



Zeus Shield Smart Insurance Market

V0.7

Zeus Shield Blockchain Technology Development Co., Ltd

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1. Abstract

Insurance is an important tool for transferring risks. By nature, it is a form of mutual assistance between different groups. People transfer the risks that they cannot or do not want to bear to the insurer collectively and thus pay a small but regular amount in exchange for enormous economic guarantees. In this way, risks are transferred in the form of insurance.

Blockchain is a distributed ledger technology. It is accessible to the public, inalterable and unforgeable, and therefore has the potential to help humankind turn the concept of an “Internet of value” into a reality. Blockchain is a fundamental technology for our species’ next phase of development and will affect all walks of life with its simple but perfect technical design. Considering their compatibility in many aspects, blockchain technology and insurance could be highly complementary to one another. Blockchain insurance, a new insurance model, is developing rapidly and will become an important part of the industry’s makeup, revolutionizing the traditional industry.

2. Insurance markets

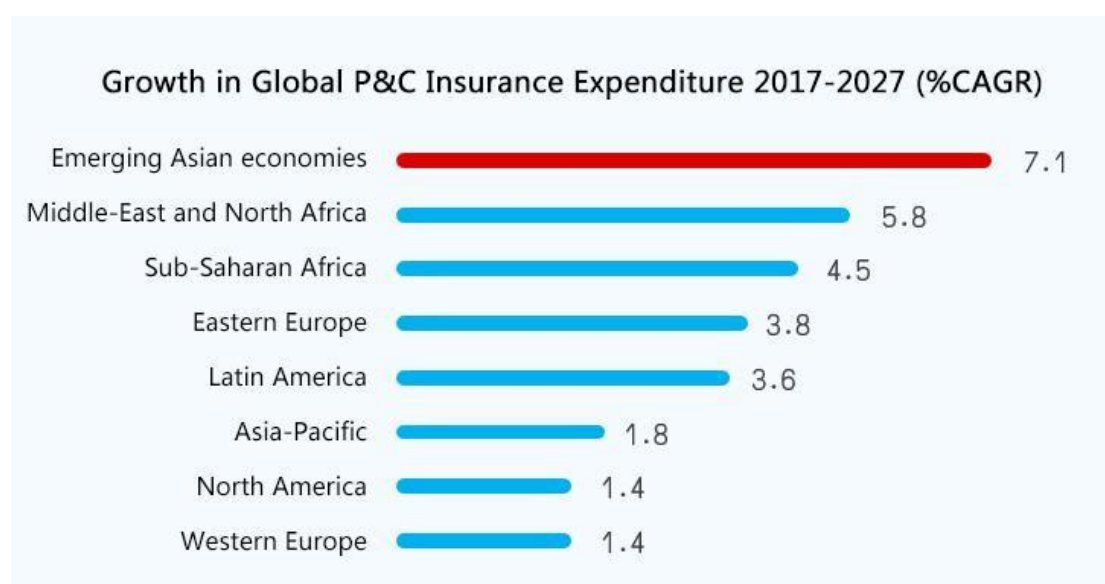


Table 1 Global Growth in CAGR of Premiums by Region

As living standards rise, demand for insurance is ever increasing. This model of mutual assistance that distributes risks through financial means has become widely accepted and is now considered an essential part of daily life. Life insurance, vehicle insurance, cargo insurance, and various other insurance products have penetrated society and become strong guarantees of a happy life. Meanwhile, the insurance industries of major countries of the world have achieved revenues exceeding one thousand trillion dollars. Even in the economic downturn, the insurance industry registered an uptrend and became a major driving force for the global economy. The above chart is Munich Re's forecast for the mean annual composite growth rate of insurance premiums in the world's various emerging economies.

3. Industrial weaknesses

Although the insurance industry is still an emerging industry in a global sense, more and more weaknesses have been identified within it as society develops rapidly and application technologies are continually upgraded and replaced. An analysis of the insurance industry shows that the main problems faced by the industry today include:

3.1 Multiple layers of agents increase intermediary costs

The traditional insurance industry relies too much on agents, undermining customer interests. The Internet blockchain industry can reduce intermediary steps, minimize premiums and enhance the user experience.

3.2 Malicious fraud

"Utmost good faith" is a fundamental principle of insurance, which all contract parties are required to abide by. In practice, however, utmost good faith cannot be objectively evaluated; rather it is established on a trust system. Insurance companies, for example, may conceal their contract terms out of self-interest, while applicants may cover up their actual situations in order to gain lower premiums.

Moreover, the law of large numbers determines that insurance operations must realize data sharing across a broader scope. As insurance companies pursue enormous interests, however, "information asymmetry" between firms easily occurs. Intentional concealment or uncooperative attitudes increase moral hazards in society, particularly the probability of insurance fraud.

3.3 Serious lack of diversity in insurance products

Many insurance products available on the market have very poor specificity and applicability, and the insurance clauses are not compiled stringently enough, thus hardly satisfying the needs of applicants. This lack of product diversity has also increased market competition, prevented effective distribution of social resources and even resulted in the massive waste of resources.

3.4 Moral hazards

Moral hazards have always been a big headache to insurers. For instance, a car owner may drive less carefully after taking out vehicle insurance, therefore the insurer has to pay out more in indemnities and the car owner suffers losses too—this is a scenario where no party benefits.

3.5 Regional restrictions

In view of the differences between the insurance industry supervisory systems of different countries, the freedom to procure insurance products across national borders is significantly restricted.

4. Solution

In recent years points of correspondence between new technologies and the insurance industry have emerged. We hope, therefore, to restructure the insurance industry on the basis of blockchain and AI technology and establish a new insurance ecosystem. We can summarize this restructuring in the following steps:

4.1 Digital identity + smart contracts

We will provide a technical solution using blockchain to all insurance companies and upload the insurance business data to the chain. We can use the authenticity and inalterability of information on the blockchain to address the problem of "self-identification". The digital identity established on the blockchain can't be altered, removed, edited or forged. Such digital identities include, but are not limited to, those of natural persons, and may be expanded to cover vehicles, airplanes and other physical objects; thus providing all physical entities that require them with credible digital identities.

Meanwhile, the Zeus Shield system also allows for smart coded insurance contracts and more convenient insurance plans. Combining smart contracts with data management in fields like vehicles, traffic accidents, electronic medical records and personal information to provide revolutionary indemnification services.

An example is combining smart contracts and flight data management to provide a new kind of flight delay insurance—there is infinite room for growth in this area. Such a blockchain solution can substantially save operating costs for insurance companies, eliminate unnecessary intermediary steps and enhance the insurance experience.

4.2 Artificial intelligence module

Insurance industry data used to be complicated and the ability to integrate it was not available. As a result, the potential value of such massive data was wasted. With the continual deepening of research in the AI sector, people are gradually coming to realize the potential value of such enormous data resources.

In the Zeus Shield system, we will design the AI module and analyse the information in databases to help insurers increase their performance-price ratios and provide the insured with smart insurance packages and a stable, secure and trustworthy claims procedure. Coupled with AI technology, the Zeus Shield system will have the following advantages:

4.2.1 Individualized policy and pricing

In traditional actuarial research, the target of research is general statistics, with individual cases seldom studied. All policyholders are deemed to have the same level of risk, which is not strictly reasonable. Due to technical reasons, point-to-point insurance models cannot be realized. With an additional AI module, the Zeus Shield system offers an accurate risk control plan and a pricing model and customizes insurance policies for different customers. For instance, the car owner with a history of drunk driving will have a higher risk factor while the car owner without previous traffic violations will have a lower risk factor for traffic accident insurance.

4.2.2 Targeted marketing

More accurate marketing is possible through the analysis of information in databases. For instance, refund insurance can be recommended to users with sensitive skin.

4.2.3 Development of new insurance products

With the popularization of the Internet, people are facing more diversified risks and their demands for insurance tend to be characterized by low insurance values, high frequency and fragmentation. AI technology can assist in the design of various insurance products, provide users with rich insurance packages and enhance user experience.

4.2.4 Smart claim handling and verification

AI modules offer great assistance at the stage of claim handling and verification. Taking the insurance platform of Ant Financial Services as an example—image identification technology is one of the key applications of claim verification. At the claims stage of consumer insurance, over 90% of the identification and judgment work is completed by backend technology.

4.3 P2P insurance market

As the plan moves forward, we will establish a P2P insurance platform that combines AI technology. In the future, this platform will serve the insurer and the insured simultaneously. It will take the system's original ZSC as a medium to establish a diversified and highly individualized insurance ecosystem.

The ZSC system can be defined as a decentralized insurance agency platform. We can provide insurers with new insurance concepts and insurance solutions on the chain. We can optimize the modes of execution of traditional insurers, reduce their operating costs, prevent losses from fraud and increase user bases.

Meanwhile, we will also serve policyholders, satisfying their needs for risk transfer and providing individualized insurance package solutions. Policyholders will be able to choose any insurance product on the platform through the system terminal. Moreover, the AI-based platform will also be able to offer new insurance concepts to insurance suppliers.

As a platform, we witness the contract process between the insurer and the insured and levy necessary handling charges and commissions. As the method of payment, ZSC will be partially used to construct the bottommost insurance and reinsurance capital pools, and provide the services to traditional insurers making more in-service fees, thus generating a beneficial cycle. AppStore or Taobao can be referred to regarding the main operating model for the platform.

See 6.4.2 for a detailed description of the capital pool module.

4.4 Summary

According to relevant research statistics, FinTech had an application index of 33% in 2017, which shows that financial technology has moved from the early adopters phase in 2015 towards the early majority phase (Rogers Adoption/Innovation Curve classification). FinTech companies are continually raising their status on the market and can already influence industrial standards and consumer expectations. With the continuous updating of technologies, FinTech will thoroughly revolutionize the traditional financial industry and become an indispensable part of our daily lives.

As FinTech's two core technologies, blockchain and AI have attracted an enormous amount of interest across the world. In the 27th European Conference on Networks and Communications (EuCNC) in Finland on June 12, 2017, Mr. Pekka Soini, head of the National Technical Innovation Bureau of Finland, emphasized the importance of blockchain technology and AI and included them in the four core technologies of the next 10 to 20 years.

As an important branch of the financial industry and due to its unique features, the insurance industry is naturally compatible with blockchain and AI technology. In the future, the AI-based blockchain insurance models will address the weaknesses of the insurance industry and bring people a new insurance experience. Such an insurance model is fully based on an information society and will provide distributed, contextualized and digitalized new insurance services.

5. Why Ethereum?

5.1 Ethereum

Ethereum was initiated by whiz kid Vitalik Buterin in 2013 and 2014 with the aim of developing a "next-generation encrypted currency and decentralized application platform", which started development in 2014. The whole Ethereum system is realized by open source code and its core is the public blockchain platform based on Ether, the special encrypted currency. On this platform, Ethereum provides a decentralized Ethereum virtual machine to make it convenient for third-party developers to realize Ethereum-based smart contracts. An Ethereum virtual machine allows third-party developers to easily and conveniently reuse the blockchain core system as defined by the Ethereum and focus their R&D work on the application of blockchain. For that reason, more and more individuals, teams and companies are favouring Ethereum-based R&D and the use of distributed applications. This is leading to diversification of the Ethereum ecosystem and the creation of diversified applications.

When comparing it to other blockchain technologies, the Ethereum platform has the following main features:

Smart contracts: the contract programs developed by third-party developers can be stored at a node on the Ethereum blockchain and run at that node. For the purpose of operation, the program operator needs to pay commissions to the miners or stakeholders of the node where the program is located.

Uncle blocks: it incorporates the short blockchains that have not been included on the mother chain due to relatively slow mining speeds. Directed acyclic graph (DAG) related technology is adopted.

Proof-of-stake: it is an improvement on the current POW (proof-of-work) based mining algorithm and can save considerable computer resources needed for mining and avoid the network centralization arising from integrated circuits for special applications.

5.2 Smart contracts

If blockchain is the core technology that Ethereum uses for data processing, the smart contract system is the core technology that Ethereum uses for the processing of various applications. The crucial thing supporting the smart contract system is the Ethereum virtual machine. It provides a set of Turing-complete programming languages that are similar to the assembly language that can execute the code of any complicated algorithm for the bridging of data processing and application processing. As it is very painful for a developer to directly use this set of Turing-complete languages for programming, Ethereum provides one senior language, Solidity, which is similar to C/C++. Today, Microsoft's main software product—Microsoft Visual Studio—has started to offer the Solidity programming language to program developers.

Based on the Ethereum virtual machine and Solidity programming language, a third-party developer can develop an Ethereum smart contract. Put simply, each contract is a distributed application based on the Ethereum blockchain system. When a developer launches a contract on the Ethereum platform, this contract is like an application agent living in the Ethereum platform. It has its Ether address for Ether transactions, data exchanges between the founder and other users, and execution of application with complex logic, for example establishing one Ethereum-based token system and one decentralized autonomous group.

To allow an equivalent value system to be more effectively and conveniently reflected in an application based on Ethereum platform, the Ethereum smart contract system is designed according to the following principles:

Simplicity: as the data processing part of the blockchain is already packaged at the bottom layer of the Ethereum platform, an ordinary programmer can perfectly develop a simple smart contract and create a distributed application with complex logic. This will finally help to lower the technical threshold for blockchain-based development and promote the process of opening up Ethereum to all users.

Generality: based on the Ethereum virtual machine, a developer and even an ordinary Ethereum user can establish any smart contract or transaction type that can be accurately defined.

Modularity: the system makeup of Ethereum is designed to be as modular and divisible as possible. The benefits of this design are it can be continuously improved based on the internal functionality of Ethereum, and its performance can also be improved. Meanwhile, the whole system is stable, scalable and secure and allows for the continuous proper operation of smart contracts based on the Ethereum virtual machine without making any changes.

Non-discriminatory: the Ethereum platform does not voluntarily restrict or block smart contracts of any given type; it does not attempt to object to the unwanted application of a specific type. The cost of running the application is the payment for the corresponding trading expenses according to the program's calculation steps.

6. Zeus Shield System

6.1 System framework

According to the above-mentioned weaknesses and development bottlenecks of the insurance industry, and relying on the advantages of blockchain technology, we have designed a smart insurance management system based on the Ethereum platform—the Zeus Shield System. As Figure 1 shows, the Zeus Shield System primarily comprises four parts—Zeus Shield Coins (ZSC) of the Ethereum ERC 20 protocol, a database management subsystem, a module management subsystem and a webpage and smartphone-based Zeus Shield client.

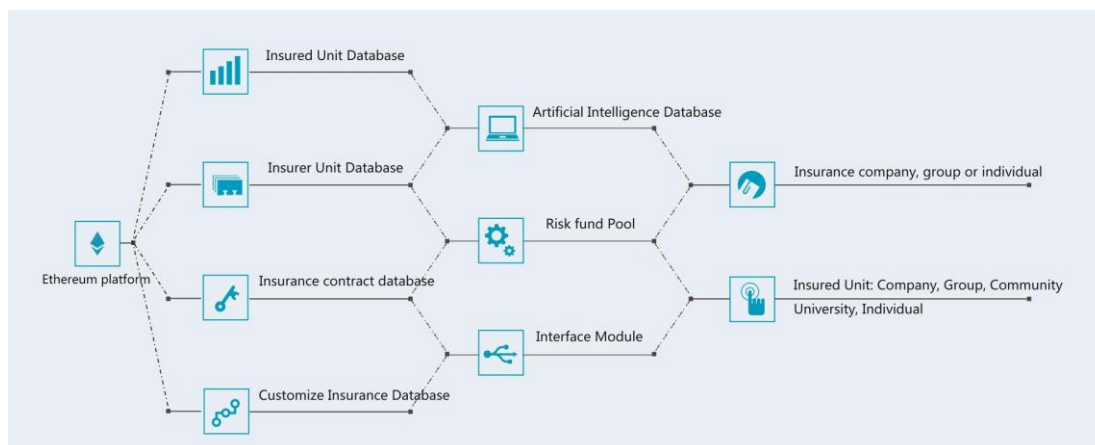


Figure 1 Zeus Shield System (a smart insurance management system based on the Ethereum platform)

6.2 Zeus Shield Coins

Zeus Shield Coin (ZSC) is a token developed on the basis of the Ethereum ERC20 protocol, which allows ZSC to be conveniently launched onto a key global digital currency exchange platform. ZSC is used to establish an insurance capital pool and a reinsurance capital pool in order to improve cash flows from insurance contracts. This service can be provided to insurers as required. As this project progresses, the insurance ecosystem will gradually improve. As the original token of the system, ZSC will offer more and more functions.

6.3 Database management subsystem

In order to increase the efficiency of data processing based on the Zeus Shield System, all text-based information will be stored primarily on the Ethereum platform. Image and video files will be encrypted and safely stored on a service independent from the Ethereum platform.

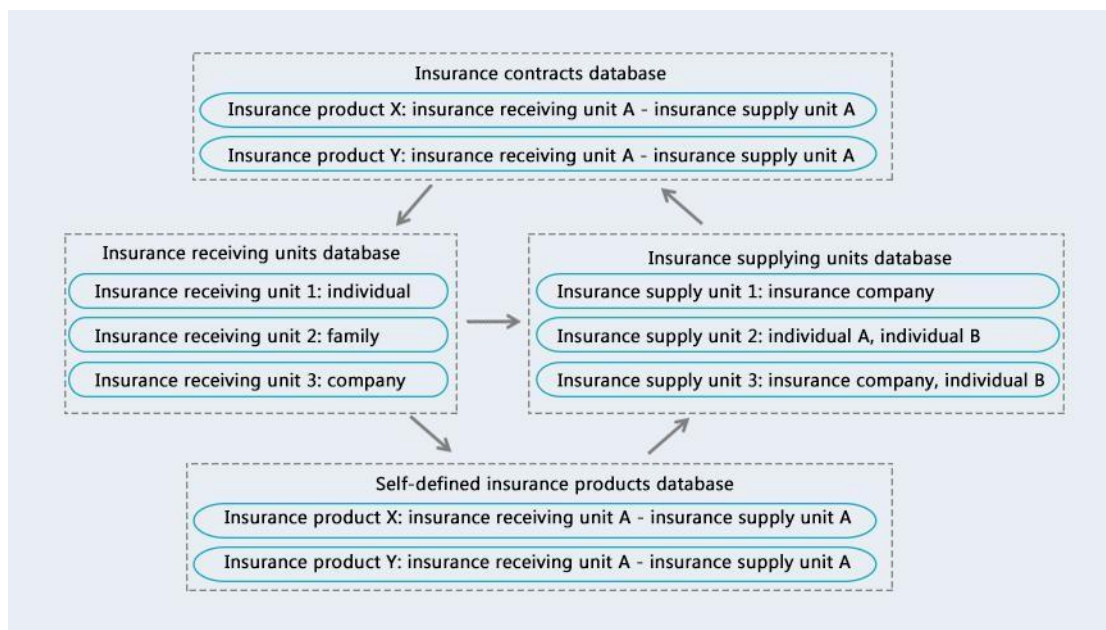


Figure 2 Zeus Shield Database

As Figure 2 shows, the database on the Ethereum platform has four main parts—the insurance receiving units database, the insurance supplying units database, the insurance contracts database and the self-defined insurance products database. As the bottom layer of the Ethereum platform is based on distributedblockchains, the confidentiality, security and inalterability of relevant data in the four parts can be very effectively guaranteed.

6.3.1 Insurance receiving units and insurance supplying units databases

Insurance receiving units and insurance supplying units are two key user types of the Zeus Shield system. As the name indicates, the insurance receiving unit is the physical entity that receives insurance services. A specific insurance receiving unit may be an individual, family, company or community. After the Zeus Shield system is launched online, we will be able to establish more types of insurance receiving units according to actual business demands. Correspondingly, the insurance supplying units refers to the physical entities that supply insurance services. On the basis of the equivalent value system of the blockchain and in contrast to traditional insurance systems, the Zeus Shield system provides an open platform that allows different types of insurance supply units to provide their insurance services. For instance, an insurance supply unit may be an insurance company, a team comprising multiple individuals or combinations of individuals and insurance companies.

6.3.2 Insurance contracts database

The insurance contracts database stores the corresponding insurance contracts or agreements signed between different insurance receiving units and insurance supplying units. Each insurance contract defines the corresponding insurance premium transaction mode and indemnification mode. Thanks to the security and inalterability of the Ethereum blockchain, the Zeus Shield system can prevent insurance receiving units being affected by timing, geological or human factors when the claimconditions are satisfied and enable them to receive insurance payouts

quickly and conveniently.

6.3.3 Self-defined insurance product database

The insurance services needed by insurance receiving units and insurance supplying units are stored in the self-defined insurance products database. The type and model of insurance can be proposed by the insurance receiving unit according to actual demand or provided by the insurance supplying unit according to its market analysis. Once these services are defined, the Zeus Shield system will provide them to its users. The user may then sign the corresponding insurance service contract via the Zeus Shield system. The executed insurance service contract will be included in the insurance contracts database.

6.4 Module management subsystem

The Zeus Shield system provides different modules for smart database management and smart support for insurance services, wherein the three main modules are an AI module, a capital pool module and a client interface module.

6.4.1 AI module

The AI module delivers two main features—big data analysis and increased analysis efficiency through parallel computing.

1. Big data analysis

Big data analysis, as a feature of the AI module, offers multiple smart features to Zeus Shield system users—for example, customization of special insurance services, insurance package recommendations, smart selection of insurance products, insurance product risk analysis and image identification during indemnification.

Big data analysis is adopted primarily because the Zeus Shield system provides one set of open features for self-defining insurance products so that insurance products can be developed in a more extensive, flexible, scalable and market-oriented manner. However, an ordinary insurance service developer (insurance receiving or insurance supplying unit) faces a very important problem—how to establish a complete and accurate business model, including insurance premiums, insurance indemnification conditions and amounts to be indemnified. Meanwhile, the insurance receiving unit faces a further important issue—how to find an insurance product that suits its actual needs from a multitude of insurance products, while guaranteeing its highest performance–price ratio.

2. Parallel computing

Big data analysis is primarily conducted via deep learning in the Zeus Shield system since blockchain systems based on distributed network architecture have the capacity for natural parallel data processing, and a hot topic of research in the field of deep learning today is machine learning and parallel computing.

The main purpose of machine learning is training a neural network (e.g. convolutional computing) via captured data to establish a data module and thus help the system to effectively forecast the

corresponding feedback after the capture of new data—for instance, in the service customization, recommendation and service selection and recommendation mentioned above (see the annex for detailed descriptions of deep learning).

To increase the validity of the forecast, however, it is necessary to use large amounts of data and repeated data learning and training. If a single-threaded mode is adopted as the training mode, considerable resources (e.g. CPU, GPU, memory and time) will be taken up, thus introducing a mode that requires parallel computing. As the blockchain and smart contract system of Ethereum are based on a distributed architecture with multiple nodes, it helps to distribute the learning data and learning procedures to different Ethereum nodes for parallel data learning.

6.4.2 Capital pool module

The Zeus Shield system will record and analyse each insurance business and the ZSC capital circulation. Relevant analytical results will help the insurance supplying unit to make a detailed and accurate calculation of income from the premiums of its insurance products. According to the actuarial results, the Zeus Shield system will support two different insurance and reinsurance capital pools—unit-level capital pools and system-level capital pools.

A unit-level capital pool needs to be supplied and maintained by each insurance supplying unit. The insurance supplying unit may gather income from premiums into a capital pool and adjust its insurance services on a real-time basis according to the income-from-premiums calculation. In this way, the capital pool can continuously ensure income from premiums is higher than the costs of indemnity payments. In this way, the insurance supplying unit can maintain a stable capital pool with capital surplus and stable growth. The capital surplus will be partially used to cover indemnity expenses, with the remaining part used for other insurance operations to generate more income.

The Zeus Shield system will establish a system-level insurance and reinsurance capital pool which primarily works to support insurance supplying units in the reasonable handling of rare cases when the capital pool is not enough to cover costs of indemnity payments; thus protecting the legal rights and interests of insurance receiving units.

6.4.3 Interface module

The interface module contains the client interface and the Ethereum external data interface, wherein the client interface enables the system user to conveniently, rapidly and securely use the Zeus Shield system via its client. The Ethereum external data interface primarily works to allow the system to communicate with the external data server.

6.5 Zeus Shield client

The Zeus Shield client is an application for exchange and communication between the system and its users. We will develop a webpage and smartphone-based client for our users. Meanwhile, we will also provide an open application programming interface (API) for the convenience of third-party developers.

6.6 Zeus Shield system's operating logic

Put simply, Zeus Shield system is an insurance-based P2P market platform. See Figure 3 for the Zeus Shield system's operating logic regarding specific insurance supplying units and insurance receiving units.

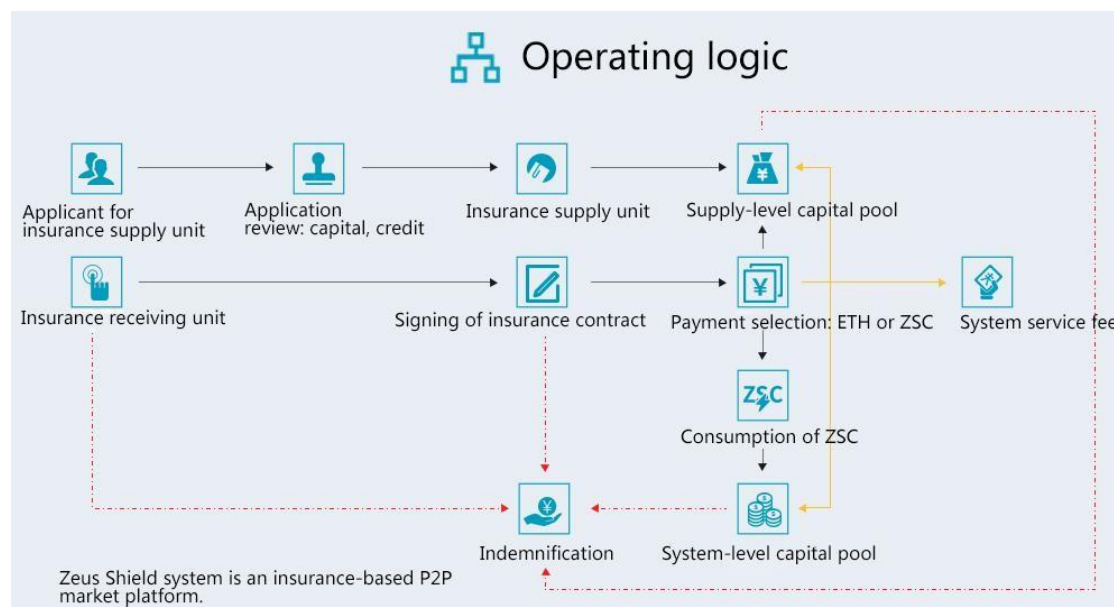


Figure 3 Zeus Shield System's Operating Logic

For insurance supplying units, it is first necessary to apply to Zeus Shield Blockchain Technology Development Co., Ltd for a space in the system. Applications will be examined and approved on the basis of multiple factors—such as, the supplying unit's capital support and reputation. Once approved, the insurance supplying unit needs to transfer a certain amount of capital into the blockchain-based digital currency system to establish the supply-level capital pool. The inbound capital may be in Ether or ZSC. Thereafter, the insurance supplying unit may produce and display different insurance products through the Zeus Shield system, and potential insurance receiving units can choose from them.

When an insurance product is selected, the insurance receiving unit needs to sign an insurance contract with the corresponding insurance supplying unit and pay relevant expenses in a digital currency, either ETH or ZSC. The payment comprises three parts: the first part is paid to the insurance supply unit; the second part is the service charge paid to Zeus Shield Blockchain Technology Development Co., Ltd at a certain ratio; the third part is the transaction fee which shall be paid in ZSC only. The used ZSC will be recycled by the system to establish a system-level capital pool.

Moreover, if the insurance supplying unit needs to use the system-level capital pool, it has to pay certain service charges to Zeus Shield Blockchain Technology Development Co., Ltd.

7. The Zeus Shield Board of Directors

7.1 Makeup

The Zeus Shield Board of Directors comprises a core team oriented towards the same goal and it is a valid management team established on the basis of a blockchain smart contract. The board members share a common understanding of the prospects for future applications of blockchain insurance and hold the same concepts regarding the Company's operation and development.

7.2 Main tasks

The board of directors are the founders, executives and guardians of ZSC smart contracts. From the beginning of the design and through the building of the blockchain-based smart contracts, they could foresee future operating modes and the possible benefits for all participants. The board of directors proposes strategic guidance on ZSC, allowing the ZSC design to be adequately forward-looking and practical.

The board of directors is the company's management body liable for the present and future interests of ZSC tokenowners and ensures the healthy running of the ZSC system.

“We will provide outstanding user experience to customers. We also aim to provide a transparent and fair management model for our users, partners and team members.”

7.3 Nature of the board of directors

The board of directors is an innovative management mechanism working in an open, transparent and supervised manner. In operational design, the board applies the essential features of blockchain technology in its practical operations and thus revolutionizes the traditional operating and management concepts of a board of directors. Our board's resolution-making process directly interfaces with smart contracts, with the conventional legal contract is converted into blockchain language. One-click voting links make it easier to execute and implement board resolutions, which thus become fair and transparent smart executive orders. The board has a decision-making and supervisory role in the strategic guidance, risk management supervision, management succession planning and accomplishment of other basic tasks; it also provides system maintenance, ensuring the proper operation of the ZSC system.

Zeus Shield performs its supervisory work through risk forecasts and mechanism improvements. It aims to identify and expose problems, eliminate loopholes and optimize mechanisms. In the future, the company will authorize frontline staff via smart contracts using blockchain technology and perform field supervision and multi-platform management on behalf of all TSC owners. The board releases powerful and unique messages, listens to proposals and take actions for the continuous optimization of management; it takes advantage of social media, emphasizing its efficient application and its use for carrying out candid exchanges; it has put in place procedures to effectively control information disclosure to ensure the reliability of public reporting.

8. Zeus Shield Community Fund

8.1 Community fund structure

Executive president, advisors, executive committee and supervising committee

8.2 Our mission

We are highly committed to blockchain insurance R&D and promotion. To fully realize the potential of global R&D and application of blockchain insurance, we will adopt highly open methods of thinking and operation and establish Zeus Shield Community Fund executive bodies of in all five continents. The initial regions of operation are China and Japan in Asia, Australia in Oceania, Holland, Sweden and Germany in Europe, the USA and Canada in North America, and South Africa in Africa.

8.3 Fund utilization principles

Zeus Shield Fund is open to all universities, enterprises, natural persons, government organizations and non-government organizations. Any organization and individual that wishes to make contributions to the blockchain insurance sector can apply to use our fund through the fixed procedures on the official Zeus Shield website. We will regularly publicize our annual quota, names of organizations applying for the fund, names of organizations using the fund, our user quota, progress and other relevant information in an open, transparent and timely manner on the Zeus Shield Community Fund home page.

8.4 Fund mode of operation

The Zeus Shield Community Fund is initially composed of 24% ZSC. It is allocated upon application and approval to universities, enterprises and organizations committed to blockchain insurance R&D and application. The achievements and patents that these organizations make using the fund will be vested to the fund and the organizations at an agreed ratio. To ensure the continuous and sustainable development and growth of the Zeus Shield Community, the fund will also look for more business opportunities and development.

8.5 Community fund operating model

The original shareholders of the Zeus Shield Community Fund will elect people to fill each position once every two years. Anyone who wishes to contribute to the blockchain insurance sector can apply to become a member of the Zeus Shield Community Fund. We will provide the contact information and working model of your nearest fund.

8.6 Future development of community fund

At a certain point in the future, when the community fund has reached a certain development stage and conditions are ripe, the Zeus Shield Community Fund will consider establishing a ZSC-based operational token allowing members of the fund to make greater returns. This will be conducive to the development and expansion of the Fund.

8.7 Most favoured partners of the Zeus Shield Community Fund

In order to better implement new insurance concepts, the Zeus Shield Community Fund will

favour and prioritize partnership with innovative enterprises with hi-tech products. New ways of thinking, new technologies, and new insurance concepts and products are our priorities and development goals. We wish to deliver brand-new insurance products to enterprises in the new energy, hi-tech and astronautics sectors that go beyond what conventional insurance companies are able to offer in terms of capability and daring. New concepts and new insurance logic will be the priorities of the Zeus Shield Community Fund.

8.8 Zeus Shield Community Fund and Zeus Shield Board of Directors

The Zeus Shield Community Fund is part of the Zeus Shield Board of Directors but operates independently. It updates the board of directors and the community quarterly on the progress and aims of different projects in an open and transparent manner, providing information about fund usage and accounts details. The Zeus Shield Community Fund as we have defined it will be the original driving force behind the Zeus Shield Community. It reports to the board of directors and runs independently from the board of directors. As you can see, the members of our Community Fund are all senior professionals from the blockchain, insurance, hi-tech and actuarial sectors. We feel highly honoured to have them as our colleagues, promoting the progress of blockchain application together.

The Zeus Shield Funds in different continents will continue to attract outstanding members. Committed to the principle of good faith disclosure, we will provide honest and accurate reporting of the latest information regarding the Zeus Shield Community and project updates on our official website. Blockchain projects are still at the fledging stage and we may face enormous risks in our explorations. We hope each member of the Zeus Shield Community will be fully aware of their responsibilities.

9. Roadmap

The main milestones for the Zeus Shield project are set out as follows:

2017 Q4-2018 Q1	Complete the ZSC blockchain insurance database contract and technically launch insurance data on the blockchain
2018 Q2 - 2018 Q3	Complete the prototype of the ZSC blockchain insurance system, connect it to the insurance data and establish a decentralized blockchain insurance data platform
2018 Q4 - 2019 Q1	Complete the initial development of the ZSC blockchain deep learning module; start AI-based deep learning of insurance data; and control risks relating to output of recommended insurance products and insurance claims.
2019 Q2 - 2019 Q3	Complete the ZSC blockchain P2P insurance service module; allow anyone to establish insurance products and provide insurance services to people worldwide

10. Team makeup

10.1 Technical Team



Guo Yang

Guo Yang is a Ph.D from Blekinge Institute of Technology. Sweden. His major is computer science. His research area includes Artificial Intelligence Internet of Things, Big Data and Block Chain



Jiang Xiaofeng

Jiang Xiaofeng has got master degree in computer science, a Chief Engineer and has more than 12 years' experience in software development, very skilled in full stack development, Block chain development.



Li Pengyu

Senior IT engineer, inventor of seven Mobile Internet patents.



Yao Yong

Chief scientist, Phd in Telecommunication system Sweden. Responsible for system architecture For the European Union project, Application modeling building and data.

10.2 Advisory Team



Tim Michael Buhr

IT system management professional, Block chain consultant of European market..



Russel Muzenmda

General Manager(GM) of Nnovex Insurance(Botswana, more than 20 years of professional experience in life insurance.



Li Hongyin

Chief publicity officer in china, translation Of Matchpoo, Starbase and other projects White paper and business analysis.

10.3 Founding team



Longshan Fangshu

Senior block chain investors, is currently committed to promote the formation of world Block chain associeons.



Xie Shaoshuail

Cutting-edge Block chain marketing Experts, senior player for Digital Encrypted currency. Determined to Be block chain promoter for China.



Huang Wei

Banking and insurance Experts, innovex insurance (Botswana) ICo founder SINOSE intemational (Sweden), Founder.

11. Disclaimer

This document is for message transmission only and shall not constitute relevant opinions on the purchase and sale of ZSC. This document shall not constitute any proposal, intent or preaching on investment

Relevant interested users confirm their knowledge of ZSC risks. Involvement of the user shall indicate the user's understanding and acceptance of the project risks and the willingness to bear all corresponding consequences or results thereof.

ZSC team does not bear any direct or indirect property losses arising from participation in ZSC project.

ZSC will be used by a third-party insurance supply company and ZSC team only provides technical support but does not bear any direct or indirect loss caused by any third party.

Any risks arising from any violation of any anti-money-laundering, anti-terrorist financing or other supervisory requirements within any jurisdiction shall not be related to our team and the ZSC team shall not bear any liability associated with them.

- ✧ ZSC team does not bear any property loss arising from any participant's leakage and loss of the key of any damaged encrypted token purse.
- ✧ ZSC is classified or deemed by any government, quasi-government, authority or public institution as a currency, security, commercial bill, transferrable bill, investment or any other article that may be banned, controlled or restricted by law.

12. Annexes

12.1 Deep learning

The main areas of research for deep learning are machine learning and parallel computing. The main purpose of machine learning is to establish a data module that helps the system to effectively forecast corresponding feedbacks after capture of new data by training neural networks using already captured data—for example, in applications such as the customized service recommendations and service selection recommendations mentioned above. However, to increase the validity of forecasts it is necessary to use large amounts of data and repeated data learning and training. If a single-thread mode is adopted as the training mode, considerable resources (e.g. CPU, GPU, memory and time) are taken up, thus introducing a mode that requires parallel computing. As the Ethereum blockchain and smart contract system are based on a distributed architecture with multiple nodes, it helps to distribute the learning data and learning procedures to different Ethereum nodes for parallel data learning.

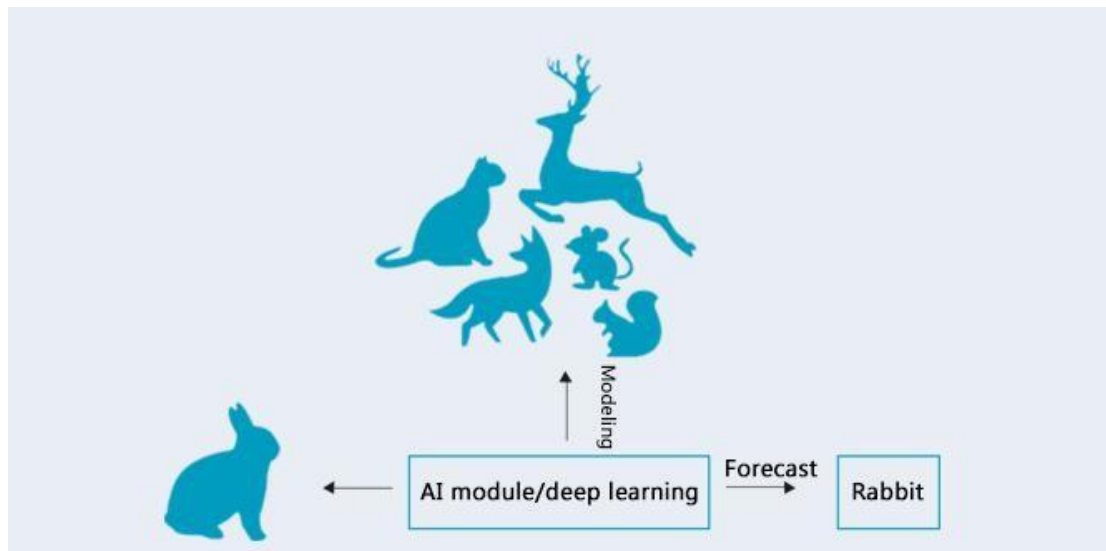


Figure 5 Forecasting Image Content via Deep Learning

Big data analysis based on deep learning primarily includes modelling and prediction (also known as “interface”). Modelling refers to learning from existing data to find out about its specific data mode and thus establish a model for forecasting new data. In practice, the most appropriate model is adopted on the basis of various models acquired in order to analyse the newly acquired data and forecast its unique data mode, as Figure 5 shows.

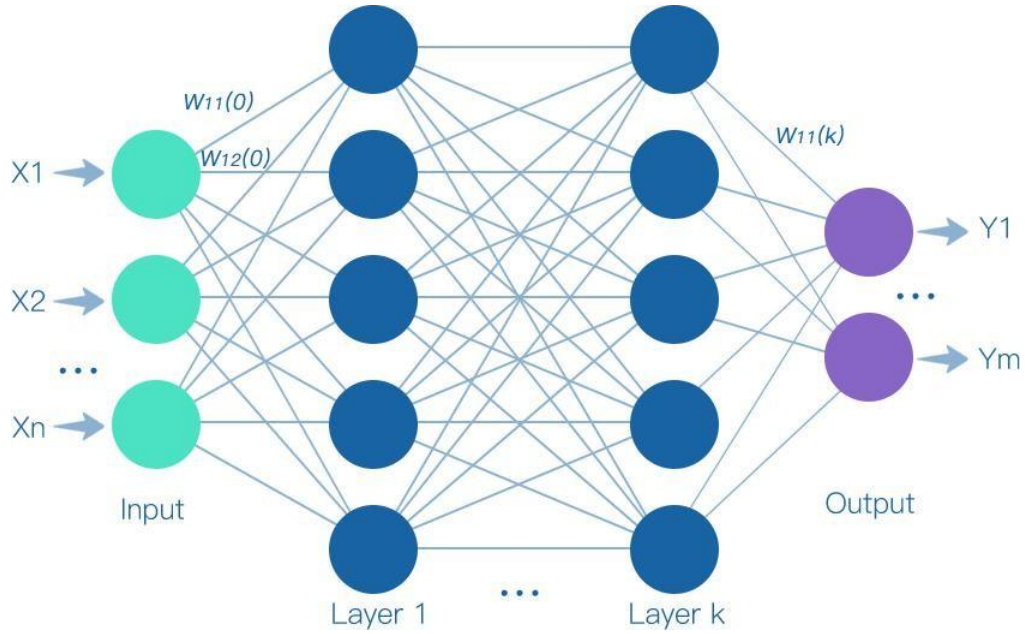


Figure6 Nerve Net and Impacts of Weight of Neuron

As Figure 6 shows, the basic principle of modelling is to repeatedly train the system through various different algorithms of the neural network in order to accurately calculate the impact, or weight, of each neuron on the next neuron from the input layer to the output layer in the neural network. The primary neural network algorithms include deep neural networks (DNN), deep belief networks (DBN), convolutional neuron networks (CNN) and convolutional deep belief networks (CDBN). Different neural network algorithms give rise to different problems, primarily involving accuracy and time of computing.

Now, we will take DNN as an example to introduce how deep learning goes on. DNN networks are based on the principle of a discriminative model. A backpropagation algorithm is adopted for learning and training and the most important part is updating the weight of each neuron in the following formula:

$$\Delta w_{ij}(k, t+1) = \Delta w_{ij}(k, t) + \eta \frac{\partial C}{\partial w_{ij}(k)}$$

According to Figure 6 and the formula above, we know that $w_{ij}(k, t)$ represents the impact of neuron i in layer k of the neural network on neuron j in layer $k+1$ of the neural network, wherein η is the learning rate and C is the cost function. The selection of cost function is related to the type of learning (e.g. supervised learning, non-supervised learning and enhanced learning) and the activation function. On the basis of this function, AI modules can perform repeated learning according to the input data and finally calculate an accurate weight.

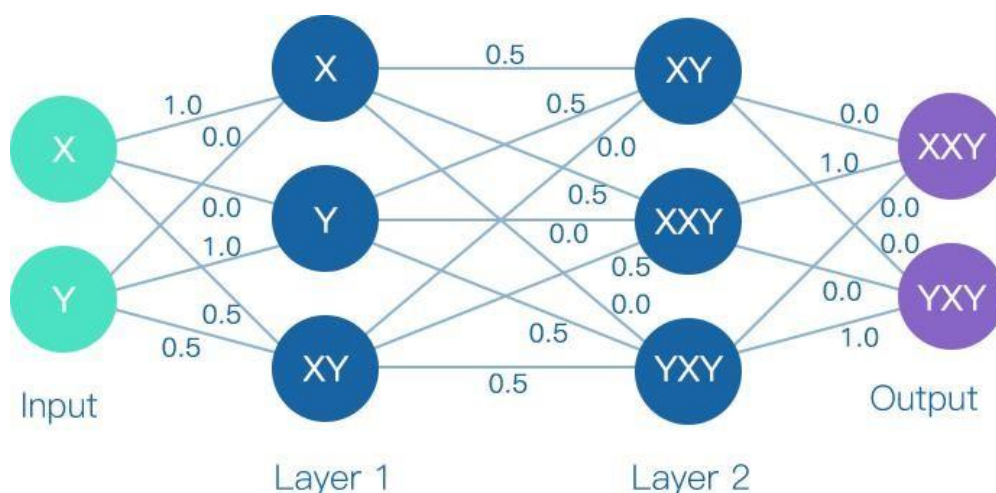


Figure 7 Examples of Using Nerve Net to Forecast Possible Letter Combination

Figure 7 provides an example to illustrate the final result after the neural network has been subject to weight update learning. In this example, we can see that the possible letter combinations include XXY and YXY if two letters X and Y are input.

12.2 Zeus Shield system's deep learning

In the Zeus Shield system, we adopt Ethereum local and external deep learning to realize accurate modelling.

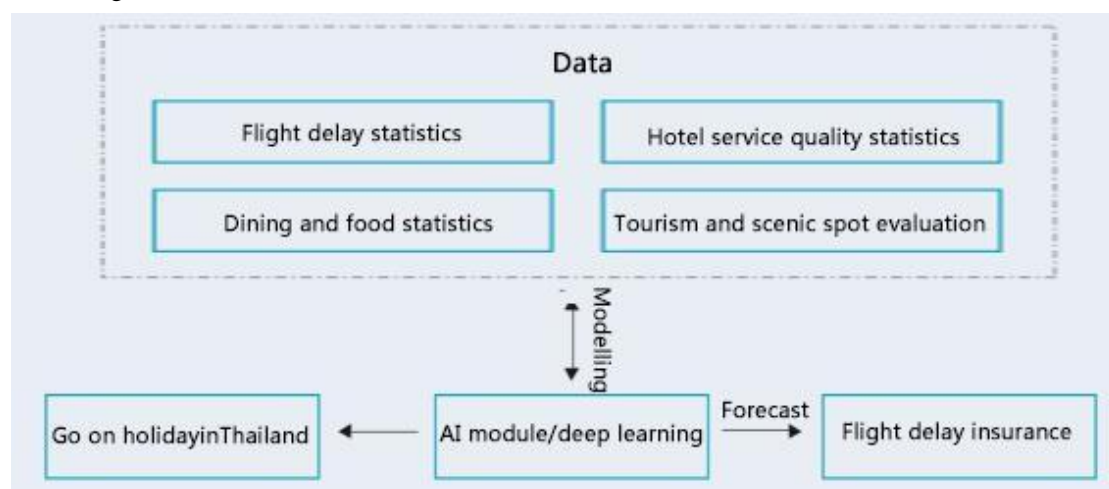


Figure 8 Risk Pre-warning and Insurance Proposal

Local deep learning refers to the Zeus Shield system's data analysis of the textual information stored on the Ethereum platform in order to acquire a key model for forecasting future data. With reference to the example quoted in Figure 8, the forecast information given by this model may include the insured's acceptable level of premium, pre-warning of risks or preferences for certain types of insurance.

External deep learning refers to our utilization of other commercialized cloud computing platforms—for example, Ali Cloud, Amazon, for data analysis of the image and video information stored outside the Ethereum and establishment of a reliable model. Its benefit lies in the possibility

to initially verify users' image-based authentication and thus provide a reference for subsequent indemnification work.

Moreover, the Zeus Shield system will also provide a privacy protection mechanism to protect the personal information of users during the AI module's deep learning.