



The World's Largest Ecosystem-level Gateway
for Blockchain Games



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KRYPTON

<https://kexingqiu.net>



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Overview

The online game industry is a fast-growing market with more than a billion users. Blockchain games are considered to be the next growth point in the blockchain application field. Globally, the number of blockchain wallet users has reached 30 million . Gaming is absolutely a highly suitable scenario to implement blockchain.

With the potential of reforming existing gaming modes, blockchain games are superior to traditional games in credibility, fairness, democracy and ownership of virtual assets. However, they are currently trapped in a vicious cycle of high entry barrier, low playability and ineffective marketing.

Krypton aims to create the first gateway to a blockchain gaming ecosystem. It would reduce the barrier to entry faced by traditional developers and players, Krypton can provide a comprehensive solution for creating blockchain-based games, and quickly acquire both traditional game players and existing blockchain users through its unique distribution system and public chain plan.

Krypton has been making steady progress and currently has more than 1.4 million users worldwide. It supports both iOS and Android in 20 languages. In addition, it has created gateways for players, developers, blockchain communities and distributors. Krypton is on the eve of a massive outbreak.

《Number of Blockchain wallet users worldwide from 1st quarter 2016 to 1st quarter 2019》<https://www.statista.com/statistics/647374/worldwide-blockchain-wallet-users/>



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1. Market Analysis

A. Pain points of traditional game Industry

Traditional game market has been experiencing explosive growth since 2007. According to Newzoo's data, the global game market has reached \$134.9 billion dollars by 2018 and it is expected to reach \$174.0 billion dollars by 2021 with a compounded annual growth rate of 10.3%. In 2018, the Chinese market contributed \$34.4 billion dollars, accounting for 25% of the world, ranking first in the world. It is estimated that Chinese market will reach 50.7 billion dollars in 2021.

Although the game industry has been developing at a high speed in the past 20 years, it has faced various problems since its development. The most prominent problems are mainly concentrated among players and game developers.

a. Problems Facing Gamers

(1). Developers lack credibility and game mechanics and data are not transparent

In the past, games often did not disclose the mechanism of in-game digital assets, and players could not verify the authenticity of the rules used by game development companies, which harms player's rights and interests. Especially for games such as chess and gambling, the probability of winning or losing is described in plain text, but the player still cannot verify its authenticity. There may be situations in which the game development company seeks improper financial gains and damages the fairness of the game.

Traditional games often lack credibility. Driven by their own interests, many game development companies often change the game rules. For example, the probability of creating the best equipment has never been made public. Some public probabilities such as those affecting the chance of drawing cards, treasure chests and equipment are often secretly altered, causing great dissatisfaction.

(2). Players do not really own their virtual assets in games

For the virtual assets in current traditional games, players only have the right to use but no ownership. Although players pay for the virtual assets such as points, items, weapons, and characters in the game and these can be traded, but its ownership



essentially belongs to the game makers. This is because in all current games, the player's digital assets are stored on the official centralized server of the game.

For game makers, these virtual assets are just a bunch of code that can be changed at will. Players are not free to dispose their "owned" assets, and trading is even not supported in most games. In addition, when the game development company stops the server operation or seals the player's game account number, the player's game assets also disappear, and the game assets are heavily dependent on the survival of the game product and is centralized.

(3). Depreciation in Virtual assets is a serious problem

In order to make profits, game operators generally continuously introduce new virtual assets with greater functionalities. The so-called god-like costumes and beasts that players have paid a lot of money before are often replaced by new ones, and the functionality of existing virtual assets cannot be guaranteed. Further, given that most games have separated servers, items collected in one server cannot be brought over to other servers.

(4). Game assets cannot be traded across games

Most game economies are a closed system, which makes it impossible for game assets to trade across games. For example, it is difficult for players to sell Warcraft items in exchange for skins in Honour of Kings. For those who have committed large amounts of fiat money, there is almost no other way to recover the sunken cost once they stop playing the game, except for selling their account at a large discount.

(5). Game asset trading is problematic

The trade of game assets has always been problematic. Peer-to-peer transactions in forums and communities are risky, and transactions on third-party trading platforms are subject to a 10–30% fee. These circumstances have increased the difficulty of trading game assets.

b. Problems Encountered by Developers

(1). User bonus is decreasing while user acquisition (UA) costs skyrocket

The rise of entertainment mediums such as short videos has led to a decline in user



bonus and a shortened game life cycle. Internet applications such as e-commerce are also competing with game producers for the attention of users, resulting in increased UA costs. In addition to a few top games, the pay-out rate and average revenue per user (ARPU) have little room to improve.

Due to the increase in UA costs, most low ARPU games have difficulty obtaining players. Further, games with high ARPUs, such as strategy MMOs, can get players at a very high cost. This actually caused bad money to drive out good money, and the entire industry environment is deteriorating rapidly.

(2). Intensive competition and monopoly pattern in traditional game industry

In 2017, the Chinese game market was monopolized by Tencent and Netease, with a market share of 76.2%. In the new market, their market share reached 95.8%, almost monopolizing all new opportunities. Top game producers created extremely high barrier to potential competitors, including prohibitive R&D costs, IP resources, human resources, marketing expenditures, hold on player's time and wallet. Other producers are facing intense pressure just to survive.

B. Blockchain Game Advantages over traditional games

a. Developer's credibility is guaranteed by transparent smart contracts

Blockchain games can expose rules and are executed by smart contracts. Users don't need to trust developers, just trust the code. The rules of how game assets are generated, obtain probabilities, quantities, etc., are ensured by mandatory and open source nature of smart contracts. Typical applications are probabilistic guessing, chess and card games. Moreover, based on the characteristics of smart contract enforcement and open source, new teams without trusted endorsements can quickly gain users' trust in their products, which helps the growth of small and medium-sized innovated teams.

b. The players Truly own in-game assets

The virtual assets in blockchain games are divided into standard tokens and non-standard (Non-fungible Token) tokens, which are divided into ERC-20 and ERC-721 of the Ethereum protocol. The tokens of both protocols are stored in the user's own wallet, and the user has complete ownership of these assets and is free to trade and use.



Developers can't make arbitrary changes to the user's assets. Even if developers decide to stop operating games in the future, these assets will still exist on the blockchain, which can still be traded freely and may be used in other applications. At the same time, through the traceable and non-tamperable characteristics of the blockchain, the occurrence of each transaction and the flow of assets are recorded, and prevented from being tampered with, and any fraud in the game is eliminated to a certain extent.

c. Scarcity of virtual assets

As long as other participants recognize the value of transferrable virtual assets at player's blockchain address, the assets will always maintain their value and will not be changed easily by any game development company. The release of virtual assets is achieved through smart contracts. By nature, all types of tokens are limited in amount.

d. Fairer market for opportunities

Blockchain game developers are now facing new high-value market opportunities: a premium user base + a global marketplace + a low barrier to entry. Blockchain has a globally distributed user base with a high willingness to pay, providing more room for growing ARPU. The blockchain industry is still in the early stages of development. Despite the emergence of ETH, EOS and other top projects, the final ecology is far from stable, and it is a fairer market for new entrants.

e. Increased liquidity of blockchain game assets

Due to the openness and transparency of game asset distribution, users can participate in game transactions with confidence. Therefore, the virtual assets of blockchain games have extremely high liquidity, and users can transfer and trade their own assets. The high liquidity of blockchain game assets can attract users to participate in the game and stimulate the payment rate.

In addition, by tokenizing virtual assets through separate secondary smart contracts, game assets can be traded more securely and conveniently. In the future, through cross-chain technology, players can trade game assets across games and platforms. In traditional games, the assets in the game are often limited within the game. The game itself is basically worthless elsewhere and technically difficult to reuse. The "tokenized items+ mobile wallet" of the blockchain game allows game items to be traded anywhere, anytime, across games and platforms.



f. More democratic rights to players

With blockchain games, the relationship between developers and players will change dramatically. For the most part under the previous system, the two tend to stand on opposite sides: one side constantly revises the game mechanics, adjusts the parameters, and constantly tries to extract profits from players; the other side wants to earn reputation in the game and plays for fun. Because traditional games run on developers' centralized server, they naturally have god-like authority.

However, blockchain games run on multiple nodes, and some of the nodes are run by the players, so the developer and the players may form a community and reach a consensus. When some nodes are handed over to KOL in the game, the interests of the game community will be in line with the interests of the developer. The loyal players will spontaneously maintain the balance of the game, help the developer acquire users, extend the game's life cycle, and build it together with the community.

g. Reforming traditional game experiences

In the real world, currency is issued by the central bank. In the traditional game world, virtual asset is obtained by players through tricks, bounty tasks, upgrades, etc., similar to the "Prove of Work" mechanism of the blockchain. The blockchain token economy and the virtual economy of games belong to the category of digital economies. Network content and assets are more suitable for the blockchain. If blockchain technology and the token system are introduced into the game, it will be a highly disruptive innovation.

Blockchain-based games offer players and owners the possibility to be rewarded for their in-game actions, and this new game trend has begun to change the way players interact with games. In the near future, it will give players a unique gaming experience with evolving characters and easy cross-game trading.



C. Pain points of blockchain game industry

According to Dappradar, the number of average daily active users of DAPP has increased from 158,000 in March 2019 to 184,000 in May 2019, as a result of increasing number of games and closer attention from more players. Currently, 47 of the top 100 Ethereum Dapps are game applications. According to incomplete statistics, there are currently nearly 500 blockchain games on the market. Unlike traditional games, most players of blockchain games are seeking speculation or novelty, that is, they do not play just for fun. At present, there are only 5 games with DAU higher than 1000 and 21 games with DAU higher than 100, which suggests strong potential of blockchain game industry.

Smart contracts and open source code have created a high entry barrier for game developers, which set off a chain reaction in the blockchain industry:

(a) Difficulty for traditional game developers to enter the blockchain game business;

(b) Lack of popular games and existing games have low quality and playability;

(c) Lack of loyalty of existing users with speculative purpose;

(d) High barrier against traditional game user created by low quality of games and their unfamiliarity with blockchain infrastructure;

(e) Developers have to resort to third-party distributors due to inadequate incentives to promote games designed for main-net public blockchains;

(f) Low conversion rate of third-party distributors which lead to high marketing expenditures and low returns.

Eventually, the entire ecology falls into a vicious circle.

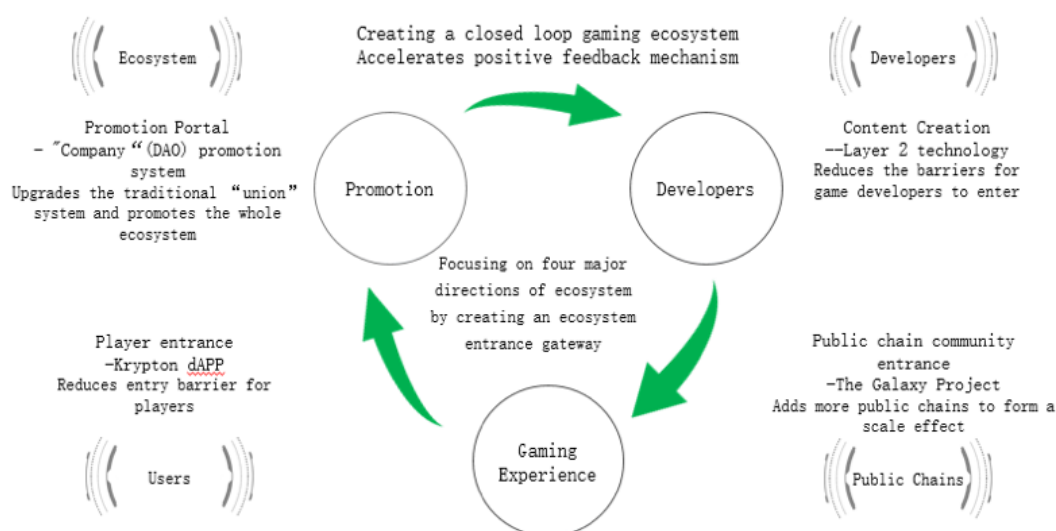




2. Introduction

A. Overview

Krypton aims to build the world's first gateway to the blockchain gaming ecosystem. Unlike other games or content distribution projects, Krypton believes that a complete blockchain gaming ecosystem should include players (both native blockchain users and traditional game migrant players), developers, production and distribution of contents and community. Only with the joint efforts of these necessary elements can the entire ecosystem enter the virtuous cycle and develop rapidly and healthily. Therefore, Krypton's gateway to the blockchain gaming ecosystem compromise four parts: user entrance, content gateway, public chain community gateway and promotion portal.



a. User Entrance

In most blockchain games, users need to complete public chain registration, wallet generation, record mnemonics, exchange registration and currency trading before they can play the game, which could be quite complicated and result in loss of users.

Krypton allows users to register easily with their WeChat account, and then automatically generates player's wallet address to store the user's mining income. When the user needs to withdraw or transfer the assets to wallet addresses, just import a wallet address and it does not affect the player's gaming experience. A smoother gaming experience would attract players who are used to traditional games.



b. Content Gateway

This gateway suggests more high-quality games. High-quality games are inseparable from excellent game developers. When developing blockchain games, traditional developers confronts many problems: high development threshold caused by smart contract complexity; security risks arising from open source code; inadequate support for complex contracts resulting from low TPS of main-net public chain; inability to host high quality products due to insufficient API support; difficulties of acquiring cross-platform and cross-token users.

The built-in Layer 2 technology of Krypton puts the transactions that don't need to be publicized off the chain, with encryption and gaming to ensure the ability to put them back on the chain at any time, and eventually implements zero-latency transfer confirmation and contract call without any fees.

Krypton provides game-specific smart contract templates and SDKs, which developers call on demand, eliminating the time cost and security risks of smart contract development. Krypton also provides cross-chain trading solutions, docking multiple public chains together and acquiring large number of users from other public chains.

Therefore, with SDK service provided by Krypton solving all technical challenges, traditional developers can concentrate on updating and developing games. Fundamentally addressing the issue of developers, Krypton can encourage more developers to create more high-quality blockchain games.

C. Public chain community gateway

Based on different historical backgrounds, technical paths and professional applications, the blockchain industry has a variety of public chains, forming a number of public chain communities, each of which has its own original user group. These unique user groups also form many independent communities. There are no signs of integration of those communities in the short term, which is quite unfavourable for the promotion of blockchain games. A blockchain game often needs to be developed based on a public chain, and then reuse the technology to other public chains, but the user information, virtual assets, equipment and other digital information of the game can't be traded or transferred across different chains.

Krypton launches the public chain plan, which packages the entire game ecosystem and quickly copies it to other public chains and help those public chains to build their own



game ecosystem. Thus, Krypton can activate original users using the game ecosystem. At the same time, it can also help original blockchain users to quickly join the Krypton ecosystem and exchange game tokens across different chains based on layer 2.

In this way, Krypton's public chain plan connects independent blockchain user groups and allows them to join Krypton ecosystem. The free flow of users and value stimulates the activity of various public chains within the ecosystem.

d. Promotion Portal

Traditional blockchain games are usually distributed or promoted through third-party channels such as wallets and information platforms. Therefore, the promotion is limited to the user base of those third-party channels. However, a third-party channel with more than 10,000 users may have a conversion rate lower than 1% because they are not binding on their users. As a result, developers have to promote their game on one third-party channels for a long time or turn to multiple channels. Moreover, the user groups of different third-party channels may overlap, which also increases the cost of game promotion. Even if these channels exert the most ideal effects, they cannot effectively cover the whole blockchain industry, not to mention the traditional game users.

Krypton's innovative "in-game governance" system adds blockchain solutions to the "guild" system in traditional game. Based on fairness and transparency, the community mechanism will make full use of ranks, honours, points, missions and other functions of game to mobilize players, support marketing activities, and disseminate information more efficiently and accurately. Meanwhile, developers can cooperate with the managers (community leaders) of the target community that matches their game. Employees (ordinary players) receive salaries from the community in exchange for their efforts and thus are bounded by the managers, which means higher conversion rates to the game. Finally, the managers stimulate growth of the community by setting KPIs and engaging employees in game tasks with the ultimate goal to issue its own secondary tokens for the mutual benefits of game developers, community managers and employees.

B. Empowering public chains——Krypton Platform Design

In order to allow developers and users to reap benefit from the blockchain, based on high-quality game content, social interaction system, built-in NFT wallet and marketplace, Krypton created a closed loop ecosystem. On the one hand, it gives developers easy access to tools for development, and helps high-quality games issue ERC20 tokens.



Developers can benefit from issuing these tokens. In addition, these tokens can be used to charge, which solves the problem that many non-use tokens do not get spent and cannot maintain their circulation. On the other hand, users are encouraged to actively participate in Krypton ecosystem, by playing games, participating in the development of games, holding game tokens.

a. Games

(1). Features:

We focus on high-quality content, using our own development team and combine traditional game developers with existing successful blockchain games. We also try to attract traditional game players in order to create incremental effects. At the same time, a game crowdfunding function will be released through secondary smart contracts on Krypton, which will establish a strong connection between developers and early adopters.

In addition, as an important function of the Krypton Chain, games with high quality ecosystem and huge use base can issue their exclusive secondary ERC20 token based on Krypton chain. So that players can play the game, hold the game-specific token and reap the benefits from future game development.

(2). Existing Games:

i. Block West



(1). Developed by the core team members of Perfect World's "The Condor Heroes" team. The world's first blockchain MMORPG game. At present, it has officially launched on Krypton, and has many functions such as daily prize wheel, quests, battles, social chat, etc., and issued built-in ERC20 token (KC) based on Krypton. Equipment and pets were



converted to NFTs and listed on Krypton's NFT Mall.

(2). As the first exclusive game token, Block West token (KC) has been launched in the built-in wallet of Krypton. Players are free to perform transactions between the game and the wallet, and can use the wallet to transfer tokens freely.

(3). The goal was to put "Westward Journey" on the blockchain. While retaining the various interesting core gameplays of a traditional MMORPG, the game mechanism is more transparent, the assets are more tangible and reusable, and all players can enjoy utility from the tokens.

ii. Krypton Knight

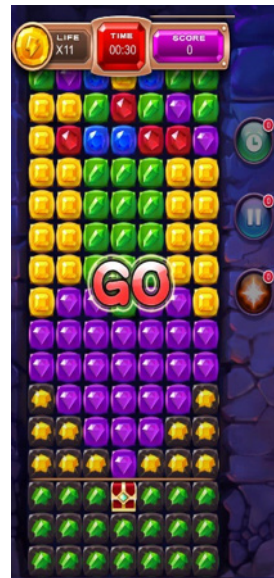


(1). Similar to the traditional classic shooting game "Soul Knight", the game has 5 kinds of characters, hundreds of equipment, dozens of maps and 3 modes (single adventure, survival challenge and world boss events). The three modes are easy to get started, difficult to master and have high playability. More importantly, the game's equipment are NFTs. Any equipment that players receive can be transferred out to a wallet, and then traded freely in the NFT Mall.

(2). The game was the first NFT-enabled game supported by the Krypton Chain. It truly realizes the full potential and value of game equipment outside the game. Any player, even those who don't play Krypton Knight, can freely trade in the Krypton Mall. When players trade the game's equipment, the equipment is stored in their own wallet address and not on the game server.

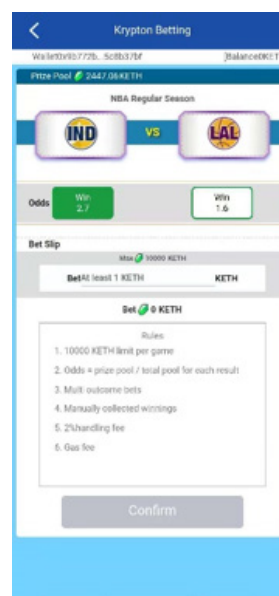


iii. Krypton Miner



(1). The first "match-3" game on Krypton. The casual game of finding treasure chests is fun, easy to get started and difficult to master. If players play well, they will get KGC rewards and there will be an extra reward distributed every week based on the top-ranking chart. At present, the single-player timed mode is online and more modes will be released in the future.

iv. Krypton Betting

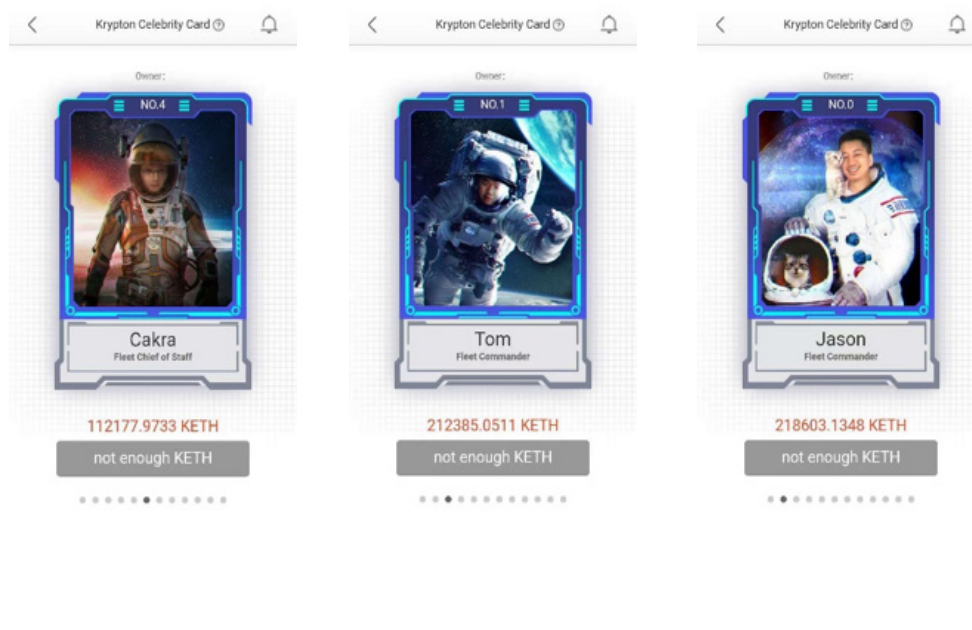




(1). The betting game takes advantage of the blockchain's untamed, open and transparent features to eliminate player's distrust of the developer manipulating results. The idea was to put the result of the random probability of betting on the blockchain.

(2). Krypton's players predict the outcome of the game and each event. The odds are completely determined by the user's betting dynamics. The settlement rules are completely transparent. Currently, popular tournaments such as the UEFA Champions League, Asian Champions League, the English Premier League, the European Top Five Leagues, the NBA, the League of Legends LPL and the NFL are all supported.

v. Krypton Celebrity



(1). As the name suggests, that is, users can benefit from cultivating or collecting virtual cards, trading, fighting in the game. The transparency of game is ensured through smart contracts. The idea was to have a card game that used ERC721 tokens. Because of the non-identity of ERC721 tokens, each token is an independent and differentiated individual, which can be visualized into images with different appearances and parameters, such as cats, dogs, fishes, or a country, city and celebrity, etc.

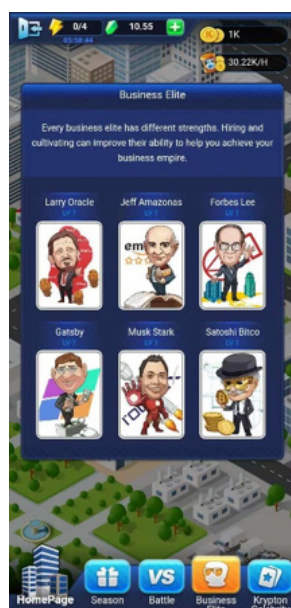
(2). Krypton Celebrity is a celebrity card collection game. We make celebrities in the Krypton community into tokenized card. Players can buy and sell cards freely and gain more platform benefits by owning celebrity cards. The current celebrities include the first members of the Krypton community, third-party partners and well-known strategic



partners in the blockchain industry. And more celebrities will be voted from those who have made significant contributions to the development of Krypton.

(3). As an NFT asset, Celebrity cards have reusable properties, which are used by another game, Krypton Tycoon. Players with celebrity cards will automatically have a corresponding super strong card in Krypton Tycoon and can freely battle with other cards in the game.

vi. Kether Tycoon



(1). Simulation games are about constructing a decentralized virtual world from a base. Players will obtain virtual property rights through various ways and can carry out various business activities in their own territory to grow.

(2). Krypton Tycoon is a simulation game. Players collect a variety of celebrity cards in the game and develop their skills with training. They can battle with other players. If win, they can plunder opponent's resources. Currently, Krypton Tycoon is a tournament-based game. Each tournament has a time limit. Players might need to compete with other players to maximize your profits within a limited time.

(3). Krypton Tycoon was the first game to do a pre-sale on Krypton. During the pre-sale period, players could purchase celebrity card packages to get exclusive cards for the next season.



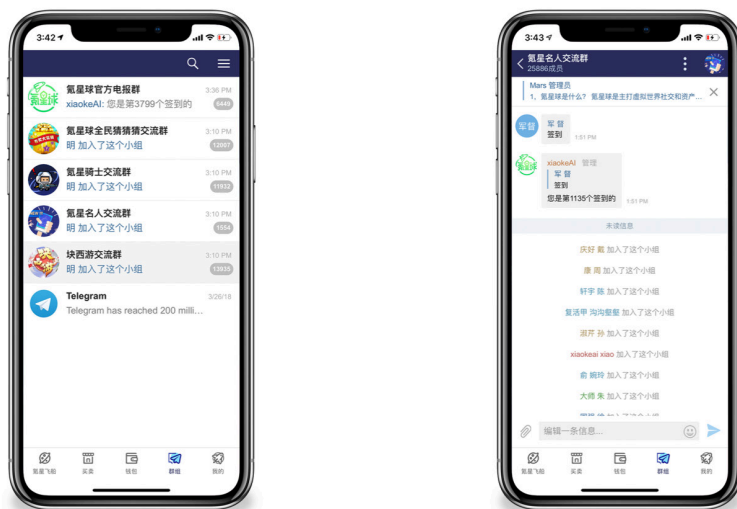
b. Social

(1). Personalized Avatar

(1). Each user of Krypton has a customized 3D avatar and own private virtual space. The 3D avatar and personal space will also have a DIY function, where users can customize their appearance and decorate their personal space. Follow-up updates will bring intercommunication between users, and the user's character can visit another user's space.

(2). Personalized clothing, accessories, furniture, ornaments, etc. will be circulated as NFTs in the Krypton Mall. Krypton will also open the editor function to support DIY designs by players. Users with strong design capabilities will provide design services that can be used to make personalized clothing and home decorations for sale to other users.

(2). Contact List And Krypton Telegram Groups



(1). Krypton has its own built-in Telegram group. Players can use their account to log in directly to the Krypton group and can easily join each blockchain game's exclusive discussion group to communicate with other players.

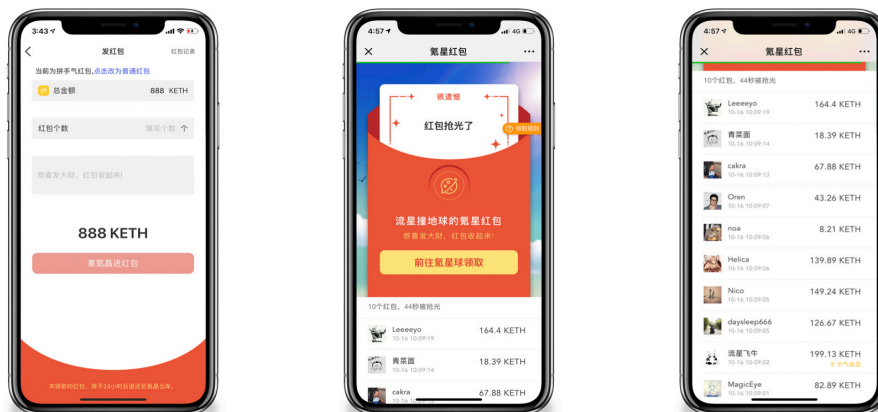
(2). The group has all the functions of Telegram. Players can add contacts for private conversations; they can get updated information from the Krypton community; they can also create their own groups to interact within exclusive circles.



(3). Third-party Platform Login

- (1). Krypton supports WeChat and Facebook Login
- (2). Future support for Kakao, Line and other platforms

(4). KGC Red Packet



(1). The KGC Red Packet is a unique platform feature of Krypton. As a link between Krypton's community and outside world, it is easy to implement gift-based socialization based on KGC.

(2). Users can easily send the KGC in their wallet into red packets for third-party social platforms such as WeChat, Telegram, Facebook and Kakao, etc.

(3). If a Krypton user has received a red packet, the KGC will be directly sent to Krypton wallet.

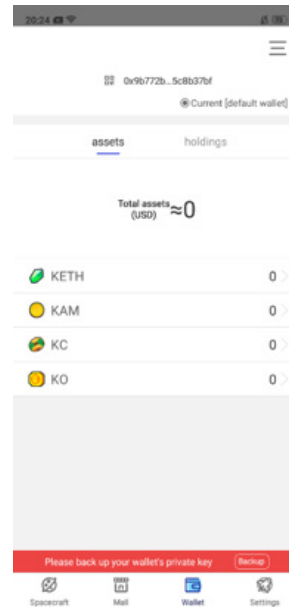
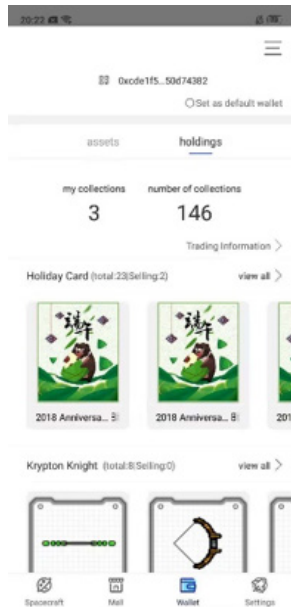
(4). If the user is not part of Krypton, they can get an invitation via the red packet, and join Krypton to get the KGC.

(5). Currently, the KGC red packet has been widely used in community interactions, platform activities and incentives for new players.



c. Infrastructure

(1). Wallet



(1). Krypton has a built-in ERC20 token and NFT wallet, which not only facilitates transactions, NFT collections, transaction inquiries, etc., but also let user view current NFT collections, and makes it easy to transfer or sell NFTs.

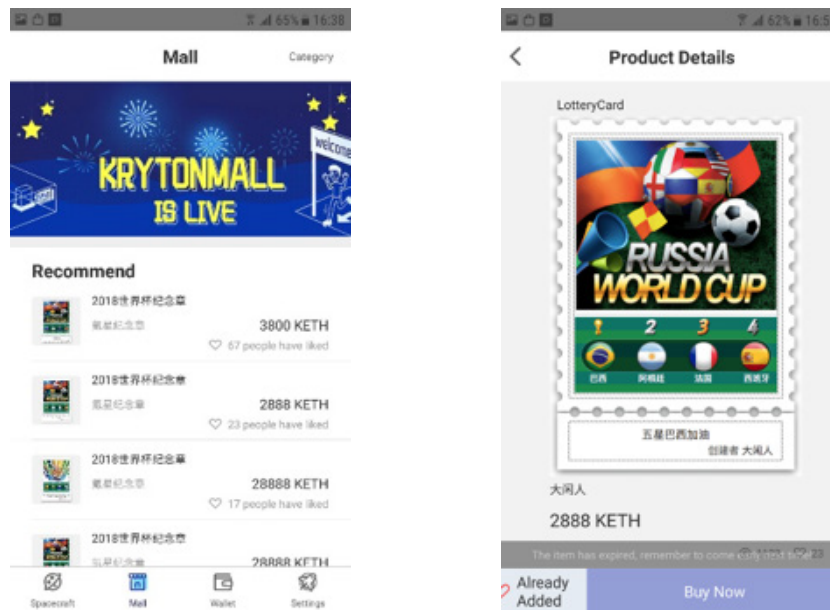
(2). In addition to the Krypton Chain's main token KGC, Krypton wallet add KAC, created to celebrate Krypton reaching 1 million users, and Block West game token KC. KAC is a collection of tokens issued by Krypton, with a total amount of 10,000. The initial price for 1 KAC was 100 KGC, and the KGC used for initial purchases has been burned. At present, it is completely owned by the users of the Krypton community. KC is a game token with scarcity issued in Block West, which can be used to buy and sell rare equipment and pets in the game. KC can be obtained by paying KGC in Block West.

Browser Payment

Complete built-in browser payment system. Whenever doing a wallet transfer, buying NFT in the NFT Mall, charging KGC in a Dapp like Krypton Knight or in Krypton Betting, users can use this universal KGC payment process is provided.



(3). NTF Shopping Mall



(1). Krypton Mall is a digital collection exchange based on the ERC20 standard similar to OpenSea and Rarebits.

(2). There are currently thousands of collections from Krypton Knight, Festival Commemorative Cards, Krypton Celebrity Cards and Block West.

(3). Currently, it supports sorting and filtering collections according to major categories, latest releases, popularity, prices, etc., and recommending products according to popularity.

(4). It supports additional searches like, precise filters (ID, numerical interval, etc.) and others; upcoming auctions, treasures and more.

(5). All digital assets like equipment, props, etc. that are converted into NFTs on Krypton can be traded in the Krypton Mall using KGC.

C. User Profile

Charles Huang, investor in Silicon Valley and the founder of "guitar hero", says, "The real blockchain is the key for gaming industry to escape from sequel dependence. It enables game developers, investors and players to achieve profits." Success of a



game depends on the participation of various users. According to the different stages of the user and the roles played by them, we divide the user profiles of Krypton into five categories: core players, developers, creators, traders, and ordinary players.

a. Core Player:

Content consumer. As the core users of the games on Krypton, they are the core participating in the experience of games. Their main purpose is for entertainment and therefore consume more KGC. They are willing to pay to play the fun game content created by developers and other players.

b. Developer:

Game producer. Providing games for Krypton's community, connecting with players through games, earning KGC through pay points in the game, and using KGC to attract users via airdrops, rebates, etc.

c. Creator (User Generated Content, UGC):

Game asset creator. Use the tools provided by the game to create DIY customized content for other users, such as featured clothing, levels created with the level editor. They are typically artists and their UGC is of high quality.

d. Trader:

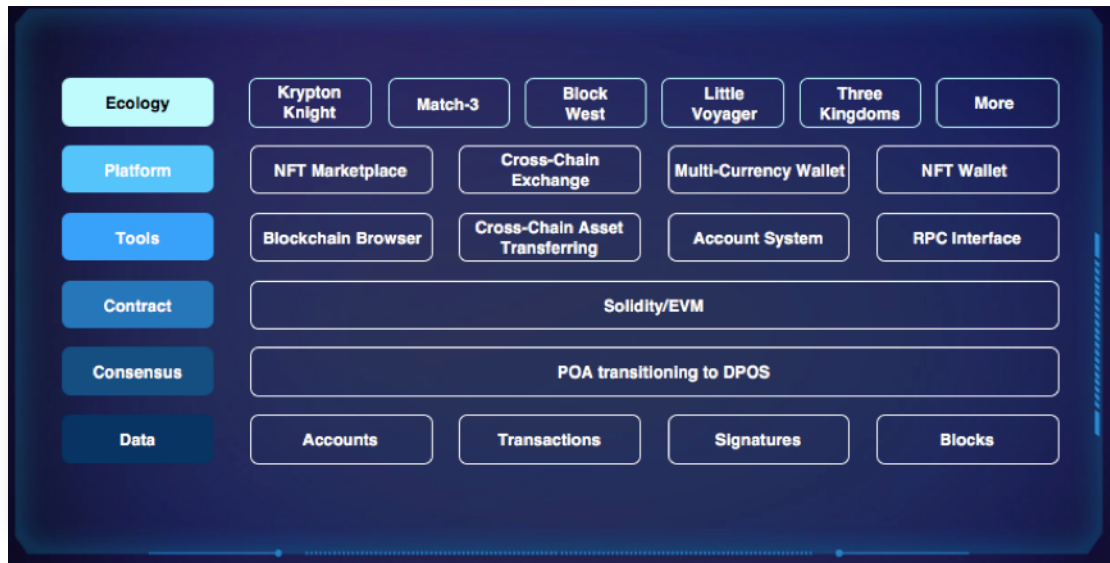
Value circulation facilitator. They are a barometer of the market, have a keen sense of the opportunity to make money and are extremely active in the community. They are the backbone of the Krypton Mall and online transactions, which greatly promotes the circulation of various game tokens and NFTs in the community.

e. Ordinary Player:

Asset miner. They earn money through playing. On the one hand, they experience various games for free and earn KGC, and on the other hand, they are the bottom of Krypton's community.



3. Technology Stack



The technical stack of Krypton is divided into six layers: ecosystem layer, platform application layer, tool layer, contract layer, consensus layer and data layer.

A. Ecology Layer

Krypton's goal is to become the world's first gateway for blockchain games, based on high-quality game content, social interaction, built-in token transactions and an NFT collectibles mall, forming a complete closed loop ecosystem, encouraging users to create value and accumulate digital assets by playing games on Krypton.

The ecosystem layer of Krypton is mainly composed of high-quality game content like Krypton Knight, Krypton Miner, Block West, Hyper Dragon and Titanium Interactive games. The composition of the ecosystem layer is formed mainly through self-research, cooperation with traditional high-quality game developers and existing successful games to combine traditional classic games with blockchain, etc. Not only ensure the quality of the game, but also hope to attract traditional gamers, creating an incremental effect. At the same time, Krypton will open the game crowdfunding function, which will establish a strong connection between developers and users from the nascent stage of the game.



B. Application Layer

a. NFT Wallet

Wallets are tools for storing and using cryptocurrency, which play a pivotal role in the blockchain field. Unlike traditional currency wallets, the NFT wallet is a dedicated wallet for virtual collections that documents the various attributes of each digital asset and related events. The specific implementation method is to monitor the ERC721 transaction on the blockchain, convert the transaction on the chain into the ownership and topic data that the user cares about, and provide a unified interface to record the specific attribute data of the NFT. The built-in token and NFT wallet not only facilitate transfer, collection, transaction record inquiry, etc., but also let user view all current collections in the NFT collection wallet, and it is easy to initiate transfer collections and initiate sales of collections from wallets.

b. Cross-chain Transfers

Cross-chain is the direct circulation of tokens, which overcomes the barriers between different chains. Cross-chain trading does not change the value of digital assets on each blockchain, but only allows exchange/transfers between different holders. One of the core elements of cross-chain trading technology is to help user Alice on one chain find a user Bob on another chain who is willing to redeem. From a business perspective, cross-chain technology is an exchange that allows users to conduct cross-chain transactions on the exchange.

The ultimate goal of Krypton is to allow cross-chain trading, and exchanges that support cross-chain trading will accept payments for Bitcoin and Ethereum and their ERC20 standard tokens. Cross-chain transactions can be implemented using hash-locking techniques, relay-chain (such as BTCRelay and ZecRelay), or cross-chain communication protocols (such as Cosmos and Polkadot). Krypton uses Notary schemes, which sets interoperable triggers between different chains. Cross-chain transfer behaviour can only occur if the trigger condition is met. The solution does not require the construction of a new blockchain and functions directly on the original chain to achieve cross-chain capabilities.



c. Multi-currency Wallet

Krypton Wallet will be the global cryptocurrency wallet that supports the transfer, payment and storage of most cryptocurrencies. Any cryptocurrency can be safely and conveniently traded on this wallet, and the recharge and withdrawal between trading platforms allows users to have secure storage tools for their favourite game tokens.

d. NFT Mall

NFT Mall is a decentralized asset trading mall empowered by smart contracts. The contract itself guarantees the security and transparency of the transaction process. The combination of on-chain execution and off-chain match increases the fluency of usage. Specifically, the seller signs the sold item ID and price through the private key and sends the signature to the mall for the pending order, the buyer can obtain the signature, and send the response price to the transaction contract to complete the transaction.

C. Tool Layer

a. Blockchain Browser

The blockchain browser can be considered as main window of the blockchain information, and the contents recorded in each block can be viewed from the blockchain browser. Usually the digital asset user will use the blockchain browser to query the transaction information recorded in the block. It will record in detail the confirmation process of each block and the process of generating and distributing tokens, and completely record the token circulation between each block, thus revealing the information more completely and publicly, such as stocks, increments, turnovers, etc. The only thing that cannot be known is who is behind each block, which is a feature of anonymity.

b. Cross-chain Asset Transfer

The Krypton Chain will be the hub for cross-chain trading of several assets. We use smart contracts and hash-locking technology to transfer digital assets from any chain to the Krypton Chain, or vice versa, without the help of any authoritative third party. Regardless of the public chain of another game, if it can support smart contracts and hash locks, the Krypton Chain can be used as a cache for its high-speed processing. This can give developers a lot of convenience. For example, developers can reduce the cost



of learning and games developed using the original public chain are easily transferred to Krypton. In addition, the combination of cross-chain transactions and the underlying blockchain can provide a more robust assurance of utility value for secondary tokens issued based on the Krypton Chain. For example, users can use ETH to freely and securely purchase or sell a Krypton-based token on other chains without the presence of a third party.

c. Krypton Account System

The blockchain account system is based on key pairs, which increases security and anonymity, but it increases the entry barrier for ordinary users. Krypton uses the mobile phone number that the user is familiar with as the default ID, and the user can choose to actively associate the wallet address to realize the mapping between the account and the wallet. The third-party application can freely choose to use the user's account or wallet address as the main account. When selecting the user account, user can use the oauth2.0 provided by Krypton as the access, and query the user's related information through the token, such as the address of mapped wallet. The wallet address, user avatar, and the property that needs to be received by the wallet address can be temporarily hosted in the account, which reduces the barrier for Dapp development, so that its function can be unaffected in the non-wallet environment. Users can also choose to use its own wallet address directly, without having to go through Krypton, interact directly with the user, adding a lot of flexibility.

d. RPC Interface (Remote Procedure Call)

That is to say, the calling procedure code does not run locally, but rather implements the connection and communication between the caller and the callee. Krypton will provide a wealth of technical PRC to meet the needs of games and NFT+. For example, Krypton will provide a cross-chain event monitor interface. All the token transactions that occur on all Krypton's supported public chains are monitored by the Krypton client and support a programmable event handling mechanism. Krypton also provides ample NFT+ query RPC. For example, being able to query NFT+ public key at any time, owner, etc.



D. Contract Layer

Solidity is a high-level language for writing smart contracts. The Solidity program needs to run on the Ethereum Virtual Machine (EVM). EVM is used to execute the smart contract of the Krypton. Smart contracts can be developed using the advanced development language Solidity, and the contract source code is compiled to get the bytecode that can be run in the EVM. When deploying contracts and interacting with contracts, bytecodes are passed and presented as hexadecimal strings.

E. Consensus Layer

The underlying technology of the Krypton Chain is the perfect blend and improvement of ETH and EOS technologies. We implemented BFT-DPOS technology based on the Ethereum. The full name of BFT-DPOS technology is the Byzantine Fault Tolerance Delegated Proof of Stake. Unlike traditional POS technology, BFT-DPOS achieves two important improvements. First, the block producer is voted by all participants; the second is the use of Byzantine fault tolerance technology to shorten the block confirmation time. Voting determines that the block producers can be part of the blockchain producer on the one hand and a correction channel on the other. Any producer who does evil can be quickly removed by the voters, thus maintaining the stability of the system. The possibility of universal participation is an important guarantee for maintaining consensus. The application of Byzantine fault-tolerant technology allows a block to be confirmed within one second of its generation. This speed of confirmation makes it possible for in-game real-time transactions based on blockchain.

F. Data Layer

The Big Data layer of Krypton is a decentralized file storage and reading system. In this system, we use a technique similar to the Interstellar File System (IPFS) to decentralize access to files. For each data stored, it can be obtained by its signature. The behaviour data of NFT+ can be freely accessed. In addition, this system will support NFT+ based big data analysis. For any NFT+ token, all of its behavioural data can be stored and retrieved at low cost and guaranteed to be correct.



4. Features of Krypton's products

A. Cross-chain Asset Trading

a. Market Problems

The concept of decentralized cash has been proposed for a long time. Bitcoin (BTC, Nakamoto 2008) is the first decentralized ledger system with broad consensus and application. Its revolutionary emergence has made the acquisition of consensus no longer dependent on an authoritative third party. ETC (ETH, Wood 2014) promoted the Bitcoin system, which further supports a Turing-complete trading system. This makes Dapps possible. However, to date, the ETH consensus system is still Proof of work (PoW). Thus, ETH requires system participants to spend a huge amount of energy to competitively solve some cryptographic hashing problems. And these hashing problems alone do not bring any meaning other than PoW. BTC that use similar systems consume more energy per day than some small countries. Because of the use of this system, ETH has a lower transaction rate (the current transaction rate is only 15 transactions per second). As a next generation blockchain system, DPoS proposes and improves another consensus system with other similar systems: Delegated Proof of Stake (DPoS). Its trading system can theoretically achieve TPS of 10000. ETH is also improving its consensus algorithm to improve transaction rates. Such a system, if implemented, will greatly improve the experience of deblocking applications based on blockchain.

Although the blockchain technology has made great progress, the current public chain system cannot meet the needs of a complete decentralized digital asset trading and management platform. For example, in the game field, ETH's NFT system (ERC721), while giving an excellent digital asset trading system, is far from meeting the high transaction rate and data storage and verification demanded for games. Each NFT will have its specific trading history and behavioural trajectory in a multiplayer game due to its uniqueness (for example, User A uses this NFT to perform an operation at a certain time). These trajectories even give the NFT a special use-case. Existing platforms are not able to record these data efficiently and completely. One possible solution is to record the data on the existing public chain. But this will make the NFT's record limited by the bandwidth of the public chain and will cause high costs. Another solution is to rely on current database technology. But such technology is centralized, and records may be tampered



with. This greatly affects the practicality of the NFT. Therefore, digital assets require a more powerful NFT trading and management system. Moreover, due to the large number of existing underlying public links, different game developers may use different underlying public chain systems. This aspect makes the liquidity and practicability of digital assets worse, and on the other hand, the development and testing costs of decentralized games become higher. These factors make the development of game DApps slow and the public acceptance rate is low. Therefore, we urgently need a cross-chain high-speed digital asset management and trading system to solve these problems. Therefore, the Krypton platform has proposed a cross-chain asset exchange.

B. Cross-chain Solution

In the case of single-chain, clear/settlement consistency and atomicity (if a transaction is treated as a program, it is either executed completely or not at all, this feature is called atomicity) are easy to guarantee. However, if the assets are on different chains, it is necessary to technically guarantee the cross-chain consistency and atomicity of clearing settlements and provide technical support for the cross-chain asset exchange of the decentralized exchanges. Currently cross-chain solutions can be divided into three categories:

(1). Notary Mechanism

This is a centralized or multi-signature-based witness model. The main feature is not to pay attention to the structure and consensus characteristics of the chain, but to introduce a credible third party to act as a notary as an intermediary for cross-chain operations. A representative solution is Interledger.

(2). Sidechains/ Relays

The side chain is a chain structure that anchors the original chain, but it is not the fork of the original chain. Instead, it extracts specific information from the data stream of the original chain to form a new chain structure, and the relay is a channel of cross chain interaction and communication. Whether it is a side chain or a relay, the role is to collect data from the original chain, playing the role of the monitor. The side chain and the original chain cannot directly verify the state of the square, because this will form a loop, but it is feasible to include only light nodes with each other. The corresponding verification logic can be implemented by the chain protocol itself or the application



contract. In general, the main chain is not aware of the presence of the side chain, and the side chain must be aware of the existence of the main chain. Representative solutions are btcrelay, RootStock, Polkadot, etc.

(3). Hash-locking

It sets interoperable triggers between different chains, usually a hash of the random number of the plaintext to be disclosed. The hash value is equivalent to the secret code of transfer, and only those who get the cipher can get the money. At the same time, it also constructed two Redeem contracts, which require double signature and have a time limit, the other party signs, and they are not signed. When they sign, the assets are returned. One of the key technical designs is that a Redeem contract for a person who makes a transfer of a hash secret code is longer than another person in time, thereby protecting his rights. A representative solution is the Bitcoin Lightning Network.

Among the above three designs, 1 and 3 don't require building a new blockchain, and directly expand functions in the original chain to achieve cross-chain capability. The design of 2 realizes asset transfer across chains, so that assets are aggregated into the same book to facilitate trading. The first one has to be used as a notary by a third party, which deviates from the purpose of "decentralization" of the blockchain. The second solution requires building a new blockchain to realize the technology. It is rather cumbersome. In contrast, option 3 does not require building a new blockchain, and can be extended directly in the original chain to achieve cross-chain capability.



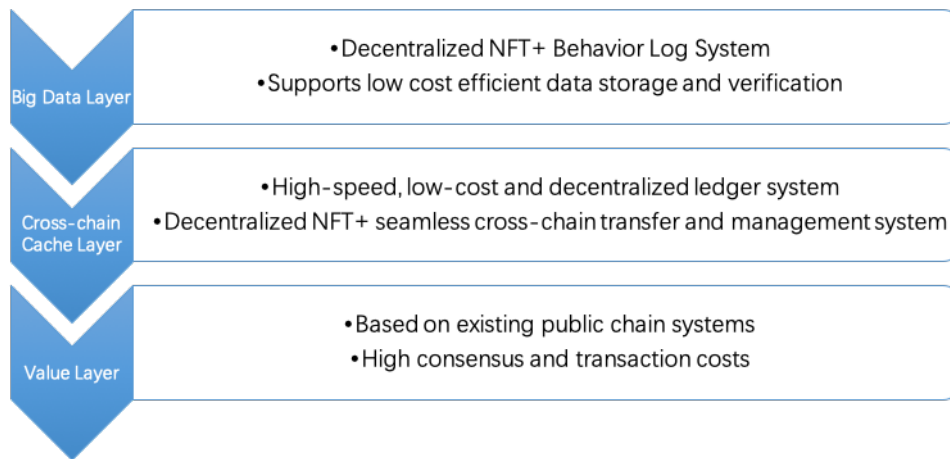


B. Game Equipment NFT

a. 【NFT+】 Pass System

ERC721 provides a new NFT standard, and the "uniqueness" feature extends digital assets to a higher dimension. The digital assets such as rare props, best equipment, pets, and fashion in the game perfectly meet the conditions for becoming an NFT. The NFT of game items truly gives asset ownership to the player, and the NFT will exist and circulate independently separated from the game's, and cross-game assets become a reality, which will be an extremely important step for the blockchain to promote the development of the game. We have fine-tuned the equipment NFT in Krypton Knight and formed a complete solution for third-party developers.

In addition to ensuring the functionality of the traditional decentralized ledger system, the goal of Krypton is to provide a complete high-speed decentralized digital asset trading and management platform. The digital asset of the planet's core is a new generation of non-fungible token NFT+. NFT+ will provide a powerful big data entry access and management interface based on the original NFT. The NFT+ token system is a three-layer blockchain structure. The bottom layer is based on existing public chain technologies, such as the Ethereum or EOS system. These public chain systems provide a decentralized value certification system. The second layer is based on the cross-chain NFT+ trading and management system of Krypton. On the second level, Krypton not only provides a high-speed and low-cost NFT+ decentralized ledger system, but also provides a free NFT+ cross-chain transfer system. For example, the user can transfer NFT+ to any public chain. This will greatly facilitate developers and game users. The third layer is an NFT+ big data access and management system. On the third level, Krypton will provide a decentralized NFT+ log system. For each NFT+ token, users can get their complete non-tamperable behaviour data on the third level. This platform will provide a complete ecosystem guarantee for the Krypton-based games. Next, we introduce the NFT+ system and the structure of the layers of Krypton.



NFT+ is the core digital asset system of Krypton. It provides a more powerful data storage and verification interface than traditional NFTs. It is therefore more suitable for digital asset certification and management of games and similar systems. To better introduce NFT+, we first introduce the traditional NFT system, which is the token system based on the ERC721 protocol on Ethereum. Unlike traditional tokens, each NFT has a uniquely identifiable ID and is not subdivided. For example, the famous CryptoKitties, each cat is a non-subdividable NFT. With the ERC721 protocol, owners can freely trade NFT. Since every item in life can be regarded as non-fungible (i.e., unique), the NFT corresponding to the ERC721 has a wide range of application scenarios. However, the existing ERC721 protocol still cannot meet the management and application of many digital assets. The main problem is lack of a unified data storage and verification interface and physical interface.

In a game or some other application scenario, the NFT usually corresponds to the items in the game. These items usually have certain features in the game. For example, weapons are lethal; shields have defensive functions; and some items even require multiple people to participate in order to function. The usage of each item will generate corresponding data. Compared to transaction data, these behavioural data usually do not involve the ownership of the NFT, and thus require less consensus. It should not be stored on high-cost public chains. But these data form part of the function of the NFT. For example, the reason why an item is collectible is because a celebrity uses it to complete a certain task. Therefore, these data need to be stored and need to have authentication mechanism. Other solutions may have to store this data in a centralized database. This aspect makes the data easy to lose and tamper with, on the other hand, it does not have the authenticity of the authentication function.



On the other hand, an important application scenario of the NFT is to correspond to actual objects. For example, an NFT can correspond to real estate, cars and other products. However, the existing NFT has a problem of being out of touch with actual items. For example, trading a car in real life does not mean that it has been recorded on chain accordingly. Trading items that require both online and offline operations will affect the NFT experience and functionality. The underlying cause is due to the fact that there is no tamper-proof authentication system in direct contact with NFT.

NFT+ is an improved version of NFT designed to address data storage and verification and physical linking issues. The NFT+ solution is the concept of introducing a private key in ERC721. In addition to a unique ID, each NFT+ pass corresponds to a public key private key pair. NFT+ requires a private key signature to complete the transaction at the time of the transaction or transfer. Each NFT+ data needs to be signed with its private key before being stored. In this way, its role has three aspects:

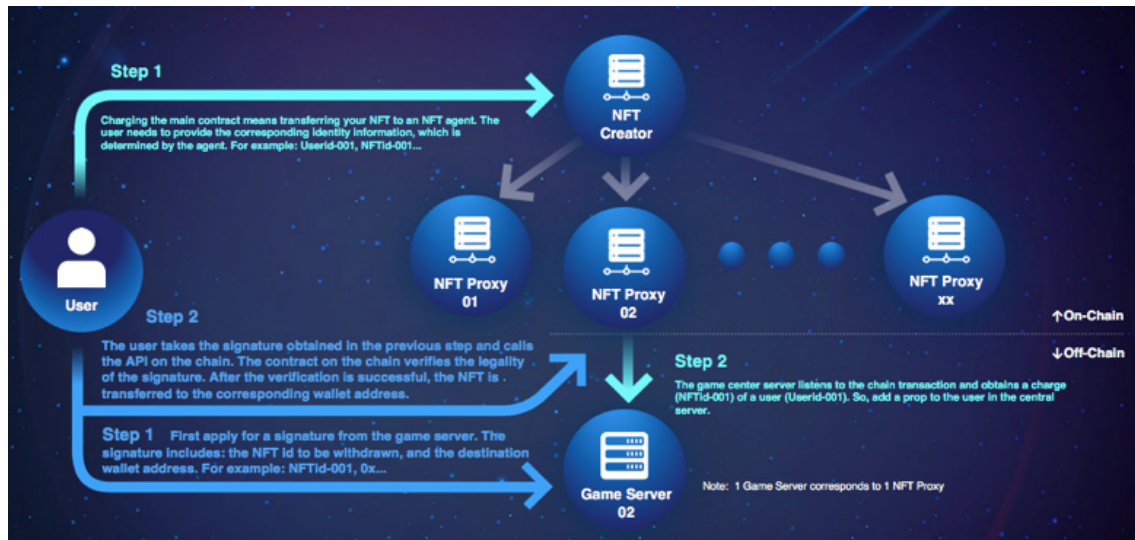
(1) . The NFT+ public key can be used to verify the legitimacy of its ancillary data, thus preventing data tampering.

(2). The private key of NFT+ can be regarded as the proof of ownership of another layer. This private key merges with the owner's wallet to create a richer application scenario. For example, the owner of NFT+ can lease NFT+. During the lease period, the NFT+ Pass will behave as a traditional NFT. At the end of the lease period, the private key owner can redeem the asset at any time.

(3). The private key of NFT+ can be determined by the real object. For example, future electronic products or actual licenses will be embedded with an integrated circuit that generates signatures but does not reveal private keys. Trading is required when the transaction requires physical participation. This solves the problem of NFT and physical disconnection.



b. Technical Solution Achievements of game items



Recharge method: First, the user recharges the main contract, and transfers his NFT to an NFT agent. The user needs to provide corresponding identity information, which is determined by the agent. The game centre server monitors the winding transaction, and the game service provider obtains a recharge from a certain user. Therefore, an item will be added to the user on the central server.

withdrawal method: The user first applies for a signature to the game server, and the signature includes the amount to be withdrawn and the destination wallet address. Then, the user takes the signature obtained in the previous step and calls the API on the chain. The chain contract verifies the legality of the signature. After the verification is successful, an NFT is transferred to the corresponding wallet address of an NFT agent.



C. Traditional Game Assets

In addition to the tokenization of the existing economic system, the traditional game can also use the ERC721 protocol to tokenize the player's rare items to ensure the transferability and transparency of the assets. Developers can also take advantage of the natural tradability of assets to enrich the gameplay. Krypton has provided three different solutions for the asset-winding of traditional games for different needs:

a. One-way asset reference:

The game server unidirectionally references the data on the chain, monitor the transaction modification on the chain, and synchronously modifies the mirrored data in the server. Krypton provides event monitoring and notification APIs to easily inform the changes in the data in the application chain.

b. Two-way asset reference:

In addition to synchronizing the data on the chain, the game server also needs to modify the chain data. For example, in a game of battle, winner A wins the equipment of loser player B: Krypton provides a proxy contract to host the user's property, and user A, user B, and platform C need to sign the contract before starting a match. After the game is over, the three parties sign the results of the game (A obtains the equipment of B), and only two or more signatures can take effect.

c. Logic on chain:

Applications can use smart contract to fully disclose their key logic such as equipment drop rate, activity reward distribution, and publish source code to the Krypton. Any user can see the source code and call the corresponding interface to query the contract data, which increases the player's trust.



5. Community

A. Game Performance

Krypton launched on April 28, 2018 with a total of 1.4 million users, all of which are mobile users, excluding users on the web, WeChat, html5, etc. Krypton's DAU is 20000. 95% of users are from China, 5% are from overseas, and overseas users are mainly from Japan, United States, South Korea, and Thailand. Users have created more than 400,000 wallet addresses with tokens.

B. Community Data

Krypton community has more than 100,000 members:

QQ platform: 33 groups of 1000–2000 users; 47,000 users in total;

WeChat platform: 213 groups of 100–500 users; 8 groups of more than 500 users, 21,323 users in total; 65,000 followers of the Krypton subscription account;

Among the active users of Krypton, 65% have exchange accounts; 96% would like to participate in the overseas public sale of KGC; 82% believe that the public sale price should be higher than 0.1 CNY; 50% hope to subscribe for more than 1,000 CNY; 20% hope to subscribe for more than 5,000 CNY.





6. Krypton Token Economics

A. KGC Issuance Plan

The native digital cryptographically-secured utility token of Krypton (KGC) is a transferable representation of attributed functions specified in the protocol/code of Krypton, designed to play a major role in the functioning of the ecosystem on Krypton, and intended to be used solely as the primary utility token on the platform.

KGC is a non-refundable functional utility token which will be used as the medium of exchange between participants on Krypton. The goal of introducing KGC is to provide a convenient and secure mode of payment and settlement between participants who interact within the ecosystem on Krypton. KGC does not in any way represent any shareholding, participation, right, title, or interest in the Foundation, the Distributor, its affiliates, or any other company, enterprise or undertaking, nor will KGC entitle token holders to any promise of fees, dividends, revenue, profits or investment returns, and are not intended to constitute securities in Singapore or any relevant jurisdiction. KGC may only be utilised on Krypton to use KGC as a means to enable usage of and interaction within Krypton.

a. Allocation

In total, there will be 3 billion KGC issued. The tokens are allocated in the following way:

- 51% of the KGC will be reserved for ecosystem mining
- 15% of the KGC will be reserved for the team
- 6% of the KGC will be reserved for the Foundation
- 23% of the KGC will be reserved for token sales
- 5% of the KGC will be reserved for marketing initiatives

In particular, it is highlighted that KGC:

(a) is non-refundable and cannot be exchanged for cash (or its equivalent value in any other virtual currency) or any payment obligation by the Foundation, the Distributor or any affiliate;



(b) does not represent or confer on the token holder any right of any form with respect to the Foundation, the Distributor (or any of its affiliates), or its revenues or assets, including without limitation any right to receive future dividends, revenue, shares, ownership right or stake, share or security, any voting, distribution, redemption, liquidation, proprietary (including all forms of intellectual property or licence rights), or other financial or legal rights or equivalent rights, or intellectual property rights or any other form of participation in or relating to Krypton, the Foundation, the Distributor and/or their service providers;

(c) is not intended to represent any rights under a contract for differences or under any other contract the purpose or pretended purpose of which is to secure a profit or avoid a loss;

(d) is not intended to be a representation of money (including electronic money), security, commodity, bond, debt instrument or any other kind of financial instrument or investment;

(e) is not a loan to the Foundation, the Distributor or any of its affiliates, is not intended to represent a debt owed by the Foundation, the Distributor or any of its affiliates, and there is no expectation of profit; and

(f) does not provide the token holder with any ownership or other interest in the Foundation, the Distributor or any of its affiliates.

The contributions in the token sale will be held by the Distributor (or its affiliate) after the token sale, and contributors will have no economic or legal right over or beneficial interest in these contributions or the assets of that entity after the token sale. To the extent a secondary market or exchange for trading KGC does develop, it would be run and operated wholly independently of the Foundation, the Distributor, the sale of KGC and Krypton. Neither the Foundation nor the Distributor will create such secondary markets nor will either entity act as an exchange for KGC.



b. Lock-up plan:

- Team release schedule: The team tokens will be subject to an initial lock-up period for 12 months after the first listing of KGC on a reputable digital asset exchange (the Listing) and unlocks linearly every 3 months over a total period of 5 years.
- Foundation release schedule: The Foundation tokens will be subject to an initial lock-up period of 24 months. The Foundation has the right to distribute tokens if needed and will announce the plan with one month in advance. The amount released over each 3-month period will not exceed 1/16 of total tokens and will be released over a total period of 4 years.
- Private sales release schedule: 30% of tokens will be unlocked on the Listing date, 35% of tokens will be unlocked each 3-month period, over a total period of 6 months.

B. KGC Token Functionality

a. KGC Token for ecosystem Mining Plan

Total Mining Target: 51% of the total KGC will be mined, 1.53 billion

Mining Timing: Up to 10 years, up to 300 million of KGC each year with no limit for minimum amount, if the mined KGC doesn't reach the mining target amount, the unmined tokens will be locked-up and not issued.

KGC also provides the economic incentives which will be consumed to encourage participants to contribute and maintain the ecosystem on Krypton. Computational resources are required for maintaining the Krypton, thus providers of these resources would require payment for the consumption of these resources (i.e. "mining" on Krypton), and KGC will be used as the medium of exchange to quantify and pay the costs of the consumed computational resources. KGC is an integral and indispensable part of Krypton, because without KGC, there would be no incentive for users to expend resources to provide services for the benefit of the entire ecosystem on Krypton. Users of Krypton and/or holders of KGC which did not actively participate will not receive any KGC incentives.

(1) Mining Methods

Method 1. lock other public chain tokens to mine KGC



Every user has the right to mine KGC with the token of public chain planet and claim a certain amount of public chain tokens and KGC until expiration. Miners can ultimately get back all public chain tokens staked, together with n% of public chain tokens (in KGC) as payment for their efforts.

First period: $n\%=10\%$

Following Periods: $n\%=10\% / (\text{purchased amount of KGC pool} / \text{total amount of KGC pool of last period})$

Attention: Users has to claim the KGC mining incentives manually each hour – if the rewards hasn't been claimed in 24 hours, the token incentives awarded will be forfeited.

e.g.: if buying 1 ETH of KGC pool on Ethereum Planet, 1 ETH = 2000 RMB and 1 KGC = 0.05 RMB, then the total amount of KGC allocated for mining incentives will be $2000 \times 1 \times 10\% / 0.05 = 4000$. Every hour, $1/24/365 = 0.000114$ ETH and $4000/24/365 = 0.456621$ KGC will be available to be distributed to miners in proportion to the actual work performed.

(2) Method 2: Invitation rebate

If a user refers another friend to purchase KGC, the referrer may receive 10% of the KGC purchased by that friend as an incentive.

B. Advantages of the ecosystem mining

- For public chain planet:

Native tokens will be locked-up

- For users:

Ability to participate in ecosystem maintenance

Transparent mechanism with smart contract

- For Krypton

New quality users will be continuously introduced to the platform

Cultivating users' login habits and increasing DAU

Simplifying the way to buy KGC and promoting in-game purchase



C. KGC ecosystem fees:

KGC will be used as the platform currency for various fees payable on Krypton:

- transaction fee from selling first-hand NFT items: e.g. Commemorative card, commemorative coin, community land NFT, etc will be paid in KGC
- community creation fee (10%) of KGC spent by users to create "communities" (DAO) in games
- community maintenance fee will be paid in KGC
- operating fee (10%) of KGC spent by users on various features to increase the scale of "community" (DAO)
- a portion of the revenue from games developed by the Krypton team or third-party developers would be charged in KGC as service fee
- exchange fees for NFT exchange as well as for OTC transactions will be payable in KGC
- various other fees on Krypton

Lock-up

- Bidding: Third-party game bids for the home page promotion place based on the ranking of KGC locked, Weekly refreshed, continuously locked
- Voting: Using KGC to vote for new Commemorative card or new game launched, KGC needs to be locked for 1 month. For the avoidance of doubt, the right to vote is restricted solely to voting on features of Krypton; the right to vote does not entitle KGC holders to vote on the operation and management of the Foundation or its affiliates, or their assets, and does not constitute any equity interest in the Foundation or its affiliates.
- 90% of KGC used for creating "community" (DAO), locked until dismissed
- Up-coming other methods



7. Roadmap

- 2018Q2 Krypton and Krypton Knight launched;
- 2018Q3 NFT wallet and trading platform launched; Celebrity Cards, World Cup Cards, Quizzes and other applications launched;
- 2018Q4 Third Party Game Access Opens (Hyper Dragon、Last Trip etc.); Krypton Tycoon, voting and other applications launched
- 2019Q1 "Community" (DAO) system launched; Built-in Decentralized Token exchange launched;
- 2019Q2 Zilliqa Planet and Ethereum Planet launched;
- 2019Q3 Docking More Public Chains; launching Super Player on Appstore and Google Play;
- 2019Q4 Improving Layer 2 Implementations and Developer Guidance; cross-chain assets movement through Cosmos cross-chain solution;
- 2020Q1-Q2 Releasing more high-quality third-party games;
- 2020Q3-Q4 Combining "in-game governance" system with traditional "guild" to attract players.



8. Team & Advisors

A. Core Team

Mike Lee, CEO

Former Vice President of Happy Elements and early team member, responsible for business development, global operations, strategy and investment, M&A operations. Received B.A degree from Academic Talent Program at Tsinghua University and dropped out of the Marketing PhD program at Duke University (U.S.). Former Baidu Senior Product Expert and participated in the development of Baidu's search engine, also involved in the development of the following games: "Anipop"(The #1 game in China), "Happy Aquarium" and "My Kingdom".

Tom Guo, CTO

Full-stack blockchain engineer, graduated with a Masters in CS from the Harbin Institute of Technology. Former senior engineer of MultiVAC, Kabam Engineer, Firewing Games Technology Partner, Senior Architect for "Dragons of Atlantis".

Cakra Gai, CPO

Former Kabam Lead Game Designer, where he was responsible for "Dragons of Atlantis". At Tianshen Interactive, he was responsible for "Sword of Honour" and "Flying" which had a combined \$288 Million LTV. At Perfect World, he was involved with "Wulin Rumour" which had a \$94 Million LTV. He has 10+ years of experience in the game industry and graduated with a Bachelor's of Science in Biology from Tsinghua University.

B. Additional Members

Lin Yang Chief Scientist

Postdoctoral fellowship at Princeton University, Berkeley University Visiting Scholar, PhD in Astrophysics and CS from Johns Hopkins University, he graduated with a Bachelors in CS from Tsinghua University.



Yong Shi

Graduated from Beijing University of Technology, majoring in aircraft design, from 1997 to 2009, he mainly engaged in research and development of cyber security. He successively developed host-based IDS, line-speed 100-mega firewall, giga-mega firewall based on Intel NP technology, and the first TPM of independent intellectual property rights sponsored by the Ministry of Science and Technology in China. He completed encryption and decryption algorithm, signature algorithm, hash algorithm implementation, and got two patented technologies; He entered the Internet field in 2007, in MySpace, Qihu 360, Le element completed the R&D of platforms of security, distribution, operation, advertising. He started his own business in 2013 and established of Beijing Easy. Daoyou Network Technology Co., Ltd. has developed the first iBeacon application system in China. It has received millions of dollars of venture capital investment and applied for two patented technologies. Early participant in Blockchain Technology, Director of CCX.ph Exchange

C. Advisors

Andy Tian

Gifto Founder, Asia Innovations CEO, former General Manager of Zynga China and Head of Google Mobile China. Masters in CS from MIT and a successful serial entrepreneur.

Vincent Niu

Founder of DappReview, founded China's largest DApp developer community, Received Master of Science in Financial Mathematics and Statistics from Stanford University.

Tianfang Li

Founder of Hydro protocol, Early Engineer at Palantir, Consultant to Radom Block Capital and a blockchain technology expert.



Sheng Wang

InnoAngel Fund Partner, won CLPA 2017–2018 Best Post–70 Venture Capitalist and 2017 Zhongguancun Top Ten Investors.

Ye Yuan

Founder of Chainfire Blockchain Alliance and Executive Director of Shuimu Tsinghua TBC.

Hongyi Wang

CEO of Danke Family, reached over 30 Million users, co–Founder of PixShow, creator of "Good Song" and "Shoot Show".

D. Strategic Partners

- InnoAngel Funds
- Danhua Capital
- AC accelerator
- Zilliqa Foundation





9. Disclaimer

This statement does not involve the risk of securities tendering and the risks associated with the operation of the planet and KGC. It does not involve any regulated products under judicial control: this document is a conceptual document [white paper] for project description, not for sale or solicitation of tenders and Shares, securities or other regulated products of Planetary Products and its related companies. This document cannot be used as a prospectus or any other form of standardized contract document, nor is it an investment advice that constitutes advice or solicitation of securities or any other regulated product in any jurisdiction.

This document cannot be used to sell, subscribe or invite others to purchase and subscribe to any securities, and to form a link, contract or commitment based on this. This white paper has not been reviewed by judicial authorities in any country or region. Recommendations not to participate in the investment: Any information or analysis presented in this document does not constitute any recommendation to participate in the token investment decision and will not make any specific recommendations that are biased. You must listen to all the professional advice you need, such as tax and accounting.

No representations or warranties are made: this document is used to describe our launch of the Planetary Games and KGC, but Krypton Foundation LTD makes it clear that:

1) no representations or warranties are given as to the accuracy or completeness of any of the content described in this document, or otherwise related to the project;

2) In the absence of any preconditions, no representations or warranties shall be given to any forward-looking, conceptual representation of the achievements or reasonableness of the content;

3) Nothing in this document shall be the basis for any promise or statement of the future;



4) Do not assume any loss caused by the relevant personnel or other aspects of the White Paper;

5) Within the scope of legal liability that cannot be waived, it is limited to the maximum allowed by applicable law.

Not everyone can participate in the project: Krypton is not accessible to anyone, and participants may need to complete a series of steps, including providing information and documents indicating their identity. Non-authorized companies are not related to the project: the use of the name and trademark of any other company or organization other than Krypton Foundation LTD and Planet Earth does not mean that any party has an association or endorsement with it, for the purpose of explaining the relevant content. Note related to KGC: "KGC" is the Cryptocurrency of Krypton.

KGC is not a virtual currency: KGC cannot exchange items, services and transactions on the exchange during the period of this document, nor can it be used outside of Krypton.

KGC is not an investment vehicle: no one can guarantee it will appreciate or depreciate in value, and there is no reason to believe that the KGC you hold will definitely appreciate, and there may even be a risk of depreciation.

KGC is not a proof of ownership or control: holding KGC is not a grant of ownership to the holder and the equity of Krypton Foundation LTD and Krypton Games; nor is it granted direct control or any decision making for Krypton Foundation LTD and Krypton Games.

Risk warnings related to KGC

You acknowledge and agree that there are numerous risks associated with purchasing KGC, holding KGC, and using KGC for participation in Krypton. In the worst scenario, this could lead to the loss of all or part of the KGC which had been purchased. **IF YOU DECIDE TO PURCHASE KGC, YOU EXPRESSLY ACKNOWLEDGE, ACCEPT AND ASSUME THE FOLLOWING RISKS:**



Risk due to user's personal wrong behaviour:

1) Risk due to loss of private key: Before KGC is assigned to the participant, the participant will get the public key account associated with KGC. The KGC public key account can be entered through the private key randomly assigned by the participant. Krypton doesn't have access to any private keys. It is possible to lose KGC in the associated public key account. It is recommended to practice how to operate so that participants can safely back up the private key on multiple local devices, preferably in a non-network environment.

2) Risk of disclosure of a private key to a third party: Any third-party individual or organization may process the KGC of its corresponding account after obtaining the private key of the participant's public key account. Participants are advised to protect the relevant equipment to prevent unauthorized login and reduce the risk.

3) Risks that may arise due to participation in the voting: KGC holders are likely to cause KGC to be lost due to malicious or irresponsible voting behaviour in the voting.

Risks associated with network security during the use of KGC:

1) Based on the related risks brought by the Ethereum network: Krypton Foundation LTD will issue ERC20 tokens based on the Ethereum platform in the initial stage. Any faults and unknown functions on the Ethereum platform may cause KGC to be unknown. What you don't want to happen. Ethereum and local unit accounts based on the Ethereum platform may lose any value like KGC. For more information about the Ethereum platform see: www.ethereum.org

2) Risk of illegal intrusion from a malicious third party: A malicious third party such as a hacker, other team or agency may attempt to interfere with the development of the planet, which may be, but is not limited to, the following: DDOS, Sybil, spoofing, smurfing or Attacks based on consensus mechanisms, etc.



3) Due to the risk of infrastructure software security vulnerabilities in the planet: This network system is an open source system. Krypton Foundation LTD employees or other third-party organizations intentionally or unintentionally introduce bugs into the network core system, which leads to KGC risks and losses.

4) Major technological breakthroughs in the field of cryptography will become the risk of hidden weaknesses being exploited: Cryptography is an important part of blockchain technology, and advances in cryptography or other high-tech technologies may cause KGC to be at risk of being stolen or lost.

5) Risk of Krypton failure: As a relatively high-tech system, Krypton may cause network failures that are unacceptable or unexpected and may also cause the risk of KGC to disappear or other risks that may cause fluctuations in the market.

6) The planet may be at risk of being attacked because of its high value: For many decentralized cryptographic tokens and virtual currency, the KGC generated by the blockchain technology of the planet has the potential to be attacked by mining. These include, but are not limited to, double attacks, large mine attacks, "selfish mining" attacks, and competitive conditions attacks. Unexpected and new mining attacks may occur, posing a huge risk to the operation of the planet.

Risk due to market uncertainty:

1) There is a risk of low adoption and/or small number of users of Krypton or its related planets. If the Krypton platform or the generated planets are not used by more commercial, personal or other institutions, it will not generate more public attention and its development. The use of a small number of people may limit or reduce the utility functions of KGC.

2) KGC is at risk of insufficient liquidity caused by the exchange: At present, KGC has not yet traded on the exchange. If the exchange is open after trading, it is likely that there will be less understanding of various laws and regulations because the exchange is relatively new. New exchanges are prone to fraud and failure, compared to exchanges that have been established for a long time and have good trading with other mature virtual tokens. Exchange problems can cause a large portion of KGC transactions to be subject to fraud or other operational risk issues, which can lead to a reduction in the value and liquidity of KGC.



3) Participants are not at risk of insurance in the face of losses: KGC's public key accounts are not the same as bank accounts, other financial institution accounts or other social service accounts, and Krypton Foundation LTD does not usually purchase insurance for network systems. When KGC is lost or the planet is lost, no insurance institution can provide claims to KGC holders.

4) The risk of the dissolution of Krypton: There are various factors involved in Krypton, such as the bitcoin, the value of Ethereum, the failure of commercial operations or the claim for intellectual property rights. Krypton may not be able to continue operations, resulting in failure, unsuccessful releases or team disbandment.

5) Risks of regulatory policies in the jurisdictions or administrations of relevant regions and countries: Blockchain technology is currently supported or recognized worldwide but has also been carefully reviewed by various regulatory agencies. The functions of Krypton and KGC may be affected by some regulatory policies, including but not limited to restrictions on use or digital currencies like KGC, which may hinder or limit the development of the planet. It is impossible to predict how, when or whether regulatory agencies may apply existing regulations or create new regulations with respect to such technology and its applications, including KGC and/or Krypton. The Foundation, the Distributor (or its affiliates) may cease operations in a jurisdiction in the event that regulatory actions, or changes to law or regulation, make it illegal to operate in such jurisdiction, or commercially undesirable to obtain the necessary regulatory approval(s) to operate in such jurisdiction. After consulting with a wide range of legal advisors and continuous analysis of the development and legal structure of virtual currencies, a cautious approach will be applied towards the sale of KGC. Therefore, for the token sale, the sale strategy may be constantly adjusted in order to avoid relevant legal risks as much as possible. For the token sale, the Foundation and the Distributor are working with Tzedek Law LLC, a boutique corporate law firm in Singapore with a good reputation in the blockchain space.

6) Other unknown risks: Blockchain technology and corresponding digital currency technologies are relatively new and unproven technologies, and there may be more unpredictable risks, and risks may appear in more ways. This document may be modified or replaced at any time; however, we have no obligation to update this version of the white paper or provide access to additional information for readers.



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