

ETHEREUM FOR NODE.JS DEVS

INTRODUCTION TO ETHEREUM PLATFORM

by Raul Pino

NodeConf Argentina 2016

WHO AM I?

- » Born in Venezuela
- » Living in Chile
- » uBiome
- » Groupon Latam
- » Like Distributed Systems
- » <3 asado, sorrentinos, choripanes, chimichurri



WHAT IS ETHEREUM?

Ethereum FAQ - What is ...?

WHAT IS ETHEREUM?

» Is it Oblivion?

WHAT IS ETHEREUM?

- » Is it Oblivion?
- » No.

“Ethereum is a computer.”

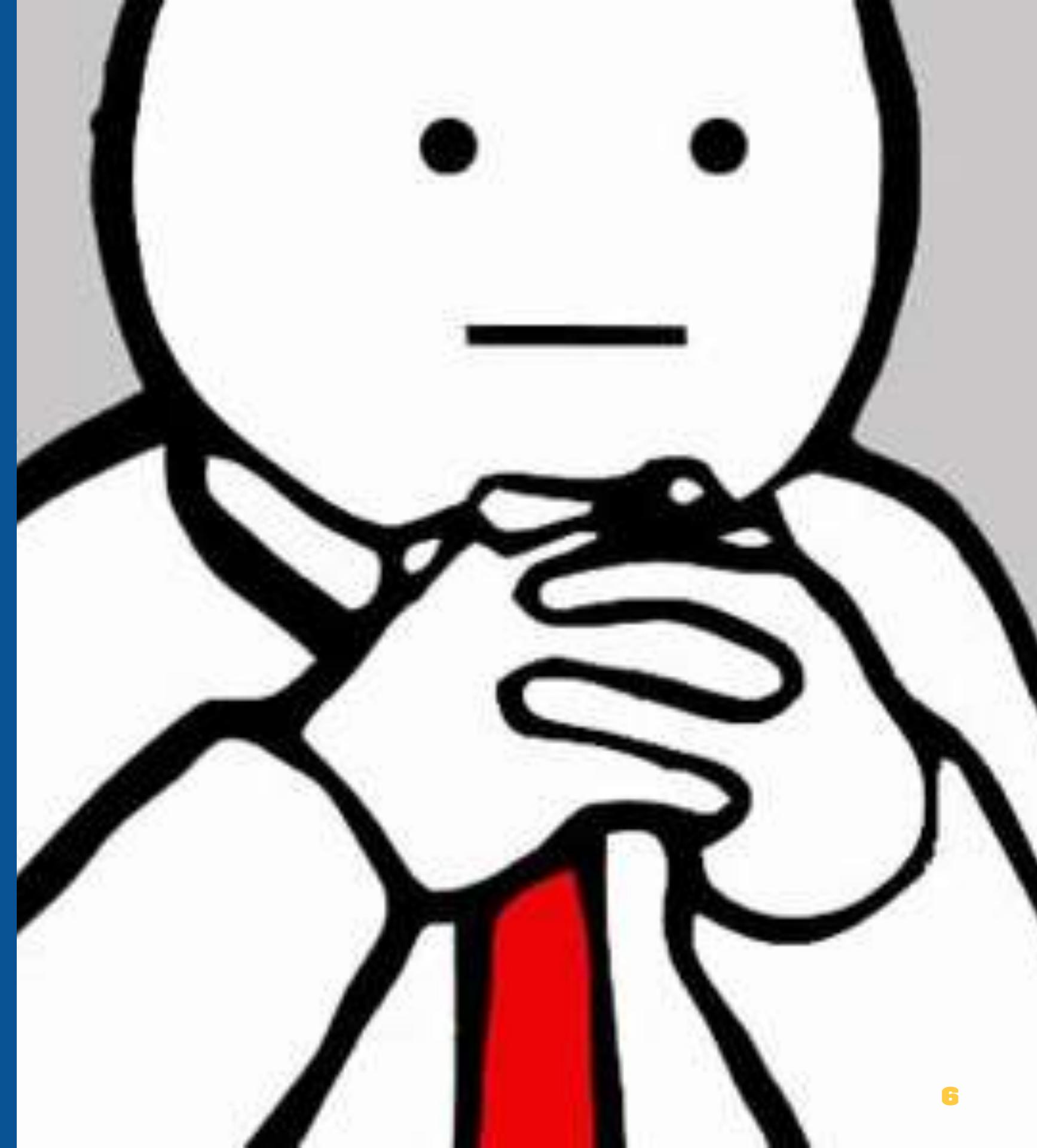
Dr. Gavin Wood (DevCon1 2015)

- » Gigawhat? (ᵔ °□°)ᵔ ~ ━━

WHAT IS ETHEREUM?

“Is a public blockchain-based distributed computing platform, featuring smart contract functionality.”

(Wikipedia)



WHAT IS ETHEREUM?

“It provides a decentralized virtual machine, the Ethereum Virtual Machine (EVM), that can execute peer-to-peer contracts using a cryptocurrency called ether. ”

(Wikipedia)



ETHEREUM CONCEPTS:

- » Ether
- » Blockchain
- » Smart Contract
- » Ethereum Virtual Machine
- » Decentralized Application (dApp)

ETHER

Is the cryptocurrency itself.

It is a form of payment made by the clients of the platform to the machines executing the requested operations.

Related to Gas, cost of transactions over network.



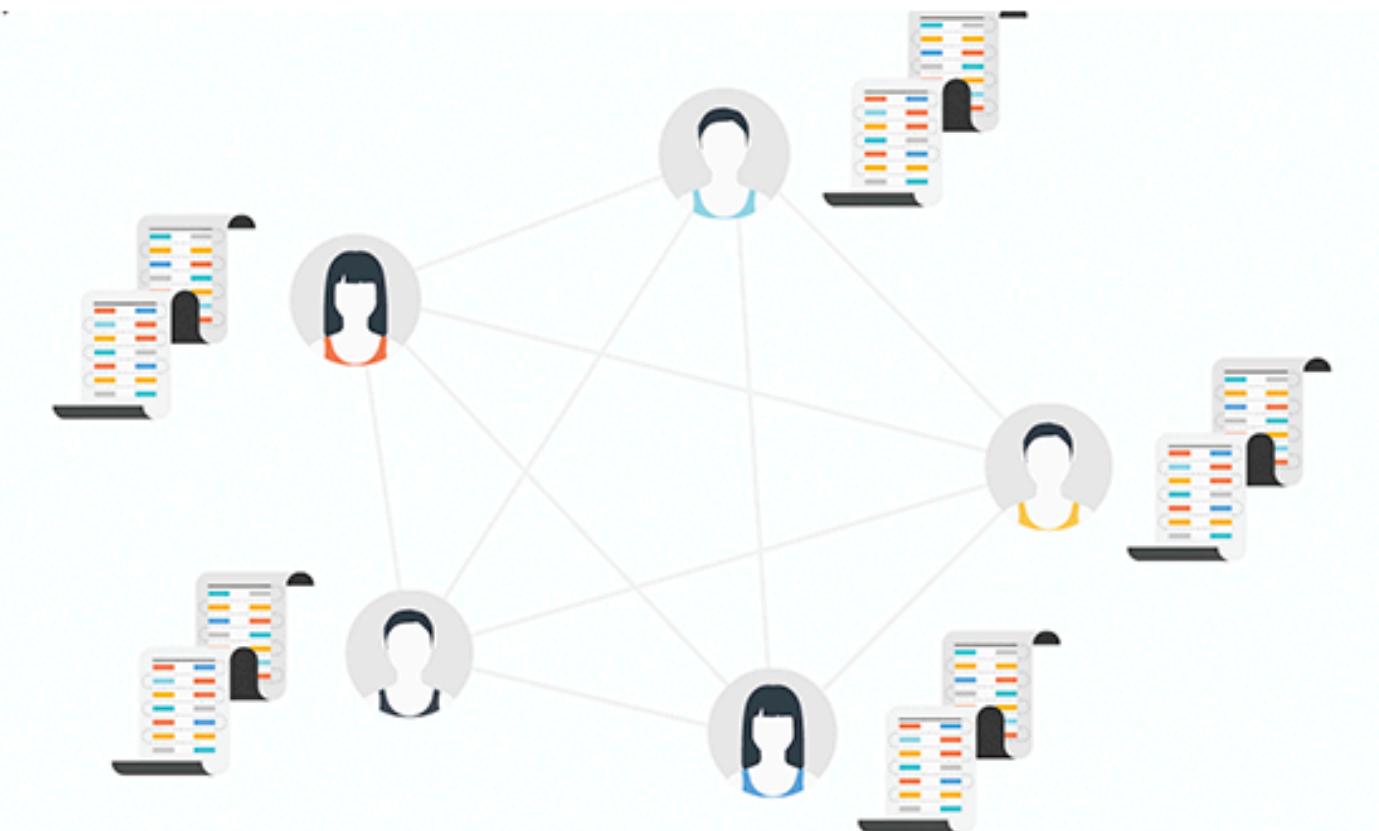
BLOCKCHAIN

Is a distributed database.

Each record is a block.

Each block have a timestamp
and a link to a previous
block.

Entire history of all
transactions on the network.



SMART CONTRACT

Is kind of the protocol implemented in the network by a dApp.

There are some languages used, but the most popular is Solidity .



ETHEREUM VIRTUAL MACHINE

It refers to the blockchain,
the miners/clients.

"The computer" that executes
smart contracts.

Backend of dApps.



DECENTRALIZED APPLICATION (DAPP)

UI to decentralized backend
(smart contracts and
blockchain, EVM).

Old EthAcademy - [https://
dappsforbeginners.wordpress.c
om/](https://dappsforbeginners.wordpress.com/)

Truffle *** - [http://
truffleframework.com/](http://truffleframework.com/)



LIVE CODING: MODE ON!

Brace yourself a demo is coming! :O



SO AGAIN WHAT IS ETHEREUM?

“Ethereum is a computer.”

Dr. Gavin Wood (DevCon1 2015)

ETHEREUM --PROPERTIES

According to Dr. Wood:

- » Slow: Code runs 5-100x slower than natively compiled.
- » Expensive to use: Basic computation, memory and storage costs are ~1950s levels.
- » Not always immediately decisive: Actions of last 60s may be reorganised.



ETHEREUM ++PROPERTIES

According to Dr. Wood:

- » Truly global singleton: One computer for the entire planet now and forever.
- » Ubiquitous: Wherever there's internet, there's Ethereum.
- » Cannot fail, be stopped, be censored: No authority, resistant to attack.



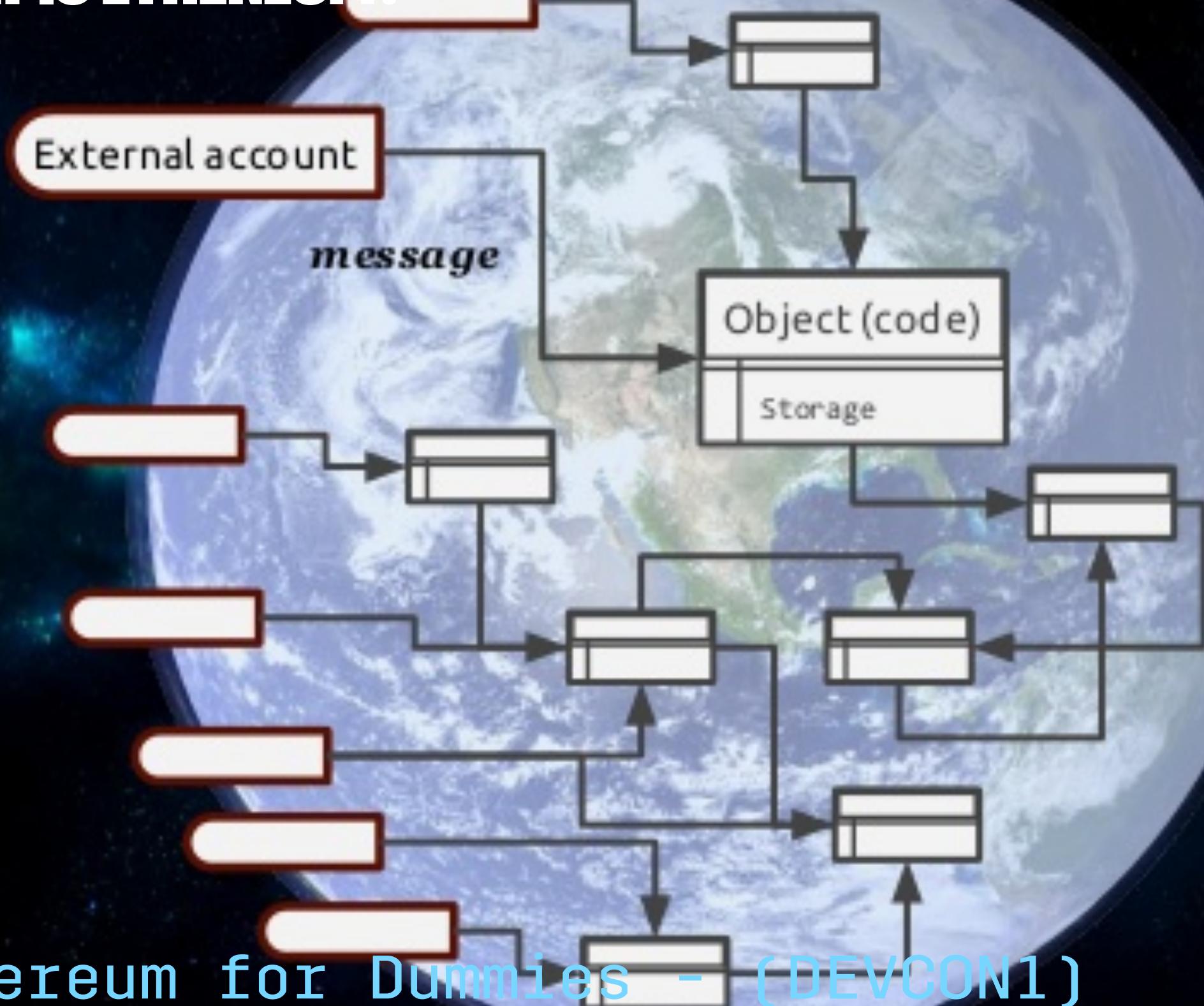
SO ETHEREUM IS LIKE

...Matambre!

A blockchain of meat,
which is surrounded by peers,
which uses a social contract,
to get a consensus how to
consume it,
to... "Kill hunger" for
decentralization.



WHAT IS ETHEREUM?



The World Computer

Ethereum for Dummies - (DEVCON1)

TAKEAWAYS

Ultimate goal:

“A decentralized web would give power back to the people online”

Matthew Hodgson (matrix.org in [TC](#))



TAKEAWAYS

“Threats to the Internet, such as companies or governments that interfere with or snoop on Internet traffic, compromise basic human network rights.”

Tim Berners-Lee



Featured Libertad de expresión

Al menos doce estados venezolanos presentaron fallas de Internet durante el fin de semana electoral

11 diciembre, 2015 accesolibreadmin Acceso a internet, Internet

INTERESTING LINKS AND RESOURCES:

State of the dApps

Ethereum for Dummies - (DEVCON1)

Ethereum FAQ

ConsenSys/Ethereum-Development-Best-Practices

Ethereum 101

Truffle

MetaCoin Example