

# TrueLoveChain



Blockchain Based Global Romantic Love Consensus Community

www.truelovechain.com





# **Table of Contents**

1	TR	UELOVECHAIN DESIGN BACKGROUND	3
	1.1	THE STATUS QUO AND PROBLEMS OF CONTEMPORARY LOVE	3
	1.2	THE MEANING OF BLOCKCHAIN FOR LOVE	4
2	TR	UELOVECHAIN DESIGN GOALS	6
	2.1	True love identity	7
	2.2	JOINTLY MANAGING LOVE, ADDING VALUE TO LOVE	7
	2.3	LOVE SOCIAL OPERATIONS	8
	2.4	ALL LOVE IS EQUAL	8
3	TR	UELOVECHAIN APPLICATION SCENARIO	10
	3.1	FIND LOVE	10
	3.2	Prove Love	10
	3.3	GUARD LOVE	11
	3.4	ENDING LOVE	12
	3.5	MORE APPLICATION SCENARIOS	
4	TR	UELOVECHAIN TECHNOLOGY	14
	4.1	TrueLoveChain core architecture	14
	4.2	REAL IDENTITY AUTHENTICATION	
	4.3	LOVE INSURANCE TECHNOLOGY	16
	4.4	PROOF OF LOVE (POL)	18
	4.5	THE SAFE DESIGN OF THE LOVE CONTRACT	20
	4.6	PROOF OF EXISTENCE OF LOVE RELATIONSHIP	24
	4.7	PROOF OF OWNERSHIP OF LOVE RELATIONSHIP	25
5	TLO	CVALUE LOGIC	26
6	TO	OKEN DISTRIBUTION	27
7	BU	DGET ALLOCATION	28
8	RO	ADMAP	29
9	TI	RUELOVECHAIN FOUNDATION	30
1(	) TH	E LEADERSHIP TEAM	32
1:	1 .	ADVISORS	33
1:		RISK TERMS& DISCLAIMERS	
	12.1	RISK TERMS	
	12.2	DISCLAIMER	
		= · - · = · · · · = · · · · · · · · · ·	





# 1 TrueLoveChain design background

# 1.1 The status quo and problems of contemporary love

Love is the positive energy projected by the human spirit. It is one of the eternal themes of human beings. It is the most common, the most beautiful, the most precious, and the most common belief-based emotion. Since ancient times, the virtue of faith in love and loyalty to love is the cornerstone of social harmony, so that the marriage relationship based on love will be firm and lasting.

However, as society changes faster and faster, traffic becomes more and more convenient, the Internet becomes more developed, people have more opportunities to get in touch, and the scope of contacts is wider and wider, maintaining a long-lasting and loyal marriage relationship. It is getting harder and harder, marriage is still the case, not to mention the pure love relationship. The breakup rate of love is much higher than marriage, and love becomes a scarce product. Why are there more and more divorce and breakups now? One of the most important reasons is that in today's society, when the material is getting richer and richer, the cost of empathy and affection is getting lower and lower, and there is almost no cost, but there is no reward for those who are loyal to love.

After a long time together, the once-popular love will become dull and boring. So many couples gradually lost interest in the other party, and even became disgusted, and there was a phenomenon of "three years of pain for seven years." At this time, it is easy to cause breakup and emotional breakdown. In addition to the inherent reasons for the weakening or even rupture of their own feelings, the influence of external factors is also very large. According to statistics, among the main reasons for divorce, 50.16% of divorces are due to the third party's involvement, and the derailment of the other party is the primary factor in generating divorce ideas. Even some unscrupulous people deliberately conceal or falsify their own real situations in order to delight themselves or achieve certain interests, and to create false emotional experiences. When you are eager to accept love, it is difficult to verify



whether the other party is genuine.

There are also restrictions on the objective conditions of race, religion, law, customs, etc. Some love is not allowed and accepted by human rules, but should the relationship between the two people be judged by these two people?

# 1.2 The meaning of blockchain for love

The blockchain is Nakamoto's first concept of blockchain in his "Bitcoin: A Peerto-Peer E-Cash System" paper. With the crazy rise of Bitcoin, blockchain technology began to quickly gain public attention as the underlying technology for creating Bitcoin.

The blockchain technology is summarized as a new application mode of computer technology such as distributed data storage, point-to-point transmission, consensus mechanism, and encryption algorithm. Therefore, the blockchain technology has the characteristics of decentralization, openness, information not tampering, and anonymity.

Love is a kind of human emotion. This kind of emotion exists only between two people, and it is exclusive and selfish. She only exists in the heart and does not depend on anything. Those who pursue and fall in love are very sensitive to any turmoil in the state of love. So how can we prove that there is a love relationship between two people, and is true love? It can usually be verified from the following aspects: For example, whether he considers you in the future planning, whether he is willing to introduce you to his friends and relatives, whether he is willing to spend money on you, willing to put the best For you, you can contact him at any time, even if you don't answer the phone or reply to the message, you will contact you as soon as possible afterwards. But even then, it is difficult to judge whether he did the same thing for another person. Of course, there is also the ultimate means of establishing a marriage relationship and protecting the relationship between two people through legal means. However, marriage can only prove that two people have a legal relationship, and it is difficult to prove whether there is true love between



two people, and whether love is still there.

So with the blockchain technology, can we provide some help for our love?

First of all, it provides a technical means to prove the existence of love relationship. Through the decentralization of the blockchain and the unified characteristics of the whole network, the relationship of love can be registered in the blockchain, no matter in any corner of the world, as long as there is The Internet can check the love status of a person.

Secondly, the blockchain can not be falsified, ensuring that everyone's love history will not be falsified, and emotional scammers can no longer hide their true history, so that good people can prevent it early.

Third, the blockchain can be "mining", so that those who are loyal to love and who can maintain a long-lasting love relationship will gain income; and those who do not cherish love and arbitrarily give up love will be punished.



# 2 TrueLoveChain design goals

TrueLoveChain is a social entertainment system based on blockchain, smart contract and other technologies. Community consensus is the only relationship of love, loyal to love to get rewards, abandoning love will be punished. The true love chain aims to realize the consensus of human love beliefs, publicize the social values of cherishing love and loyalty to love, assisting couples to establish a stable relationship between two people, and commits to building a harmonious society.

Building a global love consensus community, creating a "real" word account on the global scale, has a logical and complete significance for carrying forward the positive love concept, avoiding emotional deception, warning and disciplining the false love concept. On the one hand, the geographical division of couples ranges from tribes to cities to countries. Now the demand for human emotion development is no longer limited to cities or countries, but rises to the level of the world, helping the global love consensus community. Let the emotional deception, multiple partners and even big-married people, let the loss of a single sincere love and believers have nowhere to hide; On the other hand, the guardian group of true love relationship, the unique mining reward mechanism of the TrueLoveChain, can keep Lovers receive blessings and rewards, harvesting wealth while harvesting love.

TrueLoveChain builds a love-seeking platform, a deposit platform, an entertainment platform and a business platform around love based on the global love consensus community.

- Love-seeking platform: Based on the characteristics of strong identity authentication and blockchain non-tamperability, build completely credible personal identity information for finding true love.
- Deposit platform: Building a completely credible depository system based on the globally unique and non-tamperable nature of the blockchain is the foundation for building a global love consensus community.
- Social platform: Couples chat in private, couples interact with other couples and friends, and collaborate with other couples to mine and develop a more



innovative social interaction platform that is completely different from traditional social software.

- Entertainment platform: Love short video, love develops games, couples
   PK games, etc., enrich the love life between lovers.
- Business platform: The class IP incubator, through the joining method, grafts the merchant into the true love chain community, realizes the merchant to provide physical or digital services in the community, and the user can use the digital assets of love to be exchanged for real thing or digital services.

Since the TrueLoveChain is based on blockchain development, the blockchain naturally has the ability of decentralized collaboration and peer-to-peer anonymous value transfer. Therefore, the business capability of the TrueLoveChain to serve global users is objective.

# 2.1 True love identity

Declaring true love, of course, requires true identity. Blockchain technology enables secure and reliable management of digital identity information, improving customer identification efficiency and reducing costs while ensuring customer privacy. TrueLoveChain develops a set of real identity registration and identification information that is applicable worldwide and that recognizes both true identity and personal privacy. The information set is mapped to the personal identity of the individual. When the couple declares love on the TrueLoveChain, they are recorded. After being mixed and encrypted, they are permanently stored in the TrueLoveChain. After being bound to the personal account, they become the personal life resume of the record. The only account ID.

# 2.2 Manage and increase love

Couples can not only create a relationship of love relationship in the true love chain, but also can buy insurance for love and provide a guarantee for love. You can also experience the rich love application service on the true love chain, so that the



love relationship will continue to heat up. As long as you are good at managing love together, loyal to love, and insisting on not breaking up, you will get the incentive of "mining" for love and add value to love.

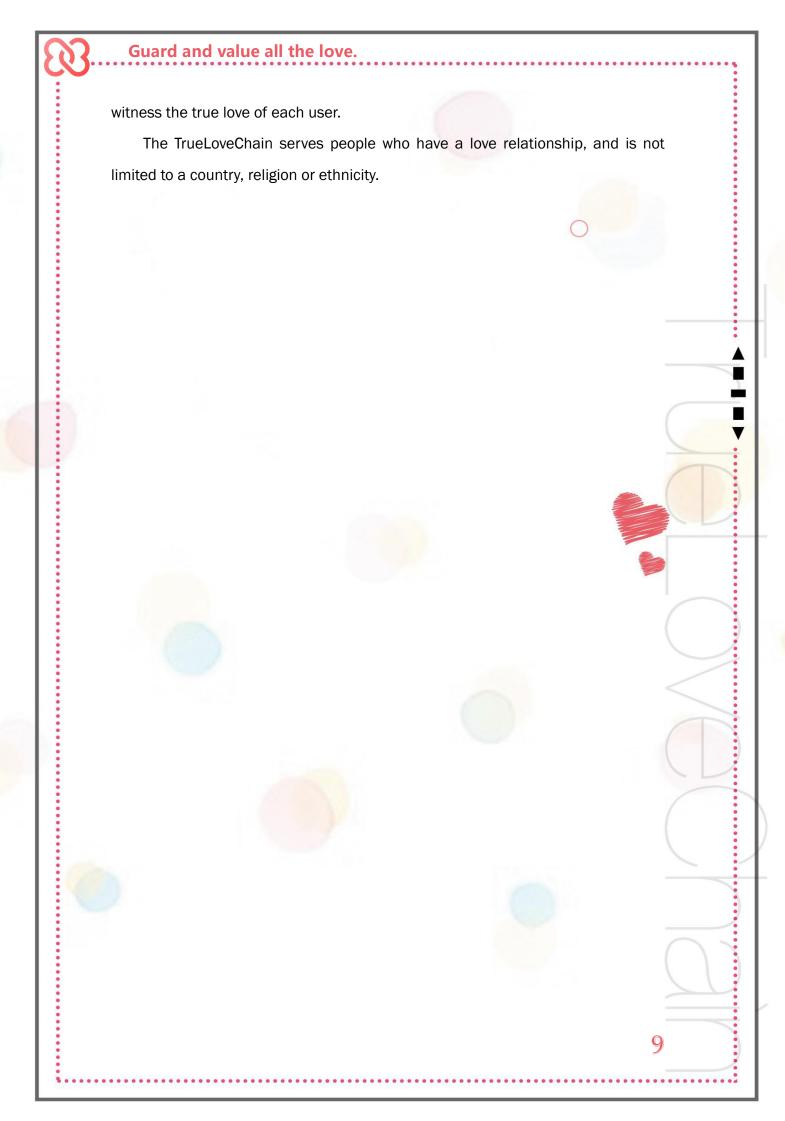
# 2.3 Social operation of love

The development direction of the love consensus community is to become the world's largest social entertainment platform for couples and become a happy helper for couples. The Love Consensus Community will design a series of social entertainment scenes that are suitable for the love and sharing of love between lovers, while being fun, concise and private.

# 2.4 All love is equal

According to world-recognized data, homosexuality accounts for 4% to 6% of the total population. In the West, the incidence of homosexuality can reach 10%, and some cities are even much higher. In 1990, the World Health Organization officially removed "homosexuality" from the disease list. As of May 24, 2017, 22 countries (Scotland is sovereignly part of the UK) and some regions and overseas territories have recognized the same-sex marriage. However, most countries in the world prohibit homosexual film and television, do not recognize same-sex relationships, and even sentence same-sex loved ones to death.

As the society becomes more open to homosexuality, the "rainbow" social and pink economy is getting hotter. Six flags are gay and their national flags - representing all races, kingdoms, politics, and gender. In recent years, more and more people have begun to speak for homosexuals. Love, this is a very beautiful word, should not be given all the negative meanings of discrimination, so we should also create a "face to non-discrimination, respect for sharing The equal environment of love. TrueLoveChain hopes and supports all love can walk in the sun, every loved one can get happiness without hurting others. "The TrueLoveChain will provide an eternal, unalterable love certificate for every couple (including rainbow lovers) to





# 3 TrueLoveChain application scenario

The TrueLoveChain is specially created for love. She serves the entire life cycle of love, from finding love, establishing relationships, maintaining love, to ending love. Through the unique incentive mechanism of the blockchain, it can help the couple to enhance their feelings, keep the freshness of love, and be loyal to love.

### 3.1 Find love

The TrueLoveChain will create a platform for finding love based on blockchain. Single young people registered on the TrueLoveChain FindLove platform must undergo strict identity authentication. The identity information is recorded on the blockchain and cannot be altered or concealed. Single youth can safely post love revelation on the platform and find their true love. At the same time, you can use your love status and love history on the TrueLoveChain to eliminate each other's doubts and concerns, and all the love-seeking process is completely free. Finding love youth can also increase the trust of the other party by pre-storing love insurance to the platform.

### 3.2 Prove love

Using the characteristics of the blockchain that cannot be tampered with, establish a love relationship on the TrueLoveChain, generate a certificate of love, and each person can only have a valid certificate of love. Both lovers can also make this love certificate, make their own love vows, and let the blockchain witness their commitment forever. In this way, no matter what nationality, race, religion or gender the couple is, no matter where you are on the earth, the TrueLoveChain can help prove the existence of this love relationship. Because there is already a love relationship, and it is stored in the blockchain, it can not be falsified and hidden. If you pursue a new love goal, the success rate will be greatly reduced, which will greatly restrict its empathy effect.



### 3.3 Guard love

A good love is something that needs to be carefully managed by both parties in order to last a long time. TrueLoveChain through love insurance, love games, love and social way, can help couples manage their love together.

### 3.3.1 Love Insurance

With a certificate of love and a relationship of love, couples can buy love insurance for their love relationship. Love insurance will provide protection for this love relationship from two aspects. Once one of them chooses to break up and ends this love relationship, the TrueLoveChain will use the smart contract technology to automatically compensate the split party. If the love relationship does not break up for a certain period of time, the love insurance contract can obtain the mining income through the POL love consensus algorithm. The longer the relationship of love is maintained, the more mining output.

# 3.3.2 Love Day

After the creation of love insurance, the expiration date of the love insurance can be the anniversary of the love of both couples. On this anniversary, both parties need to re-examine the love relationship between the two and decide whether to renew the contract. If the renewal is successful, you will get the mining income, add romance to the anniversary of love, make the anniversary of love more meaningful.

# 3.3.3 Love sharing

After establishing the relationship of love, you can share the certificate of love through social software and accept the blessings and rewards of your friends. Friends' rewards will be deposited in love insurance.



### 3.3.4 Witnessing Love

Couples who establish love relationships can invite friends to become their own love witnesses, witness the growth of love, add value to their love, the more witnesses, the higher the income.

### 3.3.5 Love Social

When the relationship is established, the social activities of the couple will be very different from the single youth. The TrueLoveChain will be specially designed for the socialization of couples. Only friends can be added in pairs. Any information in the social process can be seen by both lovers.

### 3.3.6 Love game

TrueLoveChain provides a love game development platform that allows third-party game access. It is designed for couples to play games only for couples. Adding love sweetness through game entertainment, such as two-player games, two-player games, fun games, etc...

# 3.4 Ending love

Love is good, any couple wants love to last, but in reality it will inevitably break up for various reasons.

Couples who break up peacefully, the TrueLoveChain can return the love assets to both parties according to the agreed ratio according to the agreement of love insurance.

A couple who break up unilaterally, the party who breaks up first will lose all the assets in the love insurance, and the TrueLoveChain will automatically return the rest to the party that was split after deducting the breakup fee.

Both lovers have forgotten their love relationship and forgot the love insurance



of both parties. Then the love insurance will expire after a certain period of time, and the love assets in the love insurance will be automatically confiscated.

# 3.5 More application scenarios

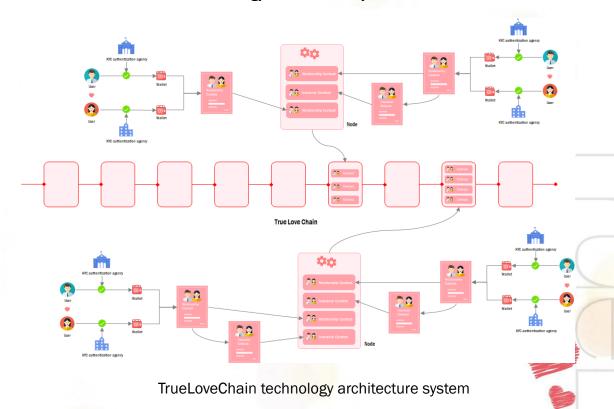
For those who have adhered to love, in some special moments of true love, you can apply to the TrueLoveChain Foundation to get precious special gifts, such as love certificates made in kind, love photo opportunities, true baby rewards, 10th anniversary, 20th anniversary. Reward, etc.





# For the technology of the technology of the technology.

The TrueLoveChain technology architecture system, as shown below.



### 4.1 TrueLoveChain core architecture

After comparing the technical architecture of the public chain that has already been implemented, we plan to use the Ethereum system as the framework based on the TrueLoveChain kernel; Ethereum is a platform with a "Turingy complete" programming language that enables developers to build automatically. And multifaceted release of the next generation of decentralized application platform. At the same time, Ethereum's compatible features lay the foundation for future interoperability with many smart contracts running on the Ethereum platform.

True love chain is implemented by four modules:

• Intelligent network layer: Realizes point-to-point decentralized data transmission. The blockchain of true love chain is established on the POL protocol



to establish data transmission trust. Complete the security protection of the client data through the three-step strategy of "Private Key -> Public Key -> Address".

- Blockchain layer: Implements the basic functions of the blockchain (not tamperable, time stamp, full network accounting), and uses the block to record transaction information.
- Data layer: In combination with the IPFS protocol, data is available and redundant on a blockchain basis. PKI-based X.509 standard digital identity system to protect users' data security.
- Contract layer: Build a distributed intelligent ecological contract on the blockchain system. Complex business logic and computing power through intelligent contracts of data contracts and logical contracts.

# 4.2 Real identity authentication

Personal data information enters the true love chain database center to achieve unique identity authentication, creating a distributed, love-and-chain ecosystem with complete functions, interlocking and excellent performance. Database anonymity, irreversibility, de-trust and other technologies can provide users with accurate, efficient and secure trading platform, and then store transaction data, users can trade through virtual currency to understand the value circulation of love.

TrueLoveChain Block System: In the technical architecture design, True Love Chain designs multiple universal smart contract templates to solve the problem of the smart contract's own code. The main design contracts include multi-signature contracts, batch payment contracts, and users' use of contracts.

After many small-scale user surveys and user experiences, True Love Chain plans to launch a series of automated services based on decentralized blockchain technology: self-certification services and proxy certification services.

Self-certification or self-validation of personal data: The TrueLoveChain allows the user to verify the validity of the input information by simply invoking the



algorithm of the TrueLoveChain platform to generate a test program to verify the data provided.

At the same time, the true love chain provides an identity authentication reporting mechanism, and users with identity fraud will be subject to severe penalties.

# 4.3 Love insurance technology

A smart contract is a computer program that directly controls digital assets. By writing a program similar to an if-then statement on the blockchain, when the preprogrammed condition is triggered, the program automatically triggers payment and other terms in the execution contract.

How smart contracts work:

The construction and execution of intelligent contracts based on blockchain are divided into the following steps:

Multi-party users participate in the development of a smart contract;

The contract is spread through the P2P network and stored in the blockchain;

The smart contract built by the blockchain is automatically executed.

The process of "multiple users participating in the development of a smart contract" includes the following steps:

First, the user must first register as a user of the blockchain. The blockchain returns a pair of public and private keys to the user; The public key acts as the account address of the user on the blockchain, and the private key acts as the account. The only key.

Two or more users, as needed, agree on a joint commitment that includes the rights and obligations of both parties; these rights and obligations are electronically programmed to machine language; Participants are signed with their respective private keys to ensure the authenticity and validity of the contract.

The signed smart contract will be transmitted to the blockchain network through the algorithm of the TrueLoveChain according to the promised content.



The process of "contracting through the P2P network and depositing it into the blockchain" includes the following steps:

The contract is spread in the blockchain network by means of P2P, and each node will receive one copy; the verification node in the blockchain will save the received contract to the memory first, waiting for a new round. Consensus time triggers consensus and processing of the contract.

When the consensus time is up, the verification node will package all the contracts saved in the most recent period into a contract set, calculate the hash value of the contract set, and finally assemble the hash value of the contract set into a block structure. After the other verification nodes receive the block structure, they will take out the hash of the contract set contained in it and compare it with the set of contracts they have saved. At the same time, send a set of their own approved contracts to other networks. Verify the node; through this multiple rounds of transmission and comparison; all of the verification nodes eventually agree on the latest set of contracts within the specified time.

The newly concluded contract set will be spread to the whole network in the form of a block. Each block contains the following information: the hash value of the current block, the hash value of the previous block, the timestamp when the consensus is reached, and other description information. At the same time, the most important information of the blockchain is a set of contracts that have been agreed upon; the nodes that receive the contract set will verify each contract, and the verified contract will be returned to the final blockchain for verification. The content is mainly whether the private key signature of the contract participant matches the account.

Specifically, in the TrueLoveChain, love insurance needs to be implemented by smart contract technology, that is, the couples jointly set the duration of the love insurance and the proportion of income distribution, and then generate a love insurance smart contract with their private keys. After the expiration of the term, both parties are required to renew the smart contract using the private key. If the



renewal is successful, the mining revenue distributed by the system is obtained and distributed to both couples according to the pre-set income distribution ratio. The data is recorded on the blockchain.

If only one party can renew after expiration, the love insurance can not obtain the mining income, and ignore the original set of income distribution ratio, and deduct a certain percentage of the renewal fee, directly return the remaining insurance money to the renewal. One party, at the same time, this love insurance expires and the contract is lifted. The data is recorded on the blockchain.

If both parties are unable to renew after the expiration, the love insurance will not only be able to obtain the mining income, but will also confiscate all the insurance premiums invested in the love insurance, and the love insurance will be invalid, the contract will be contacted, and the data will be recorded in the blockchain, on.

# 4.4 Proof Of Love (POL)

The POL (Proof Of Love) incentive mechanism of the TrueLoveChain is composed of three parts of mining income:

The first part is the basic income, similar to the POS (Proof Of Stake) equity certification mechanism, which is calculated based on the true love balance in the love insurance and the basic interest agreed by the system. The basic daily interest rate of the true love chain system adopts a gradual declining mechanism. The initial value is set to 0.2%, and then the basic interest rate is halved every one year, and will remain unchanged until it is reduced to 0.0125%. The specific algorithm is as follows:

Love insurance balance:S
Base day interest rate for mining:A
The basic mining income of love insurance is: X=S\*A

The second part is the love witness test income. If a love relationship increases



the love witness, it shows that this love relationship has been recognized by more people in the community, which can increase the income of love mining, called love witness gain. For each additional love witness, the witness rate of return increases by 1% on the interest rate of the love insurance base day. Each love relationship can add up to 199 love witnesses to their love relationship during the renewal period of a love relationship. The system will calculate the true love currency balance in love insurance, the number of love witnesses and the basic interest agreed by the system. The specific algorithm is as follows:

Love insurance balance:S

Base day interest rate for mining:A

Number of love witness:M

Love witness day interest rate:B=M\*A\*1%

Love insurance witnesses the daily mining revenue:Y=S\*B

The third part is the income of the love community, which will be calculated according to the number of true love coins in the love insurance that is broken up and forgotten in the system, the balance of love insurance that has not been broken up, and the amount of love insurance income extracted today. The specific algorithm is as follows:

The sum of the number of love insurance true love coins broken up today:  $\Sigma H$ 

Love breakup rate: 10%

The sum of the number of love insurances that are forgotten today: Σ

Love forgotten rate:100%

The sum of the amount of income from the love insurance today:  $\boldsymbol{\Sigma}\boldsymbol{K}$ 

Withdrawal fee rate:1%

The sum of the balances of love insurance that did not break up today:  $\Sigma M$ 

The balance of your love insurance today: ΣΡ

The value transfer income of your love community today:

$$\mathbb{Z} = \frac{\left(\Sigma H * 10\% + \Sigma J * 100\% + \Sigma K * 1\%\right) * 90\%}{\Sigma P} * P$$

At the same time, the system gains are:

$$Z_{sys} = (\sum H*10\% + \sum J*100\% + \sum K*1\%) *10\%$$



# 4.5 The safe design of the love contract

# 4.5.1 Security vulnerabilities in smart contracts

The love contract and insurance contract are our top priority, so we pay special attention to the security of our smart contract. On the one hand, it is officially due to the unmodifiable nature of the smart contract, because once the rule is determined, no one can modify it, everyone can trust it. On the other hand, if the implementation of the rule has a bug, it may cause the token to be stolen, or the call consumes a large amount of gas. Then we need to fix the error. Blockchain trust based on the unmodifiable nature of the data, so that its traditional application has a big difference, it can not be modified once it is released on the blockchain (can not be directly modified and re-released directly on the original contract) The following are our common contract security issues, which will continue to be updated as the project continues to update.

### 4.5.1.1 Transaction order dependent contract

The transaction order dependence is that the execution of the smart contract differs depending on the order in which the current transaction is processed. For example, there are two transactions T[i] and T[j], two block chain states S[1] and S[2], and the S[1] state can be converted into a state after processing the transaction T[j]. S[2]. Then, if the miner first deals with the transaction T[i], the transaction T[i] calls the smart contract in the S[1] state; if the miner first processes the transaction T[j] and then processes the transaction T[i], then Executing T[j], the contract status is converted to S[2], and the final transaction T[i] is the smart contract when the state S[2] is executed.

Examples of attack methods:

The attacker submits a prize-winning contest to let the user find out the solution to the problem and promises to give a generous reward. After the attacker



submits the contract, he will continue to monitor the network. If someone submits the solution to the answer and the transaction for submitting the answer has not been confirmed, the attacker will immediately initiate a transaction to reduce the amount of the bonus to make it infinitely close to zero. When the miner processes the two transactions, the current trading pool has two pending transactions: one is to submit the answer and one is to change the bonus amount. If the miner deals with the enemy's change of the bonus trade, and the adversary can let the miner deal with his trade by increasing the transaction cost, then the bonus submitter will receive a very low reward when the miner processes the transaction that submits the answer. The adversary can get the correct answer almost free of charge.

### 4.5.1.2 Timestamp dependent contract

When the miner processes a new block, if the timestamp of the new block is greater than the previous block and the timestamp difference is less than 900 seconds, the timestamp of the new block is legal. This is stipulated in the Ethereum Agreement. Timestamp Dependency As the name implies, the execution of a smart contract depends on the timestamp of the current block. As the timestamp is different, the execution result of the contract is also different.

### Examples of attack methods:

If there is a lottery contract, it is required to calculate a "lucky number" from the current time stamp and other variables that can be learned in advance, and the participants of the same code as the "lucky number" will receive the prize. Then the miner can try different time stamps in advance to calculate the "lucky number" in the mining process, so as to give the prize to the winners he wants.

### 4.5.1.3 Misoperation

In Ethereum, a contract calls another contract through a send command or a function that directly calls another contract. However, an error may occur during the call and the called contract will fall back to the previous state. Then this exception



may not be well known to the caller, depending on how it is called. For example, a contract invoked by a send directive should verify that the contract was executed correctly by checking the return value.

Examples of attack methods:

There is a smart contract called KingOfTheEtherThrone (KoET): Users can become a "Ether King" through a certain amount of Ethereum, and the amount paid is determined by the current King. Obviously, the current king can make a profit by buying and selling the king. When a user claims to be a king, the contract sends compensation to the incumbent king and designates the user as the new king. However, this contract does not check the results of the transaction for payment of compensation. In this way, once the contract has produced an abnormality in the implementation process, the current king may lose both the throne and the compensation.

The possible attack is that the adversary intentionally exceeds the size limit of the call stack. The Ethereine virtual machine specifies a depth of 1024 for the call stack. Before the attacker, the opponent first calls itself 1023 times, and then sends the transaction to the KoET contract, which causes the contract stack of the contract to exceed the limit, and an error occurs. After the contract is wrong, because the contract does not check the return value of the contract, if the contract is abnormal in the process of sending compensation to the incumbent king, then the current king is very likely to lose the throne and compensation.

### 4.5.1.4 Reentrant attack

In Ethereum, when a contract calls another contract, the current operation will not wait until the call ends. At this point, this creates a problem if the called needs to use the state the caller is currently in. The famous DAO attack incident occurred because of this vulnerability.



# 4.5.2 Strategy for the resolution of love contracts

We combine years of project experience with the characteristics of smart contracts: code logic and data, and code logic is the most problematic part, such as when implementing the following contract, such as in some cases, writing addTen() At the time, 10 was written as 11.

```
pragma solidity ^0.4.18;
contract MyLoveContract {
    mapping (address => uint256) public balanceOf;

    function setBlance(address _address,uint256 v) public {
        balanceOf[_address] = v;
    }

    function addTen(address addr) public returns (uint){
        return balanceOf[addr] + 11;
    }
}
```

If we find this problem after deployment and want to fix this bug, we have to redeploy the contract, but there will be an embarrassing problem. The original contract has been used by many people. If a new contract is deployed, the old contract is Data will be lost; so we design and write contracts from both logic and data.

### 4.5.2.1 Love contract design and writing

We design love relationship as control contract (hereinafter referred to as control contract), love data is designed as data contract (hereinafter referred to as data contract). We design love relationship as control contract (hereinafter referred to as control contract), and love data is designed as data contract (hereinafter referred to as Data contract)

The sample code is designed as follows:



```
pragma solidity ^0.4.18;
contract LoveDataContract {
   mapping (address => uint256) public balanceOf;
   mapping (address => bool) accessAllowed;
   function LoveDataContract() public {
       accessAllowed[msg.sender] = true;
   function setBlance(address _address,uint256 v) public {
       balanceOf[_address] = v;
   modifier platform() {
        require(accessAllowed[msg.sender] == true);
   function allowAccess(address _addr) platform public {
       accessAllowed[_addr] = true;
   function denyAccess(address _addr) platform public {
       accessAllowed[_addr] = false;
contract LoveControlContract {
   LoveDataContract dataContract;
   function LoveControlContract(address _dataContractAddr) public {
       dataContract = LoveDataContract(_dataContractAddr);
   function addTen(address addr) public returns (uint){
       return dataContract.balanceOf(addr) + 11;
```

Now we use LoveDataContract to store data, LoveControlContract to process logic, and LoveDataContract to read and write data. With this design, you can keep the data contract unchanged after updating the control contract, so that you don't lose data or migrate data.

# 4.6 Proof of existence of love relationship

The love relationship is proved by the love relationship contract(LRC) created by both couples. Each real-name authenticated true-chain user corresponds to a unique valid wallet private key. This private key can be used to create only one valid love insurance contract within a certain period of time. That is to say, each person can only have one love insurance in its effective state, so that this love insurance can be used as a proof of the existence of the relationship. When the love insurance expires or is invalid, it means the end of the love relationship.



Love relationships can only be queried through personal private keys, thus ensuring the privacy of personal information. If you want to check the relationship between the other person's love relationship and the past love experience, you can ask the other party to use the private key to query the display.

# 4.7 Proof of ownership of love relationship

We will store the names of both the hash and the love owner in pairs to obtain Proof of Love Owernership PoLO, store the hash and block timestamps in pairs to achieve Proof of Love Existence PoLE. Finally, store The hash itself proves authenticity, that is, if the content of the contract is modified, then his hash will change, and the contract will not find such a file to realize the love contract destruction and love insurance certificate, the contract design example as follows:

```
pragma solidity ^0.4.18;
contract LoveProof
        struct FileDetails
                uint timestamp;
                string fowner;
                string mowner;
        mapping (string =>FileDetails) files;
        event logFileAddedStatus(bool status,uint timestamp,string fowner,string
        mowner, string fileHash);
        funtion set(string fowner, string mowner, string fileHash)
                if(files(fileHash).timestamp==0)
                        file[fileHash]=FileDetails(block.timestamp,fowner,mowner);
                        logFileAddedStatus(true,block.timestamp,fowner,mowner,fileHash);
                else
                        logFileAddedStatus(false,block.timestamp,fowner,mowner,filHash);
        function get(String fileHash)
                return
                (files[fileHash].timestamp,files[filHash].fowner,files[filHash].mowner);
```





# 5 TLC value logic

The creation of love insurance requires the TLC deposited by both parties. As long as the balance of TLC in love insurance is greater than 0, the love insurance will continue to take effect, if the balance approaches 0 or equals 0 (probably because of the extremely small fee problem, If the balance cannot be exactly 0), the love insurance will be lifted.

The value of true love coins is reflected in two aspects:

First, under the premise that the total amount is constant, the more people have a demand for love relationship, the more users use the TrueLoveChain, the greater the demand for TLCs, the scarcity of TLCs, the value of TLCs. It is bigger.

Second, for users who have already used the TrueLoveChain, the more couples break up, the more breakup fees are collected by the system, and the more the dynamic mining gains that Eros will give to the love couple. If there are fewer couples to break up, the more couples who hold on to love, the more coins are stored in the love account, the fewer TLCs are circulated, and the value of TLCs will become larger.



# 6 Token Distribution

According to the latest UN data, the world's total population will be around 7.5 billion by 2018. Therefore, the initial total amount of TLC is set at 7.5 billion, which means that everyone in the world has a love and has the opportunity and right to create their own love relationship. When the ecological incentives are all dug, the community nodes will vote to decide whether to issue additional shares. The tokens issued in the initial total amount will be distributed as follows:

Allocation	Number of allocations (million)	proportion	use
Early investor	200	2.67%	Early investment institutions and investors who helped in all aspects of the project at the beginning of the project issued tokens in return.
Private investment	400	5.33%	Raise funds for projects for specific investment institutions and investors.
TrueLoveChain Foundation	650	8.67%	Business cooperation, marketing promotion for community airdrops, exchanges, marriage, social, media and other institutions.
Ecological incentive	5500	73.33%	Used for chain-inspired love relationships, when the love relationship reaches a certain period of time, you can get ecological incentives.
Founding team	750	10.00%	Used for team motivation, Love insurance reaches 10,000 copies or online trading for one year, unlocking 20%; Love insurance reaches 100,000 copies or online trading for two years, unlocking 20%; The love insurance reaches 200,000 copies or the online transaction is over three years, unlocking 20%; Love insurance reached 500,000 copies or online trading for four years, unlocking 20%; Love insurance reaches 1 million copies or online trading for five years, unlocking 20%.
total	7500	100.00%	







# 7 Budget Allocation

Allocation	percent	use	
Product development	40.00%	The true love chain needs elites from the Internet, blockchain, market, business and other fields to join the joint R&D. It is necessary to point out a lot of R&D and management costs.	
Marketing	50.00%	In the whole society, loyalty to the concept of love requires a lot of marketing, promotion, celebrity endorsement and other expenses; business cooperation with exchanges, marriage, media and other institutions.	
Consultancy	5.00%	Cooperate with authoritative consultants in strategic development planning, business operation mode, and mental health theory.	
Legal compliance	5.00%	Used to invite outstanding legal and compliance experts in the digital currency, blockchain, and mental health fields.	
Total	100.00%		







# Roadmap

2017 Q4 Start project demonstration, technical verification

2018 Q1 Application scenario research and design,

2018.Q2 Publish white papers, private placements,

2018 Q3 Community building, listing and trading, release V1.0 products (love relationship, love insurance)

2019 Q1 Release V2.0 products (search for love platform, couple chat, love games, etc.)



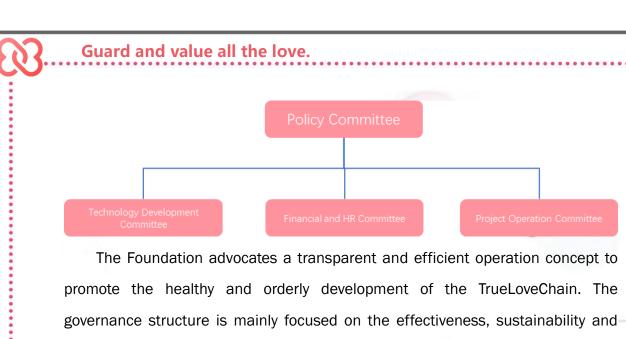




The Foundation is committed to the development and promotion of TrueLoveChain technology.

The Foundation intends to raise funds for the development of the fund through the issuance of TLC coins and provide incentives based on the actual number of users on the application. As the management body, it is responsible for the development and construction of platform technology, the comprehensive management of project operation and the development of community ecology. Based on the principle of sustainable development of the platform, efficient decision-making of the project, and strict management of funds, the Foundation will design a complete governance structure system to coordinate and coordinate all general affairs and ensure timely and appropriate response in case of special events. The TrueLoveChain Foundation is the highest decision-making body of the project. In order to ensure the correctness of the overall development direction of the project, these decisions will be handled by the decision-making committee selected by strict screening.

The overall structure of the Foundation is shown in the following diagram. The decision-making committee has three sub-departments, namely, the Technology Development Committee, the Finance and Personnel Management Committee, and the Project Operation Committee, which are responsible for the formulation and implementation of the technology development strategy; the formulation and implementation of the financial management system. Supervision; decision-making and execution of the overall operation and marketing of the project. Members of the decision-making committee change every four years. Members usually recommend two representatives from each sub-committee, plus one representative of the project investor's representative, community representative, and value network team member. Members of each subcommittee change for four years, and members are generally held by individuals with outstanding capabilities in relevant industries.



financial security of project management. The mission of the Foundation is to promote the development of the true love chain community.





# 10 The Leadership Team

### Huaishun Li:

A senior practitioner in the blockchain industry, once served as Yuanbao.com, vice president of BCEX. He entered the blockchain industry in 2013 and has long been engaged in the overall management of digital asset exchanges. He has led the review of hundreds of blockchain projects on the exchange. , has a wealth of experience in the blockchain industry.

### Yanqun Wang:

Blockchain technology expert. Has 15 years of development experience. He has served as the technical director of TNB, the technical director of karaoke FM, and the chief architect of the world's top 500 telecommunications giants. He is good at infrastructure, technology development and big data analysis in the financial, telecommunications, e-commerce and other industries. It has its own unique insights and technology precipitation for hybrid cloud, encryption authentication, blockchain, and technical framework.

### Sheng Gao:

Graduated from the Tianjin Academy of Fine Arts in 2005. After graduation, he worked in the design-related profession for 8 years: co-founded Beijing Siqu Interactive Technology Co., Ltd., a technology geek, and a blockchain believer. Focus on Internet games and social areas. Experience in product development, visual design, team management is very rich.

#### Dan Xu:

Who is responsible for project operations, has served as a new media operator on the BCEX platform, responsible for the publicity of the new media publicity, as well as the docking and reporting of events with major blockchain media.





### Robin Guo, Blockchain advisor

COO of former CK Blockchain Group, CEO of Yuanbao.com, BCEX Platform, Asia Digital Asset Finance Association (DACA) Founding member, Director of the Asian Blockchain Foundation.

### Philip McMaster, Blockchain advisor

From Cananda, featured as "DaLong" on the Blockchain 52 Poker Deck, Cofounder of the McMaster Institute for Sustainable Development in Commerce and Blockchain Republic Of Conscience, as the "Social Conscience" of the blockchain industry, is one of the earliest advocates of the social blockchain

### Masong Xiao, Marketing advisor

Famous independent strategic marketing consultant, strategic partner of barn reverse incubator, Luo Ji thinking marketing brain, tiger sniffing 2016 best author, Xiaomi ecological chain business consultant. He used to be the creative partner of Storm Mirror, the co-founder of the ninth class, and the senior marketing director of Storm Video.

### Yung-Lin Chou, Emotional advisor

Dean of the Taiwan Joint Psychological Consultation Institute, qualified for the first psychologist in Taiwan, qualified for the Chinese Psychological Counselor, Master of Psychology at the University of Pittsburgh, Member of the American Society of Stress Medicine, Shanghai Yuning Culture (Growing Insurance) Director, Angel General (China) Holding Group Psychological General Counsel, Media Psychologist, Writer.

### Ye Zi, Blockchain advisor

empower capital partner, ugChain founder

### Mingwei Sun, Blockchain advisor

Co-founder of the Block18, former founder of Block News, pioneered the community operation mode of the blockchain industry, partner of Bangcamp Beijing Alumni, the vice chairman of the International Blockchain Application Association,



and the BIS co-founder of the Singapore Blockchain Innovation Center The first batch of experts in the FINWEX think tank.

### Raymond Hu, Financial advisor

served as CFO and Director of Risk Control of a well-known digital asset exchange. Led CSE backdoor listing and listing of new three board backdoors. Worked for Shulun Pan Certified Public Accountants, auditing large central enterprises, state-owned enterprises, A-share listed companies, and listed companies for bankruptcy liquidation audit. Worked for the 21st Century Real Estate China Headquarters, participated in the listing of of Renren.com, an, and was responsible for issuing the report of the listed company.





# 12Risk terms& Disclaimers

### 12.1 Risk terms

The TrueLoveChain Foundation believes that there are countless risks in the development, maintenance and operation of the TrueLoveChain, many of which are beyond the control of the TrueLoveChain Foundation. In addition to the other content described in this white paper, each TLC token purchaser should also carefully read, understand and carefully consider the following risks before deciding whether to participate in this public sale plan.

Buyers of every TLC token should pay special attention to the fact that although the TrueLoveChain Foundation was established in the Republic of Singapore, both the TrueLoveChain and the TLC Tokens exist only in the virtual space of the network and do not have any tangible presence. Does not belong to or involves any particular jurisdiction.

Participation in this public sale plan should be a well-thought-out decisionmaking action that will be deemed by the purchaser to be fully aware of and agree to accept the following risks.

### (1) Termination of the campaign

The LOVE token public sale plan may be terminated early, at which point the purchaser may only partially refund the amount paid by the price fluctuation of Bitcoin/Ethernet and the expenditure of the TrueLoveChain Foundation.

### (2) Insufficient Availability

As of the release date of this white paper, the TrueLoveChain is still in development, and its philosophy, consensus mechanisms, algorithms, code, and other technical specifications and parameters may be updated and changed frequently and frequently. Although this white paper contains the latest key information from the TrueLoveChain, it is not completely complete and will still be adjusted and updated from time to time by the TrueLoveChain Foundation for specific purposes. TrueLoveChain Foundation has no ability and no obligation to



inform participants of every detail of the development of TrueLoveChain (including its progress and expected milestones, whether delayed or not), so it does not necessarily give buyers timely and full access to the TrueLoveChain. Information generated from time to time in development. Insufficient disclosure of information is inevitable and reasonable.

### (3) Regulatory measures

Encrypted tokens are being or may be regulated by the authorities of different countries. The TrueLoveChain Foundation may from time to time receive inquiries, notices, warnings, orders or rulings from one or more authorities, and may even be ordered to suspend or terminate any of this public sale plan, TrueLoveChain development or TLC tokens. Action. The development, marketing, promotion or other aspects of the TrueLoveChain and this public sale plan may therefore be severely affected, hindered or terminated. As regulatory policies are subject to change at any time, existing regulatory approvals or tolerances for TrueLoveChains or this public offering in any country may be temporary. In various countries, TLC tokens may be defined as virtual goods, digital assets or even securities or currencies at any time, so TLC tokens may be prohibited from trading or holding in certain countries in accordance with local regulatory requirements.

### (4) Cryptography

Cryptography is evolving and cannot guarantee absolute security at all times. Advances in cryptography (such as password cracking) or technological advances (such as the invention of quantum computers) may pose a danger to cryptographic-based systems, including TrueLoveChain. This may result in the theft, loss, disappearance, destruction or devaluation of TLC tokens held by anyone. To the extent reasonable, the TrueLoveChain Foundation will prepare itself for preventive or remedial measures, upgrade the underlying agreement of the TrueLoveChain to address any advances in cryptography, and incorporate new reasonable security measures where appropriate. The future of cryptography and security innovation is unpredictable, and the TrueLoveChain Foundation will try to cater to the changing



world of cryptography and security.

### (5) Development failed or abortion

The TrueLoveChain is still in the development stage, not the finished product that is ready to be released at any time. Due to the technical complexity of the TrueLoveChain system, the TrueLoveChain Foundation may face unpredictable and/or insurmountable difficulties from time to time. Therefore, the development of a TrueLoveChain may fail or give up at any time for any reason (due to lack of funds). Failure to develop or abandon will result in the TLC token not being delivered to any purchaser of this sale plan.

### (6) Theft of crowdsale proceeds

There may be people who attempt to steal funds from public sales received by the TrueLoveChain Fund (including those that have been converted into legal currency). Such a theft or theft attempt may affect the ability of the TrueLoveChain Foundation to fund the development of TrueLoveChain. Although the TrueLoveChain Foundation will adopt the most cutting-edge technical solutions to protect the safety of crowdfunding funds, some network thefts are still difficult to completely prevent.

### (7) Flaws in source code

No one can guarantee that the source code of the TrueLoveChain is completely flawless. The code may have certain flaws, errors, bugs, and vulnerabilities that may prevent users from using certain features, exposing user information or causing other problems. If such defects are indeed present, it will undermine the usability, stability and/or safety of the TrueLoveChain and thus have a negative impact on the value of the TLC token. The exposed source code is based on transparency to facilitate the identification and problem solving of code originating from the community. The TrueLoveChain Foundation will work closely with the Close TrueLoveChain community to continuously improve, optimize and improve the source code of the TrueLoveChain.

(8) Unpermissioned decentralized and autonomous ledger

Among the contemporary blockchain projects, there are three popular types of



distributed ledgers, namely, books with no access permits, affiliate books, and private books. The distributed ledger at the bottom of the TrueLoveChain is not licensed, which means it is freely accessible and usable by everyone, without being restricted by access. Although the TrueLoveChain was originally developed by the TrueLoveChain Foundation, it is not owned, operated or controlled by the TrueLoveChain Foundation. The spontaneously formed TrueLoveChain community is fully open, non-centralized and accessible without permission. It consists of users, fans, developers, TLC token holders and other participants from around the world. They have nothing to do with the TrueLoveChain Foundation. In terms of the maintenance, governance, and even evolution of the TrueLoveChain, the community will be decentralized and autonomous. The TrueLoveChain Foundation is only an active member of the community and other people with equal status. There is no supreme or arbitrary power, even if it has made efforts and contributions to the birth of the true love chain. Therefore, after the release of the TrueLoveChain, how it will be governed and even evolved will not be dominated by the TrueLoveChain Foundation.

### (9) Update of source code

The source code for TrueLoveChain is open source and may be upgraded, amended, modified or changed from time to time by any member of the TrueLoveChain community. No one can anticipate or guarantee an accurate result of an upgrade, revision, modification, or change. As a result, any upgrades, modifications, modifications, or alterations may result in unpredictable or unexpected results that could significantly adversely affect the operation of the TrueLoveChain or the value of the TLC token.

### (10) Security weakness

The TrueLoveChain blockchain is based on open source software and is a distributed ledger with no access permissions. Although the TrueLoveChain Foundation strives to maintain the security of the TrueLoveChain system, anyone can deliberately or unintentionally bring weaknesses or defects into the core



infrastructure elements of the TrueLoveChain, which cannot be adopted by the TrueLoveChain Foundation. Safety measures prevent or compensate. This may eventually result in the loss of the participant's TLC token or other digital token.

### (11) "Distributed Denial of Service" attack

Ethereum is designed to be open and unpermissioned. Therefore, Ethereum may suffer from "distributed denial of service" network attacks from time to time. This type of attack will cause the TrueLoveChain system to suffer negative effects, stagnation or embarrassment, and thus the transactions above it will be delayed or written into the block of the Ethereum blockchain, or even temporarily unavailable.

### (12) Insufficiency of processing power

The rapid development of the TrueLoveChain will be accompanied by a sharp increase in trading volume and the need for processing power. If the demand of processing power exceeds the load that the nodes in the Ethereum blockchain network can provide, then the TrueLoveChain network may be paralyzed and/or stagnant, and may generate fraud or erroneous transactions such as "double spending." In the worst case, TLC tokens held by anyone may be lost, and Ethereum blockchain rollbacks or even hard forks may be triggered. The aftermath of these events will undermine the usability, stability and security of the TrueLoveChain and the value of the TLC token.

### (13) Unauthorized claim for TLC tokens for crowdsale

Anyone who obtains the purchaser's registered email address or registered account access rights by decrypting or cracking the TLC token purchaser's password will be able to maliciously obtain the TLC tokens for sale purchased by the TLC token purchaser. Accordingly, the TLC tokens purchased by the purchaser may be sent incorrectly to anyone who claims the TLC token through the purchaser's registered mailbox or registered account, and such transmission is irrevocable and irreversible. Each TLC token purchaser should take the following measures to properly maintain the security of their registered email address or registered account.: (i) Use a high security password; (ii) Do not open or reply to any scam emails; (iii)Keep



confidential or confidential information .

### (14) Private key of TLC wallet

Loss or damage to the private key necessary to obtain a TLC token is irreversible. TLC tokens can only be manipulated through a local or online TLC token wallet with a unique public and private key. Each purchaser should keep their TLC token wallet private key in a safe place. If the private key of the TLC token purchaser is lost, leaked, damaged or stolen, the TrueLoveChain Foundation or any other person cannot help the purchaser to obtain or retrieve the relevant TLC token.

### (15) Popularity

The value of TLC tokens depends to a large extent on the popularity of the TrueLoveChain. The TrueLoveChain is not expected to be popular, popular or widely used in a very short time after its release. In the worst case, the TrueLoveChain may even be marginalized for a long time, attracting only a small number of users. In contrast, a large TLC token demand may be speculative. Lack of users may lead to increased price fluctuations in the TLC token market and thus affect the long-term development of the TrueLoveChain. In the event of such price fluctuations, the TrueLoveChain Foundation will not (and is not responsible for) stabilizing or affecting the market price of the TLC token.

### (16) Liquidity

The TLC token is neither a currency issued by any individual, entity, central bank or state, supranational or quasi-national organization, nor supported by any hard assets or other credit. The circulation and trading of TLC tokens in the market is not the responsibility or pursuit of the TrueLoveChain Foundation. TLC token transactions are based solely on the consensus reached by the relevant market participants on their value. No one is obligated to redeem or purchase any TLC token from the TLC token holder, nor does anyone have the ability to guarantee the liquidity or market price of the TLC token at any time. If a TLC token holder wants to transfer a TLC token, the TLC token holder is looking for one or more buyers who are interested in purchasing at a mutually agreed price. This process can be costly,



time consuming, and ultimately unsuccessful. In addition, there may be no encrypted token exchanges or other online TLC tokens available for public trading.

### (17) Price volatility

If trading on the open market, encrypted tokens usually fluctuate wildly. Price shocks often occur in the short term. The price may be quoted in Bitcoin, Ethereum, US Dollar or other legal currency. Such price volatility may be caused by market forces (including speculative trading), regulatory policy changes, technological innovations, the availability of exchanges, and other objective factors that also reflect changes in the balance of supply and demand. The TrueLoveChain Foundation is not responsible for TLC token transactions in any secondary market, regardless of whether there is a secondary market for TLC token transactions. Therefore, the TrueLoveChain Foundation has no obligation to stabilize the price fluctuations of the TLC token and does not care about it. The risk involved in the TLC token transaction price is the responsibility of the TLC token trader.

### (18) Competition

The underlying protocol of the TrueLoveChain is based on open source computer software. No one claims copyright or other intellectual property rights to the source code. Therefore, anyone can legally copy, copy, reproduce, design, modify, upgrade, improve, recode, reprogram, or otherwise utilize the source code and/or underlying protocol of the TrueLoveChain in an attempt to develop a competitive agreement., software, systems, virtual platforms or virtual machines to compete with the TrueLoveChain, or even catch up with or replace the TrueLoveChain. The TrueLoveChain Foundation has no control over this. In addition, there are already many and many competing blockchain-based platforms that compete with the TrueLoveChain. Under no circumstances can the TrueLoveChain Foundation eliminate, prevent, limit or reduce this competitive effort to compete with or replace the TrueLoveChain.



### 12.2 Disclaimer

This document is for informational purposes only and does not constitute an opinion regarding the sale or purchase of TLC. The above information or analysis does not constitute an investment decision. This document does not constitute any investment advice, investment intention or investment in education.

This document does not constitute or be construed as providing any purchase or sale or any invitation to buy or sell any form of securities, nor is it a contract or commitment of any kind.

Relevant intent users clearly understand the risk of TLC, and investors participate in the investment to understand and accept the project risk.

Except as expressly stated in this white paper, TrueLoveChain Foundation makes no representations or warranties (especially for its marketability and specific functions) to TrueLoveChain or TLC Tokens. Anyone involved in the TLC token's public sale plan and the purchase of TLC tokens are based on their own knowledge of the TrueLoveChain and TLC tokens and information in this white paper. Without prejudice to the universality of the foregoing, all participants will accept the TLC token as it is after the launch of the TrueLoveChain project, regardless of its technical specifications, parameters, performance or functionality. The TrueLoveChain Foundation hereby expressly disclaims and refuses to accept the following responsibilities:

- (1) Anyone who violates any country's anti-money laundering, counterterrorism financing or other regulatory requirements when purchasing TLC tokens;
- (2) Anyone who violates any of the representations, warranties, obligations, undertakings or other requirements set forth in this white paper at the time of purchase of the TLC token, and the resulting inability to pay or the inability to extract TLC tokens;
  - (3) The public sale plan for TLC tokens is aborted for any reason;
- (4) The development of the TrueLoveChain failed or was abandoned, and the resulting TLC token could not be delivered;



- (5) Delay or extension of the development of the TrueLoveChain, and the resulting schedule of failure to achieve prior disclosure;
  - (6) TrueLoveChain source code errors, flaws, defects or other issues;
- (7) Fault, crash, smash, rollback or hard fork of the TrueLoveChain or the Ethereum blockchain;
- (8) TrueLoveChain or TLC Token does not perform any specific function or is not suitable for any particular purpose;
  - (9) Utilization of the proceeds raised by public sales outlets;
- (10) Failure to promptly and completely disclose information about the development of TrueLoveChain;
- (11) Any participant who reveals, loses, or destroys the wallet private key of the digital cryptocurrency or token (especially the private key of the TLC token wallet it uses);
- (12) Third party crowdfunding platform of TLC tokens for breach of contract, violation, infringement, collapse, libel, termination or suspension of service, fraud, misuse, misconduct, malpractice, negligence, bankruptcy, liquidation, dissolution or closure;
- (13) There is a difference, conflict or contradiction between the content of the agreement between anyone and the third-party crowdfunding platform and the content of this white paper;
  - (14) Anyone's trading or speculation on TLC tokens;
  - (15) TLC tokens are listed or delisted on any exchange;
- (16) TLC tokens are classified or considered by any government, quasi-government agency, competent authority, or public agency to be a currency, securities, commercial paper, negotiable instrument, investment, or other thing that is subject to prohibition, regulatory, or legal restrictions.;
- (17) Any risk factors disclosed in this white paper, as well as damages, losses, claims, liabilities, penalties, costs, or other negative effects associated with such risk factors, resulting in or accompanying them.