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bloxberg

Blockchain-Infrastruktur für wissenschaftliche Forschung

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What is bloxberg?

Blockchain consortium founded in spring 2019 at Ringberg castle operating a public Ethereum network for scientific reseach

Who are the members?

Universities and research organizations world-wide, among others

- Max Planck Society
- University College London
- Carnegie Mellon University
- Karlsruhe Institute of Technology
- ETH Zürich
- Fraunhofer

About

The bloxberg infrastructure is a secure global blockchain established by a consortium of leading research organizations to provide scientists with decentralized services worldwide. The bloxberg infrastructure broadens the scientific landscape of regionally and nationally governed blockchain networks to become the first truly globally maintained scientific decentralized network for scientists. By establishing the permissioned, public blockchain **bloxberg** the network is safeguarded against the cryptographic power of third entities, as the credibility of the research organizations maintaining the network, constitutes trust in the system.

The bloxberg consortium aims to foster collaboration among the global scientific community, empowering researchers with robust, autonomous services that transcend institutional boundaries. For example, with consented transactions on the bloxberg infrastructure, research claims need not be limited to one institution alone, but can be confirmed by the whole trusted network. The excellent reputation of the participating research organizations will encourage scientists worldwide to utilize the bloxberg network and the applications built on top of the infrastructure. Researchers can leverage bloxberg to create a transparent footprint of their work, without revealing its content. Each institution can integrated the bloxberg infrastructure into existing institutional services for their scientists, and therefore easily expanding centralized services with decentralized components such as DLT (distributed ledger technology) timestamping.

Commercial companies and especially Start Ups are encouraged and supported by the bloxberg consortium to build new and innovative services on the bloxberg blockchain whereas maintaining the network and validating transactions is only administered by the bloxberg consortium of scientific organizations.

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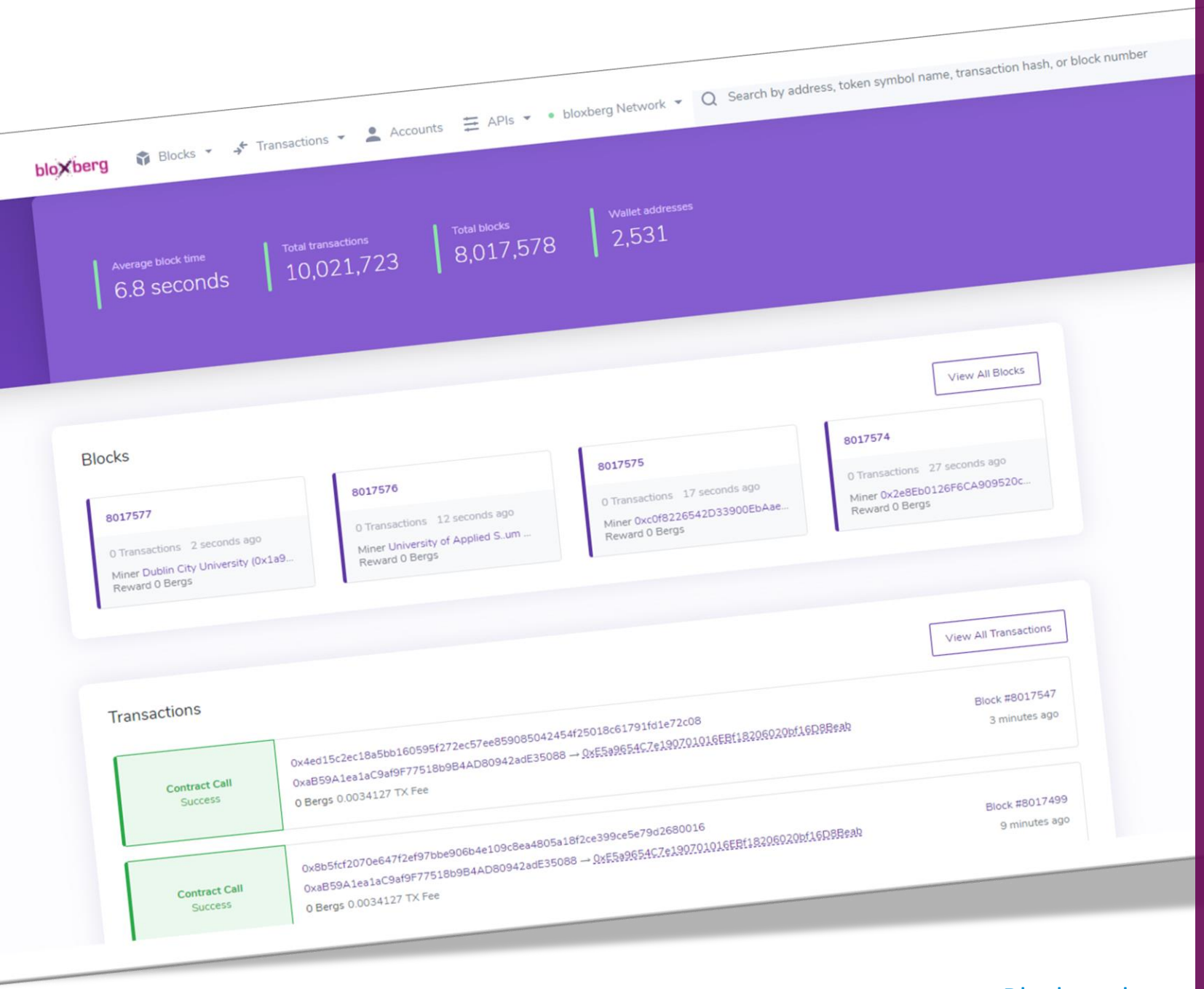
[Whitepaper 1.1]

How does the consortium work?

- Governance defined in the whitepaper
- Voting on admittance of members, governance updates etc. on-chain
- Voting power adjusted after each vote as incentive for participation
- Sanctions for nodes being offline, spamming the network etc.
- Bloxberg Improvement Proposals (BLIP) similar to (EIP)
- Election of a member for the iron throne for 1 year
- Slack channels for discussions and working groups
- Monthly conf call, annual summit
- No legal entity established yet



[Block explorer]

Who are the validators?

Each member operates an authority node, there are currently 29 of them.

Which consensus is used?

Bloxberg is based on Open Ethereum (Parity) and uses a PoA consensus called AuRa.

How is ether distributed?

The native cryptocurrency of bloxberg is called berg. Validators earn bergs by producing blocks. Non-validators can acquire bergs in limited amount from a faucet.

Certification

What is deployed on bloxberg?

Beside infrastructure services like the Ethereum Name Service (ENS) and the Gas Station Network (GSN) there is an e-voting dApp used by members and a time-stamping / certification service available to the public.

Also third party projects like DecentraVote use the network as secure infrastructure for their smart contracts.

What is planned in the future?

Some of the envisioned future applications include scientific identity, peer reviews, research data sharing and research funding.

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