

Yidark Chain

White Paper

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Part1. Industry background

1.1 Advantages of Blockchain Technology

Since the birth of the Internet, the cost of information dissemination in human society has been greatly reduced, and the leap in information dissemination efficiency has brought great liberation to productivity. However, the current Internet also has inherent flaws. It is more concerned about the delivery of information than the ownership of information. Problems such as "data streaking" and "information without owners" have arisen. Some information has strong value attributes, such as remittance transfer information. The transmission of these valuable information needs to rely on a third party to "protect" it. Therefore, the current value transmission cost of information is still high.

The birth of the blockchain has brought the dawn of solving this problem. Due to the openness and transparency of the blockchain, which is difficult to tamper with and does not rely on intermediaries, the blockchain can achieve safe, efficient, and low-cost value transmission. People are expected to build an Internet of value transmission based on blockchain. In the Internet of Value, the cost of value transmission will be greatly reduced, and productivity will be greatly liberated again. The unique advantages of the blockchain, such as the use of data confirmation and efficient transmission of value, can be widely used in many industries, such as financial services, contracts, charities, Internet of Things, etc. The blockchain will change many industries in the future. face. The next step is to move into the application stage. "Decentralization" is the core framework of blockchain. "Fairness, openness, and justice" is the soul of the blockchain.

1.2 Bottlenecks of blockchain applications

The blockchain has developed to the 3.0 stage and has the possibility to support large-scale commercial applications, but the data processing capacity is limited and cannot meet the needs of high-frequency and large-scale applications. That is to say, the limitations brought by the underlying technology have hindered the normal performance of the

upper-level applications. Although there are beautiful imaginations, it will take a long time to realize them. Specifically, at its root, the existing problems of the blockchain are the throughput and the speed of transaction confirmation.

In order to solve this problem, the blockchain industry is making the following attempts: One is large blocks, which increase the storage space of each block. This method has been tried in Bitcoin. The size of a Bitcoin block is only 1MB storage space. At the end of 2017, SegWit2x increased the block size from 1MB to 2MB. However, for security reasons, the SegWit2x hard fork was finally canceled; the second is off-chain transactions, that is, adding Lightning Network or Side chain, this method Ethereum is trying to pay some Ethereum or Bitcoin as a deposit in advance, and then use other methods to trade with other people under the chain; the third is the agent consensus agreement, that is, multiple people become super nodes, Form small groups. EOS is trying to use this "parliamentary system" consensus to generate blocks, and then broadcast the blocks to the entire network, thereby reaching a consensus of the entire network.

However, none of these three attempts can perfectly solve the contradiction between transaction speed, decentralization and security of the blockchain. Yidark Chain is committed to creating an expandable and compatible blockchain underlying framework in order to break through the industry bottleneck and realize the commercial value of blockchain technology.

1.3 Prospects for blockchain development

Blockchain technology is considered to be another underlying innovation after the steam engine, electricity, and the Internet. If the steam engine and electricity have liberated productivity, and the Internet has changed the way information is transmitted, then the blockchain, as a machine for building trust in the digital age, may change the relationship of digital production.

For example, in the financial field, the cost of reconciliation, clearing, and settlement between financial institutions, especially cross-border financial institutions, has always been high, and there are complicated manual processes, while blockchain technology has data that cannot be tampered with and traceability, and its application It helps to reduce the cost of reconciliation between financial institutions and the cost of dispute resolution, can significantly improve the processing speed and efficiency of payment business, and also makes small global payments possible.

Blockchain technology solves two major problems in the digital economy era: one is the visibility of the flow direction, and the other is zero trust cost. In the past, the circulation of physical banknotes was invisible, but the flow of all digital assets has a "chain" to check. The biggest advantage of the blockchain is that it truly completes the construction of credit in an anonymous society, bringing new opportunities to many fields, thus making various innovative applications possible.

At present, the application of blockchain has been extended to many fields such as medical health, education, charity and public welfare, and social management. Taking the cultural industry as an example, the protection of intellectual property rights has always been a pain point in the industry due to the low cost of reproduction, the high cost of rights protection, and the difficulty of proving evidence. With the blockchain, the production, dissemination, and transaction records of cultural products are true, transparent, credible and traceable, and the problem is easily solved . The development prospect of blockchain has great potential.

Part2. Introduction to the public chain

2.1 Yidark public chain introduction

Yidark Chain is a public chain that was born to carry decentralized applications. It is a visual commercial underlying system of blockchain technology and provides a complete solution for off-chain assets to be safely and conveniently uploaded to the chain. Yidark Chain operates using a POS mechanism and is jointly governed by three powers: super nodes, nodes, and verification nodes. One block is packaged every 2 seconds, TPS is as high as 21,000, and Gas fees are as low as 0.000021YDK . YDK is the native Token of Yiadrk Chain. It is a circulation certificate for asset transactions at the application layer. It can also be used in areas such as community incentives, node rewards, node voting, and identity confirmation.

2.2 Yidark technical features

Visual operation

Blockchain is an emerging technology that many industries have adopted or are planning to adopt . At the current stage, the use of blockchain technology to develop applications requires professional programmers to write codes, UI design, build and run servers and other inevitable processes, making it impossible for most enterprises and individuals to touch, thus missing the huge dividend period brought by new technologies. The Yidark Chain technical team has developed a visual SAAS system combined with the underlying system of the public chain. The system is composed of multiple smart contracts. Users can easily implement operations such as asset chaining and token issuance on the premise of zero blockchain technology. It is convenient for businesses and artists to immediately adopt blockchain technology to realize assets on-chain operation.

multi-signature

The multi-signature governance method implements the published proposals in proportion according to the proposals agreed upon when the

multi-signature contract was created, and members collectively decide the organization's fund allocation method. The method of fund distribution for decentralized autonomous organizations can be bonuses, salaries or more exotic mechanisms, such as using internal currency to reward work. This essentially replicates the legal means of a traditional company or non-profit organization, but is only enhanced using cryptographic blockchain technology. Much of the discussion about decentralized autonomous organizations so far has centered around the decentralized autonomous corporation model, with dividend-earning shareholders and tradable shares; as an alternative, multisig is known as "decentralized autonomous The entity of "community" will allow all members to have equal rights in decision-making, and everyone will have equal rights. All decisions will be implemented or rejected according to the proportion agreed upon when the multi-signature was created, so as to achieve truly open, fair and just co-governance. Spirit.

2.3 Yidark ecological application

Yidark Chain is designed to carry decentralized applications. The community has incubated ecological applications including Web3.0 smart contract e-commerce platform, digital collection (NFT) distribution and trading platform, domain name system, decentralized multi-chain wallet, and decentralized transactions. Exchanges, decentralized social media, cross-chain bridges, etc. Yidark Chain provides underlying technical support, the goal is to widely carry distributed and borderless decentralized comprehensive ecological applications, and build a safe, free, fair, and trustworthy underlying public chain of the blockchain.

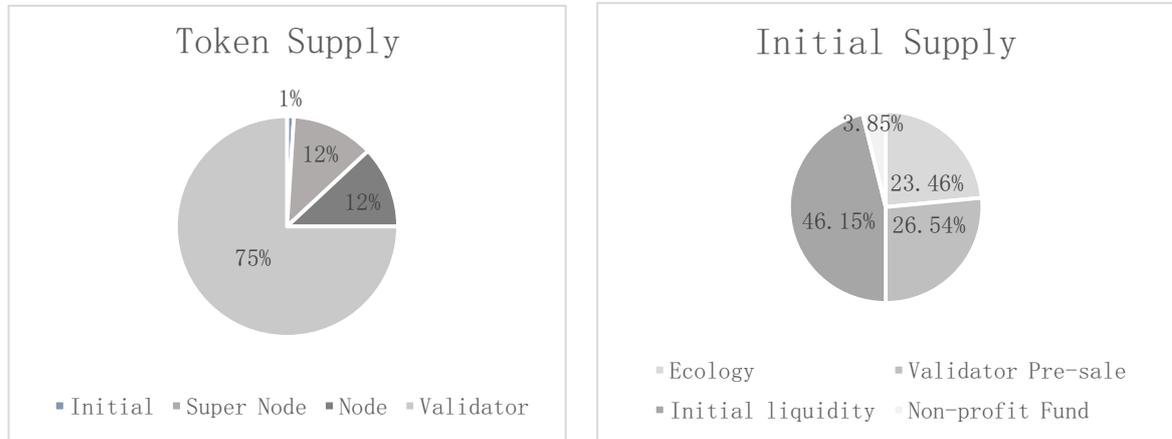
Part3. Operating mechanism

The main network processes a block every two seconds, TPS21000 .

Yidark Chain adopts the rule of separation of powers, with super nodes, nodes and verification nodes responsible for the efficient operation of the underlying system; nodes are distributed around the world, and are fair, open, and transparent through on-chain proposals, voting decisions, and distributed verification. Fairly participate in the co-construction and co-governance of the main network.

3.1 Token issuance

Yidark token is referred to as YDK, with a maximum circulation of 26 billion. The initial circulation is 260 million, accounting for 1% of the maximum circulation, and the remaining 99% is produced by nodes and verification nodes.



3.2 Economic model

YDK is produced by nodes according to rules, and the main network is designed to have a deflation mechanism of yearly production reduction and multi-dimensional ecological destruction.

Destruction mechanism: Configure verification nodes to be 100% destroyed; ecological destruction of YDK.

Production reduction mechanism: Since the creation of the original block, production will be reduced once every 15,768,000 blocks, and each time the production will be reduced by 4YDK.

Year	super node (YDK per block)	node (YDK per block)	Production reduction quantity (YDK per block)	Number of blocks (daily)
1	37	37	0	43200
2	33	33	4	43200
3	29	29	4	43200
4	25	25	4	43200
5	21	21	4	43200
6	17	17	4	43200
7	13	13	4	43200
8	9	9	4	43200
9	5	5	4	43200
10	1	1	4	43200

Part4. Token Standard

4.1 YRC-313 backing token redemption standard

What is YRC-313?

YRC-313 by Yidark Proposed by the technical team in August 2019. This is an application programming interface standard that can implement tokens in smart contracts. YRC-313 (Yidark Request for Comments 313) is an agreement for the exchange of tokens and real businesses. It aims to realize the interactive exchange agreement between real commodities and virtual assets (underpinning payment). Merchants open stores using the 313 protocol on the Yidark chain to sell goods without boundaries, thereby realizing the real industry's use of blockchain technology to achieve product digitization, marketing transparency, and transaction decentralization , resolve customer complaints fairly, and promote trade trust and The progress of consumption value-added provides solutions for blockchain technology and real-life business interoperability.

What is an underpinning redemption token?

The underlying redemption token is a kind of token used by merchants to anchor commodities on the chain to realize promised redemption. Any merchant in the physical industry can start to use blockchain technology for commodity sales. On the application platform that supports the YRC-313 protocol standard , merchants can easily issue commodity tokens, and anchor commodities for payment when issuing tokens. Token holders can use tokens to exchange for goods anchored by merchants at any time, and the conversion ratio has been determined when the tokens are issued. At the same time, merchants can also pledge YDK through the YRC313 smart contract to enhance their reputation, ensuring that token holders cannot exchange for goods and have more safeguards.

Examples of features of the YRC- 313 include:

- Underpinning redemption: When merchants issue chain business contracts, the value of token anchored redemption, token holders can exchange goods at any time; redemption deposit guarantees the minimum underpinning redemption amount of the transaction.
- Commodity contract: When the commodity contract is created, the basic information of the commodity is agreed and the performance bond of the commodity contract is paid: when the commodity is purchased, the merchant will give a token, the future value or the price of the super commodity;
- Order contract: Once the buying and selling behavior occurs, an order

smart contract will be automatically created to ensure the execution of the transaction.

If a smart contract implements the following methods and events, it can be referred to as a YRC-313 token contract and, once deployed, will be responsible for tracking 313 tokens created on Yidark .

method

```
function setPalm(address _tokenAddr, uint256 _price) external;
function minEnsure() public view returns (uint256);
function goBrokeClaim(uint256 _amount) external;
function isGoBrokeClaim() external;
function addPalmEnsure(uint256 _amount) external;
function SubExitPalmEnsure(uint256 _amount) external;
function exitPalmEnsure(uint256_index) external;
function startItem( string memory _name, string memory _logo, uint256
_price, uint256 _total, address _tokenAddr, uint256 _dayRate, uint256
_deadRate ) external payable;
function setNftCoupons( address nftAddr, uint256 amount, uint256
minMoney ) external;
function setNftCardRate( address nftAddr, uint256 rate, uint256 minMoney )
external;
```

event

```
event SetNftCoupon( address indexed token, uint256 indexed amount,
uint256 minMoney);
event SetNftCard( address indexed token, uint256 indexed amount, uint256
minMoney);
event SetPalm(address indexed token, uint256 indexed price, uint256
ensure);
event StartItem(address indexed token);
event SubExitPalm(uint256 indexed _index, uint256 indexed _total, uint2
56 indexed _time);
event ExitPalmSuccess(uint256 indexed_index, uint256 indexed_total);
event AddPalm(uint256 indexed _total);
event WaitGoBroke(uint256 indexed _total);
event GoBroke(uint256 indexed _total);
event GoBrokeClaim(address indexed _owner, uint256 indexed _total);
```

4.2 YRC-20 Homogeneous Token Standard

YRC-20, the full name of Yidark Request for Comments-20, defines a standard for fungible tokens, in other words, they have a property that makes each token different from another token (in type and value)) exactly the same. For example, a YRC-20 token is like YDK , meaning one token is and always will be like other tokens.

YRC-20 features include:

- Transfer coins from one account to another
- Get the current token balance of an account
- Get the total supply of tokens available on the network
- Approve a certain amount of tokens in an account to be used by third-party accounts

If a smart contract implements the following methods and events, it can be called a YRC-20 token contract, and once deployed, will be responsible for tracking tokens created on Yidark .

method

function name() public view returns (string)

function symbol() public view returns (string)

function decimals() public view returns (uint8)

function totalSupply() public view returns (uint256)

function balanceOf(address _owner) public view returns (uint256 balance)

function transfer(address _to, uint256 _value) public returns (bool success)

function transferFrom(address _from, address _to, uint256 _value) public returns (bool success)

function approve(address _spender, uint256 _value) public returns (bool success)

function allowance(address _owner, address _spender) public view returns (uint256 remaining)

event

event Transfer(address indexed _from, address indexed _to, uint256 _value)

event Approval(address indexed _owner, address indexed _spender, uint256 _value)

4.3 YRC-721 Non-Fungible Token Standard

What are non-fungible tokens?

Non-Fungible Tokens (NFTs) are used to uniquely identify someone or something. This type of token can be perfectly used as a platform for selling: collectibles, keys, lottery tickets, concert seat numbers, sports games, etc. This type of token has incredible potential, so it needs a proper standard. YRC-721 is here to solve this problem!

What is YRC-721?

YRC-721 introduces a standard for NFT, in other words, this type of token is unique and may have a different value from another token from the same smart contract, all NFTs have a uint256 variable called tokenId, So for any YRC-721 contract, this pair of values contract address, tokenId must be globally unique. That is, a dapp could have a "transformer" that takes a tokenId as input and outputs an image of some cool thing, like a zombie, a weapon, a skill, or a magical kitty!

YRC-721 (Yidark Request for Comments 721) is a non-fungible token standard that implements token APIs in smart contracts. It provides functions such as transferring tokens from one account to another, getting the current token balance of an account, getting the owner of a token, and the total token supply available across the network. Besides that, it also has other functions, such as approving a certain amount of tokens in the account to be transferred by third-party accounts.

If a smart contract implements the following methods and events, it can be called a YRC-721 non-fungible token contract. Once deployed, it will be responsible for keeping track of the tokens created on Etc.

method

```
function balanceOf(address _owner) external view returns (uint256);
function ownerOf(uint256 _tokenId) external view returns (address);
function safeTransferFrom(address _from, address _to, uint256 _tokenId,
bytes data) external payable;
function safeTransferFrom(address _from, address _to, uint256 _tokenId)
external payable;
function transferFrom(address _from, address _to, uint256 _tokenId)
external payable;
function approve(address _approved, uint256 _tokenId) external payable;
function setApprovalForAll(address _operator, bool _approved) external;
function getApproved(uint256 _tokenId) external view returns (address);
function isApprovedForAll(address _owner, address _operator) external
view returns (bool);
```

event

```
event Transfer(address indexed _from, address indexed _to, uint256
indexed _tokenId);
event Approval(address indexed _owner, address indexed _approved,
uint256 indexed _tokenId);
event ApprovalForAll(address indexed _owner, address indexed _operator,
bool _approved);
```

4.4 YRC-927 Digital Equity Token Standard

The full name of YRC-927 is Yidark Request for Comments 927 , which defines a standard for tokens of income right type . The most notable feature of YRC-927 is that the asset income of YRC20 and ERC20 obtained by the token contract will be obtained by all 927 contracts The holding address distributes income according to the proportion of holding 927 tokens .

What are EFT tokens?

YRC- 927 introduces a standard for EFT. In other words, this type of token

is a type of token with dividend rights. The income in the token smart contract is any token transferred in, and the token holder has The distribution of operable execution income will be distributed according to the proportion of holdings of 927 contract tokens. Example application scenario : 927 tokens issued on the Yidark chain. Enterprises or individuals can use the on-chain trading platform to anchor the income rights on the chain to issue tokens, and the value of the tokens will increase with the increase in income assets. EFT token Has the following salient features :

Digitization of the right to income: the asset package of sustainable income right on the chain is issued against the token contract ;

circulation : the number of tokens issued by the token contract is fixed, and the maximum holding address is 100;

● Reassetization of tokens: 927 tokens are also a type of reliable income right, which can be loaded into new 927 token contracts ;

● Isolation of asset packages: contracts can be loaded into multiple types of different income asset contracts and are independently distinguished and not associated;

● Flexibility of re-trading: Token is a right-of-earning certificate and a digital asset that can be sold or auctioned at any time.

Examples of features of the YRC- 927 include:

● Transfer tokens from one account to another. When the holding address of the token is a 927 contract , it cannot be transferred or divided again;

● The maximum holding address of the token is 100 ;

● The total supply of tokens is to 6 decimal places , and the maximum divisible quantity is 100 million shares;

● Approve the transfer of 927 tokens in an account to a normal address, 927 contract or a multi-signature contract;

● 927 token contracts implement YRC20 and ERC20 asset income distribution, 927 tokens cannot be used for income distribution .

If a smart contract implements the following methods and events, it can be called a YRC-927 token contract, and once deployed, will be responsible for tracking tokens created on Yidark .

method

function name() public view returns (string)

function symbol() public view returns (string)

function decimals() public view returns (uint8)

function totalSupply() public view returns (uint256)

function balanceOf(address _owner) public view returns (uint256 balance)

function transfer(address _to, uint256 _value) public returns (bool success)

function transferFrom(address _from, address _to, uint256 _value) public returns (bool success)

```
function approve(address _spender, uint256 _value) public returns (bool success)
function allowance(address _owner, address _spender) public view returns (uint256
remaining)
function claim(address token) external
event
event Transfer(address indexed _from, address indexed _to, uint256 _value)
event Approval(address indexed _owner, address indexed _spender, uint256 _value)
event Claim(address indexed _token, address indexed _addr, uint256 value);
```

Part5. Disclaimer and risk statement

5.1 Disclaimer

This document is only for the purpose of conveying information, and does not constitute relevant opinions on buying and selling digital assets. Any similar proposals or suggestions will be made under a trustworthy clause and permitted by applicable relevant laws. The above information or analysis does not constitute investment decisions or specific recommendations. This document does not constitute or be understood as providing any buying or selling behavior, or any invitation to buy or sell any form of digital assets, nor is it any form of contract or commitment. All data or cases cited in this document are for display purposes only, or represent industry averages, and do not constitute a guarantee for player participation results.

YDK is a digital token that is used in Yidark Chain . YDK is not an investment. We cannot guarantee that YDK will increase in value, and it may also decrease in value under certain circumstances. Due to unforeseen circumstances, the objectives listed in this white paper may change. Although the team will try its best to achieve all the goals of this white paper . All individuals and groups purchasing YDK will do so at their own risk.

5.2 Risk warning

As a new investment model, digital asset investment has various risks. Potential investors need to carefully evaluate investment risks and their own risk tolerance:

As of the release date of this white paper, Yidark Chain is still in the

development and testing stage, and its consensus mechanism, data rules, algorithms, codes and other technical details and parameters may be updated and changed frequently according to the specific goals of the development and operation teams. The Yidark Chain development and operation team is unable and has no obligation to inform players of every detail of the development (including its progress and expected milestones) at any time. Insufficient information disclosure is unavoidable and reasonable.

Token sales market risk

Since the Token sales market environment is inseparable from the overall digital currency market situation, if the overall market is sluggish, or there are other uncontrollable factors, the price of Token itself may remain undervalued for a long time even though it has a good prospect.

regulatory risk

At present, blockchain technology has become the subject of supervision in all major countries in the world. If the regulatory body intervenes or exerts influence, Yidark application or Yidark Chain may be affected by it. For example, laws and regulations restrict the use and sale of Tokens such as YDK. Such as YDK may be restricted and hindered Even directly terminate the development of Yidark application and Yidark Chain .

Risk of private key loss

The loss or damage of the private key necessary to obtain YDK is irreversible. YDK can only be manipulated with a unique public and private key through a local or online Yidark wallet . Each buyer should keep their Yidark wallet private key safe. If the private key of the YDK buyer is lost, leaked, damaged or stolen, neither the Yidark development and operation team nor any other person can help the buyer obtain or retrieve the relevant YDK .

Risk of hacking or theft

Yidark applications in any way , including but not limited to denial of service attacks (Dos attacks), Sybil attacks, malware attacks, or consistency attacks.

Vulnerability risk or risk of accelerated development of cryptography

The accelerated development of cryptography, such as the development of password-breaking technology or the development of quantum computers, may bring the risk of cracking to Yidark Chain, which may lead to the loss of YDK .

risk of force majeure

In the event of natural disasters, wars, rights interference, etc., including but not limited to earthquakes, hurricanes, tsunamis, wars, riots, parades, government requisitions and other irresistible events, it may limit, hinder or even directly terminate Yidark applications and Yidark Chain development of.