LYNX: A consumer EOS wallet with built-in decentralized token exchange

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Summary

Lynx a new consumer focused wallet that has been released on iOS, Android and desktop that is specifically geared towards the EOS token ecosystem. It was designed with the end-user in mind as a way to easily transfer and exchange EOS tokens and interface with EOS based dApps.

Lynx will charge users a small fee for premium features and token exchange. The Lynx token is a staking token that will be used to reduce these fees and provide pre-paid income to the Lynx development team for continued product enhancements.

Motivation

The production version of EOS was released on June 3, 2018. Built as a back-end only tool, it did not include a graphical user interface, and in fact a command line tool, cleos, was all that EOS.io provided users as a means of creating accounts. A few developer desktop focused wallets, such as GreyMass[1] and SimpEOS[2] were released with the main goal of getting Block Producer votes. With no phone versions, and released as GitHub repositories,

[1] https://greymass.com/

[2] https://eosrio.io/simpleos/

the focus was clearly not the consumer end-user. Another tool, Scatter[3], had started development as a chrome plugin wallet, similar to MetaMask[4] on Ethereum.

Our team, which has been working on a platform for freelance work since Sept 2017, felt that none of these solutions would work for our project WorkCoin[5]. The chrome plugin extension in particular was rejected as too difficult for mainstream consumers. We felt that we would need to build a new wallet solution from scratch, one that could work for our consumer application.

The app signing problem

Any consumer blockchain company has the problem of signing transactions (mainly sending different tokens) without entering private keys repeatedly. In the case of our app WorkCoin, the consumer has to authorize (sign) EOS over to a smart contract when they are actually ready to transact. This involves securely accessing an encrypted wallet password.

The traditional way of doing this is deferring the signing to a chrome plugin such as MetaMask or Scatter, which authenticates by way of desktop password. As we have mentioned above, this is not a solution most consumers understand. An alternative is to access the wallet in-app, in effect building an entire EOS wallet inside of each application. We have completed such an integration for WorkCoin, but it is an enormous amount of work, and is subject to change as the EOS mainnet changes. Realistically, most apps will not do this.

Our signing solution

The solution being developed by Lynx is to register apps directly with our wallet, verify their credentials, and issue them an API key to allow deep linking requests within the wallet. When the user needs to transact in the phone (on mobile or desktop) a confirmation is needed (2FA) in the Lynx wallet.

[3] https://get-scatter.com/
[4] https://metamask.io/
[5] http://workcoin.market

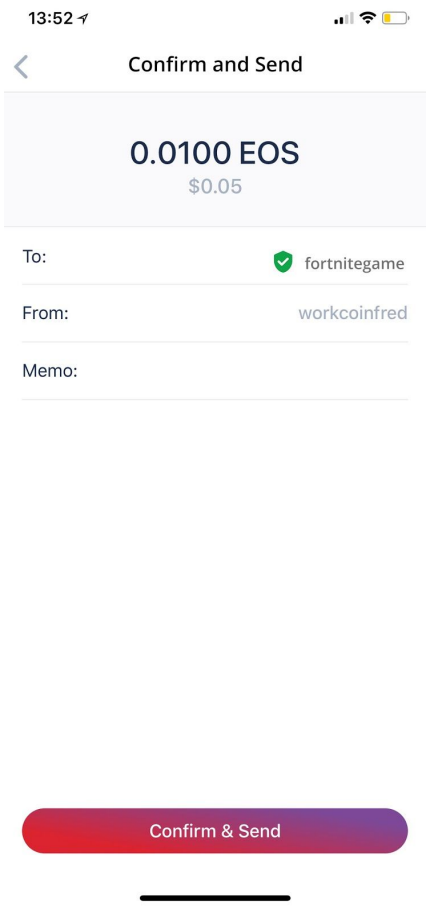

Figure 1.Example of a hypothetical call from a game dApp to confirm a transaction

The token exchange problem

In the early stages of blockchain applications, there were relatively few cryptocurrency tokens, most of which were derived by forking the core Bitcoin code. With the advent of Ethereum ICOs this number has increased dramatically and stands to again multiply significantly with the advent of faster delegated-proof-of-stake systems including EOS.

The importance of a fast blockchain with low (or zero) or transaction fees on actual consumer adoption cannot be overstated. Today's Internet users expect quick response times for most consumer applications. A second to transfer a token is acceptable; a minute is not. Not surprisingly, actual usage of Ethereum dApps, as measured by the site dAppradar.com is incredibly low by traditional app standards.

As the number of dApps has increased dramatically, the number of tokens used by these dapps has increased comeasuratedly. There are now tokens for dating applications, energy apps, freelance work marketplaces and many other use cases.

Centralized exchanges are ill-equipped to handle large numbers of relatively illiquid tokens. From a user-interface perspective, they were designed around the idea of the “top 50 coins” and not every coin that a user might happen to have in his or her portfolio. Moving coins into and especially out of centralized exchanges also poses security risks. From a custodial perspective, the centralized exchange needs to put safeguards in place against sudden removals / hacking. These same safeguards however can make it very difficult to access tokens at the exact time they are needed.

Decentralized exchanges have different problems. Just like centralized exchanges, they require the user to create a new login, and to move tokens to a completely new application just for the purpose of selling them. On the flip side, every token that is acquired in a decentralized exchange must be moved to a home wallet or dapp once the trade is complete -- also a major inconvenience, especially for small amounts.

The slow transfer speeds of the Ethereum Blockchain has hampered the adoption of ETH based DEX’s including AirSwap[6] and 0x[7].

Our DEX solution

LYNX is the first EOS based decentralized smart contract exchange that is designed to be used inside a wallet or dapp, and that is token-agnostic. As long as the token can be bought and sold, LYNX enables that transaction peer-peer in a highly efficient way.

Embedding the DEX inside the wallet as opposed to existing in a standalone site has many advantages.

First, and foremost, the DEX applies to all tradeable tokens, not just the tokens that as specific DEX decides to “list”. This allows a much more expansive notion of tokens than the typical 200 or so tokens listed on standalone DEX sites. A user could create a token for an event, such as a concert, and sell a finite amount of tokens in the DEX. “Listing” these tokens on a standalone DEX would make no sense.

Second, the integration with the DEX skips the critical steps of sending tokens back and forth to a second site. At the end of the day, the user’s wallet is the natural “home” for all

[6] https://www.airswap.io/
[7] https://0xproject.com/

the user's tokens. By placing trade orders inside the wallet, you avoid the hassle of opening a second application, logging in with username and password, sending and verifying tokens to smart contracts, getting notifications from a secondary site, and then sending the tokens back to the wallet once the exchange is complete.

Third, the wallet can easily consolidate the tokens that are held in smart contracts on the DEX with available freely traded balances in one place. This is a major advantage for informing the user of their total "account value".

Fourth, the trades can easily be cancelled from within the wallet with a single click. This not only saves time, it makes the tokens immediately accessible for any purpose without the need to login and transact in a separate application.

Interface

The Lynx desktop UI allows one click transition between wallet view and DEX view.

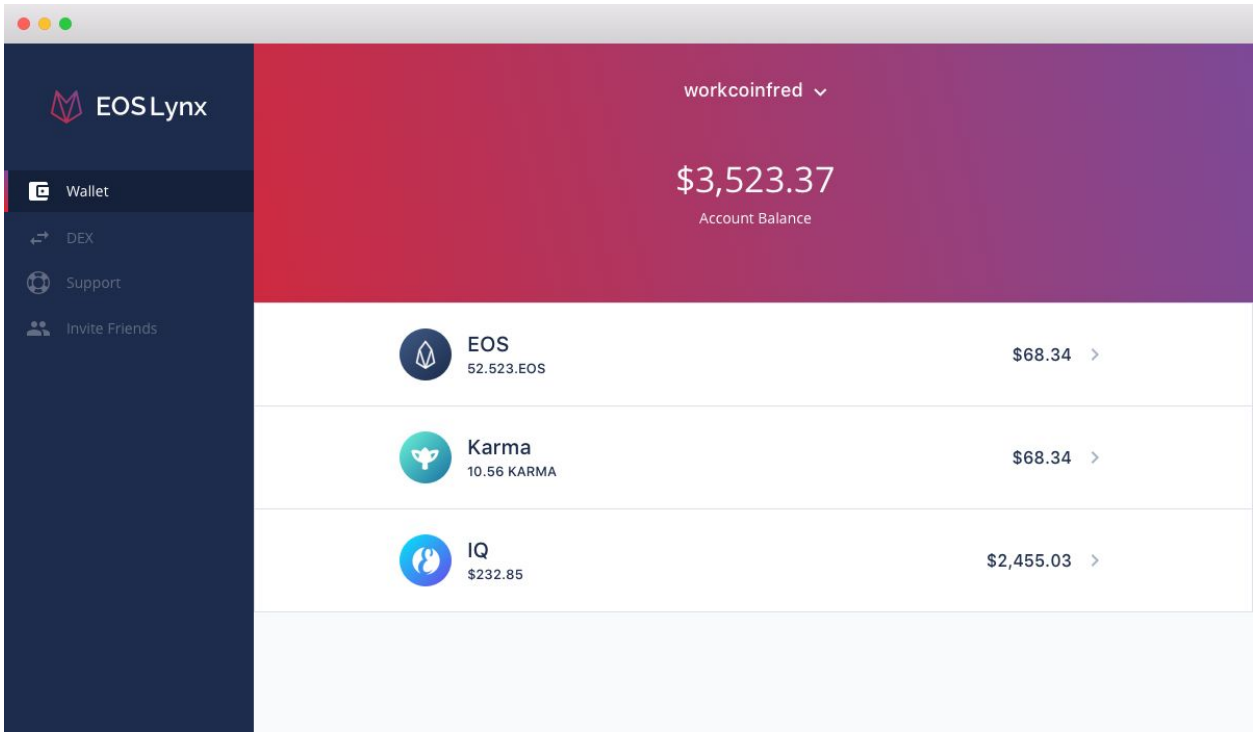

Figure 2. Lynx Desktop Interface. A number of EOS tokens are shown including many small volume, custom tokens.

In the above example, the user can select Karma in the wallet, and then with one click access the DEX view of Karma and place orders.

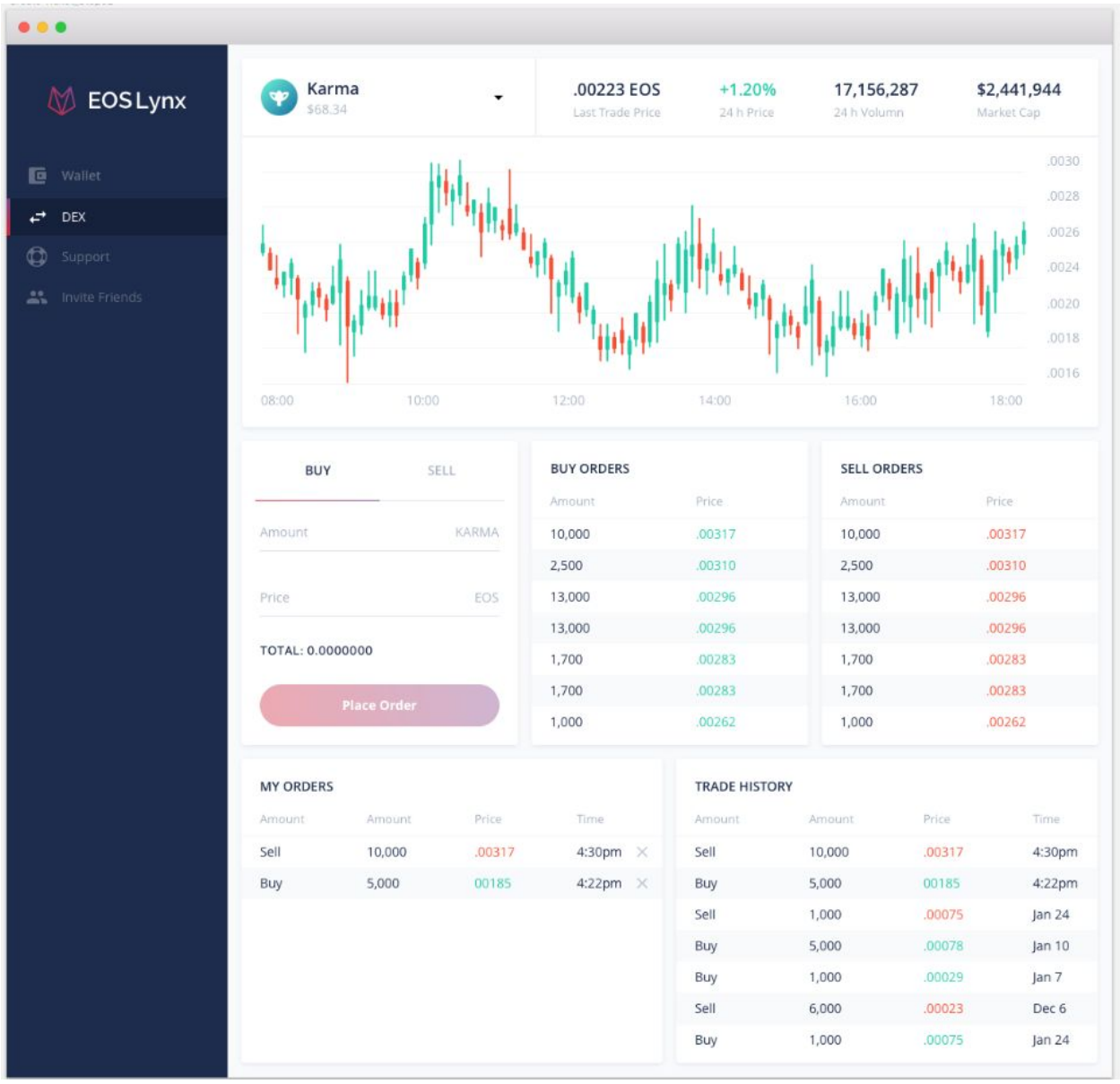

Figure 3. The DEX Interface, allowing you to submit bids or asks on any EOS token.

Shared Liquidity

The Lynx DEX is available for other wallets, bots and dApps to use programmatically. A small trading fee is payable to Lynx for use of the protocol. If the application stakes a number of Lynx tokens this service is provided free of cost (although the sender of tokens will need EOS RAM to transact -- which is released by the system at completion).

KYC / AML

Lynx takes Anti Money Laundering seriously and will enforce rigorous compliance for all amounts that exceed a small daily threshold.

All dApps using the Lynx DEX must integrate AML / KYC into their apps, and provide Lynx with the identities of all EOS accounts that trade on the DEX above the minimum threshold, to be stored in a master database.

The LYNX token

The Lynx token is issued by Work Token BVI, for the benefit of the continuous development of the WorkCoin protocol and the Freelance community.

The token's utility is as a staking vehicle to alleviate trading fees and provide voting on the direction of the project.

Company

WorkToken BVI is a private corporation set up in the British Virgin Islands is the issuer of the Lynx token. The company has contracted Needly Inc, a Delaware corporation to develop the initial Lynx software for the benefit of the overall freelance community.

Needly Inc[8], was founded by serial entrepreneur Fred Krueger and a core team of 9 developers and designers. Krueger has a Ph.D. in Operations Research from Stanford University. Together with his brother Richard, he developed several of the first Photo Editing Tools (Matisse and xRes) and sold the company to Macromedia (now Adobe) in 1995. He also started and sold iWin, one of the largest game sites on the Internet, to Uproar / Vivendi in 2001, the social Network TagWorld to Viacom in 2006 and the ad network Adconion to Singapore Telecom in 2015. In 2009 he founded the MMX, a listed company on the London AIM exchange. Overall, he is directly responsible for over half a billion dollars of company created value. The team consists entirely of senior coders and designers. We have built up world-class expertise in real-time web technologies using

[8] http://needly.work

Firebase, iOS, Realm, and Android. Our team also brings a diverse background including IBM, SAS, and the U.S. Intelligence community. Needly is located in Santa Monica, CA, with a mobile development office in Raleigh, North Carolina.

