TBTC

Fast & Cheap

WHITEPAPER

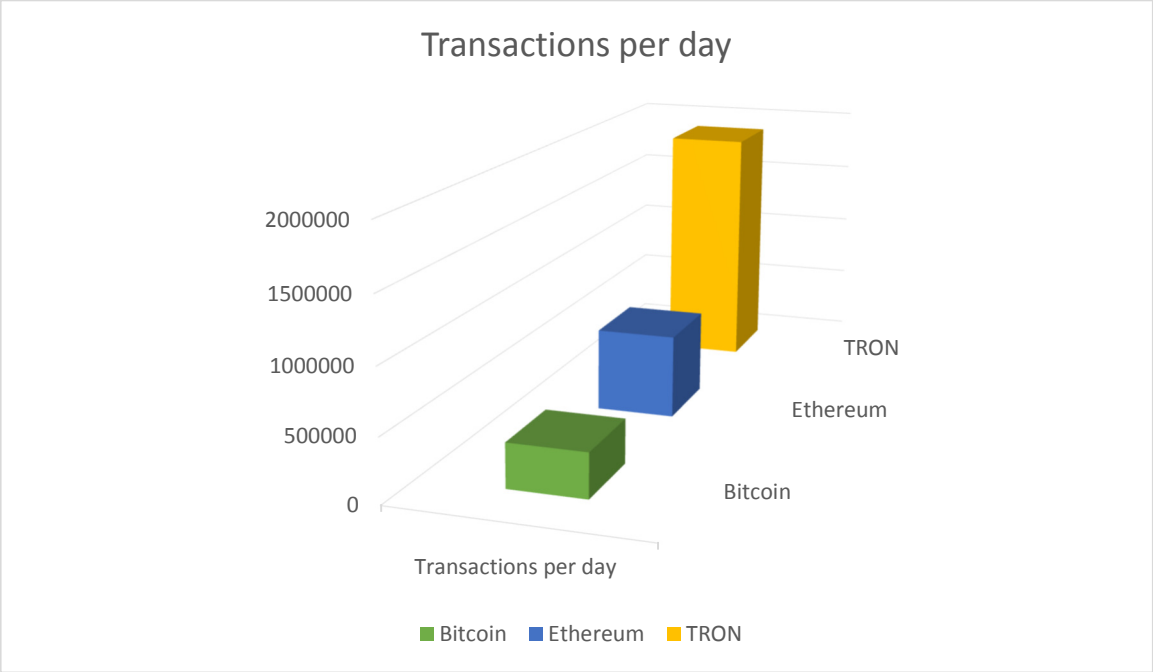
© 2019

Contents

Introduction

The purpose of creating TBTC is to accelerate Bitcoin transactions and reduce fees for transferring Bitcoin down to zero. At the moment, the main problem of Bitcoin is the lack of scalability, extremely low transaction speed and huge transfer fees. First, let's analyze the number of transactions processed by various networks.

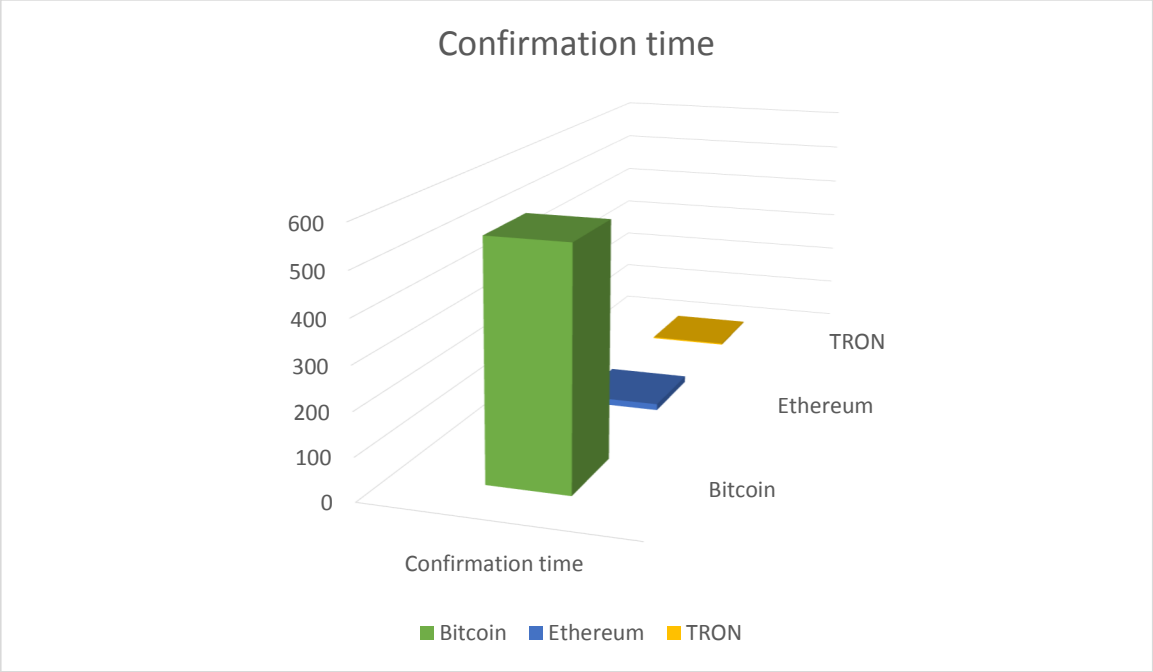
Transactions per day



As can be seen from the chart above, TRON leads among the three cryptocurrencies considered. For this reason, our team considers TRON to be the most promising cryptocurrency. At the moment, the TRON network is not fully used, so it is possible to include all Bitcoin transactions in it. The process of innovation always includes the absorption of outdated technologies, even very well-established. It is clear that at the moment Bitcoin holders are not ready to go to the TRON at once. Therefore, the best solution is to release a token on the

TRON platform, which will initially be 100 satoshi at the rate. Considering that most Bitcoin transactions are a transfer to relatively small amounts, such a token rate will eliminate the need to constantly work with a large number of zeros after the decimal point. The total number of tokens will be 100,000,000. Token developers do not set a goal to cover the entire Bitcoin capitalization. This token should be taken as a tool for fast transactions.

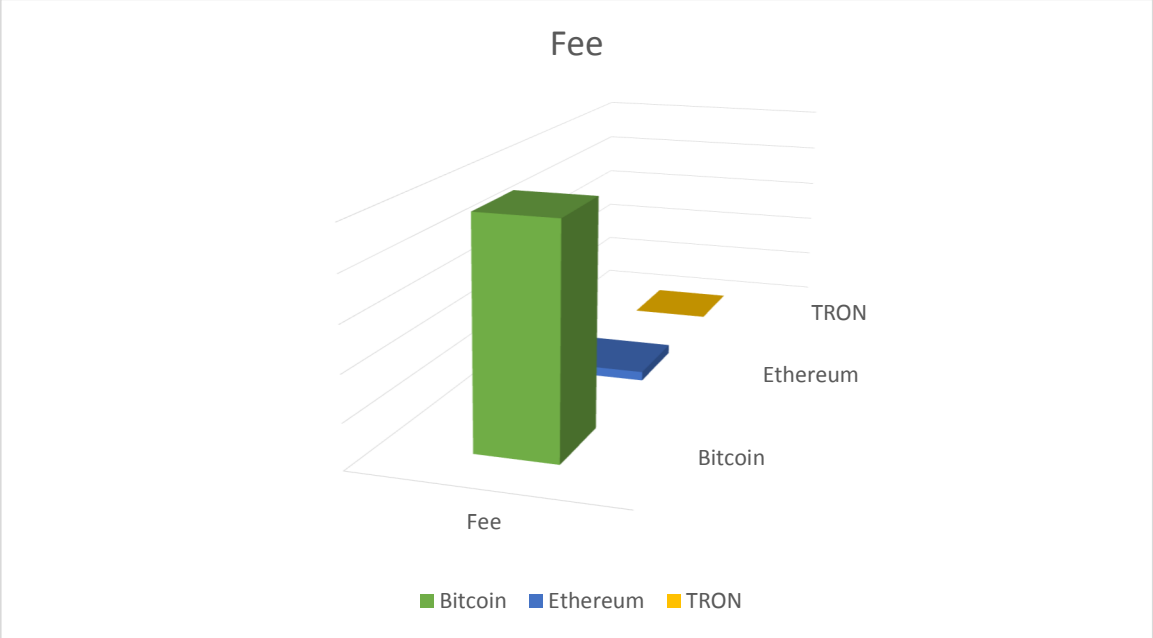
Confirmation time



In some situations, payment processing time is critical. It is not always possible to wait for 6 confirmations on the Bitcoin network within an hour. As such examples can be cited: gas station, pharmacy, grocery store. Cryptocurrency should be much closer to users than it is now. Since it takes a few seconds to confirm payment on the TRON network, this is an ideal platform for a token that can at least partially replace Bitcoin. Tests conducted by our team on the Ethereum and TRON blockchains have shown that among these two promising platforms, TRON gives the best results. The transaction confirmation time in the

TRON network is so short that it is possible to develop games that will work almost in real time.

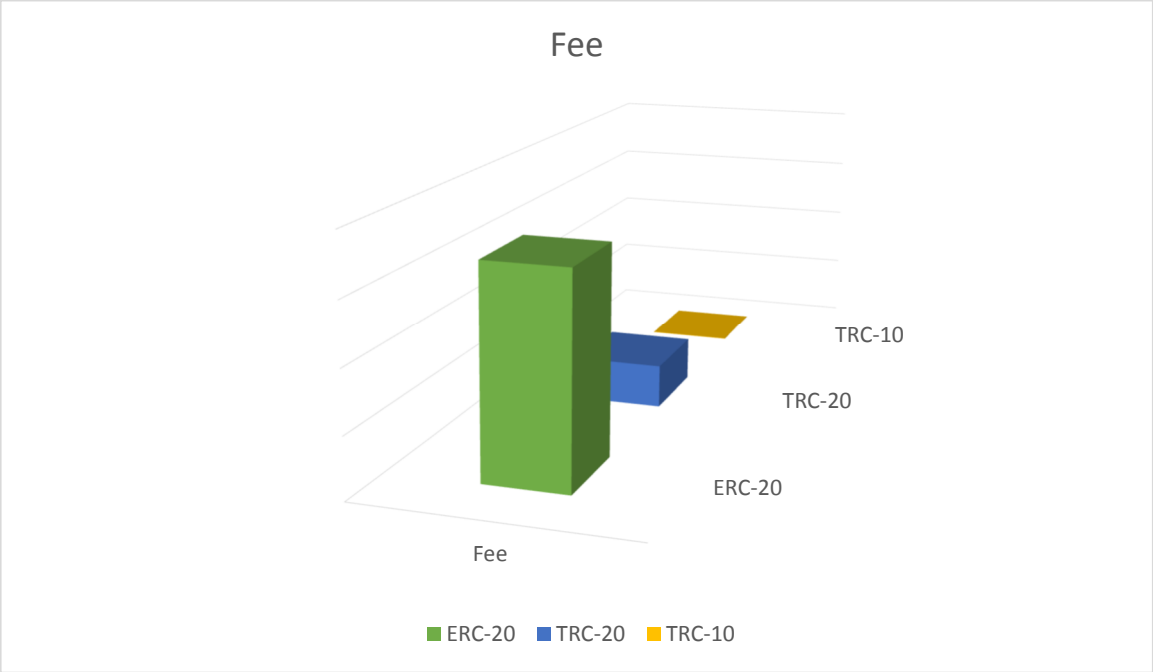
Fee



Large fees for the transfer of funds - this is the main problem of the Bitcoin network, which forced developers to create micropayment services. The abundance of micropayment services makes users understand the features of each. It also violates the decentralization of the network, since any micropayment service is centralized. The Bitcoin protocol allows you to send the smallest amounts, however, the fee in this case will exceed the amount of the transaction several times. In the Ethereum network, the fee can also be quite high with a high network load and increased gas cost. In the TRON network, the fee for the transfer TRC-10 standard tokens is not charged if there is a sufficient amount of Bandwidth, which is given free of charge, but in limited quantities. However, this resource can be obtained by freezing TRX. If you freeze TRX, the Bandwidth daily limit can be increased many times. There is also an option to pay for Bandwidth by burning TRX. In this case, it is similar to the fee for a transaction in other networks, but its value is much less.

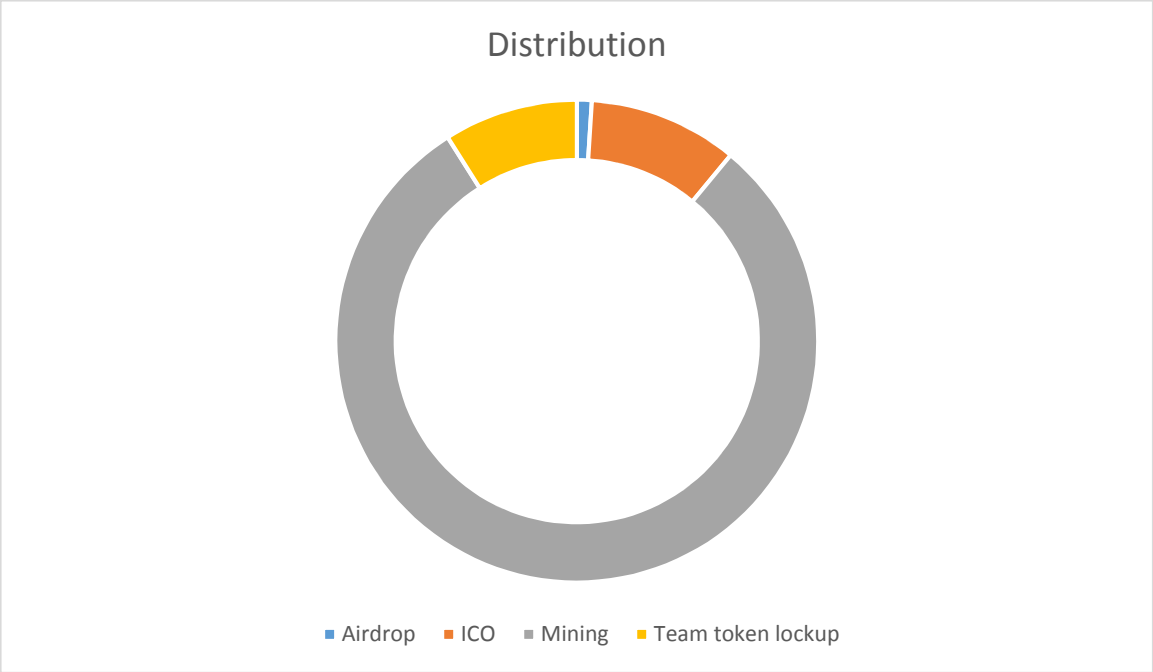
Implementation

To select the final implementation of the token, an analysis of the fees was performed when sending tokens of the ERC-20 (Ethereum), TRC-20 and TRC-10 standards. The results are presented in the diagram below.



The choice was made in favor of TRC-10. A significant factor is also the fact that there is the possibility of interaction of the TRC-10 tokens with contracts. This is used when mining the TBTC token.

Distribution



Airdrop

Airdrop is a way to distribute tokens by giving them away for free based on certain conditions. Such conditions can be registration on a specific website, activity in social networks, filling out forms. Our team has chosen the most convenient way for users. Airdrop will be made for users who have been active on the TRON network recently. 10 TBTC will be transferred to each participating address. In total, 1,000,000 TBTC (1% of total supply) are allocated for airdrop, therefore 100,000 users will receive free tokens.

Initial coin offering

During the first week or until the goal is reached, tokens will be sold at a price of 0.15 TRX. The goal is to sell 10,000,000 TBTC (10% of total supply).

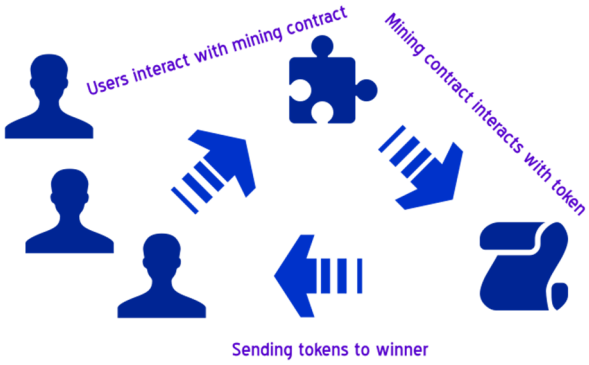
Mining

Mining of TBTC tokens is completely different from the mining of the original Bitcoin. 80% of all tokens are allocated for mining. At the start of the project, they are sent to the mining contract with open source code. Getting tokens from this contract is possible only through mining. TBTC emission (i.e. defrosting from a contract) is fixed and equals 3 TBTC per stage. This means that the issue of tokens will last about 12.7 years.

Team token lockup

Tokens that are not part of the ICO and do not participate in mining are frozen for the duration of the ICO.

Mining



The mining is the method chosen by our team for distributing TBTC. This method makes it possible to limit the emission and eliminate excessive accumulation of profits by the team. The accrual of tokens as a result of mining occurs in stages. On the TRON network, the time between blocks is 3 seconds. The stage length is 5 blocks, so the stage lasts 15 seconds. Miners send requests to participate in the stage. This request is a call to the contract method, so either Energy or TRON will be spent. The winner of each stage is the miner who has the most tokens TBTC on his balance at the time of the request. The winner receives a payout when the first request for the next stage is sent from any miner. The more unused stages pass to the next request, the more reward the last miner will receive. Thanks to this algorithm, the token emission rate remains constant. For convenience,

the project website will be available to send a request for mining with the click of a button.

Target audience

This token can be useful for:

- **People who send transactions frequently**
- **Projects that send small amounts**
- **Projects that need high transaction processing speed**

People who send transactions frequently

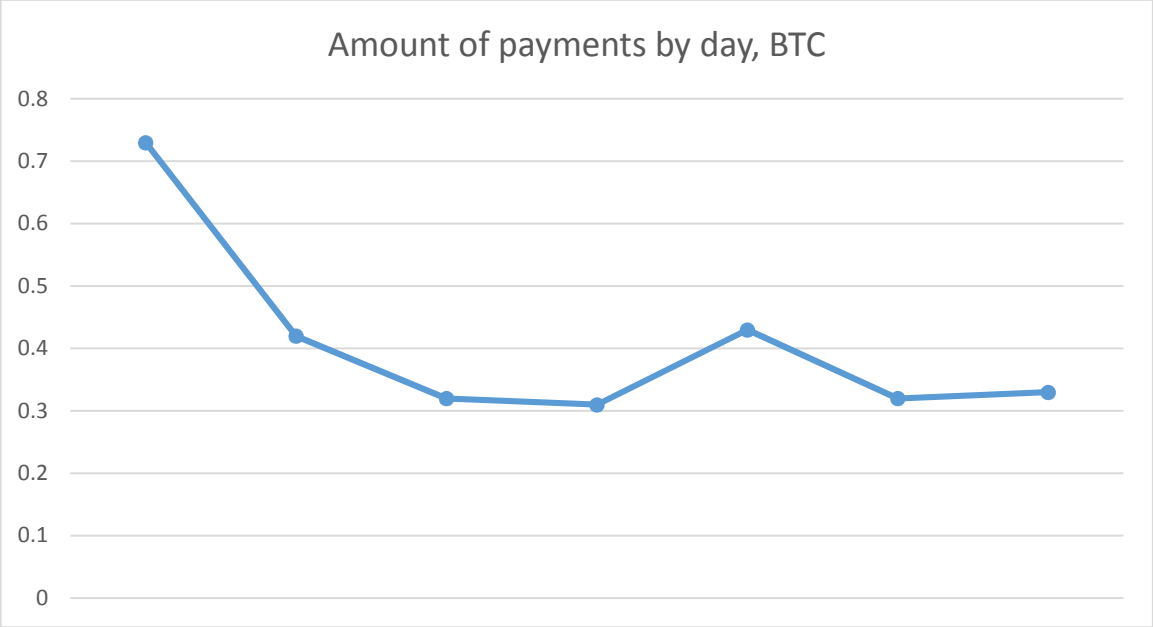
There is a huge number of activities in which you need to send transactions frequently. In this case, especially if the transaction amounts are not very large, the fee can be quite noticeable.

For example, if a user sends transactions for $10, the transfer fee may be 10-20% of the transaction amount. Such a fee is unprofitable for any business. TBTC can be sent with a fee that is thousand times less or no

fee at all due to the nature of the TRON network. Thus, using the token TBTC, you can significantly reduce costs.

Projects that send small amounts

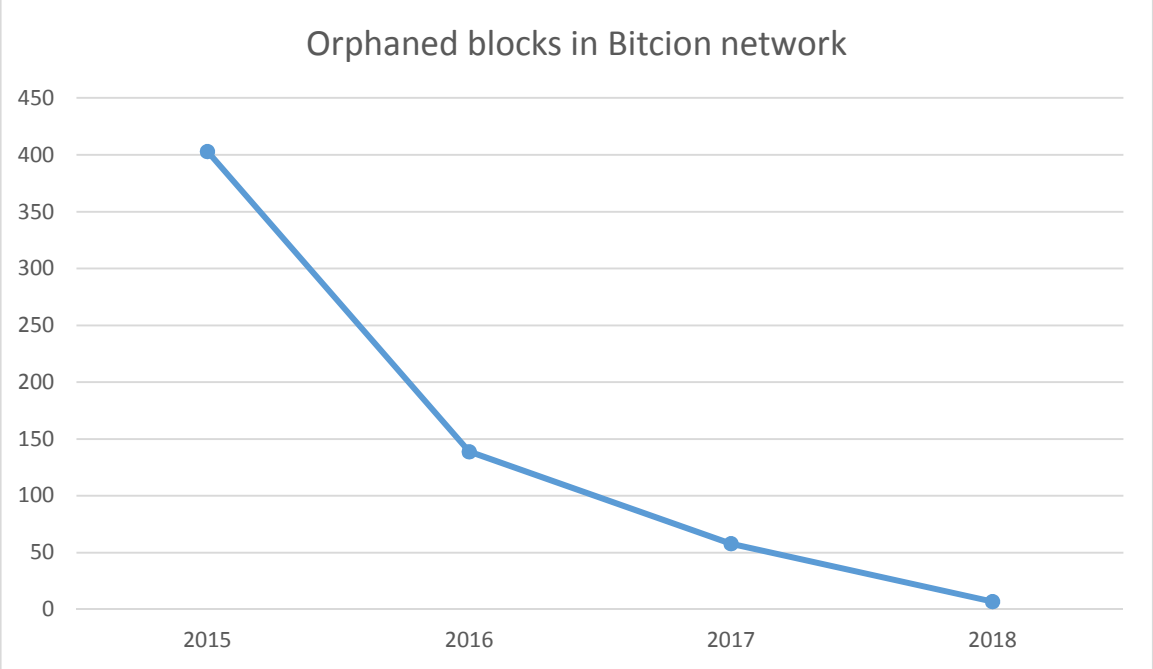
Now on the Internet there are widespread sites that distribute cryptocurrency bonuses for user activity (for example, for visiting or solving a captcha). Such projects are called faucets. Due to the fact that the payments on such sites are very small, people have to use micropayments services. However, such an approach forces owners of such projects to keep their funds on a single server, which violates the principles of decentralization. It also leads to the risk of losing all your funds. Our team believes that a decentralized cryptocurrency should be self-sufficient, so that users do not have to resort to centralized services. Below is a graph showing the payments of one of the micropayments services by day.



Obviously, this is a small fraction of the volume of all transactions, but there are a lot of such services, as a result, part of the funds is kept centrally. Using TBTC can solve this problem.

Projects that need high transaction processing speed

At the moment, you cannot create, for example, a grocery store that accepts payment in bitcoins, since the transaction confirmation time is 1 hour. Such a system can be made only under the condition that payments come from trusted sources. However, the concept of a trusted source implies storing the private key on the server and the unavailability of this private key to the sender. Otherwise, the sender may cancel the transaction.



As a result of the increasing difficulty of mining in the Bitcoin network, the number of orphaned blocks has noticeably decreased, which reduces the likelihood of canceling transactions when they were included into an orphaned block, however, the transaction can be canceled by the sender itself.

Roadmap

The first 3 days after the launch of the project, the token will be distributed only by airdrop. This will draw attention to the token before sales start. Before the airdrop starts, all information about the token will be uploaded to tronscan.org.

The mining contract will be deployed immediately after the launch of the project. This is necessary so that investors can make sure that the conditions specified in this document are fulfilled.

Applications for exchanges will be submitted only after the end of the ICO. This is necessary to maintain the price level during the ICO.

Investment attractiveness

One of the main goals of this project is to ensure the investment attractiveness of the token TBTC. Investors are interested in increasing the exchange rate of the token. If they are sure that after some time the exchange rate will be higher than during the ICO, then they are more likely to consider the proposed project. To ensure the increasing exchange rate of the token, a mining algorithm was developed that gives an advantage to the richest owners. Mining is implemented as a competition between the participants. In each stage, the richest of those who applied to participate in the stage win. Thus, each miner is interested in increasing the number of his tokens to win in the greatest

number of stages. The average cost of interaction with the mining contract is 0.5 TRX. Reward for successful mining is at least 3 TBTC. If all attempts were successful, then the cost price of the token would be 0.17 TRX (i.e. higher than during ICO). However, with an increase in the number of miners, the cost of the token will increase, as TRX will be spent on unsuccessful attempts. Of course, TRX is spent only if the miner does not have frozen Bandwitdh and Energy.

Technical documentation

Mining

For mining, the user need to call the contract method mine(). The contract will save the user's request in the internal pool. Calling a method more than once every 15 seconds does not make sense (except for cases when the balance of tokens has increased during this period of time at the user's address). Emission occurs no more frequently than every 5 blocks (every 15 seconds). An interval of 5 blocks is called stage. The reward is received by a miner who participated in this stage and which has more tokens than the other participants of the stage. During each request, the current stage number (block.number / 5) is stored in the variable stage. At the end of the request, the current stage is saved to lastStage. Payments to miners are made when the condition stage > prevStage is met. The amount of reward is determined by the formula:

amount = 3 TBTC * (stage – prevStage)

Mining will be available for N = T * B * S / R seconds, where:

- T – total number of tokens allocated for mining (80,000,000)
- B - time interval between blocks (3 seconds)
- S - number of blocks in stage (5)
- R - reward per stage (3 TBTC)

So:

N = 80,000,000 * 3 * 5 / 3 = 400,000,000 seconds =

= 12 years, 249 days, 15 hours, 6 minutes, 40 seconds

(if 1 year = 365 days)

Conclusion

Token TBTC has been developed based on a thorough analysis of existing networks. The main task in the development was to make the use of the token fast, cheap and reliable. Calculations were made (they can be found in this document) in order to make the token as attractive as possible for investors, to ensure a growth of exchange rate and to make mining sufficiently long in time. Due to the specificity of the network TRON, it was possible to make the token as cheap as possible to use. TBTC is a token based on the TRC-10 token standard. At the same time mining takes place with a contract based on the standard TRC-20. This combination of standards used makes it possible to solve the task posed - to reduce the cost of working with a token.