



Economy of Things: Overview and Challenges

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Background: Cryptocurrencies

- They are the implementation of a P2P digital ledger.
- Developed above blockchains or similar structures.
- Decentralized transactions, without third parties.
- The first one and the most famous: Bitcoin

Background: IOTA

- Designed to be a message protocol for IoT devices.
- Rather than using blockchain, it uses the Tangle Network, a DAG implementation.
- Instead of using blocks, each transaction is inserted directly into the DAG.
- No taxes. It enables zero-value transactions.

Background: Ripple

- Created in partnership with banks aiming to have fast transactions around the world.
- It is a private blockchain, having private nodes to confirm the transactions.
- The transactions are inserted after the nodes vote.
- It started with the token XRP but they want to enable other assets.

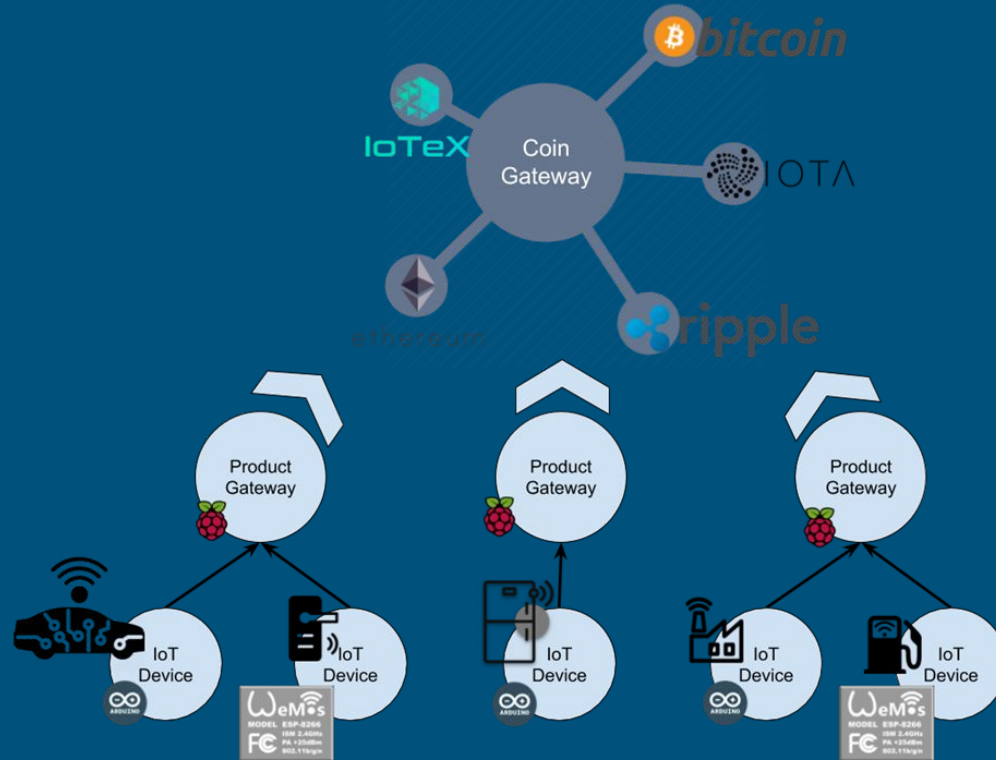
Background: Ethereum

- Introduced the smart contracts over the blockchains.
- Also introduced the GAS, a cost for each contract step to avoid resource wasting.
- Variable GAS price.

Economy of Things

- New paradigm for the monetization of things and exchange digital assets.
- The name was first used by IBM.
- Marketplace IOTA – Partnership with BOSCH.
- Cryptocurrencies + IoT.

Economy of Things



Research Question

Is it possible to use the public cryptocurrencies and blockchains as the protocol to enable the Economy of Things and a device-to-device environment to exchange assets without human interaction?



Challenges

- Blockchain integration.
- Price volatility.
- Transaction time.
- Costs.



Thank you!