

Liberton

Submission for FreeTON browser extension contest, rev. 1

Hello, dear jurors. Today I'm glad to present to you the Liberton project.
It was developed within contest requirements.

Liberton is licensed with Apache License 2.0, source code is publicly available at
<https://github.com/LibertonCrypto/wallet>

Overview

Liberton is a modern Single Page Application, which means it can be distributed as a browser extension, as a website or even as a mobile application. Main goal of the project is to provide a powerful, feature-rich and customizable alternative to existing solutions. Liberton supports multi accounts and multi wallets since day 1. Packed browser extension can be found at releases page - <https://github.com/LibertonCrypto/wallet/releases>

As for now, only fullscreen mode is supported. Extension popup and mobile version are in development.

Contact information

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TON Wallet

0:99df15d1eb9d3f37dcbeb90c5285a8989c5ad0372e9cc8c4f3fdda494420b5db

TON Public Key

0d87ace8e2ff9ff2cd9bbc46b84957dc202f81e53f1c911bc52c7a1fe9bdf808

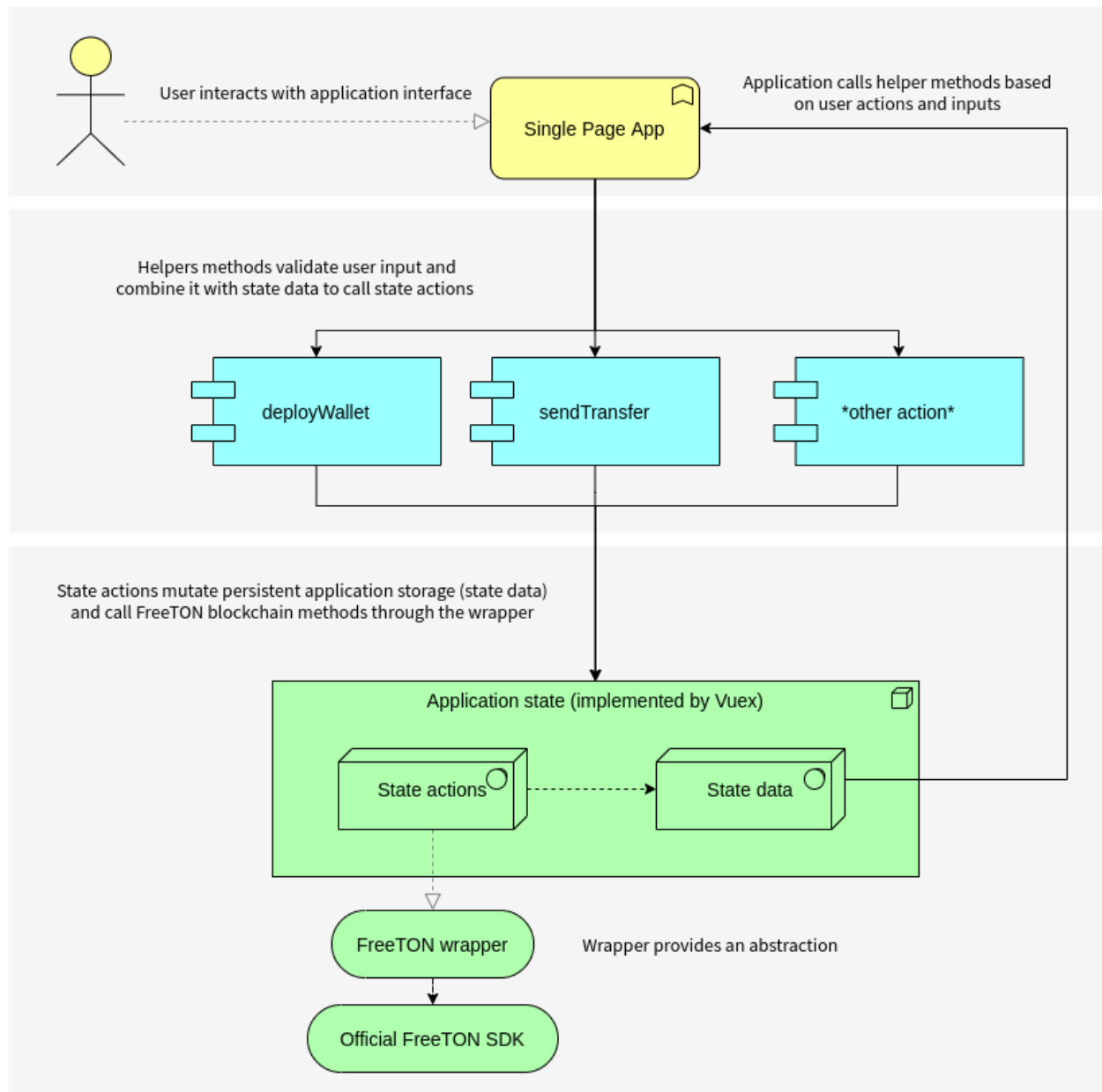
Criteria checklist

1. **Multi language support:** English and Russian languages are supported as for now. Any other language can be added easily in future.

2. **Support of browsers:** Chrome, Firefox, Opera, Brave and Edge are supported. Corresponding links will be available at <https://github.com/LibertonCrypto/wallet> once extension will be approved by moderators.
3. **Absence of analytical trackers:** Liberton has no trackers. All required resources are pre-bundled, which means there are no external requests except for the FreeTON blockchain.
4. **Support of mainnet and testnet:** Both main and test networks are supported. Custom network endpoints will be added in future.
5. **Seed phrase, key pairs:** Seed phrase generation and restoration are available. Users can choose between 12 and 24 words and 8 dictionaries of FreeTON official JS SDK. Key pairs are generated automatically derived from seed phrase, can be backed up and restored with an account.
6. **On-chain activity history:** basic explorer of transactions and messages is available.
7. **Password protection:** sensitive data such as seed phrase and private keys are stored locally, encrypted with ChaCha20 (provided by official TON JS SDK), so any user action, like wallet deployment or transfer, requires password for on-demand decryption. It was chosen not to encrypt the rest of application data to avoid performance issues, as it is anyways publicly available to any blockchain user.
8. **Wallet support, sending a memo:** SafeMultisig and SetcodeMultisig are supported for now, sending memo with transaction and decoding memo of incoming transaction supported.
9. **Verifiable extension security:** Any user can bundle extension and compare checksums with published version, as published versions are not encrypted or compiled.
10. **Readiness to participate in the implementation of the solution in the next stage:** I'm ready to participate in the next stages of the contest. I'm sure that features like web3-connection and smart contract interactions are a must for modern market-ready solution.

Wallet architecture

I tried to keep this chart as simple as possible to get you the main idea, however, detailed user paths and screenshots are available on the next page of current submission.



Available user interactions

This section describes all existing wallet features at the moment of submission with detailed explanation. Screenshots are replaced with links as they take a lot of space.

1. Common interface

All views and pages in the application have a common interface where users can select network (1), account to interact with (2) and application locale (3).

<https://raw.githubusercontent.com/LibertonCrypto/wallet/master/screenshots/common-interface.png>

2. Wallet creation/restoration

This is a welcoming application screen. Users are being redirected here from any other places if there are no accounts in local storage. Also used for restoration accounts from master phrase. Users can customize phrase words count (1), dictionary language (2), generate another phrase (3) or enter a custom phrase to restore (4).

<https://raw.githubusercontent.com/LibertonCrypto/wallet/master/screenshots/create-account.png>

3. Home

This is the main application screen, only users with at least 1 created account can see it. Here users can switch between wallets (1), create new wallet (2) (opens new wallet dialog), send transfer (3), view public key and address of selected wallet (4), view wallet in explorer (5), check recent transactions history (6), view each transaction in explorer (7).

<https://raw.githubusercontent.com/LibertonCrypto/wallet/master/screenshots/home.png>

4. Transfer

At this screen users can transfer funds to another account, estimate fees and add memo to transfer.

<https://raw.githubusercontent.com/LibertonCrypto/wallet/master/screenshots/transfer.png>

Thanks for your time! If you have any questions or feedback, feel free to contact me at FreeTON Forum or Telegram.