Sepoch

0.Preface

Nakamoto's Bitcoin white paper, *A peer-to-peer electronic cash system,* championed the use of technology to guarantee the ownership of wealth. With Bitcoin, one is free to manage wealth with no limit on the amount of money or the time of the transaction. Thus, the advent of Bitcoin also marked the beginning of a paradigm shift towards wealth freedom.

Freedom of thought and freedom of wealth are the two foundational pillars of liberty. Freedom of thought is the precursor and progenitor of other liberties, including freedom of belief, freedom of speech, and freedom of expression. Freedom of wealth includes the freedom of ownership, the freedom of use of one's wealth, the fairness of wealth distribution, and the protection of privacy. Only when these two pillars are guaranteed can other human freedoms flourish.

Bitcoin alone cannot guarantee wealth freedom. After more than a decade, blockchain has seen than 10,000 new currencies. Although many projects have applied innovative technologies, they have failed to elevate fair collaboration among the largest group of individuals in creating value to the primary goal of a blockchain project—as a result, the potential for blockchain technology as an agent of change in human development that drastically improves wealth freedom has been unrealized.

Sepoch is committed to exploring efficient solutions of blockchain technology for human collaboration and ultimately human freedom. The Sepoch project has a broad vision and ambitious roadmap. Sepoch starts with an exchange but will go well beyond this single application.

The Sepoch executive team includes senior technical engineers from IBM, senior blockchain developers, senior business developers from France, UK, Germany, and China, and serial entrepreneurs from Tsinghua University. Senior team members began to use Bitcoin in 2013 and have continued to study the blockchain technology as well as its applications.

Based on the strategic layout of Sepoch, this paper focuses on the ecosystems of cryptocurrency trading, Stars Network, decentralized blockchain ecosystem, and digital asset circulation system. It also lays out Sepoch's understanding of the blockchain industry and plans for future development. Details on our strategy and technical specifications will be reserved for future announcement when appropriate.

Contents

1. Sepoch value philosophy

Since Nakamoto published the Bitcoin White Paper, A peer-to-peer electronic cash system, in 2008, hundreds of blockchain solutions have been explored. Today, over tens of thousands of digital currencies exist. Among them, a number of excellent blockchain projects are trying to integrate with traditional industries. Such combinations promise to produce the next unicorn.

For example, blockchain traceability applications collect multi-party records on the traceability link to the distributed ledger and form a tamper-proof ledger through block structure lock record. Artificial intelligence applications combine intelligent processing of information with reliable transmission of information supported by blockchain. Blockchain's transparent yet secure communication and tamper-proof qualities can also have an important impact on Internet of Things. Multi-center, weakly centralized features will reduce the cost of operation and maintenance of the centralized architecture. The characteristics of information encryption and secure communication will help protect privacy. Identity rights management and multi-party consensus will help identify illegal nodes and prevent malicious attacks...

In short, blockchain technology can profoundly affect every industry, and we expect to see many more great projects in the coming years. However, if value cannot circulate freely, blockchain will be hamstrung.

Sepoch approaches the future of blockchain solutions from a philosophical level. Digital currency trading platforms currently on the market support circulation through trading for some tokens, but this is insufficient. In the future, a healthy value distribution system must consider two further aspects:

Multi-scenario circulation

At present, digital currency trading platforms such as Coinbase and Binance have already solved some of the circulation needs. However, these systems only meet the profitable trading scenario—future digital currency circulation needs other application scenarios. For example, micro-value exchange requires instantaneous transaction speeds and minuscule transaction fees. Sepoch will gradually implement decentralized trading. Eventually, we aim to be an efficient, secure, and stable multi-scenario circulation system. This article will focus on Sepoch's strategic positioning, market operation, and system technology characteristics. The next two steps of strategic deployment will be described in detail in the future as we release White Paper 2.0.

The value distribution system

The emergence of blockchain technology allows individuals to quantify the value of their contributions, including micro-contributions. This quantification of micro-value is a powerful force to motivate community members. In the future, most great projects will be inseparable from their community. Those who can reward micro-contributions through

a fair tracing system who will likely enjoy the most cohesive community.

At present, most digital currency trading platforms fail to do this. Early digital trading platforms such as Coinbase did not have any plan to give back to the community. Emerging cryptocurrency trading platforms such as Binance are increasingly aware of the importance of the community and are beginning to give back equity to the community.

However, a fairer and more equitable measure of the value of the contribution of each member of the community is possible. Sepoch has written confirmation schemes for community members' micro-contribution directly into its codes, in the form of Stars Network.

2. Market analysis

2.1. Market opportunities

As of 1 August 2019, the total market value of cryptocurrency has been steadily maintained at around $250 billion. According to Coingecko, the number of digital asset exchanges currently operating in the market is 366. Among them, only 250 have real customer transactions, and around 130 have achieved basic balance.

In terms of transaction values, Malta-based Binance and US-based Coinbase have daily volumes that exceed $1.7 billion. They are followed by Bit-

finex (Hong Kong), Kraken (USA) and HitBTC (UK). In addition, according to Alexa data analysis, more than 50% of global daily encrypted transactions are completed at IP addresses located in Asia.

Cryptocurrency exchange is a key link in the blockchain industry, serving as a customer, project provider, and source of capital. Because of this, new exchanges keep popping up. According to data by coinmarketcap.com, nearly 1,000 exchanges have launched since 2013, though only a few dozen have become established.

Compared to traditional industries, blockchain is still in an early stage of development. Many insti-

24 hour transactions values
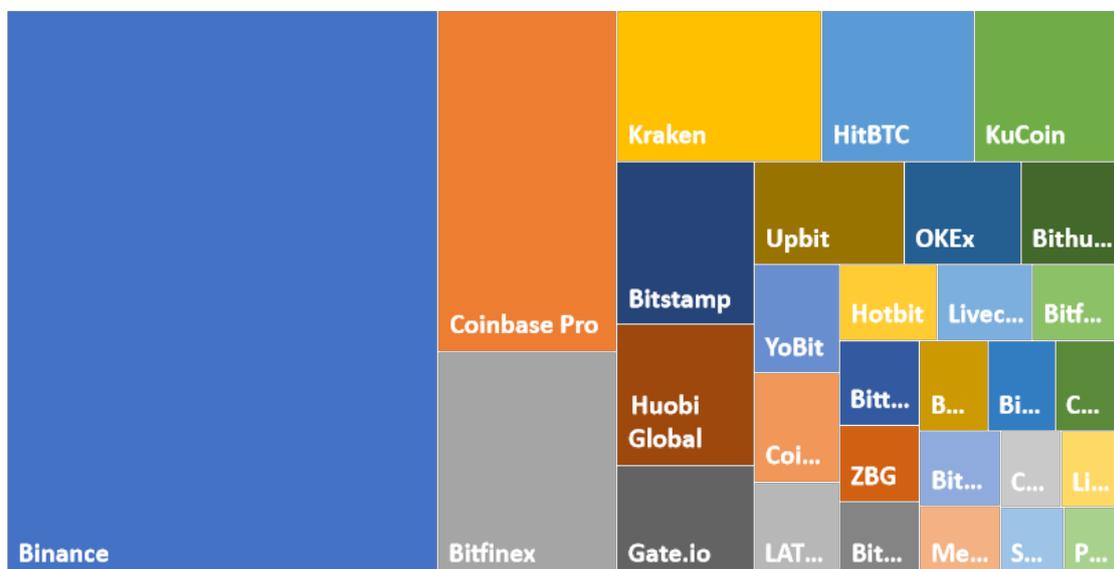
tutional policies have not yet been standardized and the future direction still needs more talents to explore. This means that the final consolidation of this industry has not even started, and that new players can become established if they position themselves correctly.

2.2. Needs for a new exchange system

Common problems in the existing exchange system

• Centralization of power and profits

Due to fierce competition and first-mover advantage, in order to achieve maximum profit, all exchanges are centralized.

• Difficulty for new projects to get listed

New projects need to pay large sums of listing fees to centralized exchanges. As a result, projects cannot make effective use of the funds raised, and every stakeholder suffers. The "decentralized" blockchain project that works for the "people" has become a false proposition.

New exchange system

• Decentralization

The preeminent feature of blockchain is decentralization. Although there are many exchanges that are "decentralized" in technology, real decentralization should be that of power and interests. The new exchange system should achieve self-governance by giving all people in the community equitable powers.

• Community consensus mechanism

Once decentralized communities are established, consensus is needed as the foundation for maintaining and developing communities. This entails a set of value systems recognized by all members. The development of the community benefits all members, and the rights of members are protected by the community.

3. Sepoch Exchange

Sepoch integrates several layers of the blockchain ecosystem, from its value-driven community platform to digital asset multi-scenario circulation technology and project incubation. We are committed to becoming the world's premier blockchain value circulation service system. With blockchain digital asset trading as the entry point, we offer digital asset enthusiasts a safe and efficient multi-scenario value circulation system. Our platform also commits to providing fast docking of resources for high-quality blockchain projects and to accelerating the broad adoption of blockchain technology.

3.1. Origin of "Sepoch"

Sepoch is an acronym for "Super Epoch". We firmly believe that blockchain is paradigm-changing. In the "Super Epoch" that it brings, civilizations can explore more efficient and fairer division of labor and distribution of wealth, through improved collaboration. Sepoch aims to accelerate the arrival of this era.

3.2. Prototype

• **Multi-language support**

Sepoch is available to users around the world. The initial version will be available in simplified Chinese and English. We will gradually introduce the supports for other global languages such as French, Japanese, and Korean, etc.

• **Multi-currency support**

Initially, we will introduce traditional trading pairs based on USDT, BTC, and ETH. A unique classification system helps customers screen projects more easily. Sepoch will gradually launch other high-quality projects to cover a large number of high-quality digital assets.

• **Multi-platform support**

Sepoch will provide support for all popular platforms, including Web, mobile (Android, iOS), WeChat.

3.3. Business model

• **Transaction fee**

Initially, users pay a uniform 0.1% of each transaction as the order is cleared. We will introduce tiered commission schemes by taking into account the needs of the market as our operation develops.

• **Withdrawal fee**

A small commission is also charged for token withdrawals.

• **Project listing fee**

A reasonable listing fee will be demanded from high-quality projects to cover our expenses.

• Financing fee

For leveraged trading, a financing fee will be incurred.

3.4. Consensus through micro-values

The value of blockchain technology itself is in part reflected in consensus; thus, a strong consensus mechanism is essential for the functioning of a healthy community. Traditional corporations reserve profits for its shareholders and exclude customers from their financial gains. While it works in other industries, this traditional model would prevent blockchain projects from closing the value loop in their communities.

Unfortunately, most established digital asset trading platforms still operate in the traditional corporate model. Some new platforms, such as Binance, have started to return part of their profits to the user community. However, no one has given the tracing and reward of micro-values the amount of attention it deserves. As a result, the rewards to users are disproportionate to their contributions.

In response to this, Sepoch has created a new community building model—Stars Network—as a robust consensus mechanism through the confirmation and reward of micro-contributions of its users.

4. Stars Network

In recent years, we witnessed the empowerment of the individual, thanks to developments in social media that give voices to the average Joes. Tools that help "influencers" monetize their influence are becoming increasingly popular. Inevitably, personal influence and social networks are turning into a crucial resource for competitive advantage. We have designed Stars Network to offer three functions:

Integration with Sepoch Exchange

Stars Network and Sepoch Exchange are symbiotic. Stars Network attracts users to the Sepoch ecosystem, which includes income-generating trading activities on Sepoch Exchange. Meanwhile, Sepoch Exchange supports Stars Network financially by offering a significant part of its profits in the development and operation of Stars Network, including the reward mechanism for micro-contributions.

Boost of personal influence in a sustainable value network

We believe that personal influence and social networks are exceedingly important as sources of competitive advantage. Stars Network provides a set of incentivizing value measurement and assurance mechanisms. As a value network that inherently incorporates value, Stars Network empowers key opinion leaders (KOLs), media (in particular social media), incubators, entrepreneurs, and users who actively contribute to value creation.

Social proof against fraud

Alongside its myriad benefits, the Internet has made the spread of fraudulent information easier: With the Internet, especially in the age of social media, information can be transmitted at exceedingly low cost. At the same time, the incentive to provide authentic information is regrettably missing. Stars Network rewards the dissemination of authentic information while punishing the sharing of fraudulent information, using its value network as the incentive system and its social nature to provide social proof. In this system, if a node publishes fraudulent information and damages the interests of the community, members of the node will cancel their subscription in response, resulting in a decrease in its revenue. Stars Network will continue to introduce more complex and intelligent mechanisms to improve its robustness against frauds.

4.1. Network structure

Stars Network consists of two groups of stakeholders: Stars Network node creators and community members. Each creator is a main node. The first layer starts with the first user. Each subsequent layer contains more users than the previous one.

Let K be the level of each layer and F be the number of users in each layer, then:

$$F=8*(K+2)^2$$

For example, in the first layer $F_1 = 8 \times (1 + 2)^2 =$

72; in the second layer $F_2 = 8 \times (2 + 2)^2 = 128$.

4.2. Synergy with Sepoch Exchange

The success of Stars Network will provide a strong user base for Sepoch Exchange. At the same time, income from Sepoch Exchange in the early days will support the development of Stars Network. In due time, Stars Network will grow into a powerful blockchain community platform. We will expand it vertically to cover other aspects of the blockchain ecosystem, e.g. media, video streaming, and social networks. Details about the evolutionary direction of Sepoch's Stars Network, for the interest of secrecy, will be gradually disclosed in the future.

4.2 Joining Stars Network

Node creators and community users are the two stakeholder groups in Stars Network. Any individual or organization can apply to become node creator, provided that the account has been verified (KYC) and that a number of Sepoch Tokens have been staked.

Any individual or organization can join any number of Stars Network nodes as community users, for an admission fee. The admission fee will be paid in the form of Sepoch Token. Each Stars Network node can set several levels of admission fees for different services, while the lowest fee level across Stars Network is set by Sepoch.

4.3. Profit distribution

1. Half (50%) of the operating income from Sepoch platform will be distributed across Stars Network.

2. Projects on Sepoch Exchange are encouraged to airdrop tokens for Stars Network.

3. Half (50%) of the advertising revenue on Stars Network will be distributed across Stars Network; the remaining 50% will be used for the development and operations.
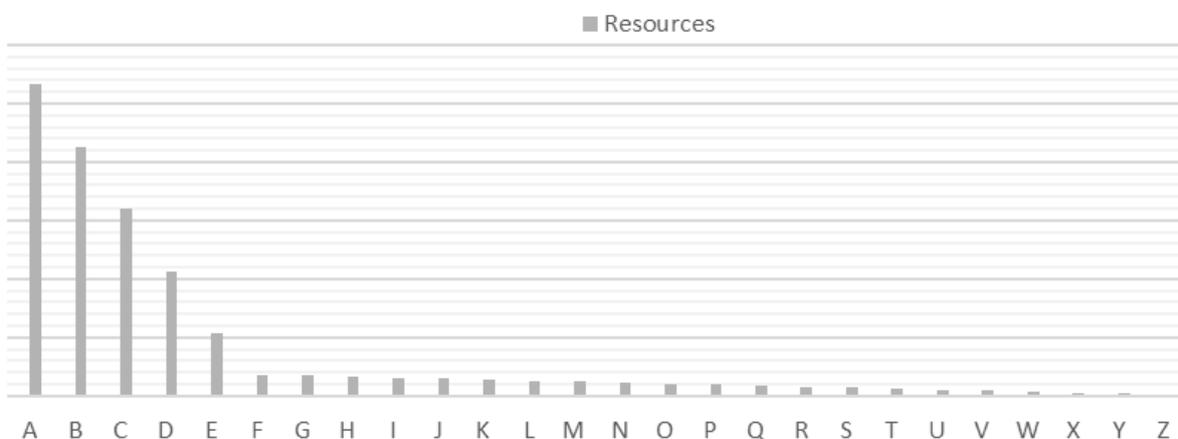
4.4. Resource allocation
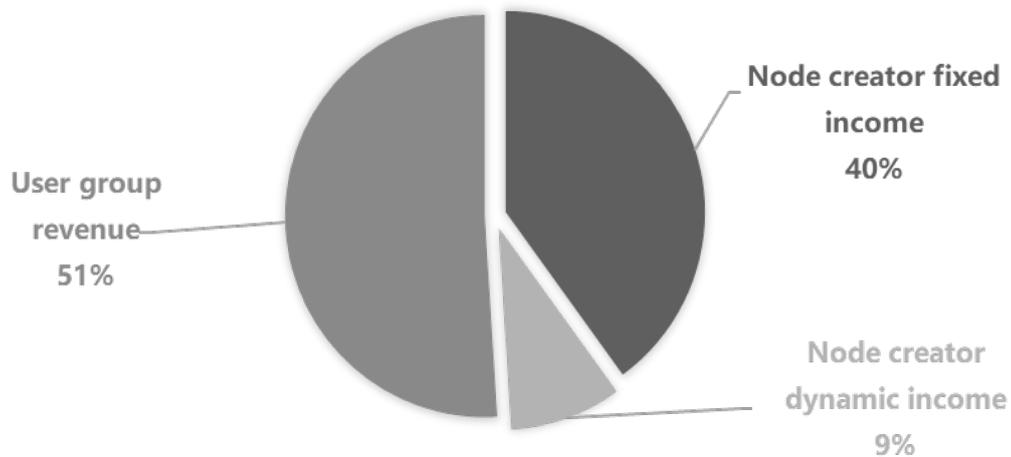
Resource allocation across Stars Networks

We have designed resource distribution across Stars Networks to follow the Pareto principle. Essentially, the Pareto principle states that, for many events, roughly 80% of the effects are the result of 20% of the causes. Hence, Stars Networks among the top 20% will receive 80% of the reward; the remaining 80% networks will receive 20% of the total reward. For both groups, rewards are distributed in a linearly decrementing fashion.

Let N be the number of Stars Networks, M be the total reward; both are reassessed monthly. Let a be the ranking order, then:

Resource allocation structure between Stars Networks

■ Resources

Single Stars Network allocation ratio

Node creator fixed income
40%

User group revenue
51%

Node creator dynamic income
9%

- **Networks among the top 20% each receive**

$$0.8M[(0.2N-a+1)/\textstyle\sum_{i=1}^{0.2N} i]$$
$$= 8M(0.2N-a+1)/[(1+0.2N)N]$$

- **The remaining 80% each receive**

$$0.2M[(0.8N-a+1)/\textstyle\sum_{i=0.2N}^{N} i]$$
$$= 0.416(0.8N-a+1)/N^2$$

Stars Network uses a rigorous formula to calculate and to rank the values created by each individual network. The primary factors include the number of active users in the network, the amount of network funds, the trading volume from users

in the network, and the level of network activity, etc. Specific considerations and rules are business secrets.

For example, suppose there are 26 Stars Networks named A to Z, in descending order of their value created.

Distribution principle inside each Stars Network

Within each Stars Network, revenue is divided into three parts: 40% goes to node creator fixed income, 9% goes to node creator dynamic income,

Resource allocation in a 15-layers Stars Network
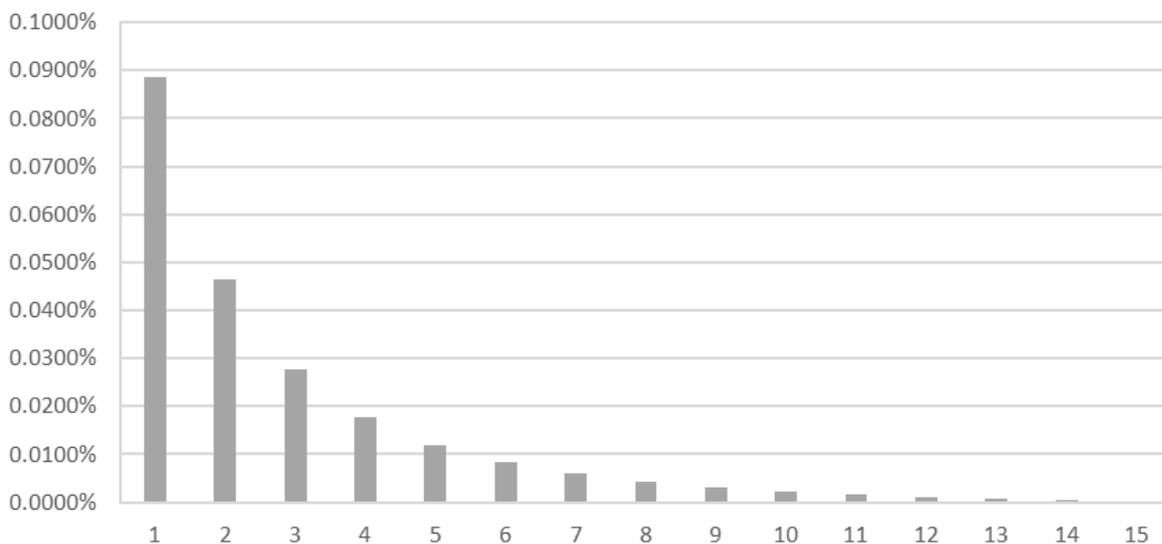
and 51% goes to user group revenue. Let m be the total resources allocated to this Stars Network and β be the ranking of the layer; let S be the total number of layers. For each network layer, **User group revenue** is the following

$$0.51m[(S-\beta+1)/(\sum_{n=1}^{S}n)]$$

$$=1.02m(S-\beta+1)/[(1+S)S]$$

The creator of this Stars Network (main node) receives income from two sources:

Node creator fixed income: 40% of the resources allocated to the network

Node creator dynamic revenue: If the Stars Network is created by invitation, the inviter (creator of the inviter network) will receive 9% of the resources allocated to each invitee network for one year. After one year, or if the Stars Network is not created by invitation, this 9% will be assigned to the Sepoch Foundation.

Stars Network regulation mechanism

Stars Network attracts users to the Sepoch trading platform and shares profits created in trading. In the face of significant interests, we cannot ignore the possibility that some malicious node creator might falsify data to achieve a higher ranking. This could cause catastrophic damage to the entire network. We have devised a control mechanism to combat this. The specific regulatory mechanisms will continue to evolve. Please follow the latest releases by the Sepoch platform.

5. Moving towards a decentralized blockchain ecosystem

Sepoch Decentralized Exchange

In order to meet the increasingly diverse trading needs, Sepoch will upgrade to a decentralized public chain and introduce a decentralized trading platform. This decentralized exchange will improve on key UX aspects such as transaction speed, ease of use, and security. The Sepoch Decentralized Exchange will be truly decentralized in the sense that the community will be driving its operations and receiving its profits.

Sepoch Decentralized Stars Network Community

Sepoch will also bring Stars Network to the same decentralized public chain. This platform will excel in terms of traceability and transparency, both key features of the blockchain technology. Stars Network will continue to be an autonomous community, driving use in Sepoch Decentralized Exchange and sharing its profits among all active users.
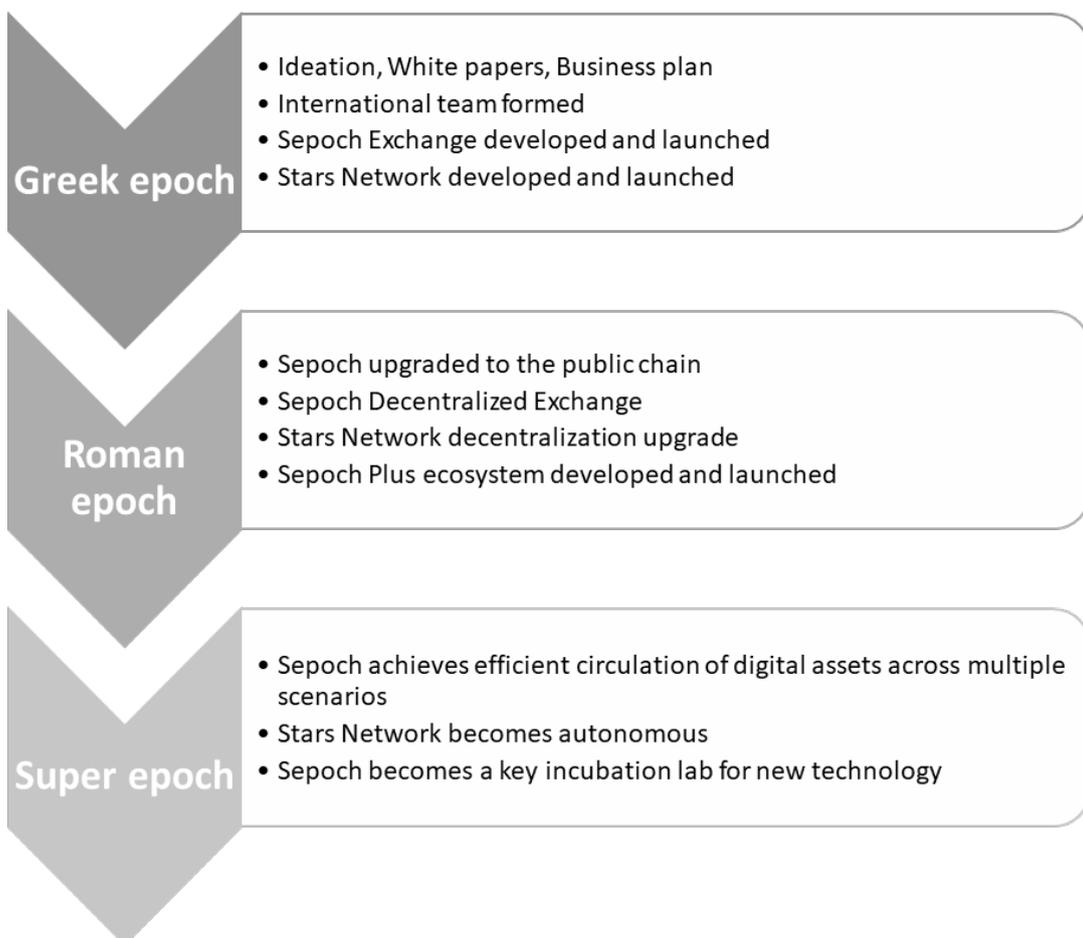
6. Sepoch digital assets multi-scenario circulation system

Value circulation itself has great value. The exploration of value exchange methods has always accompanied the history of human civilization. From bartering to precious metals to bank notes to fiat currency, the representation of value stimulates economic development by measure economic contributions exceedingly well.

Sepoch will explore both technical and philosophical aspect of money and introduce a blockchain-based, multi-scenario circulation system that leverages not only cryptography and information science but also sociology, artificial intelligence, and economics. Our goal is to identify a safer, fairer, faster, and more transparent value circulation solution that goes beyond cryptocurrencies. In this, the micro-value confirmation and circulation system incorporated in Stars Network can be considered a prototype.

7. Roadmap

Greek epoch
- Ideation, White papers, Business plan
- International team formed
- Sepoch Exchange developed and launched
- Stars Network developed and launched

Roman epoch
- Sepoch upgraded to the public chain
- Sepoch Decentralized Exchange
- Stars Network decentralization upgrade
- Sepoch Plus ecosystem developed and launched

Super epoch
- Sepoch achieves efficient circulation of digital assets across multiple scenarios
- Stars Network becomes autonomous
- Sepoch becomes a key incubation lab for new technology

8. Risk warning and disclaimer

8.1. Risk Warning

Policy risks

As the attitudes and policies of major countries for digital currency and blockchain projects remain unclear, investors may suffer losses due to regulatory changes.

Technology risks

During the development phase, due to technical complexity inherent to decentralized exchanges, Sepoch may face technical difficulties that are unpredictable or insurmountable from time to time. Therefore, the development of Sepoch may be postponed at any time for any reason.

Security risks

We are committed to ensuring the security of the transactions and assets of our users. Many digital asset exchanges cease to operate due to security concerns. We attach great importance to safety, but there is no absolute safety in the world. Users should be aware of these risks.

Competition

Digital asset exchange is an extremely competitive field. Numerous teams are planning and developing trading platforms. Competition will be fierce. Nevertheless, competition is also what faces mature companies. We consider it a positive process that drives the evolution of technology in blockchain. Investors should be aware of the risks and awards of competition.

8.2. Disclaimer

Before using the services and products provided by Sepoch, please read this disclaimer carefully in order to understand your rights and interests. If you continue to use any of the services or products provided by Sepoch, you will be deemed to have fully understood this statement and consent to and endorse the entire contents of the statement. If you do not consent to this disclaimer, please stop using any services and products provided by Sepoch immediately. This white paper does not constitute an offer to buy any digital asset offered by Sepoch in any jurisdiction where doing so is illegal. All or any part of this white paper is neither, nor should it be considered to be any form of legal, financial, tax, or other professional advice.

The user authorizes and agrees that Sepoch retains the data generated by the Sepoch platforms.

Sepoch is not directly involved in the trading of any wealth management products. It is not a party in the transaction between you and third-party proj-

ects. The information provided by Sepoch may be automatically crawled or published by a third party without our knowledge. Sepoch is not responsible for the authenticity, completeness, and accuracy of such unauthorized reproductions.

Rewards such as tokens and cryptocurrencies provided by this platform are only considered incentives to increase the user's activity. They do not constitute promotion for investment or wealth management products. Rewards are not linked to your income or risk.

Sepoch does not offer any guarantees or promises regarding the future effects, benefits, or other related risks of any financial management activities that take place on our platform. Third-party projects are responsible for information that they provide and the legal and other consequences that the disclosure of such information entails. Sepoch does not assume any legal responsibility.

Sepoch expressly disclaims any direct or indirect damages resulting from using products or services provided by Sepoch, including but not limited to:

1. The economic losses caused by user trading operations;

2. Any errors, omissions, or inaccuracies arising from personal misunderstanding;

3. Personal transactions that lead to loss of digital assets and any resulting behavior.

Before making a decision, you should seek independent professional advice and decide whether you should buy, sell, or collect any digital asset offered by Sepoch. Once investors participate in the investment, they understand and accept the risk of the project and are willing to personally bear all the corresponding results or consequences.

9. References

[1] S.Nakamoto:"Bitcoin: A peer-to-peer electronic cash system", 2008.

[2] V. Buterin, Ethereum: "A Next-Generation Smart Contract and Decentralized Application Platform", 2014

[3] Paul Sztorc: "Market empiricism".

[4] Ankunda R. Kiremire: "THE APPLICATION OF THE PARETO PRINCIPLE IN SOFTWARE ENGINEERING", 19th October, 2011

[5] Cummuta, John. "The Myths & Realities of Achieving Financial Independence", 14th Sep, 2009

[6] "The exploration of the path of super-sovereign currency", 01-July-2017

[7] Boyd, danah; Ellison, Nicole. Social Network Sites: "Definition, History and Scholarship. Journal of Computer-Mediated Communication", 2008

[8] Casey Detrio: "Smart markets for smart contracts", 2015.

[9] Steem - An incentivized, blockchain-based, public content platform

[10] Nicholas Gregory Mankiw "Principles of Economics"

[11] Goldman Sachs: Blockchain-Putting Theory into Practice

[12] Park, Kikyoung: "Customer Response to Customer Satisfaction Survey Participation", 2015

[13] "Advertisement, Is it necessary in the digital age?" (SERI Research essay) / Samsung Economic Research Institute

[14] "Digital Media and Advertising", Hanul Academy

[15] Giddens, Anthony, Duneier, Mitchell, Applebaum, Richard: "Introduction to Sociology 6th.", New York: W.W. Norton and Company. 2007.

[16] American Sociological Association: "Sociology: A 21st Century Major", Retrieved 19th July 2017