Wata.Finance

Decentralized Standard Hashrate Mining

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Abstract. Nowadays, the barrier to entry for the general public to participate in Bitcoin/Litecoin mining is higher in terms of high equipment costs and various maintenance fees. Miners are also discouraged by the lack of efficient strategy to exit the market. Wata proposes a new mining solution by standardizing and tokenizing mining power into token *mLTC* to benefit from exchange liquidity and Defi composability. Each *mLTC* is collateralized by 1 mega hash per second (MH/s) standardized mining power of a mining machine with 1600W/GH power consumption. The supplier mining rig will be hosted by WaYi during the whole life cycle and will produce LTC and DOGE as mining rewards for every block. Staking *mLTC* will entitle the staking holder to receive a daily rewards LTC and DOGE according to a given power. Empowered by the market liquidity, *mLTC* can play an important role in more DeFi scenarios, such as on-chain options, mortgage lending, leverage mining, and so forth, thereby creating a more efficient mining market and expanding the DeFi's business boundaries.

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Introduction

In the beginning of the Bitcoin/Litecoin mining history, miners used ordinary domestic computers, later graphic cards, then the popular ASIC mining rig and a more professional approach such as large-scale hosting sites and large mining pools with more concentrated mining power. The mining process has gone through a process of wilderness, violence, giant, specialization and compliance. Nonetheless, the following hurdles still discourage newcomers to participate in Bitcoin mining:

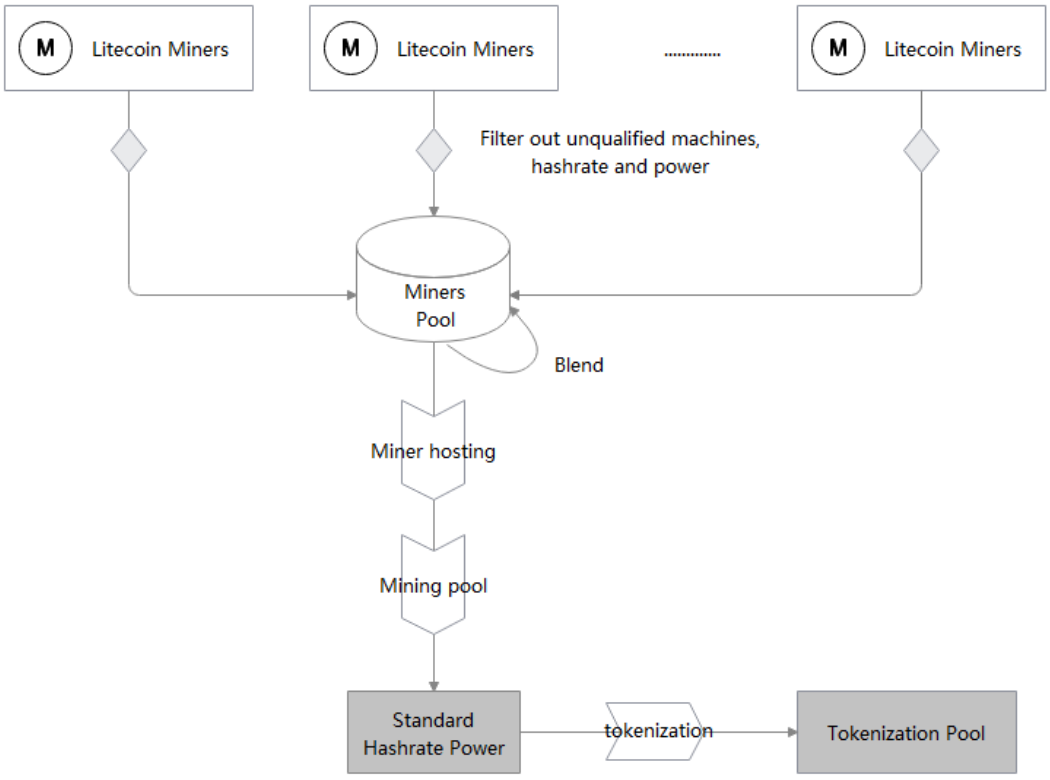
1. **High entry barriers.** At present, the cost of purchasing a mining machine is 3-5 times that of 1-2 years ago, and the starting price is no less than $5000. With the ongoing Bitcoin/Litecoin price surge, spot mining rigs are almost sold out along with futures-like miner prices and the purchase channels chaos. Even if the purchase succeeds, users still face the problems of finding reliable hosting sites, professional operations and maintenance teams, and even machine relocation team. The complexity of operations and maintenance dissuades many ordinary users to participate in mining.
2. **High risks.** The increasingly-added models of the mining rig pose a certain risk to miners, even for industry veterans. The performance of different machines can vary as a result of different power consumption, energy costs, token prices and mining environment. It takes a lot of trials and summaries to select a reliable miner model.
3. **Long cycle.** The high cost of mining machines is a drain on users' funds. In addition to this, an effective exit mechanism is in-demand in terms of the slow capital return and the lack of an effective and sound market for second-hand miners.

Cloud mining lowers the barrier to mining entry for niche groups through the package and sale of mining power, while opaque information and the lack of standards and liquidity mechanisms result in its low market acceptance. Moreover, a large number of ordinary users also have interest in mining to gain BTC/LTC/DOGE, so the market is in urgent need of a new mechanism with transparency, standardization and low entry barriers.

To solve the issues, we propose a decentralized mining solution by tokenizing the standardized LTC mining power into *mLTC*. Each *mLTC* is collateralized by LTC mining power and brings both centralized exchange liquidity and decentralized swap liquidity. Traders are free to buy or sell the token and can also circulate the token in other DeFi applications, such as mortgage lending, option hedging, staking mining, and so forth. The token of the standardized mining power, the resulting liquidity and combinability of DeFi, jointly make mining more fun, diversified and much easier.

The Wata Protocol

2.1 Architecture



Each *mLTC* is collateralized by a standardized unit of Litecoin mining power, which is achieved by Wata's three core steps to standardize and tokenize mining power. First, only select the qualified and stable mining rigs. Although many models of mining rigs are available on the market, only machines with stable effective efficiency (800-1000W), stable performance and strong durability can be our options. In the table below, only the bold mining rig are qualified. Second, effective efficiency blended technology. The effective efficiency on launch is targeted at 1600W/GH, while the individual effective efficiency can vary in different machines. Assuming we have a batch of machines with the overall 1 GH/s mining power and 1200 W/GH effective efficiency, the project can choose to procure another 1 GH/s mining power with an effective efficiency of 2000 W/GH to bring the blended effective efficiency to the aimed 1600 W/GH, and finally obtain the standardized mining power of 2 TH/s. Third, tokenizing the standardized mining power. If the blended mining power reaches the standard, with the approval of the mining power owners and the permission of *mLTC*'s governance committee, one *mLTC* will be issued for every 1 MH/s mining power. Otherwise, there will be no ownership transfer of the mining power and no token issue.

Manufacturer	**Model**

Antminer	**L3+, L3++**
Innosilicon	**A4+, A6,** A6+
Fansi	X6

2.2 mLTC economic model

mLTC has an initial total supply of 10,000,000 anchored to 10 TH/s mining power. It will be released in 10 times and the initial issuance will unlock 1T tokens. The subsequent *mLTC* issued by the standardized mining power will be unlocked linearly in four weeks on condition of getting the approval of the power owners and governance committee, as well as the mining power audit of the mining pool. For instance, if someone gets the locked rewards of 100 *mLTC* on March 1, he will receive the first 25 *mLTC* on March 8 and the rest will be unlocked in the next three weeks. *mLTC* holders can either stake to mine or sell the tokens on the secondary market.

Holding mLTCs entitles users to stake to mine and participate in governance. Specifically, users can stake mLTCs in the staking pool to obtain the daily rewards, of which the amount dependents on the tokens collateralized by the mining power. Besides, they can perform on-chain governance with mLTCs, such as voting whether to issue more mining power Tokens, whether to introduce new types of mining power Tokens and so on.

The WATA platform will guarantee two-year normal mining operations for mLTC rewards, that is, the platform will bear losses such as relocation, power outages, and mining pool failures. After that, it will then decide whether to continue mining or destroy according to the actual operating conditions of the mining rigs.

2.3 Liquidity provider

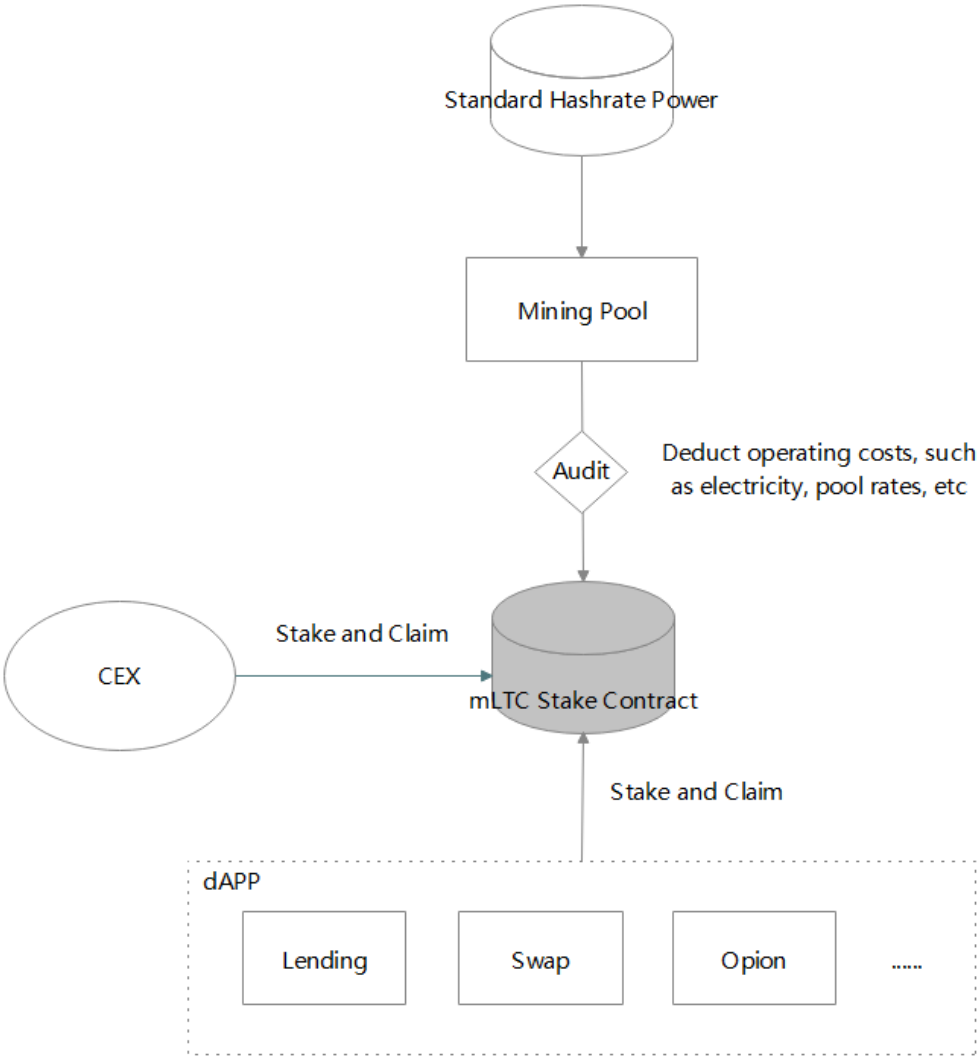
To enhance the liquidity of *mLTC*, we will bring exchange liquidity and decentralized swap's on-chain trading market. In this way ordinary users can conveniently buy *mLTC* to mine and *mLTC* holders can also quit mining with less fees. In addition, the certain price correlation between *mLTC* and LTC brings more trading opportunities for traders in the secondary market, which can indirectly promote the *mLTC* circulation.

We also encourage users to circulate *mLTC* on decentralized swap and stake LP tokens to mine so as to profit from mining and liquidity. Beside we will offer additional incentives to these liquidity providers.

2.4 Stake to mine LTC and DOGE

Users can receive daily HLTC and HDOGE rewards anchored to LTC and DOGE just by staking *mLTC* to the staking contract. Specifically, the partner mining pool will provide revenue data, the

financial team will make audit reports, and convert the rewards into LTC based on the current LTC price then send the tokens to the staking contract from which the operating costs are taken, including energy costs, mining pool payments, hosting fees and some other fees.



The formula of daily costs and rewards is as follows:

*Daily Total Costs (USD) = 0.8 kW/TH * Mining Power (TH) * 24 (h) * Energy Cost (USD/kWh) * 1.01 * 1*

Daily Net Rewards (LT) = Daily Mining Rewards - Daily Total Costs - Mining Pooling Payments - LTC Fees

Where for Daily Total Costs calculation, the industry standard power consumption loss is 1% and the machine operating efficiency is 100%. The current energy cost is 0.058U/kWh, the mining pool payment rate is 2% and the LTC fee rate is 0.2%. So, the final formula is as follows:

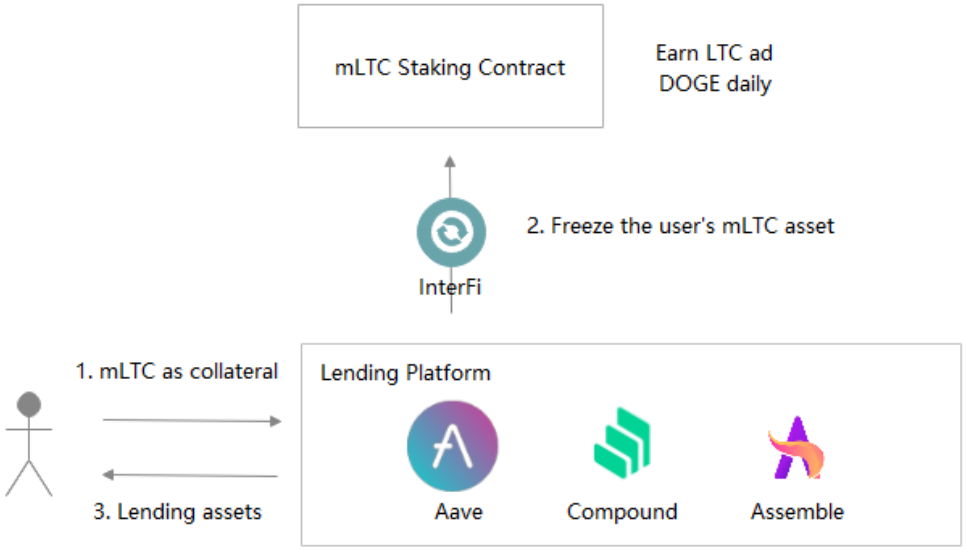
*Daily Net Rewards = (Daily Total Costs - 0.8 * Mining Power * 24 * 0.058 * 1.01 / LTC price) **

0.978

The daily mining rewards may vary due to the fluctuations in the process of mining, such as the changing machine efficiency and mining power, which is normal in the industry.

2.5 Integration with DeFi applications

mLTC is more than an ERC20 token. We plan to build a LEGO combination of *mLTC* and other DeFi applications to improve *mLTC* liquidity, and expand the current asset boundaries and application scope of DeFi to drive the entire decentralized financial market. Here are some common application scenarios.



1. Mortgage Lending. Mortgaging *mLTC* for on-chain lending provides DeFi miners with more ways to get cash. They can earn the LTC and DOGE rewards whilst reinvesting with the lent stable coins.

InterFi is an interoperability protocol for DeFi that allows one project party to freeze user assets on another project.

2. Option Hedging. Performing physical delivery based on the option platform can reduce the risk of token price fluctuation in the mining process. In case of market off for a certain period of time, users can choose the option to lock the price so as to lock the profits.
3. Leverage Mining. The subsequent integrated 0x protocol even allows users to mortgage *mLTC* as a deposit to carry out profit-push leverage mining on dydx.

Risk management

Although the return on investment of Bitcoin mining is considerable, the collateralized mining

machine for tokenized mining power still faces some uncontrollable risks, causing the machine to fail to mine normally. To name a few:

1. Policy risk, such as restrictions on mining sites, or restrictions on electricity usage or prices, leads to higher mining costs.
2. Natural disasters, such as earthquakes, floods, landslides, cause damage to the machines.
3. Third party failures, such as power outage, cloud server failure, cause the machine to be unable to resume mining for a long time.
4. dApps are hacked, resulting in the theft of tokens or rewards, or failure to mine, etc.

To hackle the above issues, the project will take the following but not limited measures:

1. Disclosure of mining information, including mining sites address, mining pools, hosting sites, machine models, machine quantity, receipts for operating fees, etc.
2. Providing an operation and maintenance report on mining machines every month.
3. Financial audit, audit and settlement of daily mining rewards.
4. At least one contract audit report provided by a third-party security company.
5. Regularly but right away for the urgent publish information to the community.

Team, Partners and Governance

The team has been engaged in the mining industry for 8 years, and has rich experience in mining, mining sites operation, mining pool operation, cloud mining power operation, mining machine loan operation, and smart contract development.

The partner, WaYi, has one of the largest mining sites in the world, covering Xinjiang, Sichuan, Yunnan, Inner Mongolia and many other places. It also has the world's largest LTC mining power and LTC mining pool, as well as BTC and ETH mining power, and is known as the leading veteran in the mining industry. Equipped with the rich experience, it is believed to bring us more professional and reliable Tokens.

Wata is desired to be a community driven project. Token holders can vote to participate in the governance and make decision on the operation, such as listing of new tokens, profit distribution, new proposals, and resolution on special cases.

Roadmap

Nov. 2020 Project launch
Mar. 2021 1T *mLTC* issued
Apr. 2021 Combined with DeFi applications, additional issuance of 1T to 10T *mLTC*
Jul.2021 Issuance of mBTC and mETH

Conclusion

Wata brings the *mLTC* to the Heco network by standardizing and tokenizing Bitcoin mining power, which makes it possible for the general public to participate in the mining and also solves the problem of liquidity lacking in mining.

Wata mainly contributes to the decentralized finance in the following aspects:

1. Lowering the barrier to mining entry, making it easy for the general public to participate in mining by staking *mLTC* to participate in on-chain mining.
2. Expanding the asset boundary of DeFi from tokens to off-chain physical assets, and making it possible to interact with other DeFi to realize on-chain mortgage lending, option hedging, leverage mining, and so forth.
3. Combining DeFi and CeFi to build a new business system.

References

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[2] Mars (https://mars.poolin.fi/#/about)
[3] Decentralized Hash Mining (DHM) (https://dhash.finance)
[4] DMEX (https://dmex.finance/)