Proton

“The Blockchain that Interacts with Fiat”

Marshall Hayner
Fred Krueger
Glenn Marien

I. Introducing Proton

Proton (XPR) is a new public blockchain and smart contract platform designed for both consumer applications and peer-peer payments. It is built around a secure identity and financial settlements layer that allows users to directly link real identity and fiat accounts, pull funds and buy crypto, and use that crypto seamlessly in apps.

At the core of Proton is the notion of a verified account, where a user Bob Smith can verify his identity, and securely assert that @bob is in fact his real account. Moreover, Bob can link fiat accounts to this account, and push and pull fiat funds from daemon commands via the node. This means that after KYC, @bob can move funds between a special purpose bank account or a credit card and crypto with one fast transaction. It also means he can find and send either fiat or crypto to his friend Alice Black (@alice) knowing that she is the real Alice Black.

The Proton system token XPR is a delegated proof of stake token where token holders can stake and bond their tokens to vote for block producers, Each token is given a single vote, and there is a thirty day un-staking period as a security measure.

The XPR token will also be, from day one integrated into the Lynx wallets for IOS, Android and Desktop and suite of decentralized applications. Shortly after launch it will be integrated into Metal Pay for iOS and Android, Metal X for web, and in the upcoming MetalPay Web wallet

2. Origin and Benefits of Proton

Proton was developed as a joint effort by two companies: Metal and Lynx. Both companies share a vision of making crypto more accessible to everyday consumers, and both have independently made significant progress towards that goal. Metal has built a compliant, consumer friendly platform for peer to peer payments. Lynx has developed an app-focused blockchain. Proton combines the elements of both efforts into a single unified offering.

Currently fiat on ramps and off ramps are a significant source of friction for app platforms, and there is no easy, regulatory compliant way to trade between crypto currencies in most app token wallets.

Proton solves this problem by integrating an optional KYC identity store, with that identity being stored in a central PCI compliant database and made available as an on-chain identity check. Because the XPR smart contract code is based on the ultra-fast EOSIO dPOS model, it makes this token ideal for gaming and social media applications. Users can establish their identities once, seamlessly buy and exchange crypto, and then use that crypto in micro-transactions on dApps such as Chirp.

But beyond being an app platform with an unified identity model, the new XPR blockchain was designed to allow websites and apps to push payment requests directly to Proton-compliant wallets.

Multiple payment applications such as Venmo, Square and MetalPay contain facilities for requesting payment from another user within that same application. For example, if Bob White and Alice Black are both Venmo members, Bob can request a payment of $100 in USD from Alice Black, and Alice will get the request on her mobile device and will be able to easily accept or deny it. Since both are users of the same centralized application, that application can easily transfer funds from Alice's accounts to Bob's. The issue is, however, if Bob is a member of Venmo, but Alice isn't. Alice might prefer to use AliPay and may not even have the option of using Venmo in the country in which she lives. Proton will solve this problem by creating a namespace that works across multiple payment providers, identity verifiers, and payment transmitters.

3. Fiat and Crypto Push on Chain

With Proton, all transactions are recorded on a blockchain whose core function is to record these payments and interface with the different entities involved. Every user on this blockchain can have a verified identity, which is in turn verified by an approved identity provider.

The blockchain contains both encrypted and unencrypted transaction data. For example, a pending transaction between Bob and Alice might contain information that is only decipherable by these two. The blockchain smart contracts also monitor the state of the transaction from request sent to transaction pending to transaction settled. In order to prevent spam a small crypto currency fee is charged each receiver for initiating a send request. Also, a list of whitelisted receivers for each user is maintained in a distributed database.

4. Token Economics

The XPR token was designed to be a controlled supply token with moderate annual inflation that can provide a short term store of value for dApps and allow blockchain governance.

There will be an initial 200 Million circulating supply of XPR, with a 5% annual token inflation. This token inflation will be split between block producers (2.5%) token stakers (1.5%) and the Proton Steering Committee (1%)

Block Producers jobs is to validate nodes using the open source Proton protocol. A ⅔ consensus of Block Producers is needed to write a transaction into the blockchain with 3 minute finality.

Token Stakers vote for block producers on a one-token, one-vote basis. In order to vote, token stakers must agree to bond their tokens, subjecting them to potential economic loss should their chosen block producers fail to deliver minimum performance standards. They also must agree to a one month un-staking period, as a security measure to any BP double spend.

Because only longer term token holders (those willing to lock up tokens for a minimum of a month) can participate in the staking rewards, these are likely to be significantly higher than the 1.5% theoretical minimum.

The Proton Steering Foundation is the recipient of 1% annual inflation, and will be itself organized as an dPos system, where votes occur every three months. The mandate of the steering foundation will be to compensate The Metal and Lynx development teams for work done on wallets, apps and marketing initiatives to benefit Proton. The steering foundation will also reward worker proposals from independent entities such as CryptoLions for core blockchain development work, as well as encourage inter-blockchain communication (IBC) using the Proton Secure Identity and standard across multiple ecosystems

In addition to the annual inflation, Block producers and the Proton Steering committee may elect to impose fees on RAM, CPU or Network usage on apps. The Steering committee is in charge of determining these fees, if any.

The maximum supply of XPR is set at 10 Billion, some of which may be released over time, subject to market conditions, to grow the Proton ecosystem.

5. Usability

A key feature of Proton is that it was designed from the outset for maximum consumer usability. Both the Metal Pay and Lynx wallets will integrate it natively on day one. With a combined user base of over 200,000 accounts, sending XPR as a token of value between accounts, and inside of apps such as Chirp and games such as BombSweeper sets a new standard for Day One usability.

5. A blockchain and a token built for apps

With hundreds of blockchains in existence, it is reasonable to ask why another is needed. Why can’t things like free-to-play token mining games

like “Alien Invasion” or Crypto Social Media apps like Chirp be built on Ethereum?

The answer is simple: existing blockchains are either too slow, too expensive, or do not easily integrate into consumer facing wallets like Metal Pay or Lynx wallet.

Let’s analyse each of these in turn:

1. *Speed*. If you are using crypto to like a post, or to generate a token every time a new level is hit in an online game, speed is critical. Ethereum, which can take several minutes to transact just does not work for dApps
2. *Cost*. If you are sending pennies or even fractions of a penny, the “gas fees” of Ethereum are prohibitive. Also, the account creation costs of EOS are prohibitive for viral growth.
3. *Usability*. Applications are only useful if they can be designed into an overall consumer experience that starts with the crypto wallet. The Proton blockchain, Lynx wallet, and Metal platform work perfectly together. Equivalent results could not be achieved with other blockchains.

6. Case Study: Chirp.

The Chirp model is an excellent illustration of how a crypto-currency and smart contract platform like Lynx can be used as the basis for micro-payments in an app-based ecosystem.

The Chirp model is a “pay to post”, “pay to like” model. Because of the low friction of the Proton blockchain, and because of the purpose-built integration of this blockchain into the Lynx Wallet, it is possible to add a “tip” of as low as $0.01 to show that you “like” a post. The recipient of that like gets the full amount of the crypto-currency immediately in their Lynx wallet.

While not financially material yet, the psychological impact of getting a token of value for a “like” is highly rewarding to the recipient, and is already changing the dynamics of the chirp social dialog. Also note that this token is transferred immediately, and not with a 30 day delay as in freelance work models using systems such as paypal.

Chirp also includes a token use as advertising. With just one click, you can “pin” a Chirp message advertising your product or service to the chirp community. The XPR token is used to pay for the ad unit, and provides a business model to the Chirp developers.

7. The Proton Blockchain and Wallet Dev teams

All successful Blockchains need full time development teams, and a wide array of paid and unpaid contributors to maintain the core code, and develop consumer facing wallet applications to deliver the application as a product. This effort will be funded on an on-going basis by the Proton Steering Committee.

The Metal team, based in San Francisco, CA has developed one of the leading compliant platforms for 1-1 fiat transmission and crypto exchange. [add]

The Lynx team, which is based in Los Angeles, CA and Raleigh, NC has built the leading mobile EOS wallet for the english speaking world. It's desktop wallet and API, launched in August 2019 has already been adopted by all 15 of the top 15 EOS dApps. They have also built several popular free to play games on the EOS blockchain, and understand dApps both from the wallet and actual application perspective.

8. Conclusion

Proton is the first fast, cheap blockchain with KYC and fiat-crypto built in at the get-go. It is designed for apps such as games and social media as well as for simple and fast transmission of fiat from one individual to another. The push-to-wallet with on-chain pending transaction notification allows apps and websites to safely interact directly with consumers with no exchange of personal identifiable information.