The Road to

ECONOMY OF THINGS

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Topics

- EoT

- Digital Assets - Bitcoin

- Digital Assets - IOTA

Economy of Things

EoT

Economy of Things

- IoT- digitization of things

- EoT - monetizations of things.

- Communication between IoT devices and trading autonomously via EoT

Machine Economy

Towards **Smart Decentralization**

Dumb **Decentralization**	Smart **Centralization**	Smart **Decentralization**
• "Dumb" devices • No connectivity / sharing of data • Human mediators	• Smart devices, dumb network • Cloud as decision maker	• Data Sharing • Local Real-time Decision Making • Smart adaptive and intelligent network

EoT

Motivation and Use Cases

- Technological resource trade

- Distributed Computing

- Distributed Data

- Distributed Storage

- Distributed Bandwidth

- Distributed Energy

Digital Assets

Digital Assets

How can we asssign modeling to digital assets?

How can we trade digital assets securely?

Blockchain in a Nutshell

The
Blockchain

- An open source distributed ledger protocol

- Formed as a chain of blocks

- Each block contains transactions that are needed to be verified

- Verification of transactions is made by miners that solve cryptogrphic equations sas specified in the protocol

- Miners are compensated by transaction fees and new bitcoins that are made ex nihilo

The Blockchain

Cons

- Scalability
- Fees
- High Hardware & Resource Requirements

Back To EoT and IoT

IOTA

Economy of Internet of Things

IOTA

Economy of Internet of Things

- Designed to be the backbone of the Internet-of-Things economy

- An open-source, decentralized cryptocurrency

- Specifically engineered for real-time micro-transactions

- Designed to solve infrastructural problems for IoT and enable the 'sharing economy' of distributed technological resources

- The core innovation of IOTA is the Tangle

IOTA

The Tangle

The Tangle retain the blockchain features of the distributed ledger and secure transactions, but drops the blocks. Instead it takes the form of a Directed Acyclic Graph (DAG).
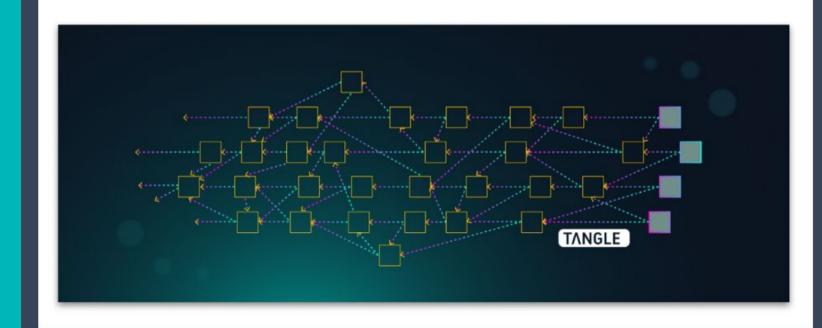

The Tangle

A Blockchain **without the Blocks** and the **Chain**

IOTA

The Tangle

- A novel new distributed ledger architecture that is based on a DAG (Directed Acyclic Graph)
- The Tangle still has the same underlying principles as a Blockchain: it's still a distributed database, it's still a P2P Network and it still relies on a consensus and validation mechanism.
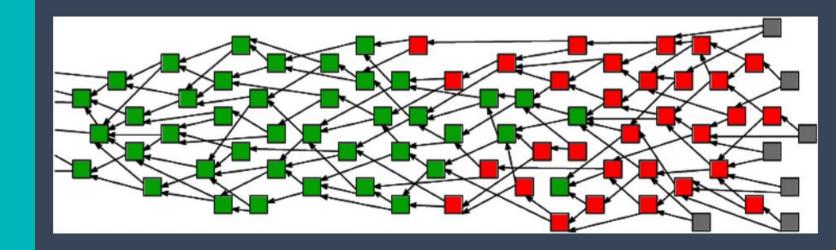
IOTA

The Tangle - transaction verification

The transaction making process in IOTA is a simple, 3 step process:

1. Signing

2. Tip Selection: MCMC (Markov chain Monte Carlo)

3. Proof of Work

IOTA

The Tangle –
Network
Consensus

- **Green Blocks - transactions on which consensus was achieved**
- **Red Blocks - transactions where we are still uncertain on their full acceptance**
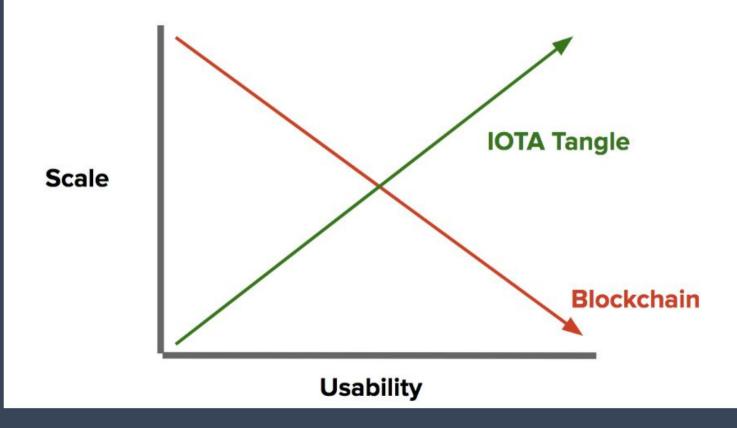- Gray Blocks - tips (unconfirmed transactions)

IOTA

The Tangle - Pros

No Transaction Fees

- $0.01 → + $0.01

IOTA

The Tangle - Pros

It Scales!

Scale

Usability

IOTA Tangle

Blockchain

Thank You For Listening