

POW Whitepaper V2

1st June 2018

POW wants to be the first global crypto currency by leveraging the Ethereum Blockchain & social media networks

Overview

POW is a standard ERC20 token on the Ethereum Blockchain with several innovations that make it unique:

1. POW features an 'off-Blockchain' wallet located on a centralised, serialised ledger at the POWtoken.com site. This enables users of the wallet to make near instant transactions with zero transaction fees.
2. Users of the wallet can move their POW onto the Ethereum Blockchain if they wish.
3. A global 'airdrop' of POW to over 2 billion worldwide social media users, with the capacity to create the single most widely held currency on the planet. To claim, users simply have to login at POWtoken.com using an account with an OAuth partner which currently includes Facebook, Twitter, Reddit, Coinbase and soon LinkedIn. We have plans to integrate a further 20 'oauth' providers including Weixin.

Recent Developments

POWtoken.com launched its global airdrop in October 2017. Since then over 360,000 users of Facebook and Twitter have claimed their free POW by registering at POWtoken.com.

The original site was built quickly, and while it served its purpose as a proof of concept, a new App (website) was needed, using best practices to ensure scalability, security and functionality as we enter a phase which we hope will see millions of users and transactions. The framework we have chosen to use in this new App is Laravel PHP.

To meet this need three new developers joined the team, with experience in the Laravel, security and system admin. Each of these new team members received the standard 3bn POW that the existing team members had received. The total POW issued to team members has now risen to 31.2bn.

In December 2017 we invited John McAfee to join as senior advisor which he accepted. Unfortunately we overshot our delivery dates on the release of new features, and he and his team lost confidence in us and decided to not to continue an active role. We wish team McAfee well, and hope that we can work together in the future.

In the first WhitePaper we released in October 2017 we talked about how running an 'off-Blockchain' service where users could transfer their POW to one another was not without its risks, while there were benefits in the form of zero transaction fees, speed and ease of use (no unwieldy public keys) and most importantly, the ability for users to directly claim POW with their social media accounts. Those risks proved very real, as we have suffered a number of service abuses, exploiting vulnerabilities in the codebase.

A substantial amount of the POW that was misappropriated was recoverable, but due to rather sophisticated "layering" technique used by the attackers, some 10.72b POW were not

recoverable without being highly disruptive to the ledger. After lengthy consideration we have resolved to draw a line under the matter.

This 10.72b POW which was essentially lost to “hacks” combined with the 9.02b required to pay new developer talent brings the total shortfall of POW to 19.74bn POW.

The team considered various approaches to making up this shortfall. Along with other possible solutions we looked at:

1. Scaling back all existing POW holdings on the centralised ledger by a factor;
2. Ignoring the shortfall and assuming that approximately this amount will be lost by users who lose their account details (or forget they ever had a POW holding) ;
3. Lastly make up the shortfall by applying a factor to the amount that all future claimants receive. This factor is 0.704.

Although none were perfect, we decided upon the third solution, as it seemed most equitable to existing users.

The following example illustrates the impact of our chosen solution, and how it would impact a future user. We take user # 400,000 for the illustration.

Version 1:

From the original algorithm, the user # 400,000 would have received:

$$(10^{10}) / (4 * 10^5) = 25,000 \text{ POW}$$

Version 2:

Then in November 2017 we adjusted the original algorithm (for future claimers) so that a referrer could be paid the same amount as the claimer received (this had a very positive impact and saw claim growth accelerate).

$$(10^{10}) / ((4 * 10^5) * 2) = 12,500 \text{ POW}$$

Version 3:

And now, for the reasons explained above, we are reducing the amount future claimants and referrers receive by adding in a factor of 0.704 into the algorithm.

$$(10^{10}) / ((4 * 10^5) * 2) * 0.704 = 8,800 \text{ POW}$$

Thoughts on valuations and the attractiveness of the offering to new users....

A large part of a cryptocurrency market valuation is a “bet” by the market that it will succeed and become ubiquitous. If POW was to achieve say 30 million holders over the next year (a similar number to the current number of Bitcoin holders) an argument could be made that would have a market cap equal to Bitcoin (currently approximately 150bn USD).

If we had given POW away to 30m users, this would mean we’d have given 209bn POW away (including the founders allocations).

This implies a market price of 1 POW of \$0.71 (e.g. 150bn/209bn)

So from the above example where we talk about how many POW user # 400,000 would receive under the latest version. If we achieved 30m users in the next year, user # 400,000’s holding would be worth \$6,248. That’s a fairly motivating reward considering all they have to do is click a button to claim it. But the potential for that user is actually far greater. If you consider that users get paid POW for introducing their friends as well. Let’s assume that user # 400,000 introduces 10 friends (this is inline with the behaviours noted in the existing 360,000 users). Then user # 400,000 would have 96,800 POW with a total value of \$68,728.

“So to recap, we’re saying that user # 400,000 could end up with around \$70,000 worth of POW just for claiming a free holding and introducing 10 friends to POWtoken.com...”

So coming back down to planet Earth. Why should the above actually happen? Isn’t this project just a ‘scam’ or ‘pyramid scheme’?

Let’s address these common objections one at a time:

- Why should we achieve 30m users in the next year?

The allocation algorithm of POW has developed with two considerations. The first is to encourage early adoption (early adopters receive more POW), while the second is to increase the probability of ubiquity with each new user acquisition. The ‘per user’ valuation at any point in time can be used to calculate the market’s estimate of the probability of future ubiquity. Where p is the probability of achieving 30m users in the next year (our threshold for ubiquity), and V is the per user valuation currently enjoyed by Bitcoin.

POW’s current per user valuation of just \$14 can be used to calculate the market implied probability of success.

$$14 = p * V$$

$$p = 0.0028 \text{ (approximately 0.25\%)}$$

Our average daily growth rate from October 2017 through April 2018 was approximately 1%. If such a daily growth rate were to continue over the next year we would achieve 14m users.

$$369K * (1.01^{365}) = 14m$$

Indeed in order to achieve in excess of 30m users we only need to achieve a growth rate of 1.25% per day.

We believe the new Laravel version of the site, with its rich functionality and integration with a wider range of social media platforms will see growth exceed 1.25% each day meaning we achieve the target of 30m users more quickly than in one year. It is quite possible that a national media outlet or an influencer like John McAfee will endorse POW and drive massive usage overnight leading to explosive growth in claims, usage and the value of POW.

We believe that the probability of us continuing to grow at over 1% is greater than 0.0025%. We think the market will soon realise this and start discounting our success. This will create the virtuous circle of growth in price and claim rates that will lead to ubiquity.

- The Project is a 'Scam'

This allegation is sometimes made in social media forums with little attempt to substantiate it. What exactly do they mean by 'scam'? It may reflect a fear of being seen as foolish or naive by their friends in supporting a project which seems "too good to be true". We believe that as the user base expands, this fear will dissipate, leading to an ever increasing rate of take-up. POW is free for users to claim, and earn simply by referring friends. POW has not raised any money from an ICO, and none of the developers have sold any POW for personal gains on the secondary market. All of the expenses for servers and technology such as 3rd party services from G-Suite, Cloudflare and AWS are being paid for by the developers.

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- The Project is a 'Pyramid Scheme'

Pyramid (or Ponzi) schemes require an ever greater number of users to buy into the scheme in order to allow participants from earlier levels to exit with a profit. Ponzi schemes become unstable after a certain point as the supply of new victims becomes scarce. There are two clear differences between POW and a Ponzi scheme:

1. Claimants do not purchase POW - which is free to all claimants using social media accounts.
2. As the network grows, the probability of ubiquity rises making it rational for owners of POW to increasing favour accumulation rather than sale.

The 'Bridge' rebranded to 'Withdrawals'...

While it was necessary to describe "The Bridge" as such (to explain movement from POWtoken to the Ethereum Blockchain), now that it is launched, the functionality will simply be described as "Withdrawals". The Withdrawal functionality allows those holding their POW on POWtoken.com to transfer part or all their POW (within daily limits) to the Ethereum Blockchain where it can be held on their own Ethereum wallet. At time of launch the daily combined limit for all POWtoken.com accounts is 1bn POW per day, with the individual limit being 1m POW per day. These limits have been put in place to prevent mass liquidations of POW by users with large holdings. We will review these limits and, market conditions allowing, our goal is to remove all restrictions.

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In order to make Withdrawals users will need to have installed Metamask in Google Chrome, or use some alternative wallet which injects a Web3 Object. We highly recommend using Google Chrome Metmask, for which the service has been specifically developed.

No more 'lite'...

In the first release of POWtoken.com we referred to POW being stored 'off-Blockchain' as being POW 'lite' while POW existing on the Ethereum Blockchain was referred to as 'POW'. This was necessary at launch, since users were unable to send their POW 'lite' from POWtoken.com to the Ethereum Blockchain.

We've now completed the 'Bridge' between the POWtoken.com 'off-Blockchain' world and the Ethereum Blockchain. For this reason we are no longer referring to POW held on POWtoken.com as 'lite', but simply as POW.

Keep the 'Off Blockchain' Ledger True...

As described above, when users claim POW on POWtoken.com using social media accounts, we create an off-Blockchain record of that allocation. The user is free to transfer it to other accounts on POWtoken.com or they can even transfer it to the Ethereum Blockchain across the Bridge.

So what keeps the POWtoken.com ledger true? The transaction system has been designed to take use a serial transaction processor which is the single authority for executing transactions between POWtoken.com users and between POWtoken.com users and the Ethereum blockchain. The single authority can even be seen as analogous to a single trusted miner of the off-Blockchain transactions. We're not claiming that the POW off-Blockchain ledger is in fact a Blockchain, but we are saying that some of its features are inspired by those of the Blockchain. At time of launch these off-Blockchain transactions are processed once a minute, however we'll likely make these more frequent in the future. Once a minute, all of the unprocessed transaction requests in the ledger are executed in a block in the

sequence that they were received by the single authority. Prior to each transaction being processed, the single authority asks, does the sender have sufficient funds (POW balance) for the proposed transaction and proceeds accordingly.

Immutability (lite!)...

As soon as the relaunch takes places, we will move onto building out this interesting feature to reassure the market of the immutability of transactions within POWtoken.com environment.

The broad brush plan is as follows. Each transaction in the block contains a **hash**. The inputs for the hash are i) the previous transactions hash, and then ii) details for the current transaction including details of from, to, amount and the unix timestamp.

This **hash** is recorded in the in the centralised ledger. Once daily, the most recent transaction **hash** will be included in the header of an Ethereum transaction, details of which will be published on a public page on POWtoken.com for transparency and proof of immutability. This link between the off-Blockchain ledger and the real Ethereum Blockchain would ideally be in real-time, but that would create technical and financial burdens. Once daily may be too infrequent, but would certainly be cheap!

Who are the team behind POW?

The team has grown to nine founders with collective expertise in Blockchain technology, Laravel, traditional server driven web based solutions, AWS, finance and public relations. Each founder has an equal share of POW.

We did not raise any money for the POW project and all funding servers hosting etc... has been from our own resources.

How are the POW team being rewarded?

The founder team and advisors have now received 31.2bn POW ERC20 tokens. This represents 13.46% of the total supply. None of the founder team or any advisors have received or will receive any remuneration (salaries, options or expenses) from POWtoken.com.

Trading the POW ERC20 token

The POW ERC20 token is listed on the following public exchanges, known as the secondary market: EtherDelta.com, Forkdelta and RadarRelay.com.

The POW contract address is: 0xEb2dA9FAC54284cEA731D1F10bb34EEcB3c00c14

Listing on the exchanges allows other parties, possibly those who share our belief for an exciting future, to purchase POW in the secondary market.

We hope to be relisted on IDEX when the stability and seriousness of the project is demonstrated.

Listing on services such as Coinmarketcap, Coinbase or Binance will require greater interest in the token from the trading community with higher daily volumes than we have seen so far. We believe that incremental improvements in our service will result in greater usage and ultimately inclusion in the above services. We do not believe in paying fees or offering exclusivity to short circuit this process.