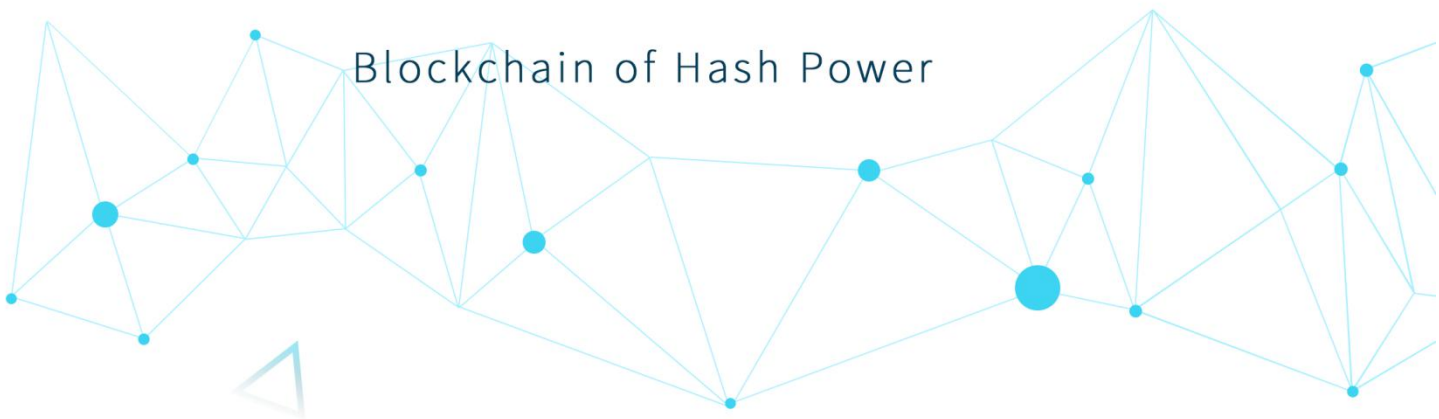# BHP

Blockchain of Hash Power

The world's first distributed financial network
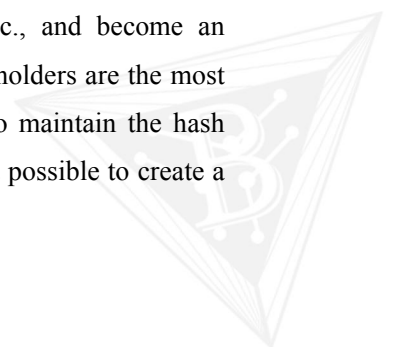based on BTC hash power credit

Contents

1. Project background

As a pioneer of digital currency, BTC has achieved great success, not only leading the upsurge of blockchain technology, but also taking the lead in the ten-year competition, occupying more than half of the market value of the data currency market for a long time. The foundation of all currencies is credit, so does BTC. The BTC network finally created a physical credit similar to gold by means of encryption algorithms, P2P networks, POW consensus mechanisms, and economic incentives. Although various altcoins and forkcoins tried to replace the status of BTC, relying on the powerful hash power as a credit endorsement, the security and decentralization of BTC have been recognized by more and more people for a long time. It is still the most accepted digital currency with the most widely circulation and the highest market value.

However, BTC is far from perfect. Low payment efficiency, high transfer cost and other problems make it difficult to be used as a daily quick payment scenario, but more as a method of value storage. In addition, failure to support smart contracts also makes the BTC networks difficult to be expanded, thus it cannot satisfy the increasingly diversified requirements of various financial applications.

In terms of the shortcomings of the BTC network, many projects have been carried out for improvement and explorations. These explorations can be broadly summarized into two directions: one direction is to release a more technologically advanced chain and try to replace the status of BTC, however, it was unable to shake the status of BTC due to lack of sufficient credit base; another direction is to transfer BTC to a new chain to expand its application based on cross-chain technology. Although this method chooses to embrace BTC, the new built chain may introduce new security risks and the operation effect is still to be verified.

Obviously, BTC has many unique attributes that are likely to solve some of the problems of reachability and credibility. Among them, the distributed governance ensures no single entity to control the network; the open access allows anyone to access and participate through Internet connection; and the encryption security mechanisms protects the integrity of the funds. However, the existing explorations and attempts have not solved the shortcomings of the current BTC network, so up to now, their actual value and trading medium have been unsatisfactory. The emergence of BHP, which relies on hash power, found a better way to solve the defects of BTC hash power network.

As the underlying asset of the BTC ecosystem, hash power is the basis of BTC credit. Hash power itself is a very valuable asset. It has developed into a rich ecosystem of mining machine manufacturers, mines, mining pools, hash power purchases and leases, etc., and become an extremely important part of the BTC ecosystem. Meanwhile, the hash power holders are the most loyal supporter of the BTC because they invests a large amount of assets to maintain the hash power, and their own interests are closely bound up to the BTC. This makes it possible to create a

secure distributed payment system with the help of BTC hash power credit.

For this purpose, BHP block chain adopts blockchain technology to integrate BTC hash power ecosystem, introduces the benefits of hash power holders into the consensus mechanisms to guarantee the security of the chain, and then expands the BTC ecosystem with smart contracts and cross-chain technologies to achieve high concurrency quick payment and other application scenarios and create a BTC-based DeFi ecosystem.

Furthermore, BHP block chain has formed BHP alliances with leading companies in various fields to provide a basic guarantee for creating a distributed financial network with a sustainable, secure and trustworthy framework based on BTC hash power credit.

2. Introduction to BHP block chain

BHP (Block chain of Hash Power) is the world's first distributed financial network based on BTC hash power credit. **BHP will build a financial infrastructure around the BTC ecosystem based on BTC hash power credit, and provide basic services for the BTC hash power ecosystem. At the same time, it will expand the application scenarios of BTC to create a DeFi ecosystem around BTC to promote the convenient access, payment and use of BTC on a global scale.**

Through the consensus mechanism of mixed equity entrustment of the hash power holder and the BHP holder, BHP introduces the hash power holder into the governance structure, and the hash power equity and the BHP holder's equity are mutually bundled and constrained to achieve the transfer of BTC hash power credit to the BHP block chain. Essentially, the BHP hash power block chain is a decentralized alliance block chain with BTC hash power as the credit endorsement and having a foundation of mutual trust.

The application scenarios of BHP block chain include:

- Provide basic services such as hash power cochain, traceability, flow, and revenue distribution for the hash power ecosystem.

- Release of BTC mortgage loan based on cross-chain and smart contracts.

- Provide safe and efficient online and offline payment services for stable coins based on the guarantee of BTC and BTC.

- Other extended financial services

As an independent, non-profit membership organization, the BHP Alliance aims to coordinate and provide a BHP management network framework, sustain and lead social influence for funding. The members of the Alliance consist of a network of verification nodes running the BHP block chain. Members of the BHP Alliance will include the diversified businesses, non-profit and multilateral organizations and academic institutions from place to place. The initial members will jointly complete the articles of the Alliance as "Founding Members", these companies are: Wuzhou Capital, Red Overtone Earth, Chenlian Capital, Jingdu Capital, MATRIX, Juntong Capital, Chuangxiang Space, Block Chain VC, Renren Capital, Bothwin Capital, Bit Mining, West CRYPTO, UK Hash Power Alliance, DSQ Spring, etc.

In addition, the BHP block chain will be open to everyone: Any consumer, developer or company can use the BHP network to build products and add value to their services. Open access ensures a low barrier to entry and innovation and encourages interest audience to conduct healthy competition. This is the basis for building BTC's more inclusive financial interests around the world.
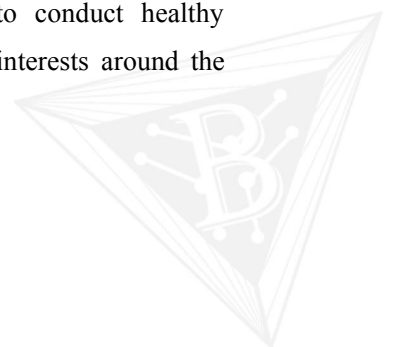
2.1 Basic services of hash power ecosystem

Along with the success of BTC, mining has evolved from the original PC decentralized mining to the current rich ecosystem systems including mining machine manufacturers, large mines, mining pools, cloud hash power sales and rental. However, as the difficulty of mining increases, the hash power is almost concentrated into the large mines, and it is increasingly difficult for individuals to participate in mining. Although there have been many cloud hash power sales and rental service providers facing private investors, a lot of practical problems still exist. For example: the hash power is completely provided by a centralized organization, and the authenticity and transparency of hash power cannot be guaranteed; the hash power is mostly tied to the mining machines, which is inconvenient to split and is very unfriendly to private investors; the hash power is mostly one-time purchase with poor mobility; private investors who are very sensitive to transfer charges generally have very few coins.

BHP block chain will register the hash power connected to the BHP network on the chain to ensure that each public and transparent hash power really exists; the hash power on the chain can be divided into the smallest unit of 1T, so as to be convenient for purchase and circulation; the sales and transfer process of hash power can be traced on the chain, and the process can be traced back to ensure the safe and transparent trading of hash power, the hash power output BTC can be distributed to users directly on the BHP block chain every day, which greatly saves the transfer charges; the user output BTC can be used directly on the BHP block chain to pay for daily consumption or other financial services such as mortgage loans, which greatly facilitates the users.

2.2 BTC mortgage loan and stable coins

The new generation of block chain represented by ETH is characterized by the introduction of smart contracts, making various financial applications possible. BTC itself does not support smart intelligent contracts, but the emergence of cross-chain technology enables BTC to transfer from BTC network to another block chain, thus realizing the application expansion of BTC. BHP block chain adopts cross-chain technology and smart contracts, and builds DeFi applications based on BTC.

The program of using intelligent contracts for mortgage loan and creating stable coins has already gained initial success on the Ethereum network, such as Maker DAO. Compared to ETH, BTC has smaller fluctuations and higher market value, enabling BTC-based mortgage systems to achieve higher mortgage ratios while supporting the generation of stable coins with a higher theoretical amount. BHP block chain will launch BTC-based mortgage loan and stable coins, on the one hand, through mortgage loan, BTC holders can make use of the bonuses more efficiently to realize rapid asset appreciation. On the other hand, as the bridge connecting the legal currency world, stable coins can be more widely adapted to payment scenarios.
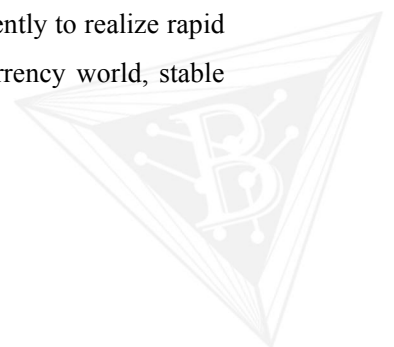
2.3 Payment system and its ecosystem construction

Starting from BTC, blockchain technology is naturally an innovator of traditional payments. The P2P transaction that does not require a third-party organization makes the payment process simple, safe and efficient. Especially facing the high-cost and inefficient scenarios such as cross-border payment, the payment advantage based on blockchain technology is more obvious.

However, even for the most widely accepted BTC, its payment characteristics has not been large-scale applied. The reasons are as follows: coin price fluctuation is too large, and acceptance to be used as the transaction medium is limited; low payment efficiency, not suitable for daily consumption scenarios; charges are not friendly to micropayments. The above shortcomings slower the BTC's payment ecosystem progress. In the BHP block chain, users can obtain stable coins through BTC mortgages for daily payments, not only enjoying the appreciation of assets but also obtaining a wider payment acceptance. At the same time, BHP block chain features high concurrency, low charges and high security, which greatly improves the convenience of micropayments.

The maturity of the ecosystem system is another important factor affecting the payment experience. BHP block chain will open consensus nodes and adopt other measures to share benefits with exchanges, financial institutions and merchants, establish payment alliances, get through payment barriers, and create better and better payment experience for users.

3. BHP coin offering

3.1 Holder's equity

The hash power coin (BHP Coin, BHP for short) is the original token of BHP block chain, and is also an equity token, which is used to stimulate the block chain construction and manage the block chain ecosystem.

- Dividend interest. While the BHP block chain provides basic services for the hash power ecosystem, it shares a certain percentage of hash power output as the service fee. BHP holders can receive BTC dividends on a daily basis according to the amount of money held.

- Voting equity. BHP holders can participate in the consensus node campaign voting thus share the node block rewards.

- Block chain equity. As the block chain ecosystem grows, BHP holders can further share the various potential benefits of the block chain ecosystem, including payment charges.

3.2 Issuance plan

The BHP Coins are issued 100 million in total, with a minimum unit of 0.00000001.

BHP Coin issue quota:

- 10 million coins are used for medium- and long-term incentives for the founding team and technical team, as well as locked position; when the BHP hash power of the whole network reaches 5000P or the block chain runs for 18 months, 30% is issued, e.g. 3 million coins, while 7000P or 24 months of operation, 30% is issued, e.g. 3 million coins, and 10000P or 36 months of operation, 40% is issued, e.g. 4 million coins. The distribution plan is decided by the initial team.

- 90 million coins are used for incentives of hash power holders and consensus nodes. Among them, 35 million coins have been distributed to the 20 BHP Alliance members that provided the initial hash power according to the hash power contribution prior to the release of the block chain, and will be generated directly in the creation block and mapped to the initial part of the hash power holders after the release of the block chain. Another 55 million coins are output with blocks, 90% of which are used for rewards of hash power holder and 10% for consensus node incentives.

3.3 Incentive mechanism

The hash power ecosystem service is the primary economic sources for the initial stage of BHP block chain. BHP block chain provides basic services such as hash power cochain, traceability, flow, and revenue distribution for hash power holders. In order to encourage hash power holders to participate in ecosystem construction, 10% of hash power is randomly selected from all accessed hash powers to participate in the block chain consensus (referred to as consensus hash power). The hash power entering the consensus hash power pool will be rewarded with 90% of the BHP Coin output by each block of the BHP block chain. 50% of the BTC output by consensus hash power will be owned by the BHP block chain and distributed to BHP holders according to the held coins.

The BHP block chain adopts a decentralized governance structure. Consensus hash power holders and BHP holders have 50% of the blockchain governance rights respectively. Consensus hash power holders and BHP holders vote together to select X consensus nodes (not limit the total number of consensus nodes; it will gradually increase with the development of BHP ecosystem) for block verification. The consensus nodes will receive 10% of the block reward and all packaging fees as a verification bonus.

All other future income from the BHP block chain will be owned by the BHP holders, and will be returned to the BHP holders in the form of a dividend or repurchase BHP.
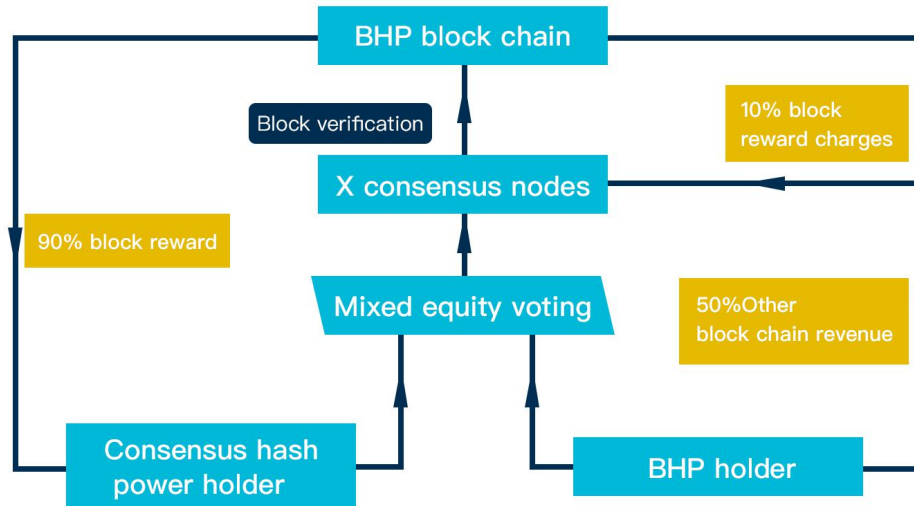
4. Technology realization

4.1 System architecture

The BHP system employs a layered model to build the BHP hash power block chain, as shown in Figure 3-1.

Application layer	dApp	Light wallet	Block chain node
	Asset transactions, settlement payments, transfer transactions, asset management, smart contracts		
Smart contract layer	Smart contract virtual machine	Smart contract scripts	Contract operation mechanism
Network layer Data layer	P2P network	Transmission mechanism	Consensus mechanism
	Data block	Chain storage	Timestamp
	Hash function	Hash tree	Asymmetric encryption

Figure 3-1: Layered structure of BHP payment system

Application Layer: the basic application functions of BHP include asset management of various wallets, various types of services such as asset transaction and the execution of smart contracts. It also provides various forms to access systems such as mobile end and PC end.

Smart Contract Layer: the smart contract layer of BHP establishes the account system for users, supports multi-currency multi-account binding, and ensures contract security through security mechanisms. It has the contract details shielding the application layer, and convert the contract layer codes into the underlying data to be executed by the smart contract virtual machine.

Block Chain Layer: the underlying blockchain layer of BHP packages and encapsulates the data. All transaction data will be packaged into the longest chain of BHP. BHP is a block chain that can

be accessed without permission.

BHP is an independent block chain. Subsequently, BHP will establish a cross-chain protocol and use BHP as a bridge to communicate multiple blockchains. The BHP parent blockchain can realize convenient technical upgrades and system iterations without affecting the operation of each side chain.

4.2 Key technologies and the realization

4.2.1 Distributed network

The BHP payment system uses a distributed network architecture as shown in Figure 3-2. The network is built on the Akka concurrency framework based on the Actor Model.
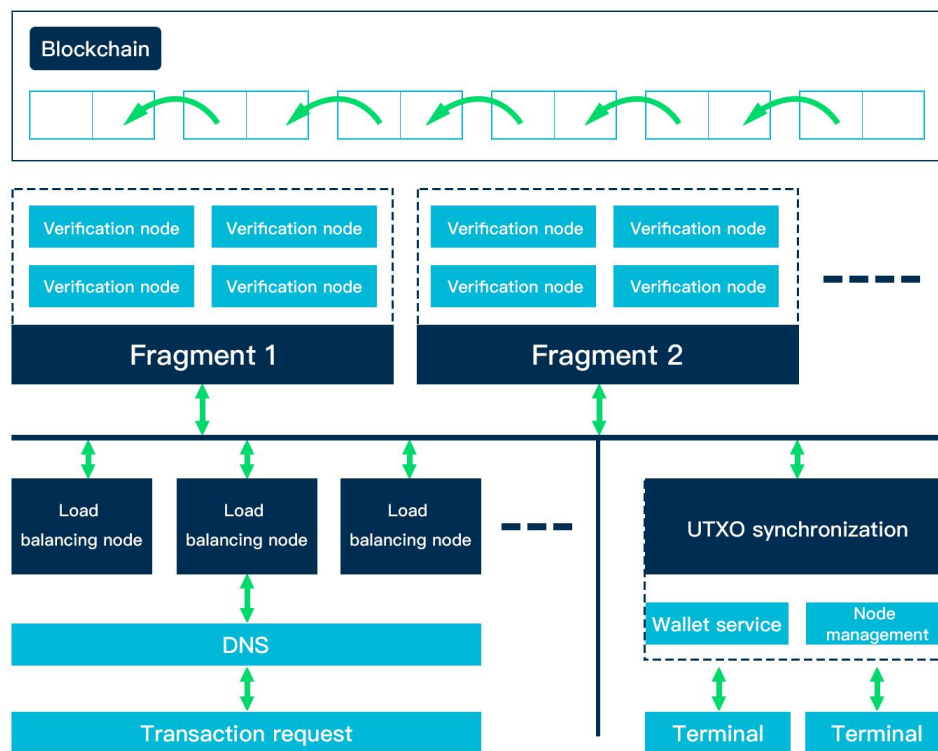

Figure 3-2: Network architecture of BHP payment system

Actor conducts interaction by sending messages to each other. The threads that execute the task will not be passed to the receiver via the message. After the message is sent, the Actor entity can continue to running other tasks without being blocked. With the same time, the Actor model can do more work. Actor processes messages in a sequential manner, one message at a time, and the sender and receiver of the message can operate independently without interference. This mode of operation avoids the destruction to object encapsulation by the concurrence of multiple threads in traditional multi-threaded programming.
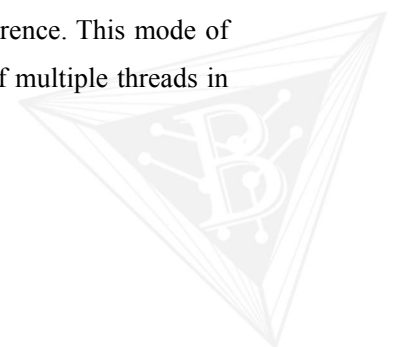
Features of Actor model:

(1) Decoupling the execution program by means of signaling, thus maintaining the encapsulation of the object (the method call passes the execution environment, but the message delivery does not do this)

(2) The internal state of Actor can only be changed by passing a message, and only one message can be processed at a time, which eliminates the problem caused by thread contention in traditional programming.

(3) The sender of the message will not be blocked. Millions of Actors can be efficiently arranged on multiple threads, which gives full play to the potential of modern CPU. Task delegation through messages is a common operation mode of the Actor model.

[Network nodes]

The BHP payment system employs the P2P network structure and communicates with the TCP/IP protocol. There are two types of nodes in the network: respectively ordinary nodes and accounting nodes. Ordinary nodes can broadcast, receive and transmit transactions, synchronize blocks, etc., while the accounting nodes participate in distributed consensus and creating blocks. Accounting node is the core role of the BHP blockchain, which can store complete historical data and listen to broadcast transactions. The accounting nodes in the BHP payment system are distributed among the numerous mineral pool nodes with super hash power in the world.
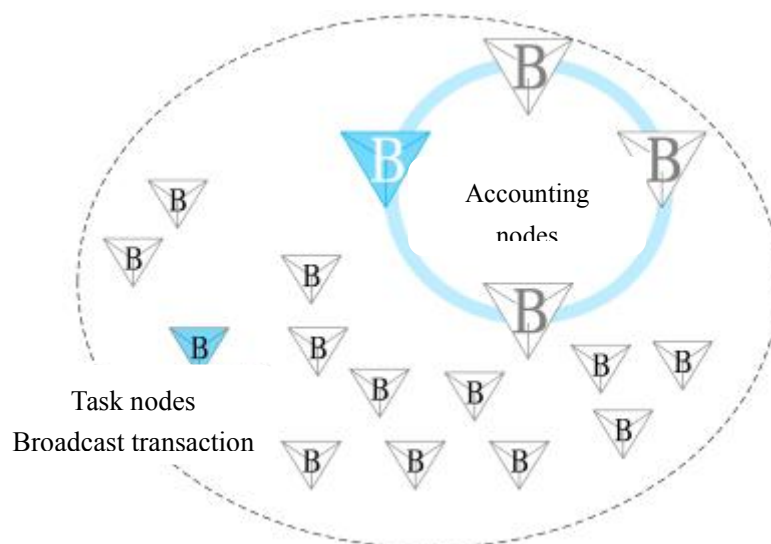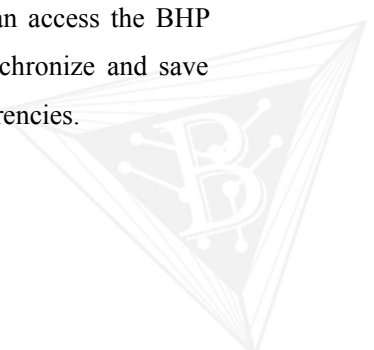

Figure 3-3: Network node

Ordinary users run light nodes or just access as client end. Ordinary users can access the BHP network through light wallet client end, block browsers or mobile Apps, synchronize and save their data, manage their wallets, and conduct financial transactions in digital currencies.

[Dynamic fragmentation]

Block expansion and horizontal expansion can be adopted to improve the throughput of network transactions. The BHP payment system realizes the horizontal expansion of the blockchain with the smart dynamic load balancing autonomous dynamic fragmentation technology. Different transactions can be processed in each fragment at the same time, and the processing performance of the entire network is linearly improved.

In each cycle, the system randomly collects the nodes into a fragment, and the nodes within the fragment only verify the respective transactions and broadcast the verification results to the parent blockchain to help the parent blockchain finalize the block.
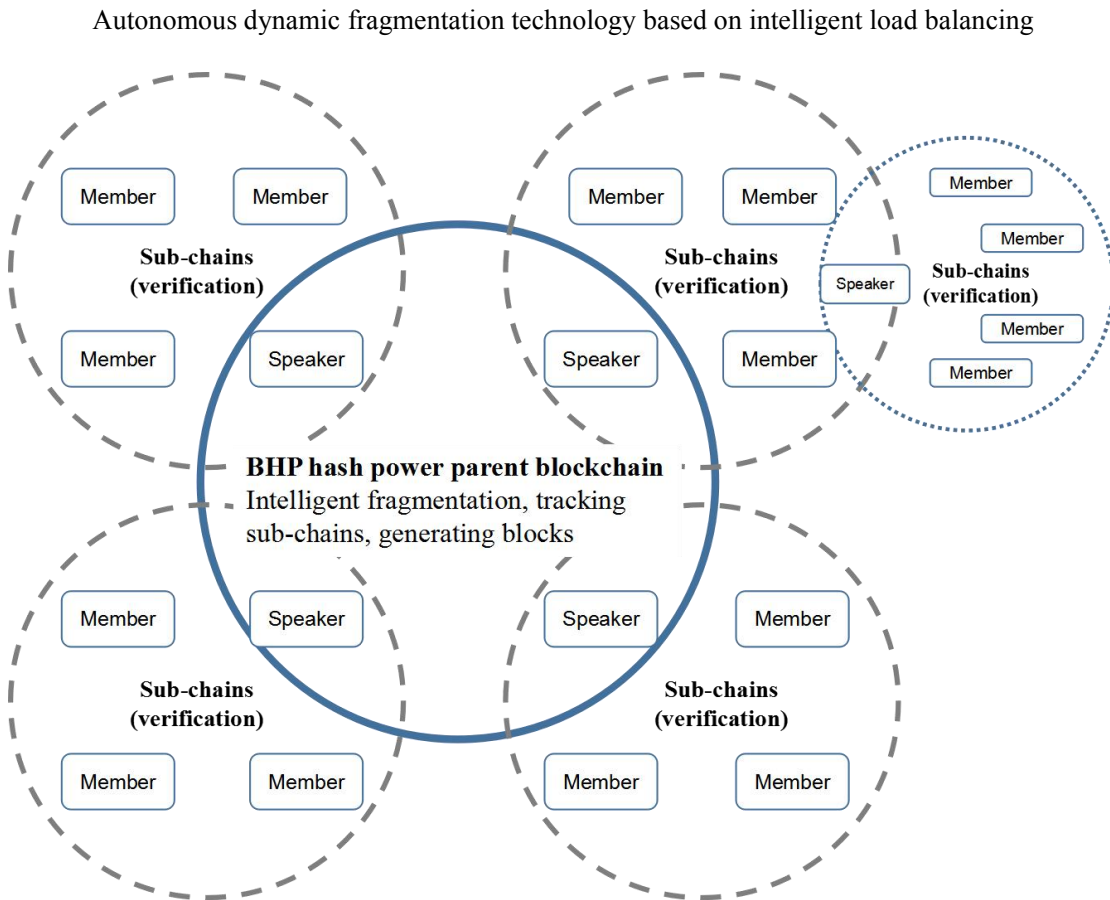
Autonomous dynamic fragmentation technology based on intelligent load balancing

Figure 3-4: Dynamic fragmentation technology

Parent blockchain network	Fragment network
Autonomous dynamic fragmentation with intelligent load balancing	Verify the transaction on the fragmentation
Voting transaction accounting rights (produce block chain)	Confirm parent block chain
Save fragment network information	

In the same cycle, if there are N fragmented networks, each fragment can process N transactions, so there are N^2 transactions in total can be processed by the system. Therefore, this proposal is named quadratic fragmentation.

4.2.2 Consensus mechanisms

Due to the high network delay existing in the P2P network, the sequence of transactions received by each node may be inconsistent. Therefore, the blockchain system needs to design a mechanism to make consensus on the sequence of transactions occurring within a certain period of time. This algorithm, aiming at a consensus on the sequence of transactions within a time window, is called "consensus mechanisms".

BHP block chain extends the consensus mechanism of DPOS (Delegated Proof of Stake), and innovatively introduces the equity certificate of hash power holders. Consensus hash power holders and BHP holders have 50% of the voting rights respectively, and elect N consensus nodes for transaction verification. The Delegated Byzantine Fault Tolerance (DBFT) was adopted in the Consensus Algorithm.

DBFT selects a special accountant (accounting node) in terms of the equity holding proportion, and then the accountants reach a consensus through the Delegated Byzantine Fault Tolerance. DBFT can tolerate any type of error, and there are multiple special accountants in charge of each block final and not forked. The accounts in the BHP system refers to the numerous nodes that own super hash power and access to the BHP network.

With the help of DBFT consensus mechanisms, there is a block being generated every 5 to 20 seconds, as well as thousands of TPS transaction throughput volume. After optimization by load balancing network, with the unique state channel mechanism, tens of thousands or even higher TPS can be achieved to support large-scale commercial applications.

Any node broadcast transaction in the BHP network. When receiving the transaction, the accounting node opens the consensus view and initiates the proposal broadcast. The member starts to verify the transaction, when the error node participating in the consensus does not exceed (n-1)/3 after t seconds, this round of consensus is successful.

4.2.3 Transaction account book

In the BHP payment system, a block, consisting of a block body and a block head, is generated every 15 seconds. The block body mainly refers to the transactions generated in the current time period. The block head includes the hash value Hr-1 of the previous block, the Merkle Root Hash Merkle TX produced by the current transaction, the timestamp T and the random number Nonce. For the hash value included in the block head points to the previous block, a "Chain" structure is made by the block.

The BHP blockchain account book has the same principle with the BTC. BHP replaces traditional accounts with a mode of unexpended transaction output (UXTO). The UXTO There are two rules for UXTO system to comply with:
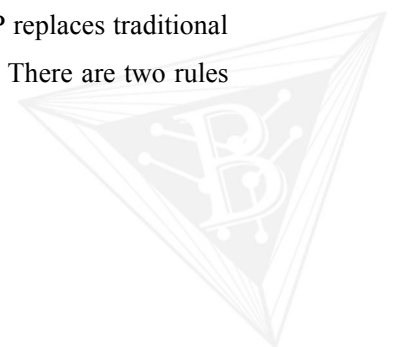
(1) Except for mining transactions, all sources of funds must come from the UXTO of one or several previous transactions;

(2) The total input of any transaction must be equal to the total output, and both sides of the equation have to be equal. (Generally, if the output is less than the input, and the difference belonging to PoS miners is the transfer fee.)

The biggest benefit of the UXTO model is the ability to faithfully record transactions. Our real world flows with time, and transactions occur one by one. The blockchain system faithfully records what happened in the world, cannot be rolled back, and cannot be deleted.

4.2.4 Smart contract

Smart contract, of which the concept was first proposed by Nick Szabo in 1994, is a computer protocol aims at propagation, verification or implementation of contracts in an informational way. It allows credible transactions which are traceable and irreversible to go on when there is no third party BHP Contract, as the independent smart contract system for BHP, is a smart contract execution environment that is microcore and not related to platform. It provides a set of instructions including stack operations, procedure control, logical calculations, arithmetic calculations, cryptographic calculations, string operations and array operations, while only two computing stacks are provided on the aspect of hardware. However, blockchain developers are allowed to create their own virtual hardware, as well as open to smart contracts in the form of interfaces, which makes the contracts obtain platform-related data, persistent storage and access to the Internet at runtime during operation. Although this may bring about some uncertainties about the contract, the blockchain developer can eliminate this uncertainty by properly writing virtual hardware. However, due to short in compiler and development environment to support AVM, it is quite difficult to develop smart contracts based on AVM, and developers have to use a syntax similar to assembler to write contracts, which requires high technical ability.

BHP smart contracts run on the BHP VM with high certainty, high concurrency and high scalability. According to the design goal of BHP hash power block chain, the realizable smart contracts based on BHP Contract include: deposit interest contract, credit mortgage contract, commercial payment contract, transfer transaction contract, asset investment contract, etc. In the future, with the smart contract protocol continuously upgrading, BHP hash power block chain will support users to develop more smart contracts.

4.2.5 Oracle machine

The oracle machine, as well as a chain code, is a smart contract deployed on the chain. Oracle machine technology needs to be used when external data is required on the blockchain. The whole workflow of the oracle machine is as follows, the oracle machine first obtains the required data from the trusted party, then transfers to the address on the specific blockchain with the price
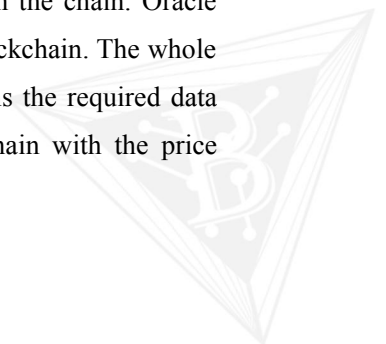
information written into the transaction remarks, so that only with the specific area's transaction record viewed, can the required data be gotten.. Since the blockchain automatically stores the blocks containing the transactions, only with the local transaction record viewed, can the required data be gotten. It not only ensures the access efficiency, but also ensures the consistency of the data. In general, it is that the oracle machine (third party) pushes the data to the blockchain, rather than the smart contracts actively pull data from third parties.

The user trusted hash power assets are chained through the oracle machine technology, which can provide reliable external data for the smart contracts of PoS revenue, solve trust problems and promote consensus.

4.2.6 Cross-chain protocol

BHP, a distributed payment system that supports multi-side chain association, supports the architecture of "hash power parent blockchain+ high-performance multi-side chain", achieving efficient exchange among multiple assets. The cross-chain interoperability protocol of BHP consists of two parts: "Cross-Chain Asset Exchange Protocol" and "Cross-Chain Distributed Transaction Protocol."

(1) Multi-chain atomic asset exchange protocol

With the extension of BHP on the double-chain atomic asset exchange protocol, it allows multiple participants to exchange assets across different blockchains and ensures the success or failure of all steps in the entire transaction process. To achieve this function, we will create a contract account for each participant with the functions of the smart contracts. The individual digital assets exchange, across two completely unrelated blockchains, can be achieved .

Multi-chain atomic asset exchange protocols do not add complex communication mechanisms among chains, but they can guarantee that such exchanges are atomic and credible, without the situation that equity is transferred but creditor's rights is not transferred.

(2) Cross-chain distributed transaction protocol

Cross-chain distributed transactions mean that multiple steps of a transaction are executed across different blockchains while keep consistency. This is an extension towards cross-chain asset exchange, extending the behavior of asset exchange to arbitrary behavior. BHP will use cross-chain smart contracts. A smart contract can execute different parts on multiple different blockchains, either all executed or all returned to the pre-execution state.

4.2.7 BTC payment

At present, the slow transfer speed and high handling fee of BTC restrict the BTC payment to be widely applied in business. The BTC payment principle, which is based on BHP network proposed in this paper, refers to carrying out a large number of transactions out of the BTC blockchain,

aiming to realize the rapid payment of BTC with very low charges and promoting the commercial application of BTC payment.

Hash Witness, A and B respectively take the corresponding BTC to pre-store into the BHP network, with the witness by the credit of the 21 super hash power nodes of BHP, to obtain the BTC payment pass of the BHP network.

Hash Consensus, when A transfers to B, A signs with private key, and broadcast transaction in BHP network; after the consensus confirmation of the 21 super nodes of BHP, the transfer transaction is recorded in the BHP network. When withdrawing, the final account book on the BHP chain is submitted to the BTC network.
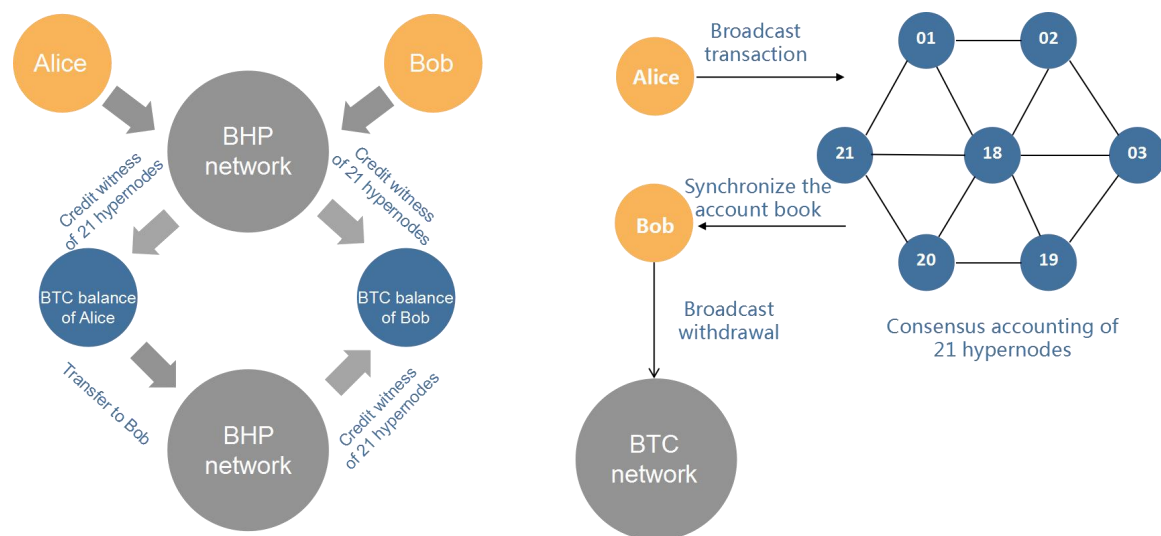

Figure 3-5: Bitcoin payments in a BHP Network

Payment characteristics of BHP network:

(1) Fast transaction, the transfer transaction is completed immediately through the payment direct mode of the BHP network;

(2) The transaction is on the chain, with 21 super hash power nodes consensus, all transactions are recorded on the chain;

(3) Offline payment, B can be offline when A transact with B;

(4) Payment channel, any two or more transactions can be performed at the same time in the BHP network, not restricted by a single payment channel;

(5) Large-value payment, both sides of the transaction carry out direct transfers, without intermediate nodes, and are not restricted by the network status and insufficient funds of the intermediate nodes.

(6) Payment and application scenarios are moderately isolated. BHP adopts a public/private chain-based value registration and transfer model, which can be used among systems of multiple

business entity without exposing personal information to all operators.

5 Development program

BHP will develop in the following chronological order:

Time	Program
2018/5	Propose the concept of BHP project
2018/8	Form the project team
2019/3	Build the underlying architecture
2019/6	Make the White Paper 1.0 public
2019/8	Release the digital asset, release the wallet
2019/12	Open access to multiple countries
2020/6	Strategically cooperate with well-known large exchanges in the industry to create a digital currency ecosystem
2020	Launch global business cooperation and cross-border payment services
2020	Become a global financial infrastructure, accelerate BTC's payment settlement and global circulation

Table5-1: BHP development program

6. Risk tips and disclaimer

- As a new investment mode, digital asset investment has all kinds of risks. Potential investors should carefully evaluate the investment risks and their own risk tolerance.

- This document is used for guiding the progress of the BHP project, only with the function to transfer the information, instead of constituting a recommendation to buy or sell BHP Coin. The above information or analysis cannot constitute an investment decision. This document cannot constitute any investment advice, investment intention or instructing investment.

- This document neither constitute nor is construed as any act purchase and sale actions, or any invitation to buy or sell any form of securities, nor is it a contract or commitment in any form.

- Relevant intent users have a clear understanding of the risks of the BHP project. The investor participating in the investment means that he or she has learnt and accepted the risk of the project and is willing to personally bear all the corresponding results or consequences.

- The project team is not liable for any loss of assets caused by participating in the BHP project.

- Project risk:

➢ Policy risk: For blockchain technology is in its early stag, there are uncertainties for the regulatory policies of blockchain projects in various countries, as well as changes in operational entities and operational management for the project;

➢ Volatility risk: Investors should have great psychological endurance, for the digital assets issued by BHP are not legal currency and the price fluctuates greatly;

➢ Technology risk: For the developing blockchain technology, technical loopholes and hacking attacks cannot be absolutely avoided in project operation;

➢ Team risk: There is no guarantee on the core personnel resign due to stress, physical and personal factors in the development of BHP. It can be guaranteed that the team turnover will definitely make the project develop more stably.