



ISPAY Chain



# Summary

In the wild growth of the crypto world, we've had a massive open-source ecosystem, a robust and ever-improving infrastructure, decentralized file sharing, and free-flowing cryptocurrencies, but it's clear that the inability to commercialize on a large scale means that there are still a lot of problems with the blockchain architecture today.

At this stage, people realize that the biggest problem is that the independent blockchain and blockchain is difficult to reach between the extensibility (Extensibility) and scalability (Scalability). According to data disclosed by CoinMarketCap, there are at least more than a thousand public blockchains (Public Blockchain) in operation, and each blockchain has hundreds of millions of nodes on standby throughout the day to carry out consensus in order to maintain the consistency of the ledger (Canonicity) and validity (Validity). Blockchain systems that are not horizontally expandable and connected are like islands and castles in the sky. Therefore, there is no doubt that Cross-Chain technology is the focus of the crypto space today. We are glad to see that some quality open source developers have built successful projects in this field, such as Polkadot, Cosmos, Iris, Chainx, etc. However, due to the fundamental nature of cross-chain technology, it is not possible to build a cross-chain project in this field. However, due to the fundamentals and complexity of

cross-chain technology, there are still a lot of aspects of the process that have not been addressed.

## **ISPAY Chain is a heterogeneous multi-chain architecture blockchain**

Due to its heterogeneous architectural nature, ISPAY Chain can support backward compatibility with one or more existing blockchain systems, such as EOS, Ether, BinanceChain, and others. The system provides a useful underlying component to support the messaging functionality necessary for a global, commercial-grade blockchain. It supports the interoperation of many highly differentiated consensus systems within a trustless, fully decentralized federation, allowing trusted access to each other's blockchains.

As a brand new relay chain, ISPAY Chain not only provides the solution of data interoperability between parallel chains, but also has a more irreplaceable creation: ISPAY Chain utilizes the original economic model to make any node in the system have the power of "liquidity mining" and benefit, which can quickly build up a powerful value network. It effectively solves the high threshold for crypto assets to participate in the consensus node to obtain income and the problem of asset consensus in the future cross-chain ecosystem. We describe it in a common way, i.e.: ISPAY Chain Network will realize relatively fair, safe and decoupled cross-blockchain "liquidity mining".

In the future ISPAY Chain open source code base, there will be two customized logic code services for their own development and ecological layout development. First, consensus logic code, including collation, collator, candi-datereceipt, commitment, execution, chunks, gossip, network, pro-tocolavailabilitystore. The second is business logic code, including parachains lifecycle management, execution management, fundraising management, crowdfunding and so on.

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# 1. industry background

Based on Satoshi Nakamoto's definition of a blockchain system, we can abstract the roles of any blockchain body to User and Miner. Users use wallets containing keys or passes to access higher-order features of the network. Miners, on the other hand, produce (through competitive computation) consensus blocks, i.e., a public authoritative ledger of all transactions.

## 1.1 Mining and Consensus

Blockchain is revolutionary. It allows anyone to own and transfer assets through an open financial network without the need for a trusted third party. There are now thousands of blockchain-based assets, and the primary way to produce crypto assets is by mining. Mining stands for wealth, and mining implies the most direct means of acquiring wealth. When the miner in accordance with the consensus rules correctly verified all the transactions, this mining behavior that can be obtained for the blockchain system for its honest production of blocks to give the reward (i.e., token), and when the blockchain system as a result of the participants of the growth and development of the value of access to enhance the value of the miner will be given more and more higher secondary market value of the token. Miners generate the initial passes within the system. The mining industry has thus become the most upstream part of the blockchain industry.

Although the mining behavior will be excited by the token award and create new coins, mining is not the ultimate goal.

Technically, mining is a decentralized transaction clearing mechanism through which each transaction can be verified and cleared. Mining is the invention that makes the blockchain system unique. It enables network-wide consensus and "piggybacks" on token issuance without a central authority. Mining is arguably the foundation of the entire blockchain industry, determining whether a blockchain system is a 0 or a 1. It's an economic innovation that has already proven its greatness in a single blockchain. However, in the cross-chain era, there is still much room for improvement in the balance between economic distribution and network-wide consensus in mining behavior.

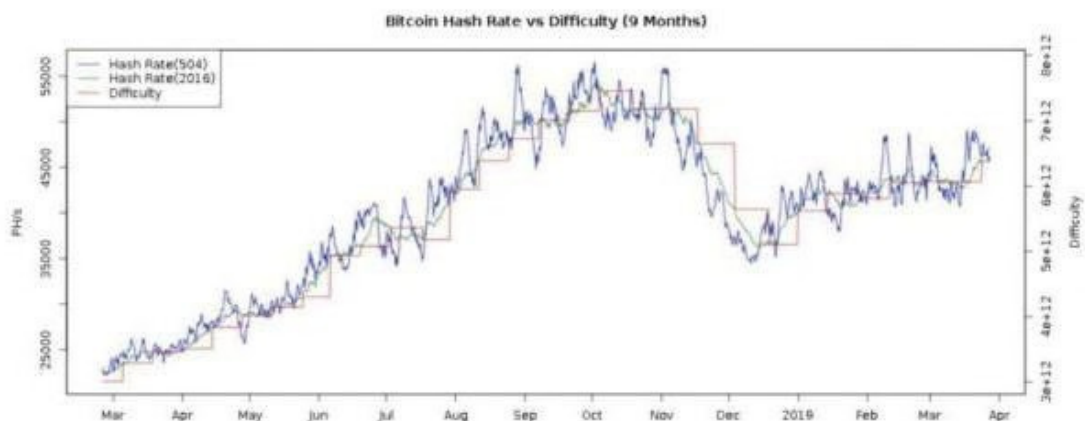
## **1.2 pain points**

-high threshold for mining

We believe that the high threshold is reflected in two aspects: the arithmetic threshold and the technical threshold. Bit City Genesis block dug out for the digital currency mining ecology opened the prelude. In the beginning of a long period of time, the founder Satoshi Nakamoto is through a CPU host mining behavior, and with the expansion of the Bitcoin ecosystem, more and more people involved in the Bitcoin mining industry in order to obtain lucrative profits. Bitcoin network after more than a decade of stable operation and the two block rewards halved, the robustness of the network increased. At the same time, the network's Hashrate and Difficulty have also increased.



After the industry innovation of CPU mining - GPU mining - ASIC mining machine and personal mining - cloud mining - mining pool, we found that almost no personal computer has the arithmetic power to obtain the power of block synchronization and conduct mining. Participating in mining requires an initial investment or the purchase of high-performance physical mining machine of high cost and technical maintenance has become the threshold of the blockchain ordinary investors to become a network node.



As a result, block rewards are invariably controlled by higher-ranking "miners", which we call "monopoly of power". This seems to be contrary to the spirit of blockchain's

decentralization (Decentralized). In addition to Bitcoin, the rest of the public blockchain using PoW (Proof of Work) consensus is also not so. This state of affairs is clearly not in line with Satoshi's governance structure for a decentralized network.

Technical threshold is also obvious, blockchain system early as a crypto-punk hands of the niche experimental creation, with a certain configuration and participation difficulty is no excuse. But after more than ten years of development, we can clearly see that the vast majority of mining client is still command line form configuration control, lack of GUI and multi-platform. But at least 95% of Internet users lack developer programming foundation. Different blockchains have different configuration and deployment of "mining" clients. Moreover, some blockchains, such as IPFS, Polkadot, etc., may even cause economic loss of nodes if they are not properly configured during mining behavior. It can be seen that the behavior of "mining" is still a lack of product friendliness. The high technical threshold of the reward is difficult to support the expansion of the global level value network. If the early blockchain complex mining preparation is not a big trouble, then in the cross-chain technology is expected to open up the "chain island" and the reality of the external information interaction to constitute the value of the Internet of the end of the blockchain, so that any network node has the ability to conveniently transform the role of the network and the means has become very necessary.

## -Waste of mining resources

According to the data provided by the official website of F2pool, at present, the proof of workload mechanism of the digital currency of hundreds of kinds, including BTC, ETH, BCH, LTC, XMR, DASH, ETC and other digital currencies with a market value of more than 1 billion U.S. dollars, 21 kinds of digital currencies with a market value of more than 100 million U.S. dollars, while the market value of more than 10 million U.S. dollars of digital currencies amounted to 62 kinds. The top five cryptocurrencies (BTC, ETH, BCH, LTC, XMR) due to mining energy consumption and the entire country of the Netherlands is equivalent to the power consumption of BTC is equivalent to Austria, while the BCH network consumes power between Moldova and Shuipuzhai. The huge amount of energy consumed in order to achieve decentralization has also become one of the controversial points of PoW coins, as well as one of the most criticized factors of the industry.

We believe that the waste of resources and energy caused by consensus can be solved by some kind of dynamic allocation of the Internet of value in the future. Each blockchain may have its own unique advantages in certain areas, but in some networks that lack "miners", by dynamically allocating high-computing power blockchain nodes to low-computing power networks, not only can reduce the waste of resources, but also maximize profits for miners. Currently unable to implement, the main reason is also the current blockchain scalability (Extensibility) and scalability (Scalability) is insufficient.

-The mining industry is in disarray

We have already discussed the importance of "mining" behavior and the "mining industry" in the whole crypto industry. However, due to the current technical barriers, high costs and serious information asymmetry, it ultimately leads to the current mining industry is full of chaos. Large graphics card or mining machine manufacturers use technical barriers to monopolize and inflate the price of mining machines, and have experienced a global harvest in disguise. On the other hand, the common speculative market of all kinds of "behavioral mining" "so-and-so mining machine", in fact, has nothing to do with the consensus behavior, is only the use of information asymmetry with the ordinary network participants or investors to create the illegal financial products in the guise of blockchain. It is only a non-compliant financial product in the guise of blockchain, utilizing information asymmetry with ordinary network participants or investors.

Thus, if you are an ordinary blockchain user without technical background and capital strength, you will find that in your favorite blockchain network, in addition to the "user" (User), you almost lost the opportunity to take on other roles in the governance system: in the classic PoW consensus system, due to the lack of large computing power equipment In the classic PoW consensus system, due to the lack of large computing power equipment, you can not participate in becoming a network node in order to obtain mining revenue; and the use of PoS (Proof of State), BFT (Byzantine Fault Tolerance) and other "coin volume", "coin age" measurement

of mining In blockchains with power and role systems, they often use private placements for the initial release of tokens, or issue them through their respective foundations, and generally distribute them in small quantities to the community after they are launched. They are not designed for the average user to participate in. The scenario is comical: miners bring security and de-trust to the blockchain network in order to earn rewards from the network, an advantage that traditional centralized servers cannot match. On the other hand, the "mining" industry is completely centralized, even powerful. The vast majority of ordinary network users and investors can only acquire tokens by buying them at a premium in the secondary market. We have never established a good solution to counter the argument that "the biggest role of cryptocurrencies lies in the secondary market speculation", and likewise, it is difficult to face the foreseeable meta-universe cross-chain era and Web3.0 value Internet era, which will see a geometrical increase in the volume of users and data.

## **2. Cross-Chain**

The development of blockchain technology has already demonstrated its great significance. Public, federated, and private chains have emerged, demonstrating to the public the possibilities of DLT (Distributed Ledger Technology) in finance, traceability, identity management, social networking, IOT, artificial intelligence, meta-universes, and many other horizontal domains, as well as the huge bubbles - we have yet

to see any meaningful deployment of real-world applications with the current technology. We have yet to see a significant deployment of real-world applications with existing technology.

Fundamentally, each chain has a set of independent systems, highly heterogeneous chain to chain, as an isolated value system exists alone. However, in the application of blockchain technology, the scalability and isolation of blockchain technology checks and balances the possibility of integration with systems outside the silo. For example, when connecting with external systems, heterogeneous systems may require geometric multiplication of computing, storage, memory and other resources, so how to ensure the processing capacity. On the other hand, it is often difficult to satisfy the differentiated needs of multiple participants in the same framework to an optimal degree. This shows that the importance of interconnecting chain and chain operations is becoming more and more prominent, and the demand for cross-chaining has also arisen. In today's Web3.0 era, the demand for cross-chaining is increasing day by day.

## **2.1 Cross-chaining**

Generally speaking, cross-chain technology is a technology that connects isomorphic or heterogeneous blockchain systems to realize the interoperability of cryptographic assets and data. Cross-Chain technology will be the key to realize the value network of blockchain, as the Internet, which was formed by connecting computers all over

the world through the TCP/IP protocol at the end of the 20th century, has brought prosperity. While increasing the expandability of the blockchain, cross-chain technology is a good medicine to save the decentralized silos, as well as a bridge for the blockchain to expand outward and connect the information outside the chain.

Currently, high throughput blockchain implementations such as EOSIO are capable of processing nearly 3,000 transactions per second in certain scenarios. In real-world scenarios, however, it seems that blockchain networks are limited to tens of transactions per second. This limitation stems primarily from the current Synchronous consensus mechanism, which requires sufficient computational buffer time to ensure secure processing, and exacerbates the fact that current blockchain systems can only be used in "slow hardware" scenarios. This is due to the underlying consensus architecture: the state transition machine. Or the way in which transactions are proofread and executed by all participants essentially binds their logic to the design of Canonicalization, or the need for all participants to agree on the likelihood, validity, and history of all transactions. Some systems, such as Factom, remove the state translator in its entirety. However, most applications rely on a shared state machine to support state transitions. Removing it simply hides the problem without providing a real alternative solution. Therefore, a reasonable direction is to decouple the consensus component from the state transition component, as routing does for And, and also being decentralized. UYT Network's strategy for solving

the scalability problem.

## 2.2 Cross-chain and consensus

Vitalik, the founder of ethereum, wrote a report on cross-chain interoperability for R3, a banking alliance chain, in which he mentioned three ways of crossing chains.



These three methods of cross-chain communication are the best practices of the current technology. While some of them have been designed by crypto-developers, others have been left unresolved, and ISPAY Chain takes the best of the pioneering technology and improves upon it, while making unique innovations in the direction of cross-chain mining.

	Notaries	Relays	Hash-locking
Interoperability types	All	All (if relays exist on both chains; otherwise one-way causality only)	Cross-dependency only
Trust model	Majority of notaries honest	Chains do not fail or get "51% attacked"	Chains do not fail or get "51% attacked"
Usable for cross-chain exchange?	Yes	Yes	Yes
Usable for cross-chain asset portability?	Yes (but requires universal long-term notary trust) <sup>36</sup>	Yes	No
Usable for cross-chain oracles?	Yes	Yes	Not directly
Usable for cross-chain asset encumbrance?	Yes (but requires long-term notary trust)	Yes	In many cases, but with difficulty

The notary model attempts to build a consistent system that almost completely abandons alidity and is able to document data efficiently. Due to the lack of global state and the scalability problems it brings, it can be seen as a scalable

program. However, the biggest drawback is that it is difficult to guarantee the legitimacy and validity of the notary's actions. Projects that use this strategy include Ripple's Interledger, an open protocol for transferring value across ledgers. However, as mentioned earlier, it strictly speaking solves only a few problems. Abandoning the effectiveness of the system is more of a castle in the air, which is more applicable to the alliance chain system, which is contrary to the construction of the global decentralized system of ISPAY Chain.

Hash lock (Hashlock) is another more sophisticated across the road. Hashlock is specifically divided into the following stages.

- A chain generates random number  $x$ , and computes  $h = \text{hash}(x)$  to send to B.

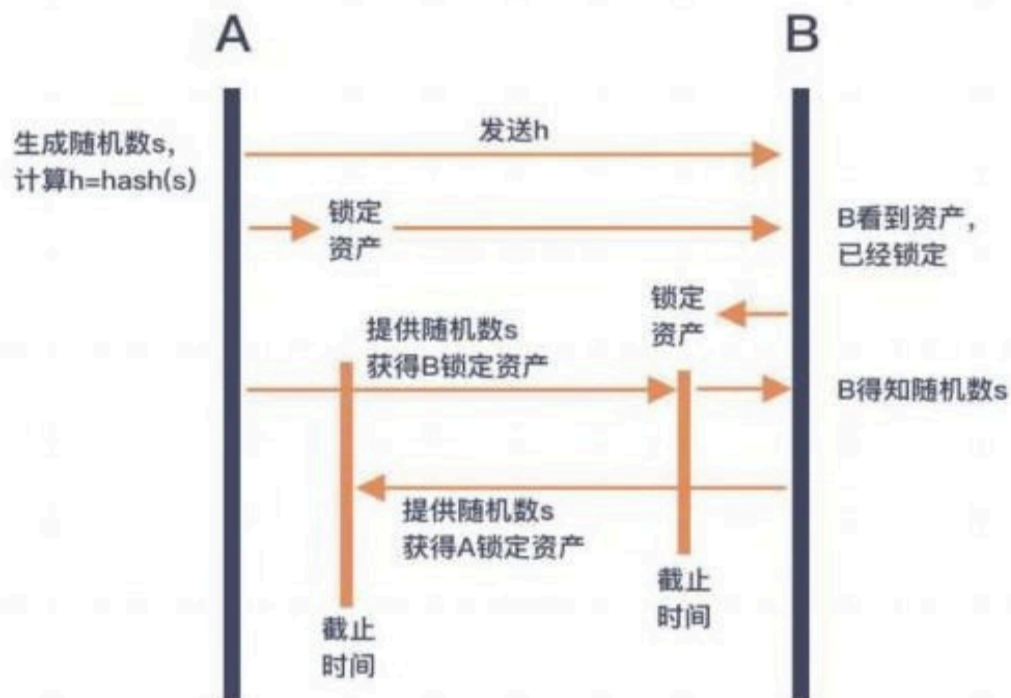
- A chain locks the assets through smart contract, and set in the smart contract: if B provides a random number  $x$  in  $2t$  time, so that  $\text{hash}(x) = h$ , then the assets locked by A will be transferred to B.

- Similarly, after B sees A locking assets, B also locks assets and sets in the smart contract that if A provides a random number  $x$  in time  $x$ , the assets locked by B will be transferred to A.

Based on this setting, the whole transaction is completed in a maximum of  $2t$  time period. The atomicity here can be verified, i.e., in order to get B's assets, A will provide the random number  $x$  to the smart contract in time  $t$  and get B's locked assets; after B learns about the random number  $x$  from the announcement, he will provide it to the smart contract in time  $t - 2t$  and get A's locked assets.

At this point, both parties have achieved an arm's length transaction. Similarly, the extension of assets to a higher dimension of the transmission, theoretically possible. Hash locking is also one of the key points that ISPAY Chain can focus on.

ISPAY Chain will be designed as a fully scalable and extensible platform for blockchain development, deployment and interactive testing. Cross-chaining has been proven to be technically feasible, but the realization of cross-chain information transmission and cross-chain pass transactions between chains will theoretically require a geometric increase in the number of nodes participating in the network as the volume of the network grows horizontally. Therefore, it is especially necessary to improve the number and robustness of consensus nodes through technical means or governance models while connecting more parallel blockchains.

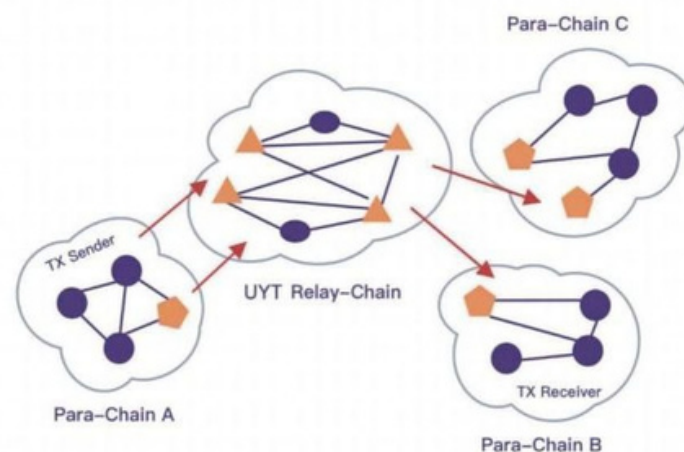


### 3. ISPAY Chain Network cross-chain solution

Cross-chaining is a solution to how to transfer assets from one chain to another, but the transfer of assets is more than just the transfer of a piece of digital code information. In a distributed system, it is more necessary to realize accurate bookkeeping in the transfer process. In a single blockchain, it is only necessary to solve the problem of how to accurately reconcile the accounts under the distributed system, but when the value transfer occurs in two or more books, it is necessary to update the data in multiple books at the same time to maintain the consistency of the books, so as to avoid double payment.

#### 3.1 scalable heterogeneous multi-chain systems

ISPAY Chain is a scalable heterogeneous multi-chain system. This means that unlike previous single blockchain implementations that focused on varying degrees of potential application functionality, it allows for the existence of a large number of verifiable, globally-dependent, dynamic data structures on top of it by providing Relay-Chains. We call these parallel structured blockchains Para-Chains.

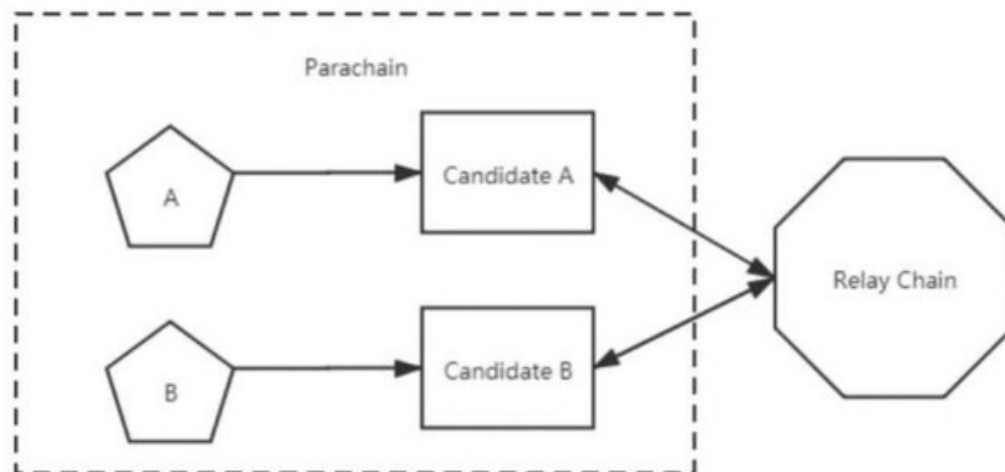


In other words, ISPAY Chain Network will be designed as a collection of independent chains (e.g. Bitcoin Ether, EOS10, BinanceChain, etc.), and compared to other cross-chain projects, ISPAY Chain Network basically solves the problem of system security after merging wells and de-trusted cross-chain transactions. This is why we call ISPAY Chain Network scalable. In principle, one problem is completely solved in the ISPAY Chain Network: it is scalable to a very large number of parallel chains. Although each parallel chain is managed in parallel by a different network model in all aspects, the system is scalable. The core element of the parallel management of distributed ledger is the cross-chain control and management of cryptographic assets within a single ecosystem. ISPAY Chain realizes that users can lock the digital assets in the A-chain owned by them, and then record the proof of assets in the A-chain of the user through the consensus of the relay chain of the ISPAY Chain, and then carry out asset rights records in the parallel chains supported by multiple ISPAY Chain Networks. This will enable the user to record his/her asset rights on the parallel chains supported by the ISPAY Chain Network. In this way, the user can apply for A-chain assets on the remaining B and C parallel chains, and then unlock the assets on the original chain through ISPAY Chain Network. With the high scalability of the ISPAY Chain Network's relay chains, we can ensure that the above operations are completed in a short, commercially viable timeframe.

## 3.2 Cross-chain protocol process

### 1. Parallel chains (parachains) stage

The Parallel Chain phase is when a collector of a parallel chain proposes a candidate block to a set of validators (validators) currently assigned to that parallel chain. The collector node is active on a unique parallel chain; and submits a proposal for a state transition along with its validity proof (ValidityProof). A candidate block is a new block proposed by a collector of a parallel chain, which may or may not be valid. It must be checked for validity by the relaychain's validators before being included in the relaychain.



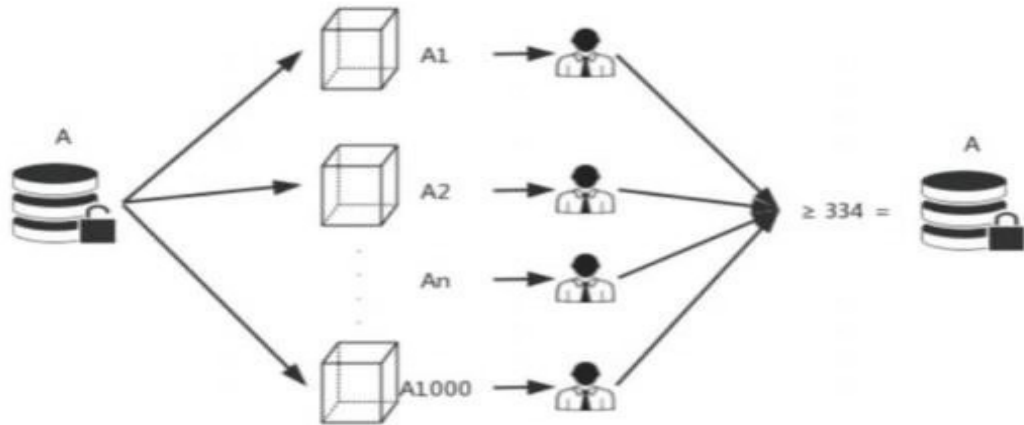
### 2. Relay-chain (relay-chain) submission phase

Each parachain assigns validators based on a random number on the chain (generated based on data from the previous 81 blocks). Then according to the shuffle algorithm for randomized allocation, each slot allocation validators are random. The flow of the relay chain is as follows. 1)Receive candidateblock 2) Use STF (StateTransitionFunction) to verify whether the state transfer is correct

- 3) Broadcast the verification result commitment&block to other validators
- 4) Once more than half of the validators have approved, prepare a candidatereceipt
- 5) preservation of block data by using the deletion-code technique
- 6) Send the transaction to the node Transaction Pool Packing  
Node packs the candidatereceipt into the block

### 3. Availability of subagreement-corrected code

The Validator needs to generate the block after the pool (block) ten proof of validity (ProofofValidity) data. Generate candidatereceipt of validator, at the same time to generate the corrective deletion code data chunkso corrective deletion code will be a data A dispersed into n pieces of data, A1...A10. A10. When more than a certain threshold (4) of the pieces together, you can restore the original data A. Polynomial interpolation algorithms can be used in such a scenario: know that two points can determine a line, know that three points can determine a parabola, know that four points can determine a cubic curve. Assuming that there are a total of 1000 Validators, deletion code chunks are also sent to the 1000 nodes, then ultimately more than 1/3 of the nodes - 334 node chunks can be recovered from the original data. The validators that receive the candidatereceipt and the corrected code will include the candi-datereceipt in the relay chain transaction pool, and the blockauthor can then include it in a block.



When relaychain generates a new block, it broadcasts the block to all validators. Each validator will perform an `importblock` operation when it receives a new block. In this operation, for each candidate receipt in the block, it will check whether its corresponding deletion code chunk is saved locally. If it is not stored locally, a warning message is issued in the p2p network, indicating that the chunk corresponding to the receipt has been omitted. If more than 1/3 of the validators have issued a warning message for a particular receipt, the block is immediately invalidated.

#### 4. Performing secondary checks in the GRANDPA mechanism

After the candidate receipt is generated and before it enters the transaction pool, the Validator needs to save the block. GRANDPA module is responsible for the finalization of the block.

When GRANDPA makes a final confirmation, it confirms the chain, not the block. The protocol applies votes transitively, and the GRANDPA algorithm finds the highest block number with a sufficient number of votes to be considered final. This process allows for the confirmation of N blocks in a single

round. all parachains in the ISPAY Chain Network follow the finality of the relaychain, and future parablocks must always be based on the candi-datereceipt in the relaychain of the final confirmation. Once finalized, the parablock will benefit from a shared security environment that allows chains to interact with each other in a trustless manner, and revoking the parablock would mean canceling the relaychain's blocks, which is very difficult.

5. the fisherman's objection procedure

6. Calling the Byzantine fault-tolerant deterministic gadget (finalitygadget) allows the chain to be finalized, the

### **3.3 Security of the ISPAY Chain Network**

All the verification in ISPAY Chain is cross-checked, after the witness verification, the fisherman and collector have to verify again. The ISPAY Chain will initiate validation from the bottom and the top, and provide mechanisms to deal with collusion to do bad things, and synchronization of rewards and punishments in the case of multiple forks. If more than 1/2 of the validators are confirmed, the candidatereceipt of the parachain will be packaged, and there is still a small probability that the validators will conspire to do bad things. Therefore, after packing the candidatereceipt into the block, ISPAY Chain Network still needs more security mechanism design to ensure security.

Secondary validation is designed for this purpose, and its main principle is to separate the block out (babe) from the

final confirmation (grandpa), providing a time to do secondary validation. When a new block is generated by the delaychain's babe, a secondary validation session will be initiated, and the delaychain will randomly select a validator to validate all the candidatereceipt in the block. The validation process includes: recovering the blockdata, validityproof, availability by correcting and deleting the code chunks; following the process of STF validation, doing a re-validation of validity; and finally comparing whether the same candidatereceipt can be generated at the same time as the ISPAY Chain. Network introduces a fisherman to establish a monitoring mechanism.

For example, in 1000 nodes, 10 groups, divided into 100 groups. If six nodes are evil nodes, the probability that they will be assigned to a group is:  $C(4/994)/C(10/1000)=1.53e-13$

If ten nodes are evil nodes, what is the probability that at

least six will be grouped together:

$$(C(6/10)*C(4/994)+C(7/10)*C(3/994)+C(8/10)*C(2/994)+C(9/10)*C(1/994)+C(10/10))/C(10/1000)=3.23e-11$$

With a 6-second block, it would take about 6,000 years to encounter one. If the number of bad nodes is doubled, the probability increases by two orders of magnitude.

## 4. economic modeling and pass-throughs

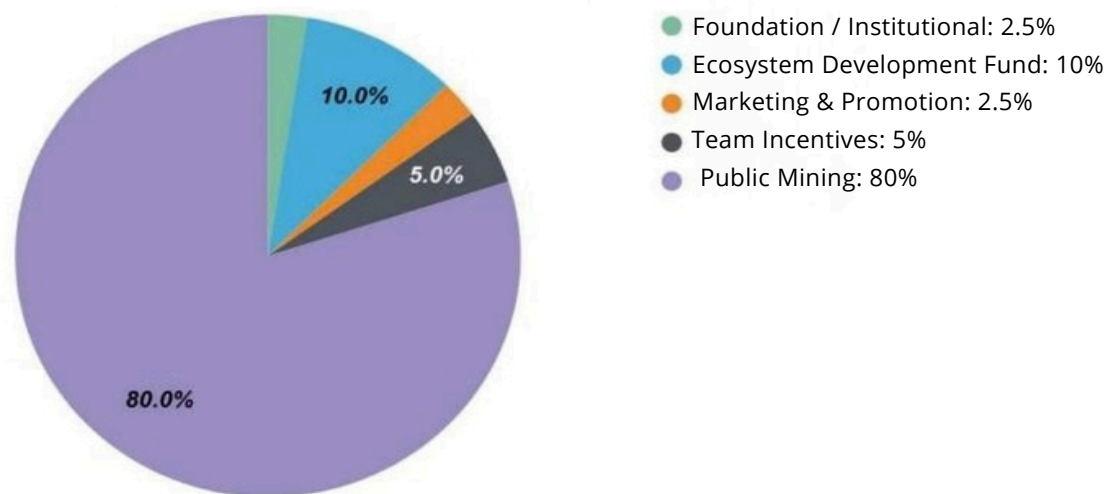
### 4.1 passes

Like all parallel chain networks connected to ISPAY Chain Network, ISPAY Chain Network also has its own native token

to represent rights and interests. The pass is called ISPAY (GlobalMutualAssistanceTo-kens), and the total issuance is 1 billion (1000,000,000 ISPAY Chain).

The ISPAY Chain is derived from the spirit of open source software and is fully compliant with the GPL (GeneralPublicLicense) agreement. 20% of the total ISPAY Chain passes, or 42 million (42,000,000 ISPAY Chain), will be issued, of which 2.5% will be used to bring in funders, 10% will be used as an ecological fund, 2.5% will be used for marketing, and 5% will be used for team motivation. Of this amount, 2.5% will be used for the introduction of funders, 10% for the eco-construction fund, 2.5% for marketing and 5% for team motivation. The rest of the ISPAY passes are generated through open mining behavior, which is fair for all community users to participate in. In addition, ISPAY does not have any public fundraising, pre-mining, pre-established nodes, etc. All on-chain behavior will be recorded by the blockchain.

ISPAY allocation (1,000,000,000)



## 4.2 Ecological Construction Fund

In addition to the early pre-allocation portion of the Eco-Construction Fund, the Eco-Construction Fund will be used to raise a stable cash flow through transaction fees, penalties, etc., in order to maintain the eco-construction and sustainability of the ISPAY Chain over the long term. The funds in the Eco-Building Fund can be utilized by submitting a proposal for expenditure, and if the Council approves the proposal, a waiting period for the funds to be allocated will be established. This waiting period is called the budget period and its duration depends on governance. The EcoBuild Fund attempts to approve as many of the requested expenditure proposals as possible without running out of funds.

As an anti-littering proposal measure, when stakeholders wish to propose an expenditure from the EcoBuild Fund, they are required to set aside a deposit totaling 5 per cent of the proposed expenditure. If the expenditure proposal is rejected, the deposit will be forfeited, and if the expenditure proposal is accepted, the deposit will be returned. The EcoBuild Fund is ultimately controlled by the Board of Directors, and how the funds are spent will depend on their judgment. At the same time, these decisions are subject to governance, so they may change in the future.

Proposals for expenditure may include (but are not limited to).

- infrastructure deployment and ongoing operations
- Network security operations (monitoring services, continuous requisitioning)
- Supporting ecosystems (cooperation with friendly chains)

- Marketing campaigns (ads, paid features, partnerships)
- Community events and outreach (meetups, pizza parties, hackerspaces)
- Software development (wallets and wallet integration, clients and client upgrades)

Funding for the Ministry of Finance comes from different sources.

1) Penalties: When a certifier is penalized for some reason, the forfeited amount is sent to the EBF and a portion of the penalty is rewarded to the organization (another certifier or angler) that reported the certifier. Rewards vary depending on the violation and the number of people reporting it.

2) Transaction fees: A portion of the transaction fees for each block goes to the EcoBuild Fund.

3) Parathreads: Parathreads parallel threads participate in the bidding for each block in order to generate the block. A portion of this bid is sent to the validator who accepts the block, and the rest is given to the EcoBuilders Fund.

### **4.3 ISPAY Chain output**

The only way to get ISPAY Chain after the release is to participate in the mining behavior, but the rules of ISPAY Chain mining are different from the regular project.

In the initial stage of ISPAY Chain Network operation, ISPAY Chain daily output is not constant, but in accordance with the daily community users pledge digital assets as computing power, all community users generated by the day

of the rewards, rewards how much to dig out to do less ISPAY, so it is set for liquidity pledge mining. In order to relay the chain to obtain high scalability and scalability, ISPAY Chain will set the block time: each block for 6 seconds, that is, every second output 0.16666 ISPAY Chain, there is a liquidity pledge can be dug at any time to mine out. (Not exclude the inflation rate indicator to control the appropriate reduction of output distribution, see 4.3 for details)

ISPAY Chain's mining behavior has a halving cycle, which is halved every two years.



Its output behavior is expressed in code form as.

```

1  # Original block reward for miners was 16.667 DNS per Day
2  Start_block_reward = 1.6667
3  # 1440000 is around every 1 day with a 1 Sec block interval
4  reward_interval = 144000
5
6  def max_money():
7      current_reward = 1.6667 * 60 * 24
8      total = 0
9      while current_reward > 0:
10         total += reward_interval * current_reward
11         current_reward /= 2
12     return total

```

Improve the degree of consensus, to ensure the stable operation of the assets on the chain, ISPAY Chain mining rewards can be obtained through the following three mining behavior:.

- Asset Pledge Mapping Liquidity Mining, which is the most basic function and the foundation of the ISPAY Chain Network architecture.

- Referral reward mechanism, i.e.: users refer users.

- The ISPAY Chain NetworkDAO organization will contribute 30% of the income from the block packaged gas to community building.

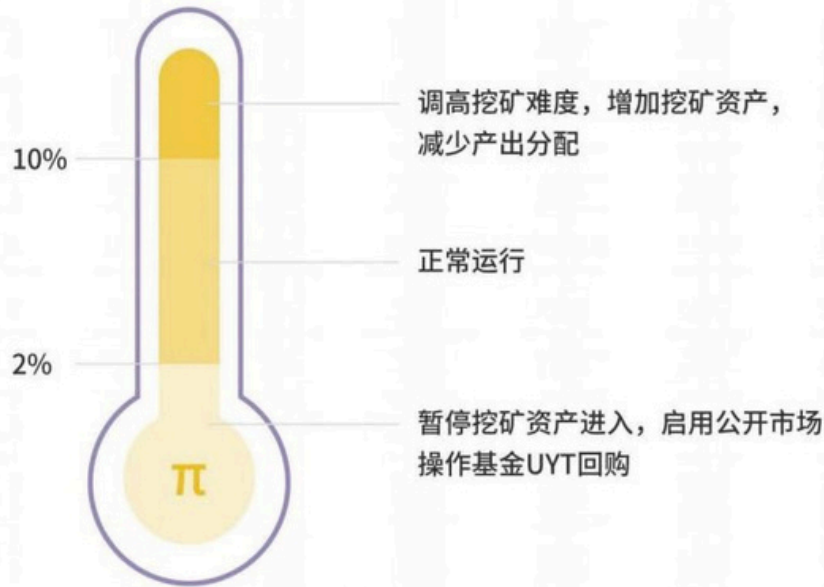
The above mining rewards will be described in detail in chapter 5 and 6. It is certain that all ISPAYs are distributed according to the arithmetic weights, and any user has an equal chance to get ISPAYs.

## 4.4 Inflation modeling regulation

ISPAY Chain adopts the inflation rate model regulation, in order to solve the "scissors" curse of mining assets increasing and mining revenue decreasing in other mining models, by setting the inflation rate Yuan [Yuan = real-time market value of the mined assets (A)/market value of the mined assets (B)] critical value interval, open market operations, and the amount of mining assets entering and the amount of ISPAY Chain to be allocated according to the market value of the mined assets in circulation. According to the circulating market value of the mined assets to regulate the number of mining assets into the number and the number of ISPAY Chain

should be allocated.

They are categorized as follows. 1) For the first time, the inflation rate range (T) is set at 2%-10%, i.e.:  $2\% \leq T \leq 10\%$ , and the entry of new mining assets will be appropriately liberalized when the upper limit of the threshold is abruptly reached or exceeded; and 2) If the market capitalization of A continues to rise while the market capitalization of B does not move, causing Wood to passively break the critical value, the difficulty of mining will be adjusted upwards (e.g., by adjusting the standard of arithmetic power), and the distribution of output will be reduced, so as to keep Wood within the critical value. 3) If there is a sustained decline in the market value of A, resulting in the Woods reaching or falling below the lower limit of the threshold, the entry of mining assets will be suspended and the Open Market Operations Fund will be activated for ISPAY repurchases; and 4) Adjustment of the meta critical value and adjustment of the arithmetic standard is requested by the development team or node. The development team, nodes, and the community vote according to the voting weights and then make the corresponding changes. 5) Destruction of the entire amount of the difference between the actual assigned amount and the fixed supply due to meta-regulation.



## 4.5 Arithmetic

In ISPAY Chain, arithmetic power is a measure of an asset's ability to mine. Mining assets are calculated according to the market price (USDT equivalent) at the time of transfer to the ISPAY Chain Network, using 1USDT = 1 arithmetic power (each coin's arithmetic power will be assigned a corresponding weight based on market conditions)

The UVT network adopts the practice of "Asset Mining" and "Vote Mining", in which ordinary users can share the revenue with node users by investing the gained arithmetic power to the node users (for details, please refer to Chapter 5).

## 5. Asset mining

### 5.1 Networks for all

As mentioned above, ISPAY Chain is generated through mining, but the distribution method is unique, and ISPAY Chain Network will provide an absolutely solid underlying

network on which to build the next-generation consensus system. Even though the ISPAY Chain Network is designed to be as minimally functional and maximally versatile as possible, in addition to its own relay chains that require network nodes to participate in the consensus, each parallel chain connected to the ISPAY Chain will require robust nodes to deal with a variety of special cases on the parallel chains, such as updating the status of the transaction queue (i.e., moving the transaction queue from one parallel chain to another) and transferring the transaction queue from one parallel chain to the other. Such as updating the status of the transaction queue (i.e., moving from the exit queue of one parallel chain to the entry queue of another), processing the transaction set of the approved relay chain, approving the final block, receiving the final state change of the parallel chain, etc. The network stress caused by these unexpected states is very high. The network pressure caused by these unexpected states requires the consensus nodes in the network to be extremely risk-resistant.

In order to encourage the nodes participating in ISPAY Chain consensus to pay stable service output, on the other hand, also out of resistance to the current strong centralized mining environment, we designed ISPAY Chain's original asset mining mode, which completely solves the problem of high threshold of independent blockchain mining in the past. With the interoperability of the relay chain and parallel chain assets, it is easy to convert the value of the assets on each parallel chain.

ISPAY Chain users can cross-link any network-supported

parallel chain digital assets address the ISPAY Chain NetworkDApp, the user has opened the door to the cross-chain, with a single parallel chain assets to use all kinds of parallel chain functions of the privileges, and at the same time, also gained the ISPAY ChainNetwork relay chain. At the same time, the user has also gained the right to mine the ISPAY ChainNetwork relay chain and the opportunity to participate in the consensus of the ISPAY Chain Network nodes. We call this kind of mining behavior: "Liquidity Asset Mining" or "Mapping Mining": the parallel chain assets mapped to ISPAY Chain Network by ordinary users will be automatically pledged and mapped to 100% of the assets on ISPAY Chain Network. The assets will be automatically pledged and mapped 100% on ISPAY Chain with the same value of arithmetic power, which can be converted to the original chain's assets after 15 days. Users can complete the mining behavior without any technical threshold and cost consumption, and get the income.

The ISPAY Chain Network has a great economic model (see Section 6 for details). Strictly speaking, asset mining is not a consensus behavior of the network, it is just a way to increase the number of backup nodes and the number of trust nodes needed for a large cross-chain in the future. However, asset mining makes the network much more robust, and the fact that everyone can participate is in line with Satoshi's philosophy of blockchain design.

## 5.2 Initial mappable assets

The ISPAY Chain Network is initially organized into two types of parallel chains

### 主流蓝筹币



### 优质平台币



## 6. ISPAY Chain Network roles and governance

As a vehicle for linking chains, the ISPAY Chain will endogenously support some form of governance structure. The underlying equity token holders involved in asset mining, as the highest authority constituents with universal voting rights and distributed control of the ISPAY Chain Network, have the right to participate in the running of the ISPAY Chain Network, replace people or dissolve the structure. We expect to create a DAO (Decentralized Autonomous Organization) structure to incorporate the needs and opinions of our users, core developers and ecosystem players, and the DAO will

receive 10% of the GAS revenues from the block to be used for community building and rewarding the best community members. The DAO members will be randomly selected from all the network players, and the whole process will take place in the ISPAY Chain NetworkDApp, and the DAO members will be supervised by all the network players. There are two basic roles in maintaining the ISPAY Chain, which we call Nominators and Validators.

## **6.1 Nominators**

Nominees, i.e. ordinary users participating in the ISPAY Chain network, entrust their security deposit to the network nodes by some means. Any user who deposits ISPAY Chain-supported parallel chain assets into the network, participates in asset mining and governance of the ISPAY Chain network will automatically become a Nominator. Nominees will have the right to vote their own arithmetic power to the network nodes, which means that they trust a specific validator (or group) to maintain the entire network on their behalf. In the process of choosing a validator, the arithmetic cannot be re-voted, and the whole voting process adopts the "1 vote 1 Vote counting rule" (which is very different from the consensus principle of some public blockchains adopting DPOS). Afterwards, according to the nominee's token voting ratio, the nominee will also receive the same proportion of the network node's total deposit reward.

When the nominee transfers the assets of the parallel chain supported by ISPAY Chain to the created wallet, he/she

can participate in mining. The assets will be automatically pledged, and at the same time, 100% of the assets will be mapped on the ISPAY Chain Network and have the same value of arithmetic power, which will be locked for 60/90 days, and can be withdrawn freely after 60/90 days. Need special instructions: each ISPAY Chain Network parallel chain assets, mapped to ISPAY Chain, rechargeable behavior changes only mapped assets, users involved in mining to create their wallet address must choose a node and selectively fill in a recommended address for account creation, in order to participate in the ISPAY Chain network in the recommended Rewards (in principle, the recommended nodes and recommended address can not be changed, unless the node selected has been canceled, you can apply for change). It should be noted that the nominee group can also apply for the establishment of their own nodes, which can be converted to the role of the verifier at any time.

## **6.2 Validators**

Verifiers, or ISPAY Chain network nodes, can be understood in a sense as the "miner role" in the classic blockchain system, with the main responsibility of packing new blocks in the ISPAY Chain network. Verifiers need to pledge enough ISPAY Chain passes and power as a deposit to maintain consistency. Currently, the applicant node must not have less than 10,000 mining assets and must pay 1,000 ISPAY Chain application fee. (The ISPAY Chain network does not charge fees upfront, and all users can be verifiers.)



### **6.3 ISPAY Chain Node Benefits and Distribution**

The main sources of revenue for ISPAY Chain Network nodes include commissions from asset mining and a share of gas revenue from packaged blocks. The revenue from asset mining other than commissions is distributed by the node to the voting users who participate in the node's asset pledge according to the predefined rules and methods.

#### **1. Asset mining revenue commissions**

The node's asset mining commission is set independently by the node's operation team according to its own development and market conditions, and the setting range is from 0 to 100%. For more sustainable development and operation and maintenance of the nodes, the system is unified for the nodes to set the commission at 10% by default, if the node operation team does not take the initiative to modify, the node will get 1% of the capital mining revenue as the node's commission revenue by default. This part of the commission will be used to support the cost of node hardware

and operation and maintenance personnel as a continuous income. (ISPAY Chain test network does not perform voting)

## 2. Asset mining revenue distribution

The global reward of ISPAY Chain will be expressed in the form of reward points, and nodes will share the corresponding ISPAY Chain according to the reward points earned, and the node operation team will share the corresponding proportion of the rewarded ISPAY Chain according to the commission ratio set by the nodes. According to the commission ratio set by the node, the node operation team will also share the corresponding proportion of the rewarded ISPAY Chain. All the rewarded ISPAY Chain other than the node commission will be shared with the top 64 node nominees according to the number of ISPAY Chain pledged by the pledged users in the order of the node nominees. The node operation team can also pledge their own ISPAY Chain passes through their node accounts to strive for more asset mining revenue sharing possibilities other than commissions.

## 3. Block packing recognizes 20% of Gas revenue

Using the ISPAY Chain Network blockchain also requires the spending of Gas to reward the miner community. Withdrawal of mining rewards, voting for prizes, ISPAY Chain matching transactions, ISPAY Chain transfers, etc. all generate Gas. node's Gas reward = node's total number of votes / all nodes' total number of votes \* all nodes' total Gas reward

## 6.4 referral incentives

ISPAY Chain's economic model is set up with detailed

referral rewards, which is a DeFiabilized way to grow.

#### 1. Users recommending users

Users fill in the referrer ID when creating an account will constitute a referral relationship, and the referrer can get 10% of the ISPAY reward of the pledged assets of the first tier of users who are referred. 5% of the intermediate push.

#### 2. Incentive burn mechanism

Whether it is a node recommender or a user recommender, such as their own mining assets lower than the recommended user assets, can not get the full amount of the recommended rewards, assets less than the part of the recommended person to be deducted from the award. Example: A user recommended B user, A user mining assets discounted 500 arithmetic, B user mining assets discounted 1000 arithmetic, then A can only get B's reward is; 500 arithmetic mining revenue \* 10%, rather than 1000 arithmetic mining revenue \* 10%, that is, the reward burn system.

## 7. Technology overview

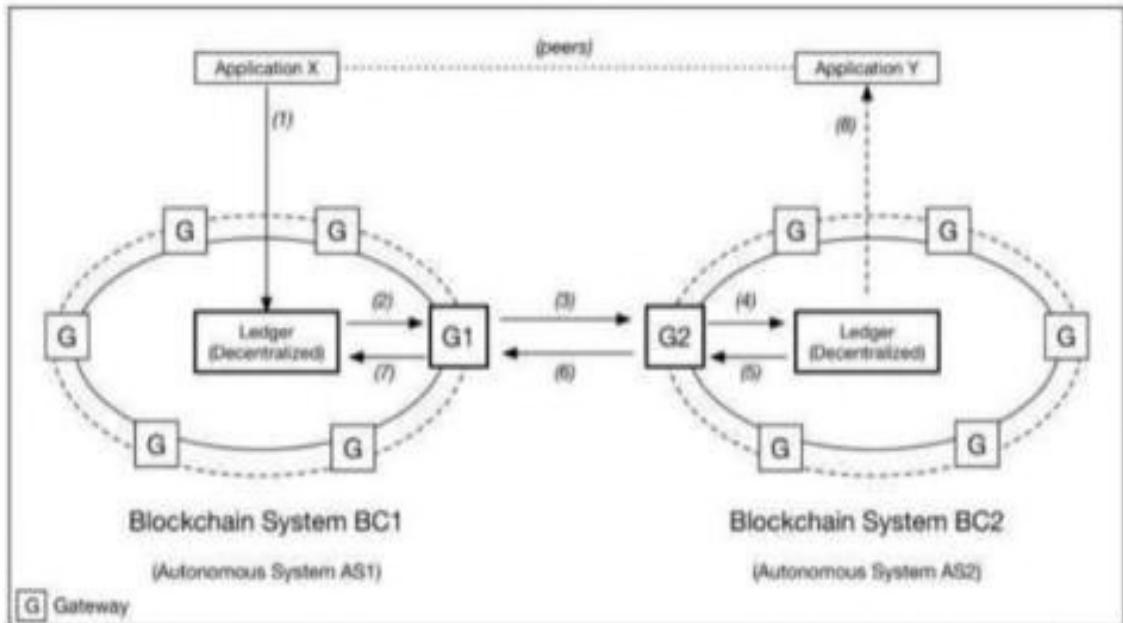
From the perspective of scalability, ISPAY Chain can outperform most of the current public chains. Vertical projects can have their security mechanisms directly handled by ISPAY Chain, and ISPAY Chain can also help many projects to complete their own sovereign blockchain by pledging ISPAY Chain to obtain the corresponding qualification rights. In addition to helping projects wishing to have their own sovereign blockchain, ISPAY Chain also supports token issuance, similar to the second-generation blockchain

represented by ETHoISPAY Chain also has the attribute of an application platform, such as the PNG project in the future will be the ISPAY Chain's Parachain, which will mainly enrich the gaming and entertainment ecosystem.

ISPAY Chain's native code contains smart contracts, and the transactions in the ISPAY ChainWallet are in essence a Runes module, where all transactions are transparent and need to be confirmed by the entire network. Therefore, ISPAY Chain itself contains the runes module, which is the most popular runes concept on the internet. ISPAY Chain's cross-chain technology will create a bigger vision than runes, because ISPAY Chain's cross-chain technology can organically combine various blockchain networks, thus creating greater liquidity.

## **7.1 Consensus**

The ISPAY Chain Network achieves mutual consensus on valid blocks through an asynchronous Byzantine Fault Tolerant (BFT) algorithm. The Byzantine Fault Tolerance algorithm using Substrate is partly inspired by the Polkadot and Tendermint projects. The advantage of using BFT is obvious: in an architecture with arbitrary network flaws, consistency can be ensured as long as a majority of the verifiers are honest.



However, the ISPAY Chain is a network that can be deployed in a fully open and public scenario without trusting any particular organization or authority to maintain it, so we needed a way to manage the group of authentication nodes (i.e., Directors) and incentivize them to abide by the rules of the network. We choose to combine BFT with a PoS-based consensus algorithm. When a user submits a transaction, the verifier collects and broadcasts the user's transaction, first to the outside of the parallel chain, and then through a relay chain to the other parallel chain as a transaction that can be executed by the accounts there.

will A node-wide PoS (Proof of State) consensus obviously lead to a wildcard, which is why PoS is often criticized, and other high-quality cross-chain projects such as Polkadot seem to have ignored this problem. Through ISPAY Chain Network's unique governance structure and role system, we incentivize all identity network nodes with a proportional distribution of issued tokens and collected transaction fees.

Since all token holders have a fair chance to participate, their assets will not suffer from inflation over time. the problem of POS is greatly alleviated.

The consensus participants of ISPAY Chain Network include four roles: Nominators, Validators, Collators, Fishermen, etc. Nominators protect RelayChain by choosing trusted validators and pledging ISPAY Chain. Nominators protect RelayChain by choosing trustworthy validators and pledging ISPAY Chain; Validators protect RelayChain by pledging ISPAY Chain to validate the evidence of collators and reach a consensus with other validators; and Collectors protect RelayChain by collecting user's shard transactions and providing proof for validators to maintain the RelayChain. Collectors maintain slices by collecting users' slice transactions and providing proof to validators. Phishers monitor the network and report bad behavior to validators. collators and any parachain full node can play the role of fisherman. The model determines that the current ISPAY Chain consensus participation will be state-of-the-art. The model contains two features, one is that everyone can participate without loss, and the other is that everyone is bound together to contribute to the ecosystem. The better the participants and nodes, the more the rewards, the more the participants and nodes will be punished for their bad behavior or laziness.

## **7.2 Relay chain operation**

Many traditional crosschain/sidechain projects have designed very complex relay chain components. In ISPAY

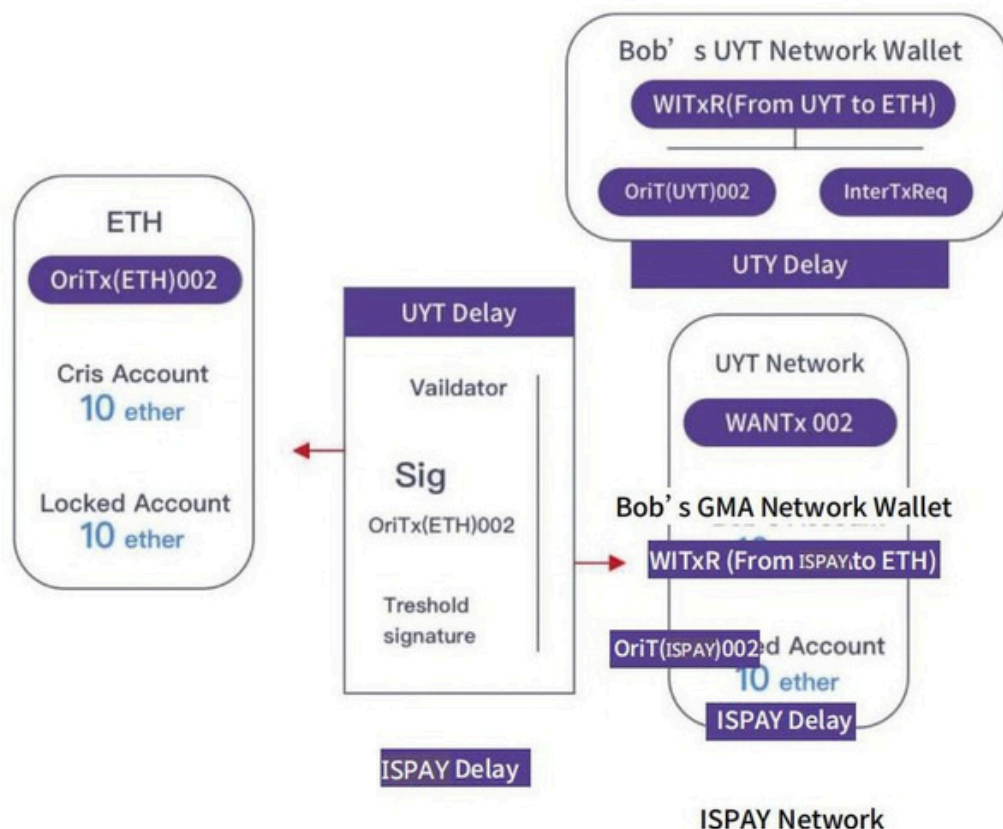
ChainNetwork, we have drawn on the experience of our predecessors, but we disagree on many core attitudes. ISPAY Chain Network relay chain is state-based, it is not UTXO-based like Bitcoin. ISPAY Chain Network relay chain contains a mapping relationship from account information to state storage, where information mainly contains balance and transaction counter (to prevent replay). The ISPAY Chain Network relay chain contains a mapping relationship from account information to state storage, where the information mainly consists of balances and transaction counters (to prevent replay) The ISPAY Chain Network relay chain is simple and robust. We have eliminated the Gas system of Ethereum and EOSIO and used a more common fee standard for all functions of the ISPAY Chainwork, which allows for more efficient execution of the dynamic code and simpler transaction formats. Due to the lack of Gas, it can be expected that the ISPAY Chain Network will not be able to deploy contracts through transactions. It is our intention to make the relay chain as non-functional as possible.

The Relay Chain includes distributed storage modules and a Web-Assembly (Wasm) based virtual machine, but with many modifications for maximum simplicity. ISPAY Chain Network will provide detailed documentation of the contracts to developers and users in the future.

### **7.3 cross-chain realization**

After the basic problem is solved, the cross-chaining of ISPAY Chain Network can be accomplished. In ISPAY Chain

Network, we need to realize that after establishing an efficient channel between parallel chains, when a parallel chain executes a transaction, it can forward a transaction to the second parallel chain or relay chain. To ensure minimal implementation complexity, minimal risk, and minimal parallel chain architectural constraints, these cross-chain transactions are indistinguishable from currently standard external transactions. These transactions are tagged with a From field and an address of arbitrary length to identify the parallel chain. Fees for cross-chain transactions, unlike in current Bitcoin or Ether systems, must be managed through the negotiation logic of the origin and destination parallel chains.



The problem of cross-chain transactions can be solved by using a simple MerkleTree to ensure that the data is true. The task of the relay chain is to move transactions from the exit

queue of the source parallel chain to the entry queue of the destination parallel chain. Transactions that have been forwarded are referenced on the relay chain, not on the relay chain itself. In order to prevent one parallel chain from sending garbage transactions to another parallel chain, it is specified that the entry queue of the destination parallel chain cannot be too large when sending each transaction after the previous block is finished. If the queue is too large after a block is processed, the destination parallel chain is seen as saturated and no more transactions are routed to it for the next few blocks until the queue drops below a critical value. These queues are managed on the relay chain, allowing the parallel chains to determine their saturation size from each other. If further transactions are sent to the stalled destination chain, this allows for synchronized reporting of failures.

## **7.4 registration of parallel chains**

With the decentralized storage module of the ISPAY Chain Network, we store a database of parallel chains that have joined the ISPAY Chain Network. The database includes the chain index (an integer) and the identification of the authentication protocol. The protocol identifier is used to distinguish between different parallel chains so that the validator can run the correct validation algorithm and then submit legitimate block candidates. An initial proof-of-concept version would focus on how to put a new validation algorithm in the client, so that a hard fork would be required for each new type of blockchain added. However, it is

still possible to make the new verification algorithm known to the verifier without having to go through a hard fork, while maintaining strictness and efficiency. Our implementation approach is to describe verification algorithms for parallel chains in a deterministic, locally compiled, platform-independent language.

According to the ISPAY Chain Network governance rules, new parallel chains can only be registered through a referendum. Similarly, the deletion of parallel chains can only be carried out by referendum, and a generous and smooth exit transition period is provided to allow them to become a stand-alone blockchain or to become part of another consensus system. The specific parameters of the parallel chain voting registration system (e.g., quorum, percentage of majority) will be formalized into a "master constitution" - system that will be updated infrequently. It is hoped that a parallel chain will never be suspended, but it is designed to be able to cope with a number of emergencies in the parallel chain. The most obvious scenario is that a block may not be agreed upon because the verifier is running multiple client implementations of the parallel chain. Because the pause operation is an emergency measure, the verifier will be used to vote dynamically, rather than through a referendum. A variety of bad user experiences, such as. For gaming applications, TPS is a prerequisite to ensure that users can participate in the game smoothly, and is the basis for motivating users to keep investing time in the game.

## 7.5 TPS

Most existing blockchain public chain applications are based on Ether virtual machines. Although the TPS of Ether is only 7 compared to that of BTC, Ether has made a considerable improvement, but the TPS is still only 15, which is far from being able to meet the needs of large-scale applications running on the chain. The initial TPS of ISPAY Chain Network can reach 1,000, and with the continuous progress and iteration of technology, the efficient confirmation speed will ensure that the new generation of ISPAY Chain Network, which is based on the substrate layer, will realize a large number of real-life applications on the chain in the future. Let's try to calculate, based on ISPAY Chain, the TPS of each Parachain is 1000, and there are 100 Parachains in the design of ISPAY ChainNetwork, at the same time, there are 1000 validators in each RelayChain, and 10 validators are assigned to each Parachain. In each RelayChain's Slot, each group of Validators only validates one Parachain. It is known that the blocktime of both RelayChain and Parachain is 3 seconds, i.e., it can be calculated:  $[(1000 \times 3) \times 100] / 3 = 100,000$  TPS, and the total number of Parachains in the ChainNetwork design is 100. 000TPS

## 8. Application direction of ISPAY Chain Network

As a highly scalable and extensible heterogeneous cross-chain solution, ISPAY Chain Network can theoretically bridge parallel crypto systems and their crypto assets perfectly, and its wide applicability is expected in the future. Therefore,

we are not limited to the areas where ISPAY Chain will play its cross-chain advantages and roles. From a forecasting perspective, we believe that the ISPAY Chain network may have good potential in the following areas.

## **8.1 DeFi**

MANetwork's implementation will clearly be the first to gain traction in the financial ecosystem. We believe that highly scalable and extensible cross-chain solutions will breed the next generation of crypto-native enterprises that don't need to be judged by their users as trustworthy, and that the financial stack will provide trust-minimizing financial products to the people and businesses that need them most. Crypto-natives that adopt the ISPAY Chain Network solution will need to redevelop the underlying modules. By that time, the ISPAY Chain protocol layer will have been tested in the market for a long time and will have guaranteed security and reliability.

## **8.2DEX**

Bitcoin utilizes a large number of double-entry ledgers to increase the security of the distributed ledger. A way to run an exchange on the blockchain to reduce its vulnerability to internal and external attacks is called a Decentralized Exchange (DEX). A centralized exchange can attract more traders by constructing a bid-ask ledger with a large volume of limit trades. In the exchange world, liquidity generates more

liquidity, so the network effect becomes more pronounced in the exchange business.

The most important reason why DEX is not able to compete with centralized exchanges is that it is not possible to quickly determine the transmission of information between two parallel chains without sacrificing consistency, so that transactions can be completed quickly. This is where the ISPAY Chain Network comes in. Through the ISPAY Chain Network, traders can submit limit orders while all parties are offline, and traders can quickly move funds in and out of exchanges and other networks. We believe that the ISPAY Chain will play an even bigger role in disrupting the decentralized exchange landscape.

## 9. Route planning

May 2022	The ISPAY Chain project cross-chain idea was born and related market research was conducted Early team participation in the
July 2022	Polkadot public offering Substrate Release
January 2023	ISPAY Chain DAO was established, proposing
April 2023	a unique technological route and research and development direction Building blockchain cross-chain models and
May 2023	developing underlying frameworks ISPAY Chain NETWORK white paper released
June 2023	IGNISVC Grant
July 2023	

September 2023	The ISPAY Chain Network test network initially realizes cross-chain interaction with Ethereum and Bitcoin
January 2024	ISPAY Chain WALLET DAPP beta release
March 2024	The development of the wallet asset pledge mining function has been completed
April 2024	Test net and wallet go-live launch
May 2024	The test network completed the accession of 100 validation nodes, the
June 2024	ISPAY ChainDAO screened global high-quality institutions, ISPAY Chain in the underlying transport protocol, state channel, governance mechanism, off-chain computing, storage and prophecy machine, payment, decentralized exchanges, stable coins, DApp development the Staking and other areas of comprehensive ecological construction
July 2024	ISPAY Chain Network 1.0 Released, POA Validates Network Operation
September 2024	ISPAY Chain Verifier Election, Governance Role Confirmation, POA Network Switch to NPOS Network
October 2024	Relay chain test network release, runes direction landing, try to build commercial grade application
December 2024	To realize mainstream parallel links into the construction of cross-chain of cross-data source, cross-organizational,

	crypto-financial platforms based on Substrate technology to carry out ecological construction in a comprehensive manner
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## 10. Disclaimer and disclaimer

This is a concept paper (white paper) to explain our proposed ISPAY Chain Network and ISPAY Chaintoken, which is written by the ISPAY Chain Network developers, consultants, and is copyrighted by the UtnetworkDAO organization. Due to the rapid development of blockchain technology, especially in the cross-chain space, its contents may be modified or replaced at any time. However, we are under no obligation to update this whitepaper or provide any additional information to the reader. Readers are reminded of the following.

### Open source

The concept of blockchain was born in the open source world, and so was the ISPAY Chain Network. We believe in the spirit of open source and the ISPAY Chain Network is fully compliant with the General Public License (GPL). Under the GPL, we are required to make provisions that prohibit anyone from failing to recognize the rights of ISPAY Chain developers with respect to the ISPAY Chain Network, or from requiring ISPAY Chain Network developers to waive those rights. Third parties are permitted to copy, use, or modify the ISPAY Chain source code, and these provisions translate into third party liability if the third party modifies the free software or distributes copies of the software.

## Open

ISPAY Chain allows any individual, organization, or company to participate in the development or provide assistance or suggestions for its technical improvement; ISPAY Chain Network allows individuals, organizations, and companies to participate in, and use, the ISPAY Chain Network under the premise of lawfulness. All values and results created through the ISPAY Chain Network are to be enjoyed by the creators; any individual, organization, or company has the right to join the UTNetwork Core Team through the ISPAY Chain Network DAO's review.

## Compliance

ISPAY Chain Network is fully open source, public, transparent and traceable. ISPAY Chain Network's blockchain passes, which are used to incentivize node consensus, are not subject to any form of private or public solicitation, and ISPAY Chain passes have functionality within the ISPAY Chain Network, but do not anchor any tangible value. ISPAY Chain passes have functionality in the ISPAY Chain Network, but they do not anchor any tangible value in themselves. ISPAY Chain will not open up or participate in any secondary market trading of ISPAY Chain that may occur.

## Exemptions

This whitepaper does not constitute a recommendation as to whether you should participate in, use, or purchase any ISPAY Chain passes in the secondary market that may arise, nor should it be relied upon as the basis for any contractual or purchasing decision. ISPAY Chain passes for any third-party spontaneous secondary market behavior, ISPAY ChainNetwork developers and participating users should not assume any legal responsibility; ISPAY Chain Network has a high level of robustness and robustness, but we can not guarantee the absolute security of the network, when the ISPAY Chain any unexpected circumstances that lead to network failure or unable to use the network. When ISPAY Chain has any unexpected situation which leads to network failure and can't be used or cause loss to third party, the developer and user shall not bear any responsibility; When ISPAY Chain finds any third party malicious network attack, damage, information theft, reputation infringement behavior, ISPAY Chain NetworkDAO has and retains the right to pursue the responsibility, and the developer and user shall not bear any legal responsibility

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