Blockchain Business Academy

Open digital asset quantitative transaction encryption system

White Paper

V2.0

BBA abstract

With the rapid increase in the popularity of the digital money market in recent years, people's willingness to invest in this field has become stronger. Digital currency has the characteristics of global circulation, attracting investors from all over the world, but individual investors are not profitable.

BBA is the world's first blockchain-based digital asset artificial intelligence quantitative trading ecosystem that integrates suppliers and demanders, as well as transaction support service providers including liquidity providers. At the same time, we grab the data of 100 exchanges around the world for trading, and high-frequency quantitative trading profits. BBA can solve the problem that investors are difficult to use quantitative trading strategies. On this platform, using the conversion channel, transaction currency, and transaction depth, you can use a quantitative trading strategy to profit from it.

BBA provides token exchanges with exchange, promotion, and community maintenance services for digital currency, stocks, futures, commodities, forecast contracts, and other financial products. It is a protocol specification and a business ecosystem. It uses Rights-backed Blockchain Securities to help participants enter the global securities market and convert more than 1,000+ global blockchain assets into equivalents through a digital currency-based BBA all-round exchange account. Securities assets such as stocks, futures, foreign exchange, ETFs and forecast contracts.

BBA provides decentralized financial services for professional blockchain currency business. With its own high-performance public chain as its infrastructure, combined with a top community of global technology and financial elites, it provides customers with comprehensive, secure, convenient and professional asset management and value-added services in the digital currency field, covering the digital currency field. Savings, investment banking, insurance trusts, futures, investment management and wealth management promote the development of digital currency investment. In short, BBA is based on the mainstream blockchain digital assets (bitcoin/Ethernet) as the benchmark for currency exchange, providing a blockchain securities exchange and quantitative trading service platform that links various assetinterests.

contents

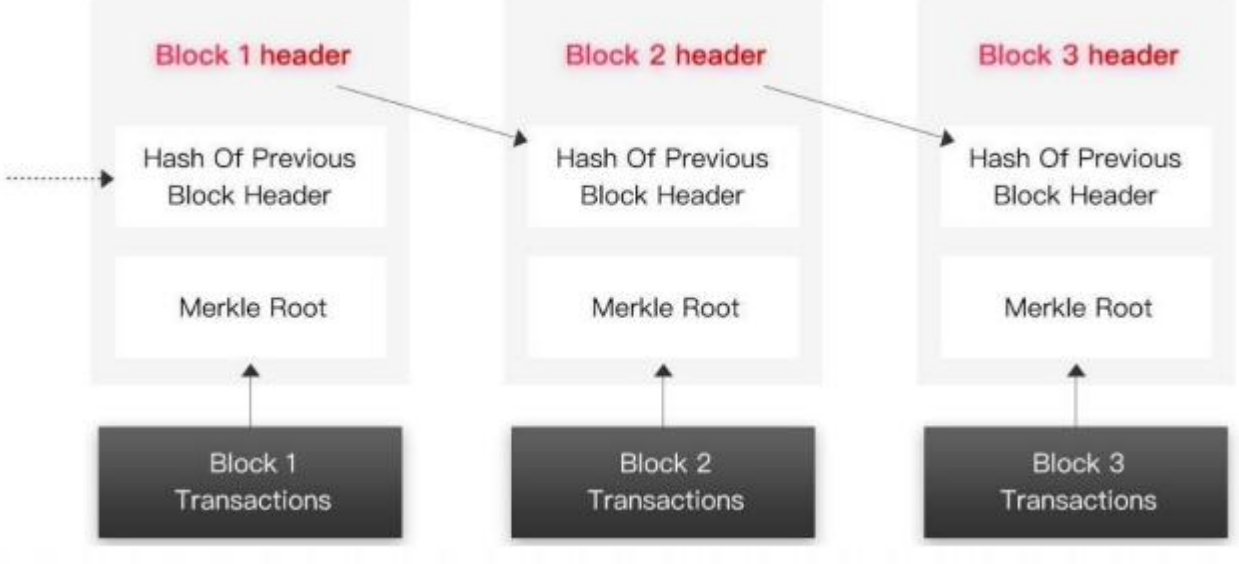
1. Background of the project

1.1 Digital currency development

In 2008, Nakamoto published a paper titled “Bitcoin: A Peer to Peer Electronic Cash System”, which first proposed the concept of blockchain. Immediately in January 2009, Nakamoto used the first version of the software to dig out the founding block, including the phrase: "The Times 03/Jan/2009 Chancellor on brink of second bailout for banks." Words like magic spells have opened up the era of blockchains and digital currencies.

Blockchain technology has gained widespread attention and support for its great development prospects. Blockchain as a basic support technology, gradually independent and applied to a variety of scenarios, as a result of the birth of a variety of digital currency based on this concept (such as Litecoin, Dogecoin, Ripple, etc.), at the same time, all kinds of general / Professional public-chain platforms (such as Ethereum, NEO, IPFS, etc.) are also rapidly evolving.

Currently, projects based on blockchain technology have been derived from the beginning of digital curr ency to finance, development tools, storage, trading, data, environmental protection and even artificial in telligence. Deloitte's latest report shows that the total number of global blockchain projects has exceeded 90000, but there are still quite a few vertical areas of the problem that are waiting for blockchain techno logy to bring a new dawn.



1.2 Blockchain is coming

Blockchain technology has begun to deploy applications around the world. The developed countries such as the United States, Britain, Japan, Germany, and Australia have recognized that blockchain technology has great application prospects in the optimization of public services and social mechanisms, and began to create blockchains. The road to development.At present, there are mainly application trends, public service level:

• Public management
•Social Security
• Intellectual property management and protection
• Applications in areas such as land ownership management

Relevant practices show that this technology can help to increase public participation, reduce social operating costs, improve the quality and efficiency of social management, and play an important rol e in promoting social management and governance. The blockchain brings technical means of effici ency improvement and cost reduction, and provides new ideas for economic and social development and governance. Around the blockchain system, we can create a wealth of products and services, a nd people can collaborate on a large scale without geographical restrictions without mutual trust. Th us, a new era of economics is presented to the public. Blockchain technology has been successfully applied in the field of digital cryptocurrency. In the future, there are also a wide range of application scenarios in economic, financial and social systems. At present, the point-to-point value transmissi on of blockchain has overturned people's imagination of the Internet. The application of blockchain has also extended to various fields of economic society. The most mature field is the financial secto r (payment, transaction settlement, trade finance, digital currency). , equity, private equity, bonds, fi nancial derivatives, crowdfunding, credit, risk control, credit reporting), the application of other ind ustries (health health, IP licensing, Internet of Things, education, social management, etc.) is also ac celerating the development stage. In the future, blockchain applications will go deep into all aspects of society.

1.3 Blockchain challenges

At present, people have widely recognized the huge application value of blockchain, but the technical development of blockchain has not yet Have reached the maturity stage, especially in enterprise applications, blockchain transaction concurrency, data storage capabilities,There are still obvious deficiencies in versatility, functional completeness, and ease of use.

Trading concurrency

At present, the high-level concurrent transaction capability of open source blockchain systems is generally not high, and the consensus algorithm is to limit performance.

An important aspect. Typical consensus algorithms used in blockchain are: PoW, PoS, DPoS,PBFT, etc., their performance comparison is as follows:

Systems		Committee Formation (Resources)	Performances	
			Throughput	Latency
Hybrid	ByzCoin	PoW	1000tx/s [1]	10–20s[1]
	Algorand	Lottery	90tx/h[2]	40s[2]
	Hyperledger	Permissioned	110tx/s[3]	<1s[3]
	RSCoin	Permissioned	2ktx/s[4]	<1s[4]
	Elastico	PoW	16blocksin110s[5]	110sfor16blocks[5]
	Omniledger	PoW/PoX	≈10ktx/s[6]	≈1s[6]
	BlueChip	Flexible	350tx/s[7]	<1s[7]
proof-of-X	Ouroboros	Lottery	257.6tx/s[9]	20s
	Snow-white	Stake	100-150tx/s[9]	–
	IntelPoET	TH12	1000tx/s[10]	–
proof-of-word	Bitcoin	PoW	7tx/s	600s
	Bitcoin-NG	PoW	7tx/s	<1s
	DECOR+HOP	PoW	30tx/s[8]	60s

表主流区块链平台的性能对比测试

Another important factor limiting performance is the book structure. At present, the typical blockchain led ger is designed as a block of the block.Chain structure means that all transactions can only be processed s equentially, from a global perspective. Due to the lack of transaction processing andIt is difficult to obtain performance close to the traditional centralized system.

注：

1 144 nodes/committee.
2 50k nodes/committee.
3 4 nodes/committee.
4 3 nodes/committee.10 committees.
5 100 nodes/committee.16 committees.
6 72 nodes/committee(12.5%adversary).25 committees.
7 4 nodes/committee.15 committees.
8 1 minute averageinterval;1block= 1 MB.
9 40 nodes.
10 Asreportedinablogpost.

Transactional concurrency in a corporate scenario typically requires processing hundreds to thousands of transactions per second, far higherThe performance of typical blockchains, including the public chain and the alliance chain, and the performance of the blockchainIt can now dynamically scale as the size of the business grows. Therefore, there is an order of magnitude difference between reality and goal.There is a need to continuously optimize and improve the high concurrent transaction performance of the blockchain system.

Data storage capability

In terms of data storage capacity, since the data of the blockchain is only added and not removed, the data is only increased or decreased.Over time, the need for blockchain systems for data storage size can only c ontinue to increase, in the processing enterpriseThis trend is even more growing when data is available.Th e main content different from the public currency digital currency is the “account balance”, and the data i n the enterprise scenario contains the structure.And unstructured data, the amount of data is very large. Ta ke the e-commerce supply chain as an example, the daily number of major e-commerce portalsAccording to the number of records, it is usually above 10 million. If it is further expanded along the supply chain, ea ch level is extended.The amount of data will be further enlarged.At present, the typical blockchain system realizes the storage of reconciliation data. The typical implementation is based on the text.System or sim ple KV database storage, no distributed storage design, so data storage canThere is also a big gap between power and actual needs, and it is necessary to explore more effective ways of storing big data.

Versatility

Blockchain needs to adapt to diverse business needs and meet data sharing across business-to-business chains.It means that the blockchain must have sufficient general and standard data to record various structural and non-representations.Structured information and the ability to meet the cross-chain requirements required to scale with the business.

Most of the blockchain systems currently on the market use specific consensus algorithms, encryption algorithms, account models, and accounts.This model, storage type, lack of pluggable capabilities, can not adapt to different scenarios.

Functional completeness

Throughout the existing blockchain platform, the model abstraction is single, and it is difficult to adapt to the requirements of rapid development of business systems. anotherIn addition, there is a lack of support for some of the features commonly found in enterprise applications, such as user authentication, multi-level authorization, and so on. Furthermore,Inter-enterprise event notification mechanism is especially important when it comes to enterprise business collaboration, but there are few blockchain platforms.stand by.

Ease of use

The blockchain is made up of a variety of technologies, resulting in high learning costs, difficult implementation, and scarcity of talent. How to let users quickly understand the blockchain, low-cost learning blockchain, and quickly apply blockchain technology to their own business, there are great challenges at present. Blockchain technology needs to lower learning and usage thresholds, support rapid implementation deployments, provide interfaces that are close to the business, and promote adoption.From the introduction of Bitcoin to today, people have tried very diverse application scenarios.

Originally the application of coins, the emergence and popularity of various digital currencies caused widespread concern and discussion. It has been found that the blockchain, which is the underlying tec hnology of Bitcoin, can be used to solve some of the pain points of existing businesses and innovate b usiness models. As a result, financial and industrial fields have begun to form alliances such as R3 and Hyperledger. The technology circle has also gradually shifted more attention from “coins” to enterpri se-level applications in the blockchain.

Extensive attempts have been made in many areas, such as supply chain management, internet finance, securities and banking, trade finance, insurance, health care, asset management, digital copyright prot ection, charity, government public services, regulatory compliance and Audit, games, charity, etc. Ho wever, the blockchain application that has been successfully implemented has been relatively small, a nd both technology and business are still in the exploration stage.

The positive practice of the industry has further consolidated and deepened people's understanding of the potential value of the blockchain, but there have been few successful landing cases, most of which remain in the concept or POC stage. The formation of this situation is affected by many factors

Inapplicable, unsustainable scene

There are a lot of cases for blockchain and blockchain, rather than starting from solving the pain points of the business, resulting in a lack of cases.Less effective value, such as depositing information that does not require disclosure. Or no combination of blockchain featuresTo design business innovation, still design business models with traditional ideas, such as still using centralization influenceSimply moving the business to the chain does not effectively expand the business boundaries.

Wrong implementation method

Without fully understanding the technical characteristics of the blockchain, it is impossible to design a reasonable technical solution. More typical caseIf the sub-block is simply used as a database, the original centralized system data is directly transferred to the blockchain.

Immature technology

The current maturity status of blockchain technology is not fully understood, and the technical solution is too optimistic. CurrentlyBlockchain has yet to be improved in many aspects such as performance, scalability, ease of use, functional completeness, and operation and maintenance costs.A more reasonable application method should be based on the application layer business system, supplemented by the improvement of the bottom layer of the blockchain.Blockchain technology applications.

Scarcity of talent

Blockchain is a multidisciplinary, integrated technology solution that includes distributed, storage, cryptography, network communications,Chip technology, economics, law, etc., high technical professional competence, technical learning, personnel training, practiceThe accumulation period is long. At present, there are many factors affecting the application of blockchain. The above is just a few points to This shows that the development of the blockchain still has a long way to go.

2.Market opportunity

2.1 Quantitative trading is the future investment trend

Quantitative trading refers to the use of procedures to execute trading strategies and order placement. Co mpared with traditional fundamental analysis and technical analysis, quantitative investment mainly relies on data and models to find investment targets and investment strategies. Different from traditional invest ment methods, quantitative investment does not rely on personal feelings to manage assets, but appropriat ely reflects investment ideas, intuition and other factors in the quantitative model through the code, using computers to help the human brain process a large amount of information, and help investors summarize t he induction. Market rules.

Compared with subjective investment, quantitative investment strictly implements the investment advice given by the quantitative investment model, and the investment strategy implemented through the progra m will not be interfered by investor sentiment. The computer can quickly respond to the market through q uantitative analysis of data, and can avoid the deviation caused by human negligence and laziness, thus ov ercoming many human weaknesses, such as greed and luck. Because the data required to quantify investm ent is even larger, the ability of the human brain to process information is extremely limited. Faced with a huge market, the quantitative investment model can rely on computers to analyze more data and capture more investment opportunities than human subjective investment strategies.

The advantage of quantifying the investment strategy itself is that it can clearly describe various investme nt concepts in different economic environments and different market environments. The United States has more than 30 years of history in quantitative trading or quantitative investment. According to Bloomberg' s data, as of November 4, 2008, the total assets of 1,184 quantitative fund management reached US 184.8 billion. Compared with the assets of 21 US dollars in 1988, the average annual growth rate reached 20%. %, while the non-quantitative fund growth rate for the same period is only 8%.

Today, ten years later, 60% of the orders in the securities market are issued by the program. More than 80% of the large US funds and one-third of the large Asian funds have used quantitative investment strategies. Quantitative transactions have gradually become Future investment trends in the financial sector. In the future, digital currencies led by BBA, etc. will lead digital assets The transaction is moving towards a more standardized and stable path.

2.2 A huge market without risk arbitrage

Arbitrage is a risk-free trading activity in the digital currency market. While the same transaction is tradin g in two or more markets, there is a certain inherent price difference between the pairs of transactions due to factors such as differences between regions. However, due to the fact that the supply-demand relationsh ip, market environment and trading rules between the markets are not completely consistent, there will be a situation in which price conduction is delayed or distorted. Therefore, the inherent price difference will deviate. Cross-market arbitrage is also the opportunity to use market imbalance to buy (or sell) certain tra ding pairs in one market and sell (or buy) the same trading pairs in another market. To achieve a profit spr ead.

Just in the digital currency market, there are exchange rate differences between various types of digital currency currencies, and the exchange rates between different exchanges are different, reg ardless of whether the market is in a long market or a short market, as long as there is a differenc e between different trading pairs and exchanges. Investors have the opportunity to use quantitativ e trading strategies to make a profit.

At this stage, the global digital currency daily trading volume reaches $40,000,000,000. If the pr ofit margin is 1% based on the total arbitrage volume and the profit margin is 0.5%, then only ar bitrage strategy can be used to get 2 million US dollars per day. The annual profit can reach 730 million US dollars, and the profit margin is very considerable.

The reason why arbitrage has a huge market space in the digital currency market is because retail investors have strong trading impulses. Retail investors rarely compare the current prices of mul tiple exchanges at the time of the transaction, so there is no greater sensitivity to the spreads betw een exchanges and trading pairs. The arbitrageurs can use the platform mechanism of the arbitrag e system to complete the risk-free arbitrage investment behavior according to the different prices in different markets.

2.3 Investor's dilemma

At this stage, the total number of people investing in digital currencies has reached tens of millio ns of people, most of whom are involved in investment in the form of retail investors. Most parti cipants do not have a complete trading strategy when investing in digital currency. In the face of price fluctuations in the secondary market, they do not know when to buy and sell, resulting in f requent losses. Quantitative transactions in the digital money market just address investor concer ns and provide them with solid returns.

In real life, investors often have difficulty applying quantitative trading strategies to actual digita l currency investments because of various conditions. In the face of ordinary investors and quant itative trading investors, we have summarized their troubles:

Trouble of ordinary investors

The number of digital currency currencies that can be traded on secondary market exchanges wo rldwide is 1,486, resulting in nearly 10,000 transactions. At the same time, there are more than 1 80 exchanges around the world, each with different transaction currencies and pairs. For ordinar y investors, it is difficult for them to monitor the price of several exchanges at the same time. At the same time, because of their limited ability to acquire information and data and build models, this poses a significant obstacle to the construction and use of quantitative trading strategies.

Quantify the troubles of trading investors

For investors with a certain quantitative trading base, it is difficult to implement quantitative trad ing models and complete backtesting functions. Because the trading interfaces of different excha nges are different, it is difficult for investors at this stage to develop a common interface based o n their own capabilities. It is used to collect data from various platforms and complete strategic t ransactions. It is indirectly difficult to use existing resources to achieve cross-market and cross-t ransaction. arbitrage.

3.BBA Vision

BBA's mission is to bring appropriate digital currency financial products and services to all investors thro ugh blockchain technology and professional communities, and to explore and construct a decentralized sta ble digital currency financial ecosystem through blockchain technology. Investors bring protection and gu ide them to avoid risks, bring value-added assets, and ultimately contribute to the chaotic blockchain indu stry and the disruption of the digital currency market.

The BBA will greatly enhance the investment professionalism of the existing digital currency market. Thr ough a series of smart contract-based financial products and smart financial community services, BBA inv estors are no longer fully exposed to risks, allowing digital currency assets to own Better investment, circ ulation and inheritance channels, not only the profitability of the BBA founding team will return to the ma rket, but also the profitability of BBA investors will also feed back the community and form a virtuous cy cle of financial ecology. BBA is also an innovative system. In the future, it will not stick to the existing pr oduct and service design. It embraces all innovations that are conducive to the development of investors a nd blockchain, and constantly enhances and stabilizes its professionalism in the digital currency market. , authority and influence.

In the 7X24-hour digital currency trading market, because the number of retail investors is very large, the number of trading currencies is large, and the exchanges are very scattered, which makes the quantitative trading strategy very suitable for such a market environment where price conduction is lagging or even di storted. And because there is an exchange rate difference between the trading pairs, there are also currenc y differences between hundreds of exchanges, which creates a huge arbitrage space. However, ordinary in vestors often become victims of market volatility because they do not have available quantitative trading i nvestment tools.

Looking at the digital currency market, there is no mature professional platform at this stage to help investors conduct quantitative transactions. Under such an opportunity, we will establish a BBA platform. BBA is a one-stop quantitative trading platform used in the digital currency mar ket. Investors can use the tools and strategies provided by BBA to easily complete quantitative t ransactions, reduce the threshold for the use of quantitative transactions, and help investors achi eve sound investment returns.

4.BBAIntroduction

Although the blockchain was initially highly anticipated in the core financial sector, due to fact ors such as technology maturity and regulation, the blockchain was first used in the non-core b usiness of the financial industry, and there were landing projects like Jinqiu and Oklink.

Beyond the financial field, with the continuous exploration of technology and application scen arios, blockchain technology has allowed us to see many very sexy projects, such as the border s reported by 36An, Gongxinbao, and Magic Orange.
With the increasing number of blockchain developers, there have been a variety of successful p ublic, private and alliance chain applications on the market, but all have encountered a problem, the assets and interests in their respective chains can only be run in their respective circles. Ho wever, it is impossible to interact with assets on other home chains, let alone with actual assets.

Therefore, BBA hopes to connect the digital asset world with the atomic world and build a dec entralized network of registration and circulation of diversified assets.

In short, BBA is a blockchain interaction protocol for diverse digital assets. Different types of assets (revenue rights, unlisted shares, claims, digital currencies, etc.) running on the BBA can be exchanged and gambling through the agreement. Interact with complexity based on smart c ontracts.The BBA is designed to be compatible with Bitcoin UTXO design, enabling high-spee d concurrency and controlled anonymity, as well as leveraging Bitcoin and the Ethereum ecosy stem.

The BBA32, BIP43, BIP44 concept will be introduced in the design of the BBA wallet system, and multi-currency, multi-account, multi-address and multi-key support will be provided by H ierarchical Deterministic Wallets (or "HD Wallets"); at the standard level, support National sec ret standard (SM2, SM3) and unified asset identification ODIN.

The BBA will form a complete ecological closed loop with wallet as the traffic entrance, and c over the most profitable projects in the blockchain field. Its goal is to create a security steward of digital assets and become the leader in the wallet field.

5. Blockchain + Smart Contract + Artificial Intelligence + Quantitative Trading

A smart contract is a "programmable contract," or "contract intelligence."

The "intelligence" is the intelligence of execution, that is to say, to achieve certain conditions, the contract is automatically executed, such as automatic transfer of securities, automatic payment, etc., which will be an important development direction of blockchain technology. Since the blockchain can realize the point-to-point value transfer, the corresponding programming script can be embedded in the delivery, and the unforeseen transaction mode can be handled through the smart contract to ensure that the blockchain can continue to take effect. This kind of programmable script is essentially a list of numerous instruction summaries, achieving pertinence and conditionality in value exchange, and achieving specific uses of value. Therefore, any price-exchange activity based on blockchain can be hard-controlled by means of intelligent programming for common use, direction and various constraints, eliminating the cost of legal or contractual constraints.

In order to avoid the problem of slow transaction speed and few transaction orders in the past decentralized platform, BBA provides artificial intelligence (AI) high-frequency automatic quantization function based on smart contracts.

AI technology is the foundation of the BBA blockchain platform. With AI, you can safely apply rules when processing transactions. You can use them to automate the verification steps to encode the conditions that were included in the signed physical contract in the past. AI means that BBA blockchain trading is much more than just buying and selling currencies, and there will be a wider range of instructions embedded in the blockchain. A traditional contract means that two or more parties agree to do something or not to exchange something, and each party must trust each other to fulfill its obligations. AI smart contracts don't have to trust each other, because AI smart contracts are not only defined by code, but also enforced by code, completely automatic and unable to intervene.

BBA is committed to developing innovative blockchain financial ecosystems, expanding the application boundaries and technology boundaries of blockchain technology, enabling all Internet users to appreciate the value of blockchain technology. Through the BBA AI (Removal Brick Robot), it is possible to identify the difference and transaction volume of digital assets on each trading platform, decide whether to execute the arbitrage task, and start the arbitrage transaction at the right time to become the industry's artifact.

One of the great advantages of AI is the uninterrupted execution of a program or contract, but the execution of certain contracts depends on some external data facts or evidence. Generally speakin g, these data facts will have some credibility. By submitting data through third parties, one of the t rends brought by BBA AI in the future is that trusted third parties will become AIs provided by m ultiple trusted third parties to achieve higher participation. Rate and reliability.

Quantitative trading refers to the use of procedures to execute trading strategies and order placement. Co mpared with traditional fundamental analysis and technical analysis, quantitative investment mainly relies on data and models to find investment targets and investment strategies. Different from traditional invest ment methods, quantitative investment does not rely on personal feelings to manage assets, but appropriat ely reflects investment ideas, intuition and other factors in the quantitative model through the code, using computers to help the human brain process a large amount of information, and help investors summarize t he induction. Market rules.

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BBA can automatically select the best trading pair in the reserve pool, complete the quantitative trading se tup and start high-frequency automatic trading, and gain profits through trading mining. The user can sele ct the optimal time to ensure the depth of the transaction.

5.1. support currency exchange

Currency exchange refers to the exchange between different encrypted digital currencies, whic h can be based on real-time ratios. Thanks to currency conversion, users are allowed to trade d igital assets or realize digital assets more quickly and easily.The opening of all digital assets a nd BBA exchanges in the BBA and the exchange of BBA and ETH. In the later opening of the BBA, there were many exchanges of all digital assets.

5.2 Support OTC over-the-counter trading

The inquiry trading method (Over-The-CoBBAter.0IC mode) is also called the over-the-count er trading method, which refers to the transaction conducted by the market trading entity on th e basis of bilateral investment, through independent bilateral inquiry and bilateral clearing. No t trading Trading within the platform, but privately closing the transaction at a price above or b elow the trading platform or with other conditions. BBA supports over-the-counter trading.

5.3 currency transactions

The later use of currency transactions in BBA can directly realize the exchange between digital assets, which is convenient and fast, and the economic cost and time cost are relatively economical.

5.4 security

(1) BBA digital asset wallet development is based on the bottom-level technology of blockchain. It is the world's first super blockchain digital asset smart wallet that integrates decentralized token wallet and decentralized trading platform.

(2) The user's digital asset storage and transaction records are recorded on the blockchain network ledger. Instead of the BBA server, only the personnel who master the private key can be controlled.

(3) support two-way anonymous transactions

(4) encrypted communication

(5)BBA has a very high scalability, transactions can be confirmed in milliseconds, can reach a million TPS;

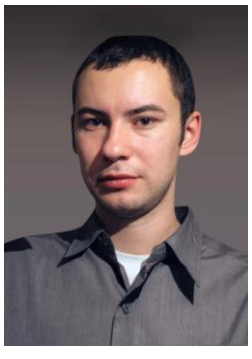
(6)the chain payment scenario can also use BBA to achieve 100% privacy of transaction data.

6.BBAcore team

BBA's core team comes from the UK, including internationally renowned companies such as the United States; it also incorporates ETH's core technology members, experts in the blockchain field, and the founders and leaders of the early blockchain community, who are interested in equity and numbers. The technical bottom layer, architecture design and risk control of asset products have deep understanding and rich theoretical foundation and practical experience in related fields.

BBA The core members of the team include:

JONES CHRISTOPHER



Rich technical experience and project management experience, research areas include cryptography, algorithm introduction, blockchain principle, design, application, and actual combat. Years of C/C++ development experience, good at technical public relations, research, improvement and innovation, system architects, design and implementation of large-scale concurrent control layered server architecture. Current CEO

SMITH MEGAN IRENE

A professional Chartered Management Accountant and Finance Specialist, an d Chairman of the Board of Directors of the UK Financial Support Fund. He i s a member of the Supreme Finance Committee and a member of the board o f directors of Gulf Navigation Holding PJSC and Taleem PJSC. Al Saleh is a member of the UAE Auditing Professional Supervisory Board and a member of the Chartered Institute of Management Accountants. He holds an EMBA d egree from the University of Sharjah and is currently a CFO.

KHANNA AMAN

Ph.D. in Computer Science from Stanford University, Ph.D. in Finance, in the core technology of financial technology - "blockchain", can create a world record of clearing every 15 seconds, surpassing the international general two-minute clearing routine, once in the US Silicon Valley Technology Google has served for many years, and then devoted himself to the field of financial investment. He has experienced the pioneering development of the blockchain investment market and played a vital role in it. He is currently the CTO.

JORDAN BOLTON

A real service service leader who is truly improving the achievements of the lowest level of employees. With many years of experience in the cooperation of top international service industry management organizations, the company has rich experience in management of various types of service industry organizations at home and abroad. He has in-depth understanding and research on financial investment, capital operation, and financial market development. He has accumulated a large number of partners in the field of financial investment and is now responsible for COO.

7. BBA positioning

The era of "bit tools": Bits as a product of auxiliary efficiency improvement, such as: excel form, email mailbox; developed into the following "bit currency" era: bit form exists, no physical carrier and media corresponding value symbols such as: Bitcoin, Ethereum, and various public and alliance chain tokens; then to the broader and more diverse "bit asset" era: all valuable, exchangeable atomic assets, such as real economic gains, equity, claims, securities Assets, etc., can all be transferred to a blockchain distributed book that cannot be tampered with, traceable, and symmetrical, and interact with the forecasting market such as finance, gaming, and insurance through programmable smart contracts.

However, buying a software (bit tool) and digital currency (bit currency) from the atomic world already has mature software stores such as Appstore, exchanges such as Coinbase, but there is no transaction or interaction for diversified bit assets. A complete, proven protocol system carries its interactions. Unlike the general-purpose smart contract platform such as Ethereum, BBA is designed as a dedicated public-chain platform for the asset sector and attempts to solve the following problems:

- How to make digital assets realize the non-replicability of atomic assets through blockchain technology?
- How to establish a mapping relationship between atomic assets and digital assets and solve compliance problems?
- How to break the gap between the atomic world and the digital world and promote the efficient circulation of assets under the chain?

The BBA is the world's first public chain to support the development of digital assets, and the technical architecture supports 10 million levels of high concurrency. In fact, BBA can realize the certification of equity assets including stocks, bonds, options, futures, etc., and even support the certification of goods, services and special resources.

For the digital asset market, BBA can be applied not only to off-exchange digital asset trading services with low transaction performance requirements, but also to providing underlying technology and cloud services to major stock exchanges around the world, promoting global integrated equity markets and new formats. Formation.

BBA's positioning includes a center, three functions and five sections.

One center: Provides three functions of blockchain technology solutions for the global digital asset tradin g market: promoting asset certification; helping the real economy to develop; facilitating investors to alloc ate assets.

Five sections: BBA (BBA Coin), BBA Wallet (BBA Wallet), BBA Digital Asset Trading Platform (BBA Exchange), Open Platform (Bluechip BaaS), BBA Community

(BBA commBBAity). BBA has truly realized the leap of blockchain application, completely changing the existing “blockchain+digital currency” pattern in the industry, starting with “blockchain+digital asset ma rket” and promoting “blockchain+real economy”. Really promote economic development and wealth crea tion.

"Our mission is to connect the digital world with the atomic world and build a decentralized network of re gistration and circulation of diversified assets."

BBA will greatly promote the exchange, interaction and flow of digital information and digital assets of e xisting value attributes. New digital assets will also be generated through contracts and configurations. Th e BBA will also create applications in a decentralized, market-based management agreement, while provi ding unique incentives for local and global digital economy participants. As a medium, BBA (BBA coin) is fully prepared to become an economy that contributes to information profitability, an amplifier of infor mation asset performance. In the future, these information assets will not only be used for the daily work and life, but also the provider of “data food” for artificial intelligence and IoT devices to further accelerat e their influence on the atomic world.

8. BBA's main innovation

8.1 Standards for building a diversified bit asset registration

The BBA aims to establish a global open Byte Assets registration platform. It's also easier to cr eate and define and generate a digital asset, and it's easier for users to understand.

8.2 Interactive tools for building diverse digital assets

From the most basic asset exchange tools (the exchange of agreements between different forms of digital assets, ownership changes), BBA will also support more complex forms of interactio n, such as:

A triggering tool: The asset is voted according to the contract, producing a deterministic Y/N B oolean result or a numerical result to activate the atomic world's participants to share the data s et;B forecasting tools: For example, through zero-sum game, two or more parties gamble, gene rate prediction information about whether a flight is delayed, and two candidates who will win, and use this forecasting information in real-world financial hedging, insurance and other fields.

8.3 Major innovations

(1) Compatible with Bitcoin UTXO design

The BBA consists of three layers: the data transaction and transport layer, the contract layer, an d the asset interaction layer. The asset interaction layer operates on assets by invoking contract s, where the Bitcoin UTXO model and transaction data structures are compatible at the data tra nsaction and transport layers for high-speed concurrency and controllable anonymity.

(2) Universal address format

BBA32, BIP43, BIP44 1 concepts will be introduced in the design of BBA wallet, and Hierarc hical Deterministic Wallets (or “HD Wallets”) will be used to provide support for multi-curren cy, multi-account, multi-address and multi-key. BIP44 provides a five-layer path suggestion: (1) determine the path rules; (2) currency; (3) account; (4) change; (5) address index. Users only n eed to save a master private key to control the asset wallet of all currencies and all accounts. BI P44 provides good support for the zeroing mechanism. Users can avoid multiple signatures of t he same private key without multiple collections at the same address, thus avoiding the risk of private key exposure.

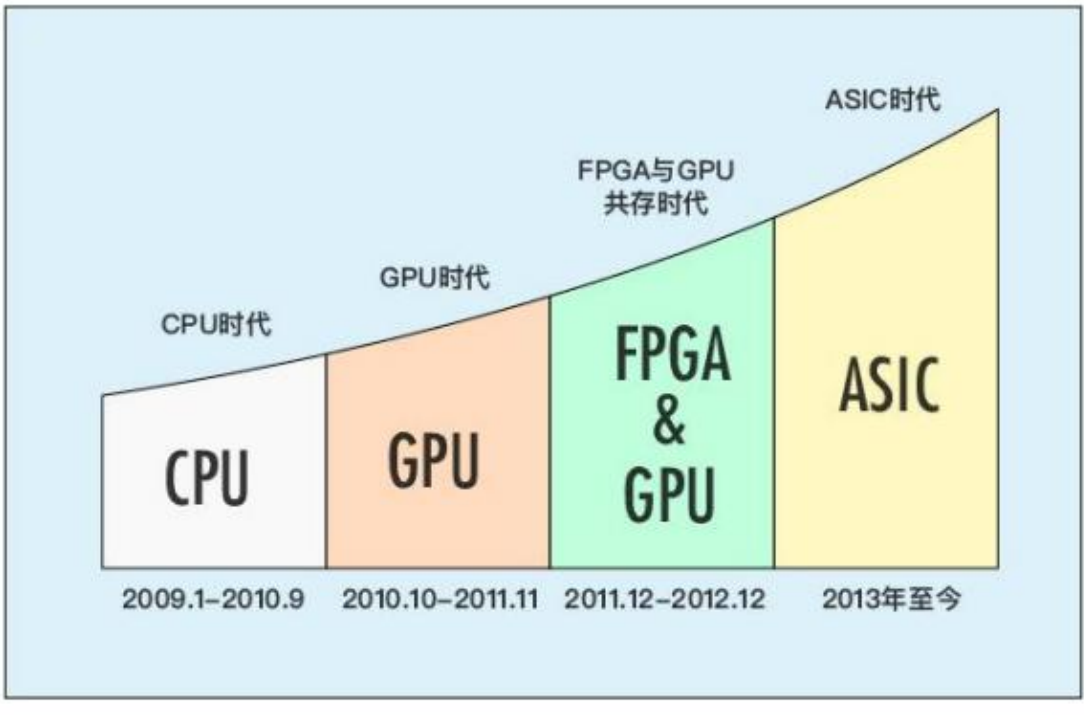
(3) Support national secret standards

BBA's asset control and operations involve private keys, public keys, and address systems. The traditional bitcoin code implementation encrypts ECDSA and SHA256 hashes based on elliptic curve functions. The BMI SM2 Elliptic Curve Public Key Cryptography Algorithm 2 and the SM3 Cryptographic Hash Algorithm 3 will be further supported in the BBA. When implementing the same computational complexity, SM2 processes the private key much faster than the RSA and DSA algorithms, and the encryption efficiency is higher. The compression function of the SM3 algorithm has a similar structure to the compression function of SHA-256, but the design of the SM3 algorithm is more complicated. For example, each round of the compression function uses 2 message words.

(4) Asset naming using ODIN logo

The naming of assets on the chain adopts ODIN (Open Data Index Name) open data index naming standard, which utilizes the transparent and credible and non-tamperable characteristics of the blockchain to ensure the uniqueness of the entire network and the entire chain of assets. Unlike other blockchain-based identification solutions, ODIN is based on the Bitcoin blockchain and supports the extension of multi-level tags to introduce other blockchains (public, federated, private), not to squat strings. Instead, the block record location is used as the identity name.

(5) Artificial intelligence ASIC chip-friendly POW algorithm



Using the artificial intelligence ASIC chip-friendly POW algorithm, the mine can be used for AI accelerat ion services after being idle or eliminated. Bitcoin mining machines and artificial intelligence deep learnin g are comparable, they rely on the underlying chip for massively parallel computing. Most of the deep lea rning algorithms can be mapped to the underlying linear algebra operations. Linear algebra operations hav e two major characteristics: First, the flow of Tensor is unconventional and predictable; second, the comp utational density is high. These two features make AI deep learning particularly suitable for hardware acc eleration4. The Bitcoin miner chip has gone through four phases: CPU, GPU, FPGA and ASIC.

In the era of CPU and GPU, mining thresholds are low, and home desktops or notebooks with discrete gra phics cards can be used for mining. With the advent of FPGA and ASIC mining machines, the Moore's La w of Bitcoin Mining has grown rapidly. At present, the calculation power of mining machines has reached the level of GH/S, and the processing precision of silicon wafers has increased from 130nm to 14nm, whi ch is close to the limits of current semiconductor technology. . However, the workload proof mechanism h as been criticized because the application range of the mining machine hash calculation is too narrow, and it can only be used for mining, resulting in great hardware and energy waste.

If we introduce matrix operations and convolution operations in the mining process of mining, the mining machine to artificial intelligence

ASIC is more friendly than GPU and CPU. Therefore, the amount of computation required by the blockch ain consensus can also be applied to AI hardware acceleration services, resulting in greater social benefits: on the one hand, the mining machine market will stimulate the artificial intelligence market and expand T he demand for deep learning ASIC chips, like the current graphics-friendly PoW blockchain, promotes th e graphics card market; on the other hand, mines that are eliminated or idle can be applied to AI hardware acceleration services, saving mining costs and forming A win-win situation.

(6) Use sidechain to support cross-chain asset trading and dividends

To operate on other chain assets, developers can create a small version of the X-chain (other chain) repeat er XRelay on the BBA, and Dapp developers on the BBA can make APIs from smart contracts to X-chain repeaters. Called to validate X-chain network activity for cross-chain communication. The transaction an d dividends are then completed in the contract.

(7) Class "Separation Witness" design

BBA designed a distributed ledger protocol where multiple assets can interact. Multiple chain s with this protocol can exist independently and can be traded across links so that different ope rators can interact in the same form. Adhere to the principle of least privilege, in which the B BA block design separates the data from the Witness and signature parts to achieve separation of asset management and distributed ledger synchronization control. Better programmability and contract support are achieved, and interfaces are reserved for subsequent bypass channels.

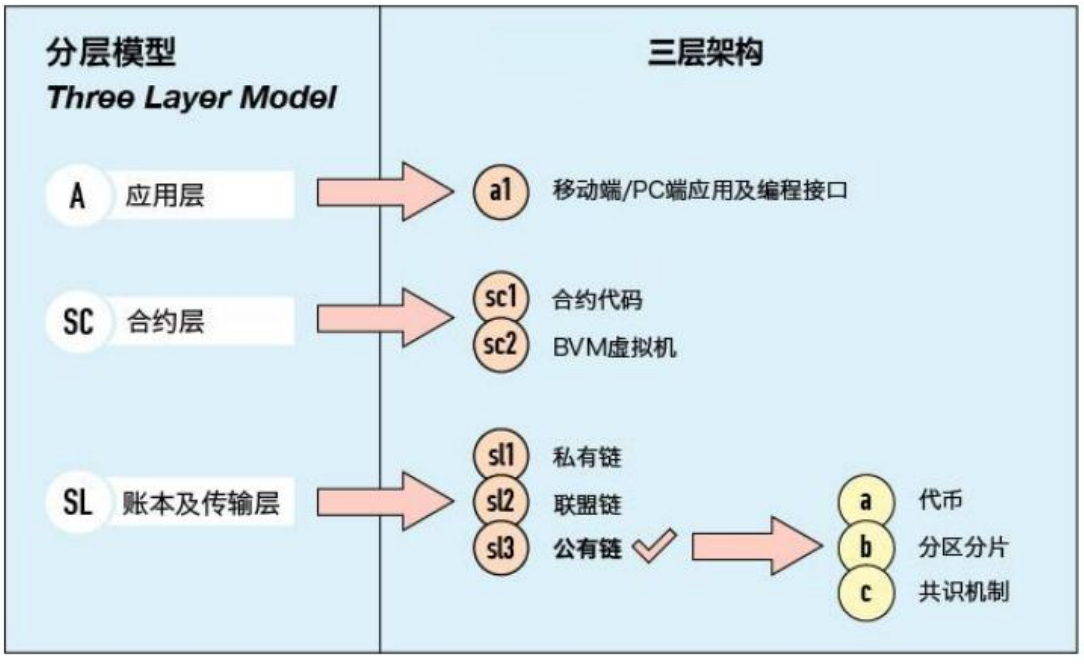
The chain protocol allows any network participant to define and distribute assets by writing a custom "publisher." Once issued, the asset unit is controlled by the "control program." The co ntrol program is implemented in a Turing-complete programming language that can be used to write complex smart contracts.

(8) Enhanced transaction flexibility

Unlike the Ethereum account model, BUTXO can verify transactions in parallel, using a mech anism similar to nonce to ensure that each unspent output can only be referenced by at most o ne transaction. In addition, the BBA supports ultra-light clients, which are naturally thinner th an Ethereum and create a lightweight world state. Participants only need to remember the unu sed outputs, because the transaction will bring other relevant information (such as asset ID). S hare, control program). Another feature of BBA is that compact verification allows only the cl ient to verify the transactions involved in the block without having to verify all transactions, a s long as the number of signers is trusted. The whole process is proved by Merkle. The client c an also delegate the task of monitoring the entire blockchain to the server it trusts. The block c an be forward-backed version compatible by soft fork. BBA not only supports inter-block com munication in the implementation of this protocol (but needs to ensure the uniqueness of the g lobal asset ID: each sub-chain is forked from the block height of another chain, according to w hich the asset ID is guaranteed to be unique) , also supports the chain of different protocols to interact with each other, because BVM provides enough instructions.

9. BBA model: three-tier architecture

9.1 platform model: three-layer structure BBA will adopt three-layer structure



i. Application layer: support the development of programmable distributed applications, call contracts for asset registration, destruction and trading, dividends

Ii. Contract level: account system, contract code support

Iii. Account layer (data layer): public chain layer without permission, POW consensus

1) Application level:

BBA offers a variety of PC, WEB, and mobile applications to facilitate contracting assets for asset operati ons. By encapsulating the underlying technology of the blockchain, we reduce the application threshold a nd provide developers and asset issuers with a more flexible and friendly interface, enabling developers a nd asset issuers to focus on business models and business logic. Innovation.

2) Contract level: contract level design

2.1) Creation Contract The Creation Contract is a special type of contract on the BBA. It is a co ntract that can issue and review smart contracts. The developer will retain some permissions, su ch as private keys, scopes, etc., and have certain specifications and Automated auditing to ensur e that the assets on the chain comply with the appropriate specifications and templates are regist ered and published. The underlying implementation of the creation contract is called to the distri bution program in the data transport layer: Asset Issuance Prog ram.

2.2) Ordinary Contracts There are two functions of ordinary contracts. They are used to set up and determ ine the trading and dividends of assets. These rights are released. Each contract is equivalent to a fund in r eality. If a new asset needs to be developed or introduced in the contract, a request must be submitted to t he Creation Contract, which can be posted to the chain after being approved. The underlying implementati on of a normal contract calls the control program in the data transport layer: Asset Management Program.

3) Account layer (data layer)

At the level of books and data transmission, BBA adopts the more mature POW mechanism in the public chain and improves it, adopting an algorithm that is friendly to artificial intelligence ASIC chips. And the partitioning mechanism is adopted to accelerate the efficiency of transaction processing while ensuring da ta consistency.

9.2 BBA master program and data structure

This part mainly operates at the data book level.

The BBA master program consists of three parts, namely

- Asset Issuance Program is responsible for the issuance of assets
- Asset Management Program is responsible for asset cost, exchange, etc.
- The Consensus Program is responsible for determining which new blocks can be included in the BBA.

The POW mechanism is currently used.

9.3 Issuance of Diversified Bit Assets

BBA will support multiple types of digital assets. Each asset will be identified by an asset ID, whichThe medium asset ID will be a 256-bit string that distinguishes between different asset types. According to dif ferent assets

Asset_ID, we can establish the type of the asset and associate it with the asset: the asset generation proces s (Asset_Issuance_Program is responsible for generating new asset units) and the asset operator (Asset_M anagement_Program controls and operates on a set of assets).There are two types of assets running on the BBA: BBA (BBA coin, BBA) and assets (Assets)

1) Token Token

The BBA on the BBA is a special type of Token distributed on the BBA for package traders and system p articipants. The POW mechanism is adopted to encourage random anonymous miners to participate in the entire ecosystem and generate them according to the scheduled distribution curve. .

The main uses of BBA are:

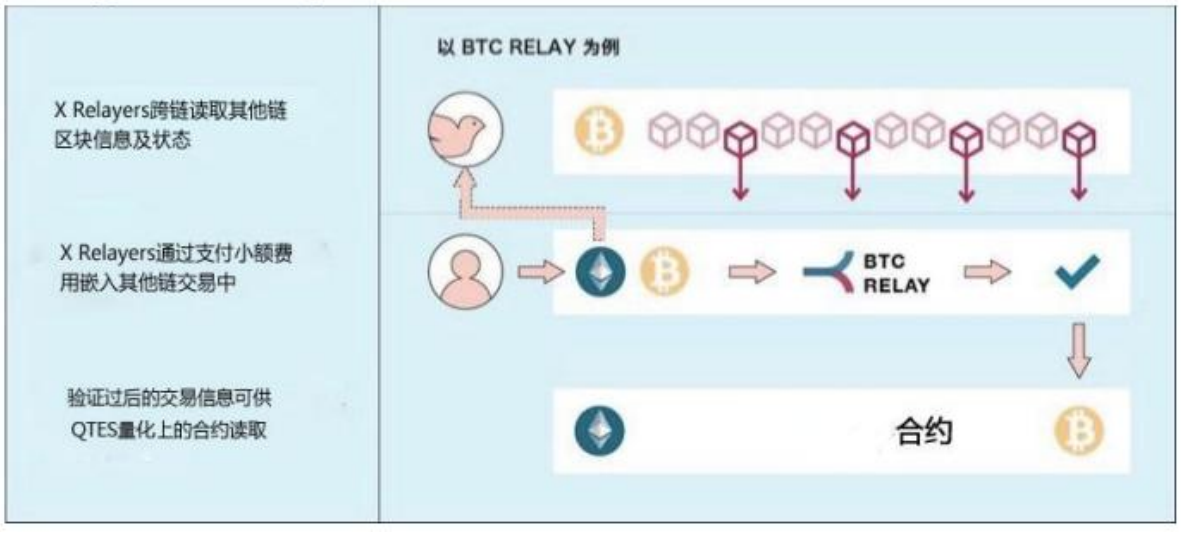
i. the handling fee for asset transactions;

Ii. Dividends on income rights assets;

Iii. a deposit for the issuance of assets;

Take the dividend of the income-based asset as an example. If the issuer of the asset decides to use Bitcoi n as the dividend, it can pass the side chain.

Lock the corresponding amount of Bitcoin, convert it to BBA at market exchange rate, and then issue it to the asset owner's address. This process is completed by the contract call XRelay for cross-chain operation, for example, BTC, ETH exchange through BTC6, Relay6, ETHRelay.



2) Assets: The application area and ecological value of the assets on the BBA:

i. Financial industry

Financial services have become one of the primary application areas of BBA technology, providing effect ive and reliable ownership certificates and strong and effective intermediary guarantee mechanisms for fin ancial services.

Ii. Credit and ownership management

Credit management is a huge market with a scale of over 100 billion. BBA technology provides data for c redit management, which will greatly improve the accuracy of credit evaluation and reduce the cost of eva luation.

Iii. Resource sharing

In the era of big data, the value comes from the mining of data. BBA technology utilizes a unified ledger composed of blockchains. The flow of data between multiple parties will be tracked and managed in real t ime, and it can be effectively controlled by access rights. Reduce management costs for the data sharing p rocess.

Iv. Investment management

v. Whether public or private equity funds, BBA technology can be applied to reduce management costs an d control

Insurance. BBA coins can provide a common ledger for L/C trading participants, allowing banks and othe r parties to have confirmed common transaction records and perform compliance accordingly, thereby red ucing risk and cost.

Vi. supply chain

BBA technology applications can provide a transparent and reliable unified information platform, which c an view the status in real time, reduce logistics costs, and trace the entire production and delivery process of items, thereby improving the efficiency of supply chain management. When a dispute arises, proof and tracing become clearer and easier to vouchers.

9.4 Exchange of assets on the chain

In this section we will discuss the most basic functions of the BBA, the "asset exchange" section describe d above, which

Will be implemented in the first version of the BBA.

Transactions on asset income rights, holding rights, use rights, etc.: The form of registration using contrac t internal account transfers.

Redemption of assets: the form in which the contract is transferred out of the BBA.

The account is an abstract concept within the BBA and belongs to the contract layer concept. Each accoun t will be at the data book level.Corresponding to a group of BUTXOs, the sum of the total number of all B UTXO assets under the account forms the balance of the account.The following are the basic concepts of t he BBA data model:

Transactions

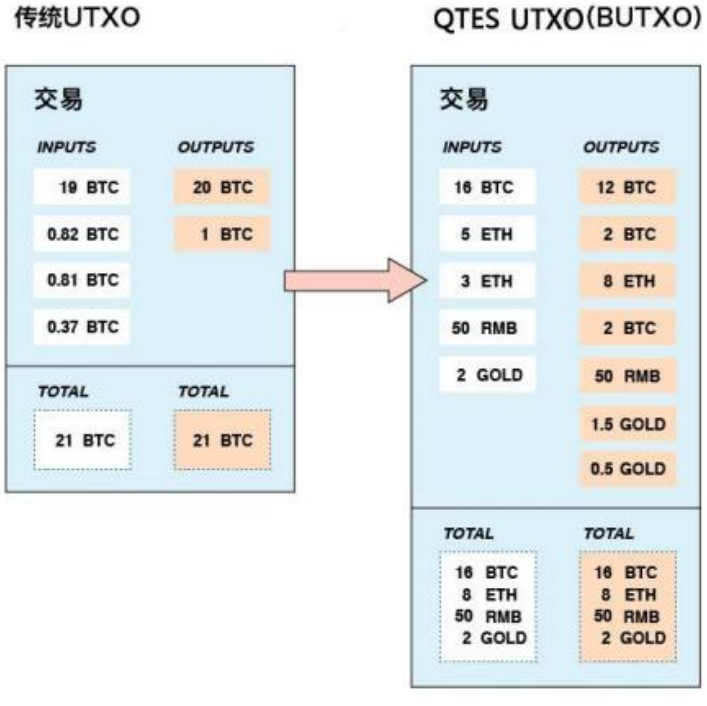
A transaction is a basic operational transaction of a BBA asset. It is a data with input and output values. structure.

Inputs

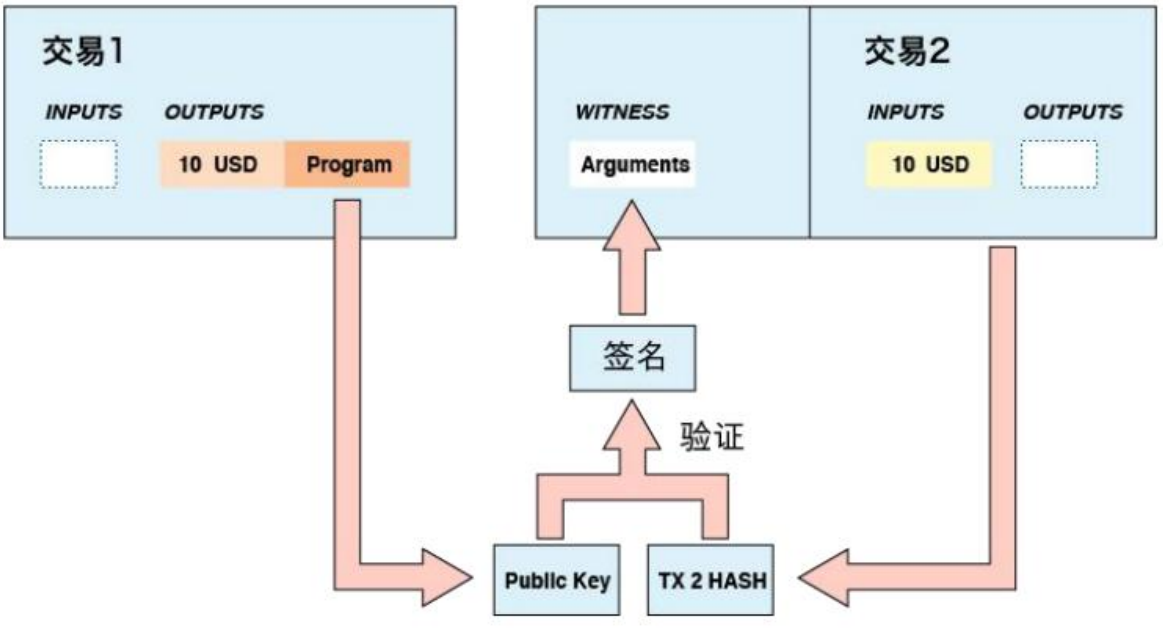
Can be one or more different types of digital assets, or the output of a transaction;

Outputs

Determining the post-transaction asset outcome is an asset operating procedure that defines the future cost of this output. The following figure shows the extended BUTXO on the BBA, which extends the traditio nal UTXO structure on the Bitcoin public chain and is compatible with many types of bits and atomic ass ets.



The input portion of each transaction must be a newly generated set of asset units, or the res ult of a previous set of BUTXOs returned by an asset operator operation, which must be veri fied by the release procedure mentioned above. The verification process of the issuing progr am is that the parameters can be passed to the Witness Field part of the transaction, and then the verification part is passed, and then the transaction is performed. This part is somewhat similar to the isolation verification idea proposed by Bitcoin public chain BIP141.


交易1
INPUTS
OUTPUTS
10 USD
Program
WITNESS
Arguments
交易2
INPUTS
OUTPUTS
10 USD
签名
验证
Public Key
TX 2 HASH

10. BBA issue

10.1 BBA issue

BBA (BBA Coin, BBA for short) by Lonan Capital InternationalFoundation release. The purpose of issui ng BBA is to quickly build a global BBA community and acquireThe big data needed for application deve lopment will promote the implementation and implementation of BBA's medium and long-term strategy. BBA is the world's first encrypted digital currency developed specifically for BBA, with unique positioni ng and functionality.Sex, the application scenario is clear and extensive. First, the BBA will serve as a BB A digital asset trading platform and BBA community.And the common currency of the entire BBA ecosys tem, which can be directly used to trade all of the certified assets within the ecology.

At the same time, the BBA has also realized blockchain assets with major digital currencies around the w orld, including Bitcoin (BTC), Ethereum (ETH), Litecoin (LTC), Ripple (XRP), EOS, etc. Free exchange transactions. BBA is the only circulation token of BBA intelligent quantitative trading ecosystem. Therefo re, BBA has a wide range of applications that cannot be compared with general digital currency, and its v alue is stable and lasting.

10.2 The technical principle of BBA

The BBA complies with the Ethereum ERC-20 TokenStandard protocol, and the bottom layer uses the Et hereum's open source generation.Code, and secondary open source. Ethereum is currently one of the most mature blockchain solutions, supporting the PoW consensus mechanism.Ethereum (ETH)'s market capita lization is second only to Bitcoin, fully demonstrating Ethereum's global digital asset investor's heart

Authoritative and broad application prospects. BBA adopts the bottom layer of Ethereum, which not only avoids many security risks,It is also beneficial for secondary development and docking functions of third-party developers. In addition, BBA can also interact with other types of encryptionWord currency exchan ge and transaction, providing a more convenient payment, transaction and settlement system for users aro und the world.

10.3 BBA application scenario

As a common currency in the BBA chain ecosystem, BBA is widely used, including but not limited to The following scene:

Ø Directly subscribe to various digital assets on the BBA digital asset trading platform;

Ø After BBA login to the exchange, it can directly conduct various market transactions;

Ø Trade currency transactions with other digital currencies on major trading platforms around the world;

Ø Interconnected with other certified financial assets and freely traded;

Ø Can be used to pay the listing fee, handling fee, etc. of BBA digital asset trading platform;

Ø Interfacing with external businesses, global circulation, direct purchase of physical goods and services;

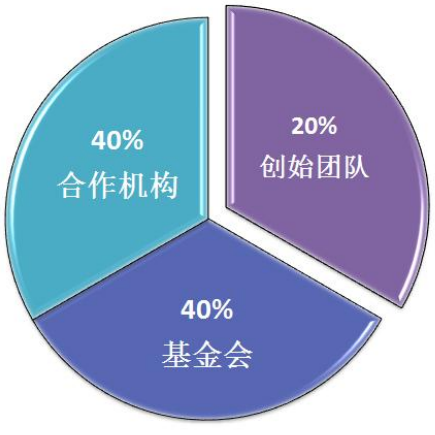
Ø In the BBA chain community, how many BBAs represent the size of voting rights.

10.4 BBA's distribution plan

Name: BBA

Total issue: 1 billion

Allocation:



The role of BBA in the BBA ecosystem includes:

1. As a general pass in the BBA ecosystem, acting as a payment and settlement in all asset transactions

2. As the main reward mechanism, build a global BBA community and self-development and maintenanc e;

3. Collect big data and cultivate fans and users for BBA's underlying technology development and applica tion development;

4. For the operation, marketing and promotion of the BBA ecosystem;

5. Used to sponsor top experts, institutions and academic activities in the blockchain field.

11. Risk and advantage

11.1 Technical Risk Risk Description:

With the rapid development of the Internet market, there will be other similar products, technical imitatio n is inevitable, how to ensure the leading technology?

Coping strategy: Lonan Capital International Foundation has already applied for relevant patents related t o software management, forming legal barriers and protecting the company's expertise in platform technol ogy. BBA is a blockchain and Internet self-employment project. The company has abundant talent resourc es and guarantees. The quality of the company's core R&D team will help Lonan Capital International Fo undation continue to maintain its technological leadership in the market.

11.2 Management Risk Risk Description:

The Lonan Capital International Foundation is an entrepreneurial team. The members have less experienc e in the industry and have enough experience to achieve good business operations.

Coping strategy: The founding team members of Lonan Capital International Foundation have rich profes sional experience. The main members have high comprehensive quality, strong professional knowledge a nd strong working ability; they have the ability to recruit excellent employees and seed users. The consult ant team we hired is a top expert in all fields and industries and has a good variety of resources to ensure t hat the project can receive professional guidance and effective support from all parties.

11.3 Market Risk Risk Description:

Faced with the many mature and fierce competition in the market, how does BBA become a new entrant t o form its own advantages? Coping strategy: BBA as a blockchain, Internet self-employment project, we are the first decentralization

The trading platform positioning supports the service platform for the painless trading of the digital asset securities market; the latitude of the BBA is higher than that of many platforms in the market. We will co operate with these platforms to help them drain and become our strategic partners. They are more professi onal in their fields and industries.

11.4 Financial Risk Risk Description

The product has just launched into the market and requires a certain period of adaptation. A lar ge number of product promotion and marketing promotion methods in the early stage may lead to a slightly longer payback period in the previous period, and will the cash flow be tight? Coping strategy: open source and reduce the existing funds, make the existing funds play the bi ggest role as much as possible, so as to reduce the amount of financing; focus on the manageme nt of cash flow, increase the collection of receivables, try to keep Good cash flow; vigorously u se online marketing methods to reduce pre-announcement and marketing expenses; and obtain continuous income through virtual asset transactions.

11.5 Business Risk Risk Description:

Will the company's decision-makers and management personnel make mistakes in the operatio n and management, which will lead to changes in the company's profitability and affect normal operations?

Coping strategy: LONAN CAPITAL INTERNATIONAL FOUNDATION will employ high-le vel financial analysts to conduct risk assessments of company decisions in order to accurately p redict risks and avoid risks to the greatest extent; LONAN CAPITAL INTERNATIONAL FO UNDATION will improve various rules and regulations, including intellectual property protect ion systems, The user credit evaluation system and various company operation contract manage ment systems reduce risks with a relatively complete system.

12. Disclaimer

This white paper is only intended to convey the purpose of the information and does not constitute an opinion about the sale and purchase of the BBA. The above information or

Analysis does not constitute an investment decision. The white paper does not constitute any investment advice, investment intention or education investment. white paper

It does not constitute or be construed as providing any sale or any act of inviting a share of the sale or purchase, nor is it

Any form of contract or commitment. Relevant intent users clearly understand the risks of BBA, once investors participate

The investment means understanding and accepting the risk of the project, and is willing to personally bear all the corresponding results or consequences.

The BBA team does not assume any direct or indirect asset losses from participating in the BBA program.