Version 1.0.0

Wanchain
Commercial Whitepaper

Contents

General Description

Wanchain aims to build a super financial market of digital assets. It is an infrastructure connecting different digital assets. With this infrastructure, financial services based on different digital assets can be carried out in a distributed way, finally forming a financial market composed of different business providers, application developers and clients.

The concept of Financial Inclusion seeks to give disadvantaged people and small enterprises, worldwide, better access to the financial system and low-cost financial services. Two and a half billion people in the world do not have access to a bank. They can neither open a saving account nor obtain a credit card. These people are separated from the global economy. Users that conduct cross-border remittances through banks bear high transaction expenses. Common investors can only buy relatively low-end financial products from major financial organizations and cannot participate in the early-stage investment of technological companies such as Google and Alibaba before they are listed. Despite having good credit and outstanding performance, many small and medium-sized enterprises are not the targeted clients of traditional banks under the 80/20 law, so it is difficult for them to obtain loans.

Georg Hegel said "Reality is a historical process," and the emergence of blockchain technology is changing the above situation. When Venezuela recently depreciated its currency, Bitcoin became a popular asset safe-haven. In the Philippines, people working in foreign countries can remit their income to their inadequate hometown banks through the blockchain network. Investors that participated in the primary investment of famous ICO blockchain projects, including Ethereum, gained hundreds of times the return on their investment. Blockchain technology is boosting Financial Inclusion to new heights.

Wanchain is entering the fray and engineering an infrastructure totally based on distributed networks and cryptology. We are solving the issue of transferring assets between different blockchains by using improved blockchain technology rather than by using another more centralized method. The objective of Wanchain is to provide financial services, based on digital assets, to all blockchain clients in a safe and open way.

With Wanchain, any individual or institution can set up their own business window and provide services such as loan origination, asset exchanges, credit payments, and transaction settlements based on digital assets. The blockchain-based infrastructure provided by Wanchain guarantees that more people will enjoy increased access to financial services based on digital assets, retain better control of their assets, and have more ways to increase the the value of their assets. The blueprint for Wanchain we envision is a distributed super financial market based on blockchain.

Wanchain is a project created by the blockchain team led by Mr. Jack Lu. Mr. Lu joined the blockchain revolution in 2012 and cofounded Factom, the globally famous blockchain project. Factom was introduced to the public with the headline "The Trust Machine: How the Technology Behind Bitcoin Could Change the World" by the famous British magazine, the Economist. In 2016, Mr. Lu founded Wanglu Tech in China and devoted himself to blockchain commercial applications. Wanglu Tech has achieved commercial success in the areas of immutable records and supply chain financing. The Wanchain team is

using resources in China and the United States to set up a global R&D team. More importantly, the Wanchain team has retained the top experts in applied mathematics and cryptology. As part of the Wanchain scientific team, these experts are responsible for the design and implementation of the cryptographic theories that underlie Wanchain. The commercial applications of Wanchain will gradually expand from the Asia-Pacific area to the whole world; areas with relatively inadequate traditional financial facilities have a stronger demand for financial services and a need for improved financial facilities. The Wanchain advisory team includes figures with great influence in local commerce and the global blockchain community.

This commercial white paper does not have drawn-out descriptions of the technological details of Wanchain. It aims to provide a clean overall blueprint for, and instruction in, the primary design intentions, basic functions, commercial values, future prospects and development planning of Wanchain. If you are interested in the technological details, please read our technology white paper. We welcome ambitious engineers to join our community to discuss and implement the technology.

To participate in the crowdfunding of Wanchain is to get in on the ground floor of creating a more open distributed financial network. You will participate in the development of the Wanchain community by owning Wancoin, the coin of Wanchain. For more information, please visit our official website: https://wanchain.org.

Project Overview

What is Wanchain?

Wanchain implements cross-chain transfers of assets by setting up connections between the accounts of different blockchains and providing a framework for financial applications based on digital currency and digital assets. Wanchain is not just a cross-chain platform, performing cross-chain transactions and interconnections between multiple assets, it is also a

blockchain network that can operate independently. It includes native coins, supports intelligent contracts and owns the privacy protection mechanism for transactions. Anyone can develop financial applications that satisfy their needs on Wanchain by following the application guidelines.

Wanchain Opportunities

From a technological perspective, Wanchain creatively solves the transaction problem of cross-chain transfer between different blockchain accounts in a distributed network. A key goal is to solve the problem of asset transfers in different blockchain accounts by using wider-scope blockchain technology. At present, most cross-chain transfers of blockchain assets use a centralized method, such as a centralized exchange. Users who give up control of their assets face great risks. Exchanges also bear the risk and responsibility of securing the accounts and managing all the users' assets.

From an application perspective, a digital currency transaction is only one of the use cases. When traditional banks were first formed, they converted currencies as their main business and then gradually developed services such as saving accounts, financial planning, and investments. The continuous increase in the types of digital currency means that more of the wealth in the global economy is represented by digital currency. Demand for debit and credit, payment settlement, and investment and derivative products will increase. A rudimentary foundation for digital currency is in place, and it will continue to grow and mature.

From another application perspective, as blockchain technology gains greater attention, traditional assets are trying to implement blockchain financial methods, such as commercial bills. Blockchain cross-chains has become the account book that records traditional asset transactions. Mutual correlation and wealth transfer between these account books are also demands we cannot neglect.

From a commercial viewpoint, any revolutionary technology gives birth to a corresponding brand-new commercial landscape. The development of the

Internet lead to the rise of cross-region and cross-country e-commerce models, which shocked and changed traditional trading methods and even the organization of production. Digital currency assets based on blockchain will also give birth to brand-new financial commercial methods. More individuals and organizations will use the Wanchain network to carry out financial services and promote the development of Inclusive Finance in a more open and public way.

Wanchain Technological Ideas

Wanchain adheres to the idea of blockchain distribution and participation without a trusted third party, and makes full use of cutting-edge cryptology theories to design and implement the technology. In cross-chain transactions, the locking account mechanism of Wanchain uses the multi-party computation and sharing technology of threshold keys. This mechanism is totally decentralized, realizing asset account management that does not need trusted third-party participation. In a Wanchain internal transaction, Wanchain uses the privacy protection mechanism of intelligent contract token transactions based on ring signature and one-time accounts, providing the basic mechanism for more abundant financial applications. For the technical details of Wanchain, please refer to the Wanchain technology white paper.

Wanchain Applications

Digital Currency Debit and Credit

As digital currency becomes more accepted as a global transaction media and a more important means of wealth storage, there is an inevitable tendency to use digital currency to create new wealth instruments and increase assets. For example, investing in Bitcoin is from "mining" and investing in other blockchain projects is by ICO. As digital currency applications keep increasing, there are more and more investment opportunities where direct investing using digital currency is available (there is no need to convert digital assets to

fiat currency and the investment proceeds are calculated with digital currency.)

People who create wealth using digital currency need more digital currency. People with digital currency in-hand want to maintain and increase its value. Therefore, we will need more and more digital currency debit and credit services. Individuals and organizations with credit and capital abilities will use Wanchain as the infrastructure and the intermediary to carry out debit and credit services. During the loan and deposit process, through Wanchain, people keep total control of their assets. Interest computation for bank deposits and loans, and asset and liability conversions, are executed through cryptographic mechanisms that are stipulated in advance and cannot be tampered with. Using the cross-chain account book and intelligent contract mechanism of Wanchain, the following debit and credit services based on digital currency can be implemented:

- Credit services
- Peer-to-Peer lending
- Direct debit and credit

Digital Currency Payment and Settlement

More and more commercial tenants accept Bitcoin and other digital assets as a means of payment. In the future, more commercial organizations will recognize multi-digital currencies as a payment media. For users, it is not convenient to install multiple wallets on both computers and cellphones. Current payment methods need intermediary organizations like VISA, Paypal and Alipay to conduct the unified integration of payment and settlement. Wanchain provides mechanisms that allow more third-parties to perform unified clearing and settlement. In essence, as third-party payers connect the accounts of different banks, Wanchain will perform a similar function in the digital currency landscape.

Payment and settlement through Wanchain has the following advantages:

- Based on the multi-currency wallet of Wanchain, users can conveniently manage multiple digital currencies.
- Developers can develop different types of multi-currency wallets according to the demands of their clients.
- Commercial tenants or intermediaries can manage capital and clear settlements more conveniently.

Digital Currency Exchange Conversion

At present, converting between digital currencies mainly relies on centralized exchanges and an intermediary in the form of a curb exchange. All transactions are based on trusting the exchange and the intermediary. When multi-currency capability is introduced in Wanchain, the exchange or intermediary can achieve multi-currency auction trading and one-to-one over-the-counter trading through intelligent contracts. The privacy protection transaction mechanism of Wanchain provides support for transactions that require privacy protection. Introducing digital currency without privacy protection into Wanchain, initiating privacy transactions in the chain, and switching the digital currency back to the original chain has, to a certain extent, achieved privacy protection in the original chain by cutting off the fund tracking path. Wanchain enables the following modes of currency trading:

- Currency exchange with privacy protection
- Intermediary mode over-the-counter trading
- Distributed exchange

Digital Asset Investment and Financing

We see a trend of mapping traditional assets into consortium blockchains, such as commercial paper, loyalty points, future earnings, accounts receivable, etc. In the future, more financial assets will be recorded in the form of a distributed ledger based on consortium chains. After linking into Wanchain, consortium chains become the financial asset provider. Digital assets will also generate more and more valuable assets. Digital currency holders can buy

assets and make investments using their digital currency. In comparison to traditional banking services, this is similar to the purchase of financial products in banks. The difference is that more intermediaries can participate and asset holders can directly finance assets. Based on the underlying assets, financial derivative assets can be created and better executed through blockchains.

Wanchain enables the following asset investment and financing operations:

- Multi-currency ICO based on smart contracts
- Commercial financing based on financial assets on the supply chain
- Derivative investments based on underlying assets (such as ABS)
- Financing based on lines of credit

The Idea of Merging with Traditional Banks

The implementation of blockchain technology has been regarded as an important strategy by many banks, but most of them use blockchain technology to revamp their traditional services. Currency exchange and other banking services in the digital currency sector is booming. Blockchain development in these two fields lies along two parallel lines. With the increase of digital assets in the economy, blockchain integration with the real economy is constantly growing. The two lines will eventually intersect. Digital assets will be added to the bank's balance sheet (bank supports digital asset loans), and the bank's balance sheet will be partially transferred to the blockchain (legal tender is represented and accounted for in the form of blockchain tokens). Since Wanchain allows asset transfers between different account books, integration will be possible in the future.

About Us

The Wanchain Foundation is registered in Singapore as a non-profit organization serving the Wanchain open-source community. It is responsible for raising operating capital for the Wanchain community and providing

support to enterprises, organizations and individuals involved in and promoting Wanchain open source projects. It will develop a fundraising plan and establish appropriate ways to use the funds.

The Wanchain Foundation will operate on the following goals and principles:

- Develop operational and capital usage plans to promote development in the Wanchain community.
- Cooperate with professional auditing institutions to regularly announce fund dispensations.

Wanchain is a blockchain project based on the Wanchain open source community, whose core development team is responsible for developing core functions such as the Wanchain consensus protocol, the official wallet, and cross-chain agreements. The business team is responsible for promoting Wanchain community development, marketing information and business partner development. The operation team is responsible for financial, legal, personnel and other basic functions to ensure normal operation of the project. The Wanchain project produces official information releases and community communication channels on WeChat, QQ, Slack, Twitter, and Reddit.

Wanglu Tech is a for-profit enterprise. It mainly focuses on technology research and development as well as the commercial uses of blockchain technology. It has obtained venture capital from River Capital and Fenbushi Capital, among others. Theoretical research and early implementation of Wanchain is derived from the contribution of the Wanglu Tech team. The Wanglu Tech team has put its previous research into Wanchain open-source projects and has become a major participant in the Wanchain open-source community. After this, the Wanglu Tech team will continue to enrich the Wanchain environment with commercial applications and development of Wanchain technology in the financial, supply chain and other fields.

The funds raised by the ICO will be used as follows: 60% for research and development, 10% for community development, 10% for marketing, 10% for business development and 10% for daily operations.

Research and development funds are primarily used to cover engineer salaries, rewards to important participants and contributors in the community, and consulting fees for outside experts and consultants. We will expand the scale of research and development teams around the world as needed to ensure the development process.

Community development funds will be used to encourage and support community participants in developing commercial applications based on Wanchain, and regularly organize activities like hackathons to encourage developers to join the community and promote the blockchain development environment. The Wanchain team has maintained close contacts and partnerships with the Ethereum and Bitcoin communities. As a cross-chain project, we will continue to participate in the development of other communities, and jointly promote the development of digital currency and blockchain technology with funds and personnel participation.

Marketing funds will be used to participate in and organize summits in the financial and blockchain industries, promote Wanchain to major media outlets, and expand the influence of Wanchain.

Business funds will be used for developing business partners.

Daily operating expenses are for finances, lawyers, personnel, office space, etc.

Crowd Funding

The crowdfunding goal is about 30 million USD equivalent in Ether. The publicly offered digital tokens will be in the form of Wanchain ERC-20 tokens. Eventually the ratio of online tokens and crowdfunded tokens will be equal. The end of the ICO will be triggered by one of two conditions: 107.1 million tokens have been sold or the crowdfunding time limit is reached. At the end of the ICO, the smart contract will be automatically closed. When the Wanchain

project goes live, participants can exchange their ERC-20 tokens in a 1:1 ratio for Wancoins.

Participants in the project must have a full understanding of the Wanchain details. For the latest updates and more detailed information, please visit our official website https: //wanchain.org.

Roadmap

In June 2016, theoretical research and POC (Proof of Concept) started for cross-chain transaction and privacy protection.

Going back to the origins of Wanchain, we introduced multi-chain division and multi-chain layering methods in the Factom project, which mainly solved the single-chain performance problem. The design was later referenced in many parts of the prototype British National Crypto-currency. The architecture of Wanchain is similar in nature to these previous projects. Our team has been continuously researching cross-chain technology, and the current result is based on this research. In June 2016, Wanchain project design began and the team started researching and developing blockchain cryptographic algorithms.

In December 2016, proof of concept development is conducted for token privacy protection of smart contracts.

Theoretical proof for token privacy protection of smart contracts based on one-time addresses and ring signatures was completed in 2016, and the POC was completed at the beginning of 2017. At the beginning of 2017, we completed the design of the cross-chain transaction mechanism and the cryptographic technology.

In June 2017, the white paper is released. The Wanchain website goes online and Wanchain enters the ICO phase.

This commercial white paper and the technology white paper were released together. We will give the first version to our advisory team and many other blockchain insiders to review, hold several closed-door meetings, and collect comments and feedback. Based on this feedback, and after revisions and proofreading, the Wanchain project will be officially announced to the public, and enter the public crowd-funding stage.

In September 2017, the ICO will begin to sell tokens and release a Wanchain test network.

After two months of publicity, and after ensuring that potential participants interested in the ICO fully understand the relevant Wanchain information, the Wanchain project will open token sales and simultaneously release a Wanchain test network. ICO sales will be publicly available through Ethereum ERC-20 tokens; participants can buy it directly through their ERC-20 Ethereum wallets. In order to benefit other participants, we will also have sales cooperation through official partners.

In November 2017, Wanchain 1.0 will be launched. Wanchain wallets and smart contract functionality with privacy protection will be completed and Wancoin will be released.

In order to promote more rapid community development and business applications for the Wanchain project, Wanchain will first introduce privacy protection version 1.0 and then introduce the official Wanchain wallet. At that time, participants holding ICO tokens can download the official Wanchain wallet and exchange the crowdfunded tokens for Wancoin.

In June 2018, Wanchain 2.0 will be launched. Ethereum cross-chain trading will be available, the Wanchain 2.0 cross-chain protocol will be online, and the multi-currency Wanchain Wallet 1.0 will be online.

The main goal of Wanchain project in 2018 is to achieve cross-chain trading with Ethereum and Bitcoin, while promoting the Wanchain community and environment. The goal of the Wanchain community is to attract more talented developers to the low-level Wanchain protocols and tools and offer better multi-currency wallets, browsers and other options for users. At the same time, we will encourage and support more developers to develop different Wanchain financial applications based on the needs of the end-user.

By the end of 2018, Wanchain 3.0 will be online. Bitcoin cross-chain trading will be available, the Wanchain 2.0 cross-chain protocol will be online, and the multi-currency Wanchain Wallet 2.0 will be online.

The Wanchain business team will conduct targeted market promotions and gain more in-depth cooperation from digital currency exchanges, OTC institutions, digital wallets and other agencies, to provide digital currency transactions for the distributed infrastructure. In the traditional financial sector, Wanchain will seek more application development team members and encourage and support them to use Wanchain as their basic platform to build alliances and pave the way for future cross-chain connections.

In 2019, Wanchain 4.0 will be online. Wanchain cross-chain trading is available, the Wanchain 3.0 cross-chain protocol will be online, and the multi-currency Wanchain Wallet 3.0 will be online.

As the Wanchain technology platform matures, Wanchain will support more digital currencies and digital assets in the public blockchain network. While the consortium chains are increasingly applied to conventional applications, the value of cross-chain transactions will be fully explored.

Our Team

Jack Lu, Founder

Mr. Jack Lu is the cofounder and CTO, with a deep technical knowledge and years of experience in business leadership. He has received degrees from Peking University and Ohio State University. He has extensive business experience in China, the United States and Europe. In 2012, he entered the blockchain space and co-founded the world-renowned blockchain project Factom, which was introduced to the public by the Economist magazine's cover story "The Trust Machine". Factom technology successfully developed business in China and the Asia Pacific region, which expanded the global influence of Factom. He Founded Wanglu Tech in 2016, which is committed to promoting blockchain commercial applications in the data storage and supply chain finance businesses. Wanglu Tech has become one of the few domestic blockchain enterprises that has realized commercial success.

Zane Liang, Science Team Lead

Mr. Liang graduated from the Department of Applied Mathematics at Peking University and earned a Ph.D. from the University of Massachusetts. He is a specialist in performance computing and has a profound knowledge of cryptographic algorithms and security. He has more than 20 years of theoretical and engineering research and development experience in the United States and has led a number of teams to gain breakthrough achievements in the ultra-performance computing field. Mr. Liang entered the blockchain industry in 2015 and later led R&D work for Wanglu Tech in the United states. Mr. Liang leads science teams to design and demonstrate Wanchain and its underlying algorithms and protocols.

Roger Zhang, Engineering Team Lead

Before entering the blockchain industry, Mr. Zhang worked at Huawei, Talking Data and a number of cutting-edge science and technology companies in China and Singapore where he served as CTO and chief architect. He is proficient in architecture design, data processing and high concurrency web services. After entering the blockchain field in 2015, he became an Ethereum developer. He has a deep understanding of, and rich experience in, engineering the chain structure of smart contracts and consensus algorithms. He led the team to complete the one-time address and ring signature privacy protection POC.

Michael Y, Senior Engineer

Michael got into the blockchain field in 2012. He is a fan and active developer in the Bitcoin community and a former core developer of Mastercoin and Omni. He joined the Factom team and was responsible for the core development. He has profound engineering expertise and understanding of the Bitcoin protocol. He is responsible for cross-chain transaction between Wanchain and Bitcoin.

James Shen, Senior Engineer

B.S. in Computer Science from the University of Texas. Worked as chief engineer at General Motors and HP. Got into the field of blockchain in 2011. He is a senior miner and senior blockchain development engineer.

Piyush Mehta, Senior Engineer

Graduated from India's top university, the Indian Institute of Technology, and from the University of Southern California. Worked at DELL, AT&T and the Loss Recovery Company.

Shi Liu, Science Team Member

Bachelor degrees in Science and Computer Software; Ph.D. in Applied Mathematics from Peking University. Focused on elliptic curve cryptography, public key cryptography based on identity, and homomorphic encryption theory. Participant in algorithm design and implementation. Responsible for designing the Wanchain cryptographic algorithms.

Zhao Zhong, Science Team Member

B.S. and Master's in Economics, Ph.D. in Applied Mathematics from Peking University. Focused on elliptic curve public key cryptography and encryption algorithm security analysis. Responsible for blockchain privacy and anonymity algorithm design. Has successfully designed a number of blockchain related algorithms. Responsible for designing the Wanchain cryptographic algorithms.

Ning Luo, Senior Engineer

Ph.D. in Physics and Computer Science from Clemson University. Served as chief software engineer at MaxPoint and Lumeris.

Richard Zhang, Senior Engineer

Twenty years of development experience. Was a senior engineer at Huawei before getting into the blockchain industry. Proficient in C/C++, Golang, Nodejs, Java and other computer languages. Expert in blockchain P2P networks, encryption algorithms, and consensus algorithms.

Eric Swartz, Senior Engineer

B.S. in Computer Science from Southwestern University. Has worked at Novell, Vtel, Active Power, Xtreme Power, and other companies.

Gu Junfeng, Senior Engineer

Graduated from Tsinghua University, M.S. in Computer Science from the University of Maryland. Worked as a senior engineer at Cisco and Dell and is proficient in network communication and information security.

Wenyan Qin

Worked at the IBM Toronto Laboratory on the Bank of Montreal VaR Engine. Expert in data technology and data model specifications. After joining the blockchain industry, he participated in the development of Ethernet Parity.

Shanfeng Chen, Senior Engineer

Bachelor and Master's degrees in electrical engineering from Fudan University; Ph.D. in electrical engineering from Texas A&M University in the United States. Served as a product design leader at ST-Ericsson and an analog design engineer for NXP.

Cathy Niu, Senior Engineer

M.S. degree in Computer Science from Ohio State University. Served as chief engineer and architect at HP R&R. Participated in the research and development of the Factom project.

Boris Young, Product Lead

Before entering the blockchain industry, was a financial systems senior consultant and entrepreneur. Became a supporter of the digital currency concept in 2014. Great at product design and experienced in many kinds of blockchain application products. He has published many blockchain and digital currency articles. Mainly responsible for the application requirements of Wanchain and the design of commercial application functions.

Lizzie Lu, Marketing Lead

Graduated from the Communication University of China. Worked for television, magazines and publishing for many years. Was marketing director of the Zhijia Design Innovation Group. A blockchain community organizer who repeatedly planned and organized blockchain conference sessions and blockchain industry conferences. Primarily responsible for globally promoting the Wanchain community.

Advisors

Feng Han

Secretary general of the DACA Blockchain Association

Dustin Byington

Founder and president of Stokens Venture Capital, co-founder of Tendermint, founder of Bitcoin University

David A. Johnston

Chairman of Factom

Li Rongge

River Capital Partners

Wu Gang

Founder and CEO of Bixin

Albert Ching

Founder of Singapore i-Sprint

Zhang Yuyan

Chairman of S-League Supply Chain Blockchain Alliance

Ramble

President of the North American Blockchain Association

Pitinan

DigitalPass Managing Partner

Chen Zhong

Director of the Network and Information Security Laboratory, Peking University

Jin Jian

Research Fellow, the China Information and Communication Research Institute

-- Contributors --

Jack Lu、Boris Yang、Demmon、Shi、Zane Liang 、Ying Zhang、
Eric Swartz、Lizzie Lu

Reviewers : Dustin Byington、David A. Johnston、Michael Y.、Jian
Shen 、Feng Han、Albert Ching

wanchain.org   /   info@wanchain.org