decimals);

    constructor() public {
        mint(msg.sender, totalSupply);
    }
}
```

TIME FOR SOMETHING FUN

DECENTRALISED APPS



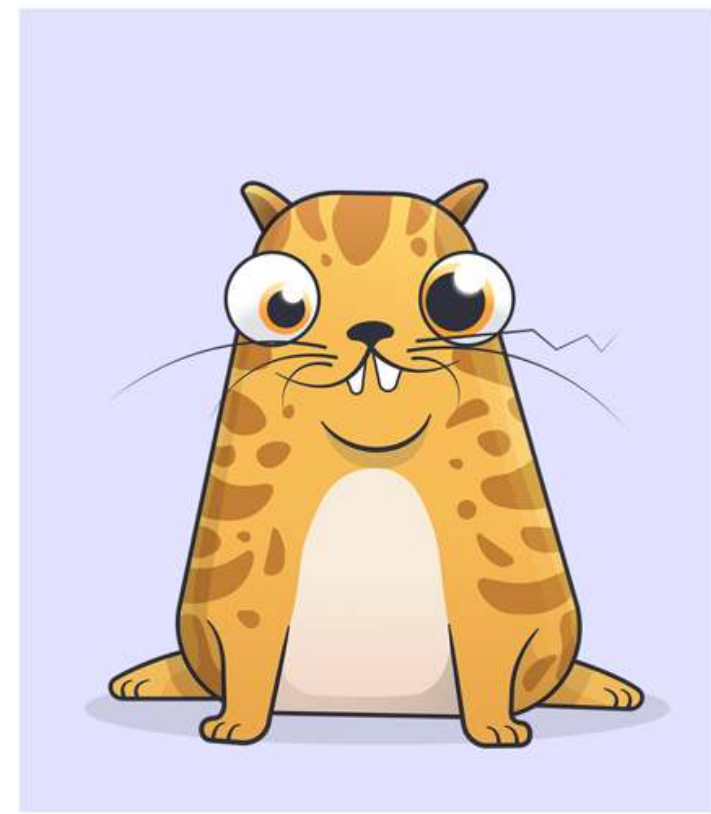
THE DAPPLICATION PHENOMENON

- ▶ dApp = smart contracts + user interface (e.g. HTML)
- ▶ Applications which are “autonomous” and “transparent”
- ▶ Just like smart contracts, nobody can bring them down once deployed and anyone can interact with them



GITCOIN

CryptoKitties



Dai is a
decentralized
stablecoin



HOW ABOUT?

- ▶ Investment Funds
- ▶ Prediction Markets
- ▶ Loans
- ▶ Insurance
- ▶ Decentralised GPS
- ▶ *Insert your idea here*

Web 1.0



Service provider



Server



Customers

Web 2.0



Platform provider



Cloud



Service providers

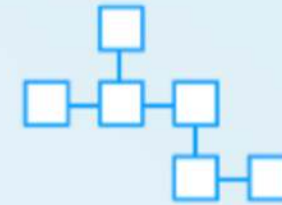


Customers

Web 3.0



Developers



Blockchain (DApps)



Service providers



Customers



TIME FOR SOMETHING EVEN MORE FUN

PHILOSOPHY AND ECONOMICS 

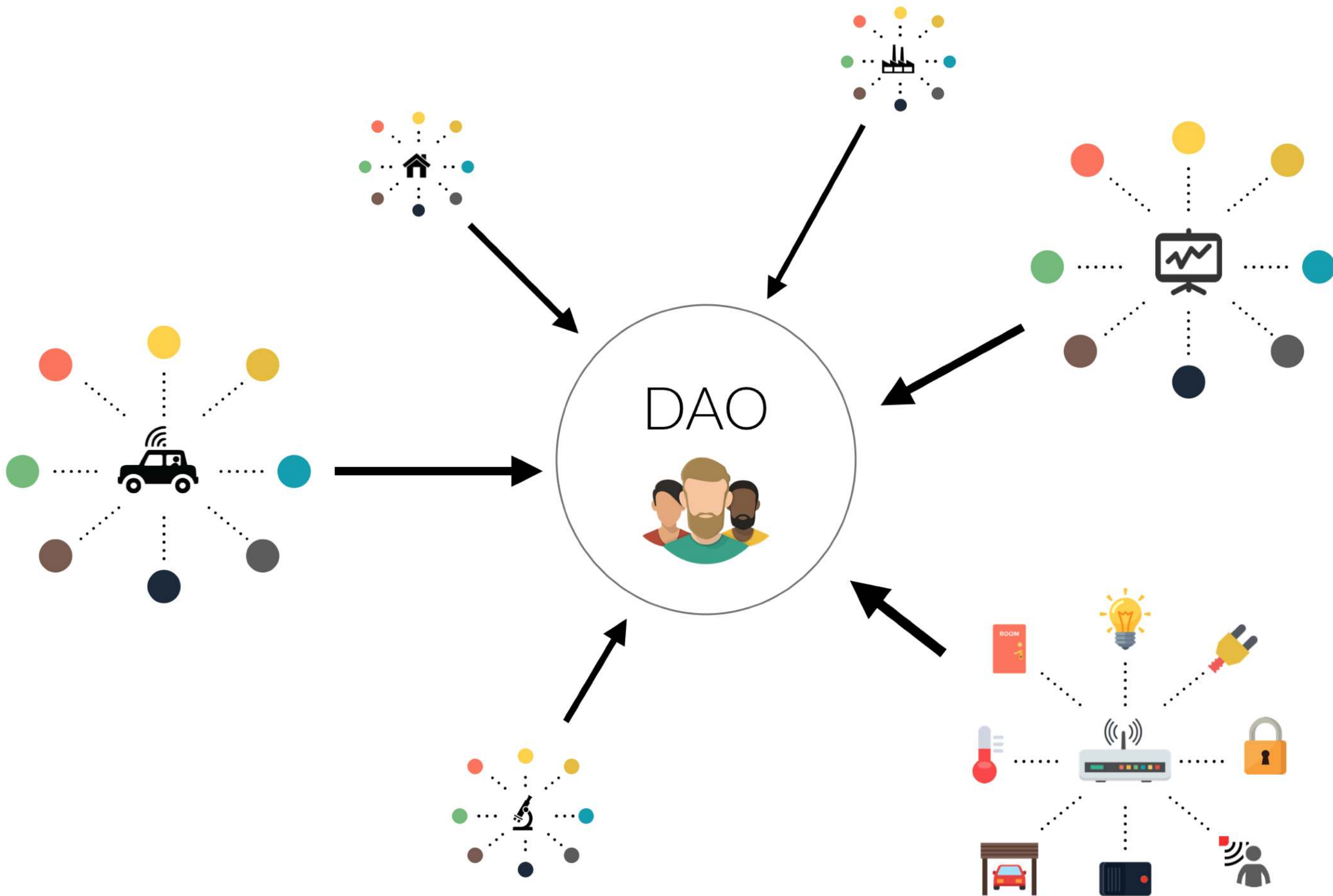
WHAT ARE BLOCKCHAINS ON A DEEPER LEVEL

- ▶ Coordination mechanism across space and time
- ▶ Actually, a standard unit
- ▶ S.I.
 - ▶ distance :: meter
 - ▶ time :: second
 - ▶ value :: blockchains

INCENTIVE ALIGNMENTS

- ▶ The ability of a process or set of processes to align the motivations of a group
- ▶ Examples: limited liability companies (SRL), non governmental organisations (ONG) or public corporations (SA)
- ▶ Share common goals and governance methodology
- ▶ But they are moving slow and are usually dependent on the nation state

**THERE IS A NEW WAY TO DO
STUFF...**



HOPE YOU ENJOYED THIS

WRAPPING UP



TAKEAWAYS

- ▶ Blockchains are cool tech but they also represent international economies
- ▶ Smart contracts can get rid of middlemen
- ▶ You could start developing your own decentralised app tonight
- ▶ Buuuut...

**ETHEREUM IS STILL AN
EXPERIMENT. WEAR YOUR
SEAT BELT.**

The Ethlasi Peeps



FABLABIAȘI

MANY THANKS 🙏

FAB LAB IASI



AND 🙏

MAKERDAO.COM

THANKS FOR COMING!

SEE YOU NEXT TIME



Romania3

<https://ro3.co>