



POLYBIUS TOKEN WHITEPAPER

Draft May 10 2017



1. eToken Contract as a basis for Polybius Token (PLBT)

PLBT is a token issued within an eToken¹ contract. There is no limit to the number of Polybius tokens issued during the ICO. However, no further PLBT will be generated after this phase of the project and all the unsold tokens will be destroyed.

eToken is an Ethereum smart contract, written using Solidity² programming language by Ambisafe³. It enables issuance of tokens in Ethereum network and provides a rich set of features:

1. Implementation of ICAP⁴ for multi-layer transaction routing
2. Account recovery for the lost key scenario
3. Allowances
4. Automatic ethereum network fee refunds
5. Integrated exchange with Ether currency
6. Ability to set transaction fees

eToken also implements EIP20⁵, also known as Standardized Contract API. EIP20 compatibility ensures that integration with exchanges and other services will be no harder than for any other Ethereum-based token.

¹<https://github.com/Ambisafe/etoken-docs/wiki>

²<https://github.com/ethereum/wiki/wiki/The-Solidity-Programming-Language>

³<https://www.ambisafe.co/>

⁴<https://github.com/ethereum/wiki/wiki/ICAP:-Inter-exchange-Client-Address-Protocol>

⁵<https://github.com/ethereum/EIPs/issues/20>

System Architecture Overview

Concerns Breakdown

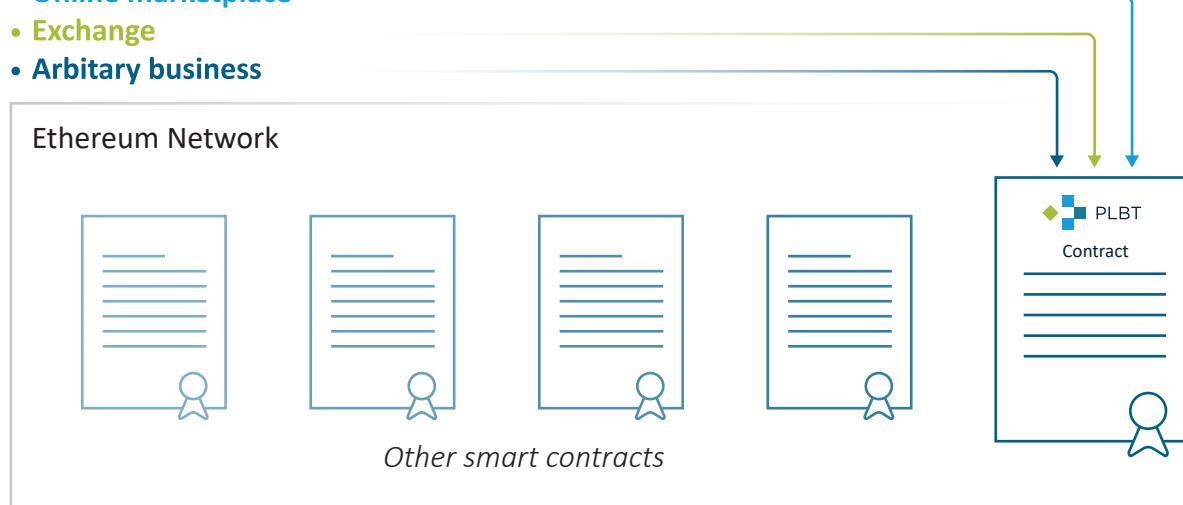
Polybius project consists of 3 layers of software responsible for different concerns, as shown below:

Ethereum Network	1. Network infrastructure 2. Data persistence layer 3. Consensus/enforcement of the contract logic 4. Transaction execution
eToken Contract	1. Token issuance algorithm 2. Account balances database 3. Transaction rules
Wallet Software	1. User interfaces 2. Business logic of token users 3. Transaction creation

Network-level Interaction Diagram

Ethereum network provides a medium for interaction between companies and users. Parties interact by sending transactions to the Polybius contract. All transactions are validated by contract business logic and recorded in the blockchain. Contract API is open to all internet users and anyone can become a user of Polybius token.

- **Online marketplace**
- **Exchange**
- **Arbitrary business**



System

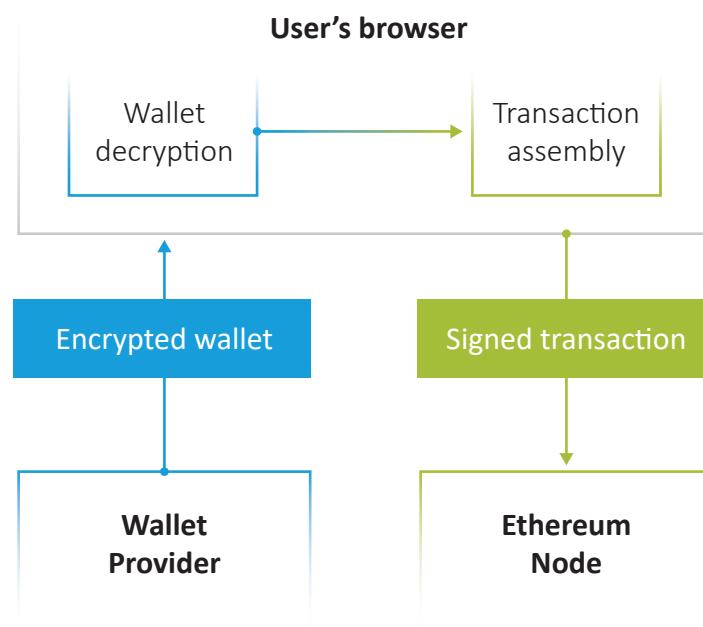
System Architecture Overview

System-level Interaction Diagram

The eToken protocol supports 2 primary account security models: user-side keys and hosted wallet.

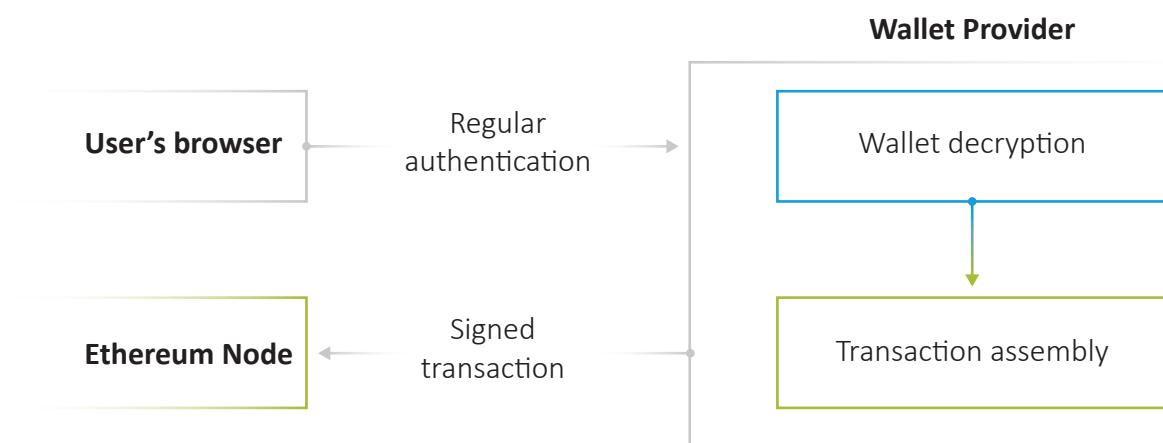
User-side Keys

In this case, private key that unlocks account is known only to end-user.



Hosted Wallet

In this case, financial institution (exchange or wallet provider) is responsible for key security. Only 1-2 keys per institution are used and transactions are routed to specific user accounts using ICAP⁶ protocol.



⁶<https://github.com/ethereum/wiki/wiki/ICAP:-Inter-exchange-Client-Address-Protocol>

Dividends Distribution



The dividends distribution process consists of two stages: getting the accurate data about the PLBT distribution among users (dividends report) and spreading the company profit among the tokenholders.

Dividends report

To have a proof of PLBT ownership by exact addresses, Polybius will make Snapshots of Blockchain prior each dividends distribution using a specially developed tool named Dividends Report. It allows to capture the current state of tokens distribution among investors as on the exact block. The number of the milestone block as well as an approximate date and time of its appearance will be announced in advance both, by email and at the Polybius Website.

Distribution of the profit

Polybius Foundation financial management undertakes to transfer 20% of the company distributable profit to the Dividends distribution smart contract on a yearly basis. The date of dividends distribution will be announced in advance at Polybius Bank Website. Also users will be notified via email twice.

In order to receive their share of dividends, users will be required to return PLBT tokens to the Polybius Wallet or any other wallet which supports the dividends payment mode in case, if they have been stored outside of it. The list of such wallets will be announced at the Polybius Website.

Polybius is negotiating with all major exchanges regarding implementation of the dividends accepting functionality. Polybius will inform customers whenever this feature will be available at any of them.

A Dividends distribution smart contract is designed to distribute profit among the investors according to their stakes. All the payments will be made in ETH. Dividends will be sent to those addresses whose PLBT token ownership will be proved by Snapshot of Blockchain.