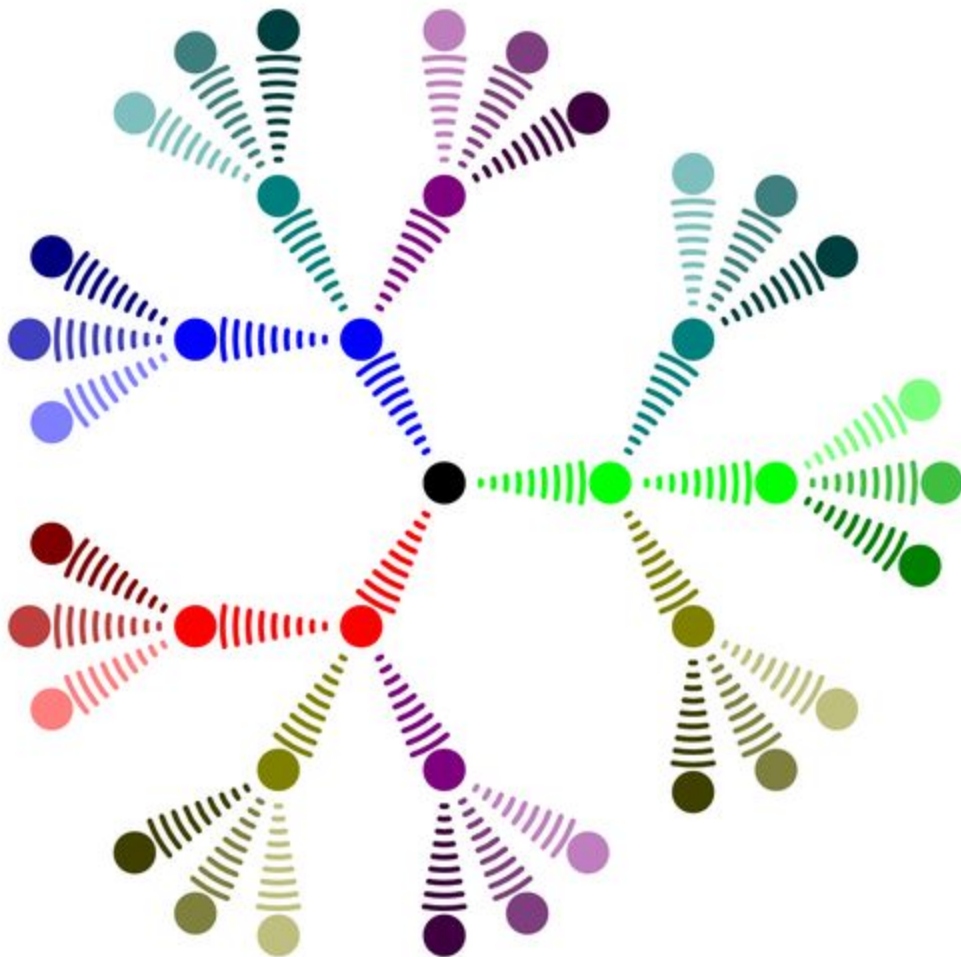


DAIOS (Decentralized AI Operating Systems) Platform



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Abstract

A cryptocurrency has emerged in 2009 based on mathematical characteristics. It's Bitcoin consisting of P2P Network, hash, cryptography, and proof of work through resource usage. Starting with Bitcoin, many major coins have appeared, such as Ethereum, Litecoin, Ripple, Namecoin, Qtum, and NEM. At the moment, money is determined by the value of the times. In the past, gold and silver were used for the first generation currency, bills and coins with the standard of currency for the second generation, and cryptocurrencies—the third generation currency has emerged. Then, what should be valued? How can we keep up with the vision of the Fourth Industrial Revolution as well as the future blockchain? We must also think about how to achieve the decentralization of genuine values.

At present everything in our world can be explained by data. We saw the value of data as well as the transparency and stability of blockchain, decentralization, the paradigm of hyperconnected society and the connection through Ethereum's smart contract. And we decided to start drawing a better future through DAIOS. DAIOS draws on the concept that all participants will be able to load distributed block data based on blockchain, and that service participants will utilize and learn to create a new ecosystem. We want DAIOS to be a development environment and service operating platform that demonstrates the decentralization of the true value of data that is legitimately rewarded through the Proof of Contribution (PoC).

1. Introduction

1.1. Changes in Blockchain and Software Development Environment

With the emergence of Ethereum, new conceptual services are being in the limelight recently, in which softwares and economic circulation structures work together. Blockchains, such as Crypto Kitty, Steamit, and DTube, are now transforming the software development and operating ecosystem around the world by becoming a convergence of software engineering and IT technology beyond the capabilities of virtual currency with encrypted data structures. Initial Coin Offering (ICO) philosophically penetrates the definition and development methodology of software.

It's hard for the public to understand how software is developed and operated. Specialized software developers in the 21st century must use a number of libraries and development environments, development tools, middlewares, and OS environments to complete the applications delivered to end users. This applies equally to the process of developing mobile apps such as casual games, to large-scale services such as YouTube. From the moment someone wants to develop a software or application, the corresponding technologies are covered. From the moment you review and design all these technical requirements, you will need engineers and developers with relevant skills or experience. We believe that the complete software is like imagination. A simple imagination is not specific, but engineers or developers imagining a particular software or application is like they have skills and plans that can materialize it. In the process of achieving this, capital is invested, and the size of that capital is proportional to the degree to which we imagine softwares or applications to be realized.

The blockchain after the second-generation has created an event that dramatically improves this software development environment. The value of the cryptocurrency was then converted into the value of the software, and real money was injected into the cost of software development. "We sell software that someone imagines in monetary form to those who agree with the economic value to be created in the future. The software to be created can be sold in open markets according to preemptive economic value." What makes these two statements possible is the blockchain-based cryptocurrencies and exchanges. The public blockchain is a verifiable form of software that opens the source and transparently reveals the entire development process. Moreover, payments of cryptocurrencies will be managed fairly and transparently through the smart contract, the concept of the second generation and later blockchain. This creates a new software development environment where more people can use the concept of copaying richer, more valuable softwares at a lower cost.

1.2. Contemplation on Data Ownership for Data Utilization

The true potential of this change in the development environment can only be seen when we understand the potential of the data generated from these innovations. In fact, we have been living with data innovation. In addition to the vast amount of data, the basic technology that changes the way we collect, store, analyze, and transform information also drives this data innovation.

Data is now being collected not only from online services, but also from a number of devices, machines, vehicles, as well as roadside sensors. Storing these vast amounts of data is costly and difficult, so only a few are able to store, process, and use the data properly, and these companies are benefiting from the analysis and utilization of the collected data. All of the data collected reflects individual thinking and activities, some of which are highly sensitive personal

information, but few people know what data they are producing, how they are used, and how much potential they have.

Data has become ubiquitous, and it's creating a lot of new values. Now it is time to give back to each individual ownership of the new value that the data creates and let them know what data is being collected and how it is being used. The rewards for new values created by data analysis and utilization also need to be returned to the data producers and require a transparent and fair solution to that.

1.3. Vision and Philosophy

DAIOS wants to be a third-generation blockchain that inherits the decentralization philosophy of the blockchain. Many blockchains, such as Ethereum and Ios, have adopted the centralized POS / DPOS method for efficiency and speed, but DIOS is a side-chain (PoC) Interlocking method is adopted. Although many blockchains, such as Ethereum, EOS, and others have adopted the centralized proof of stake (PoS / DPoS) method for efficiency and speed, DAIOS adopted a fair proof of contribution (PoC) approach and a way to connect the sidechain that is not overly dependent on the central mainnet. It even provides a truly decentralized blockchain environment with high speed scalability by offering standards that allow interoperability between different types of mainnets.

With this true decentralization, DAIOS will soon be the most reliable platform for users and companies in the distribution of data for AI. The goal of the DAIOS platform is to provide a platform to facilitate exchange and distribution of data that serves as a key fuel in the global AI market. The ultimate vision of DAIOS is to distribute data in a transparent, fair and efficient manner through a blockchain.

2. What is DAIOS(Decentralized AI Operating System)?

The DAIOS platform is a blockchain-based AI operating system that popularizes the blockchain technology by providing tools that make it easy to use blockchains, and decentralizes the collection, processing, and storage of big data that is the foundation of artificial intelligence through a blockchain. Existing data companies like Google and Facebook are limited to developing artificial intelligence using their own collected data. These data companies want to monopolize the data they collect, recognizing that sharing all the data they collect is a loss.

Because of this, current artificial intelligence has the problem that it is produced in various forms by individuals, and is difficult to distribute.

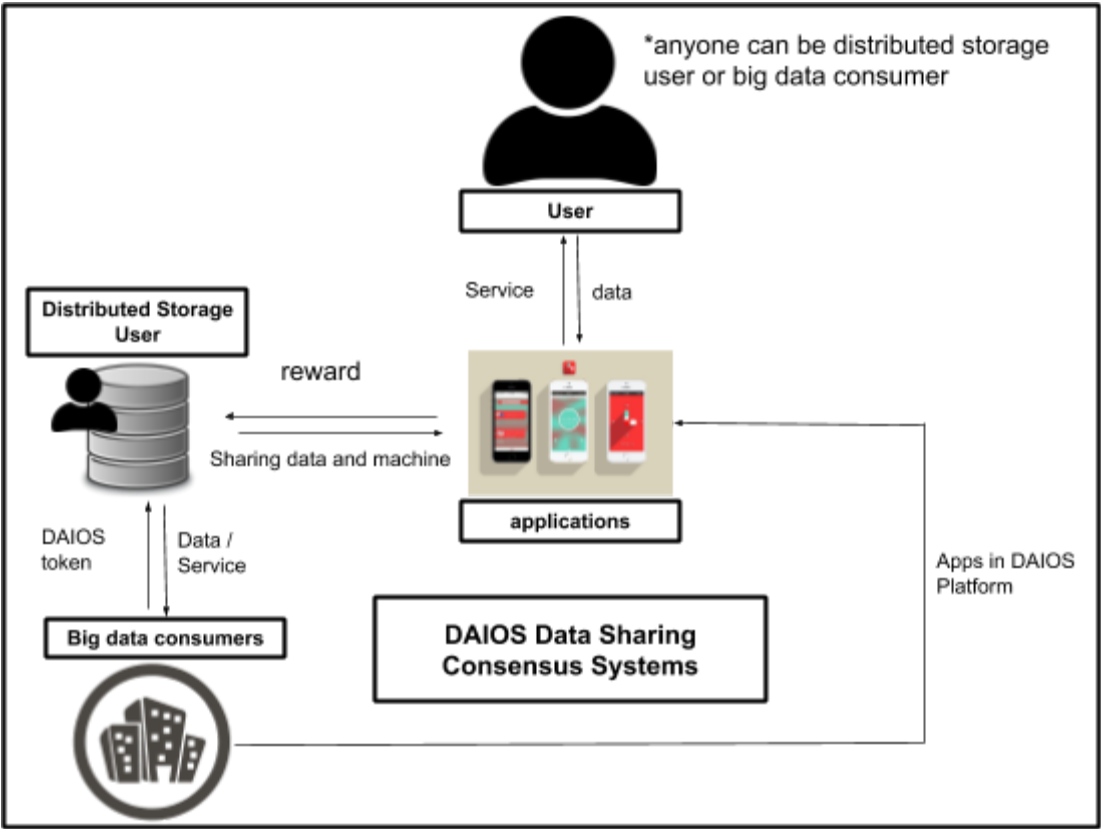
DAIOS is an innovative data-sharing platform that will serve as the birthplace of numerous artificial intelligences, while providing big data studios and direct locations for everyone to participate in by organically and transparently collecting and sharing data through the economic reward system of the blockchain.

Features	Ethereum	DAIOS	EOS	Explanation
Consensus Algorithm	POW/POS	POS/POC	DPOS	
Scalability, Performance solution	sharding, plazma	p2p side chain (sharding)	mega cluster servers	
p2p distributed storage	O	O		Using IPFS and bitTorrent technology. To create an application to fully decentralize ownership of resources
Smart Contract	O	O	O	
Blockchain DB	O	O	O	
p2p distributed DB	X	O	X	A separate p2p-based NoSQL-oriented database, which is not a blockchain internal database
p2p CPU/GPU share	X	O	X	The underlying technology for machine learning to evaluate resources and data
p2p machining learning	X	O	X	The technology for evaluating the contribution of block producers and services running on the platform
decentralized message protocol	O	O	X	Used for communication protocols that require anonymity

Extended Application IDE		O		Integrated application development tool that can be developed in one place with various functions intuitively
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2.1. DAIOS Ecosystem

The DAIOS platform is operated by an ecosystem of four key factors. In an ecosystem of users, application developers, distributed storage managers, and big data users for AI, data is collected, processed, and stored in a virtuous cycle.



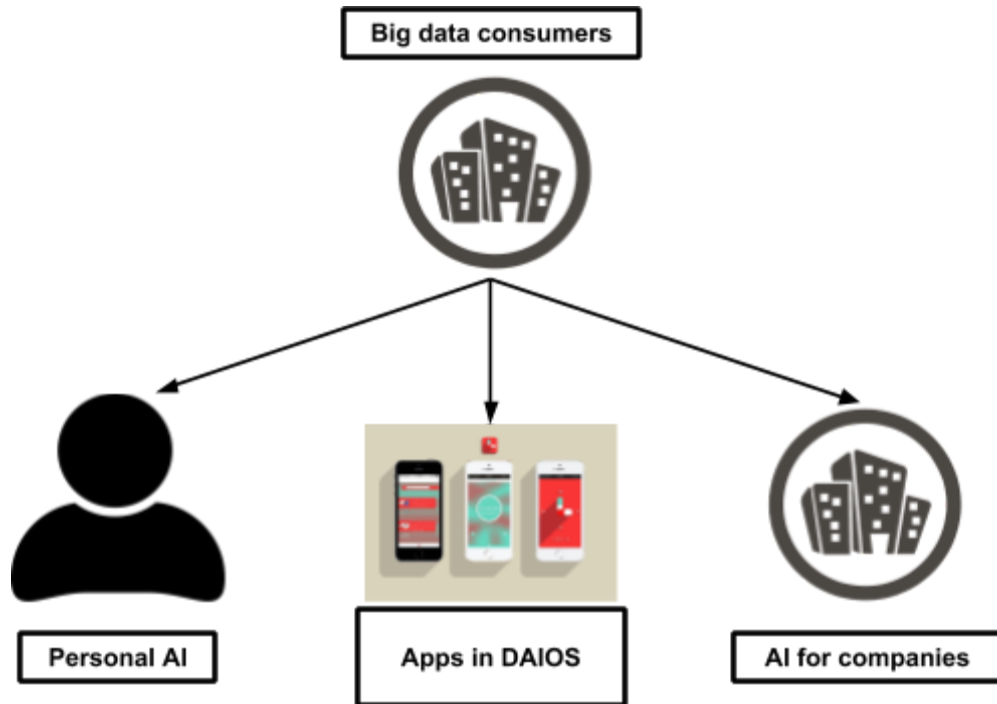
[ecosystem diagram]

First, application developers develop and distribute apps and receive data from users. In the beginning, companies make profits by receiving DAIOS coins in exchange for sharing data through ICO, or as distributed storage managers that directly store their user data on a blockchain platform. The variety of apps developed on the DAIOS platform will serve as a window for data collection.

Application users buy and use these developed apps using their unique tokens or DAIOS coins. They can benefit from a variety of apps, including a decentralized chatbot using artificial intelligence, SNS, AR glasses. The data collected during this process is provided to the application company, and users receive a unique token in return for providing the data.

In other words, application users are consumers of the DAIOS platform and all of the apps that are based on it and are essential components providing the platform with the data it needs. While the existing blockchain is public enough to make the data written in blocks available to anyone, the original recorder can not delete the data once recorded. This is not a structure in which users can actually own the data, so they should be able to delete the copy themselves if necessary. For this reason, you will receive rewards through a published copy of the data and you will no longer receive rewards through a deleted copy of the data. The approach applies only to the data of users who do not need to guarantee the authenticity of all distributed ledgers. Application production companies must design the rewards to be applied to the users, using this approach. The DAIOS platform provides application production companies with a guide to the level of user data management as an API. The disclosure scope of the data and the level of rewards can be set through the API and then reevaluated by the contribution proof algorithm operated in the service.

Distributed storage managers receive tokens from application companies in exchange for storing their data, and later they receive DAIOS main coins each time individuals or companies, that want to develop artificial intelligence, use stored data. While storage service providers in today's blockchain systems are focused on storing all data as miners, storage service providers on the DAIOS platform will only store the most profitable data for efficient use of limited storage capacity. As a result, apps would try to collect the most meaningful and efficient data to be supported by storage service providers, or to provide good content so that the value of tokens paid to those storage service providers can be increased.



Big data users can use the vast data from the DAIOS platform to develop AI. This developed artificial intelligence runs through distributed processing by storage service providers, enabling the production and distribution of massive AI at low cost. Data users pay for their fees with DAIOS mainnet coins.

They can create their own artificial intelligence, build new artificial intelligence-based companies, and even join the dApp companies in the DAIOS ecosystem by creating DAIOS-based apps using their own artificial intelligence. Big data users now have the similar role of ordinary users running smart contracts or wire transfers in blockchain networks.

3. Innovations in the blockchain of the DAIOS platform

3.1. DAIOS Consensus Mechanism

The DAIOS platform introduces a new consensus system, called Proof of Contribution, to maintain a high speed while being decentralized, the philosophical backbone of the blockchain.

Bitcoin uses proof of work (PoW) to centralize itself, but it is not only slower but also less efficient in terms of storage space utilization. On the other hand, the Proof of Stake (PoS) system, which is pursued by Ethereum and EOS, is advantageous in that it is faster, but it is criticized for the possibility of simple centralization unique to the PoS algorithm.

The Proof of Contribution (PoC) consensus algorithm of DAIOS complements these shortcomings of PoW and PoS and determines the influence distribution of coin compensation and data processing across all systems. To safeguard the data and the consumption records of the DAIOS coin, we put 20% of DAIOS tokens holding volume as PoS deposit. Degree of contribution by service providers and individuals who participate in data storage share and computing power share on the DAIOS platform determines the next round of PoS deposit ratio which is purpose of fair incentive on block compensation and remittance record. The higher contribution for the platform, the more rewards you get, so amount of DAIOS coin becomes accumulation of past contributions. Therefore, DAIOS provides the most fair decentralization through a new way of delivering rewards and impact to users who contributed the most to the platform by measuring their current contributions and past contributions.

DAIOS devised a PoC (Proof of Contribution) consensus mechanism to resolve PoW speed issues and PoS intentions, functional and philosophical issues. For the mechanism, the PoC will require a procedure to derive the latest contribution and contributing factors to the weight level by learning the contribution information from each node account. Depending on the level derived, the representative node that performs the consensus algorithm for the processing of the blocks is elected, which is called the Honor node. The number of honor nodes elected relates to the number of peer clusters determined by the Coral DSHT, which is used in the IPFS. The number is determined by the number of honor nodes targeted nodes in the round, and the system determines 20 honor nodes. The nodes can be identified through the IPFS routing interface.

The honor nodes selected through pretrained weight models can be changed according to the learning cycle of training weight models, and anyone with a high contribution can be targeted. The criterion for measuring the honor node are currently:

- Resource Delivery Time
- The spacetime of valid data proven to be a weight model produced by service producers
- First data contribution
- Additional data contribution
- Contribution of replicated data
- The extent to which the platform provides right services (occupancy figures)
- Healthiness of the data used in services

Generally, if you think of PoS and DPoS, the honor node is usually bigger than others in the ecosystem. We wanted to avoid irrationality inherent in the existing stake delegation method. The sweat of every activity must be fair and we did not want to systemize it and let anyone

judge it. As a result, with the goal of providing decentralized big data in the platform we decided to calculate the contribution figures through quantitative / qualitative indicators of contribution to data in use.

In general, simply providing time for resources and numbers to deliver data seem good to be indicators of contribution, but there were potential irrationalities such as:

- Did they provide really useful data?
- Are they using resources for valid tasks?
- Are they doing service activities for the platform ecosystem where everyone is working together
- Is the node doing the right thing?

We have been thinking a lot about overcoming these irrationalities. The blockchain technology draws automation of a middle-point rather than an end-point. That's why we decided to let a learning system works based on data retrieved from service activities as a solution on the platform. A qualitative analysis is essential because the number of contributions exceeds quantitative factors and weights of the components varies throughout each learning cycle. This yields the contribution of nodes for right platform activation. This also plays a major role in calculating honor nodes, and will ensure that all nodes who are not merely determined into honor nodes will be compensated according to their contributions.

Elected honor nodes determined by contributions and evaluations determine creation and merging of blocks in accordance with the PoS, DPOs methods accepted by the PoC. In the above mentioned number of clusters, an honor node is determined by a multiple of 3, and each determined honor node rotates every three seconds and can create blocks. To achieve a consensus of block joining, our systems follow the decision of $\frac{2}{3} + 1$ of agreement of honor nodes. The benefits of this consensus mechanism are the same as well known problem-solving methods claimed by existing consensus mechanisms' such as Byzantine Fault Tolerance. Through this, DAIOS guarantees proven performance and what we believe to be the most fair decentralization for the public.

The Π^{PoC} schema generated by the service producer is defined as $\Pi^{\text{PoC}} = (\text{Setup}, \text{Proof}, \text{Verify})$.

$\text{PoC.Setup}(1^\lambda, D) \rightarrow C, S_p, S_v, S_p, S_v$ are setup variables that match the schema of the prover (P) and the verifier (V), and λ is a security parameter.

The setting creates a level of contribution and gives a prover and a verifier the necessary information required to perform proof and validation. Other schemas could be third party data received from sharded blocks to calculate settings and third party APIs to handle them.

$\text{PoC.Prove}(S_p, C, t) \rightarrow \pi^t$, t is derived from a pre-trained model indicated by the honor node obtained through the DAIOS scan. If there is no pre-trained model, it has a value of 0. π^t is a

parameter that helps a prover calculate contribution (C) of data on the network. Prover itself produces π^t for node maintenance.

PoC.Verify(S_v , c, π^t) \rightarrow π^t reflects a value of a newly updated trained weight model by accounts. Verifier checks whether in $\{0, 1, 0 \text{ to } 1\}$, proof is correct.

Verification performs by the verifier and the prover evaluates whether the verified data is valid and how efficient it is.

T stands for target, which can be defined as the sum of rewards to compensate data providers in services using each data. Defines true (1) or false (0), depending on the amount of increase or decrease in the contribution.

3.2. Rewards

DAIOS will clearly disclose data, resource usage, platform contribution, etc. on the platform, and the degree to which it is being evaluated will be recognized through its contributors' assessment metrics without any intermediates. Quantitative and qualitative evaluated factors are relative to all nodes:

- Total resource usage of the platform
- The degree of data used by high-indexed services
- How healthy the contribution was on the platform

Resources used for specific services and development on the platform require compensation. There are nodes that provide the resources and accounts that request the use of resources. Accounts that use resources must have minimum MAHAs, Staked DAiOS tokens for the desired behavior to be able to act. The nodes that want to provide the resource power are determined by channels that are of the same purpose as the accounts they have. The channel is evaluated by performing a transaction on its start and end for each action. The value of MAHA for its access and usage is determined by the health check performed every 60 days.

3.3 Charity

The platform calculates the contribution each time a 30th block is created, selects honor nodes, and distributes the rewards to all participating nodes with MAHA and DAiOS tokens. Charity is charged to nodes that are probabilistically over a certain number by calculating the sum of the rewards distributed to all the nodes every 60 days and the numerical value according to biased distribution of the rewards of the specific node. Certain nodes that are charged with Charity will have to further stake DAiOS / MAHA, staked proportionally to the Charity value in the next 60 days of rounds, and the DAiOS platform will redistribute the acquired MAHA equally to lower

20% nodes. Every 60 days, Charity values are calculated by the average and variance over the entire reward and the machine-learning clustering technique. And they occur probabilistically. Therefore, the scale of the Charity is a data analysis technique that evaluates the health of the ecosystem.

The nodes with Charity will actually donate to the bottom 20 % lower income bracket nodes over the next 60 days of round. As a result, they will be given one honor token. A non-fungible honor token is a symbol of Charity as a unique digital asset, although it does not affect decision making on the platform. When Charity occurs, the platform issues DAIOS by the amount of MAHA obtained by Charity, causing the inflation of DAIOS. The effects of inflation will be tailored to the redistribution of wealth and you will need to continue learning the value of the Charity that occurs in the future. The recorded Charity value is then used as a target for predicting appropriate Charity thresholds to be learned by machine learning techniques.

3.4. Accounts

An account represents the subject of all actions on the DAIOS platform. From the moment the account is created on the platform, contributions can be made and all contributions will be account-dependent. You will need the balance at the beginning of your account, so when you create an initial account, you need to go through the process of securing the initial balance through a contract. The nonce status starts with 1 when the transaction on the initial balance in the account is performed.

Once the conditions for the establishment of the agreed-on algorithm have been established, the node will be active on the DAIOS platform. All contributions in the account are proven with contributed hash addresses, and the level attribute is recorded as a uint64 value in return for them.

A contributed hash address is composed of a form of contribution details recorded on Merkle Patricia Tree that are specified for common proof on the mainnet, and are specified depending on the contribution activities of the nodes with each account bound to the mainnet. This value is used to derive leaders according to the proof of contribution and is derived from value level. Mainnet compensates each contributed node DAIOS tokens based on value level calculated by MAHA, staked DAIOS tokens.

As the DAIOS platform becomes active, systems assigns an account an active category. Metadata retrieved from service producers plays a key role in this process. Information becomes more and more relevant whenever each service producer produce data and metadata. The metadata associated with the account continues to accumulate through the main network. Named groups bound the metadata to empty slot of account. Finally, activity of contributors elect named groups and organize accumulate data and information in the decentralized distributed storage platform provided by DAIOS.

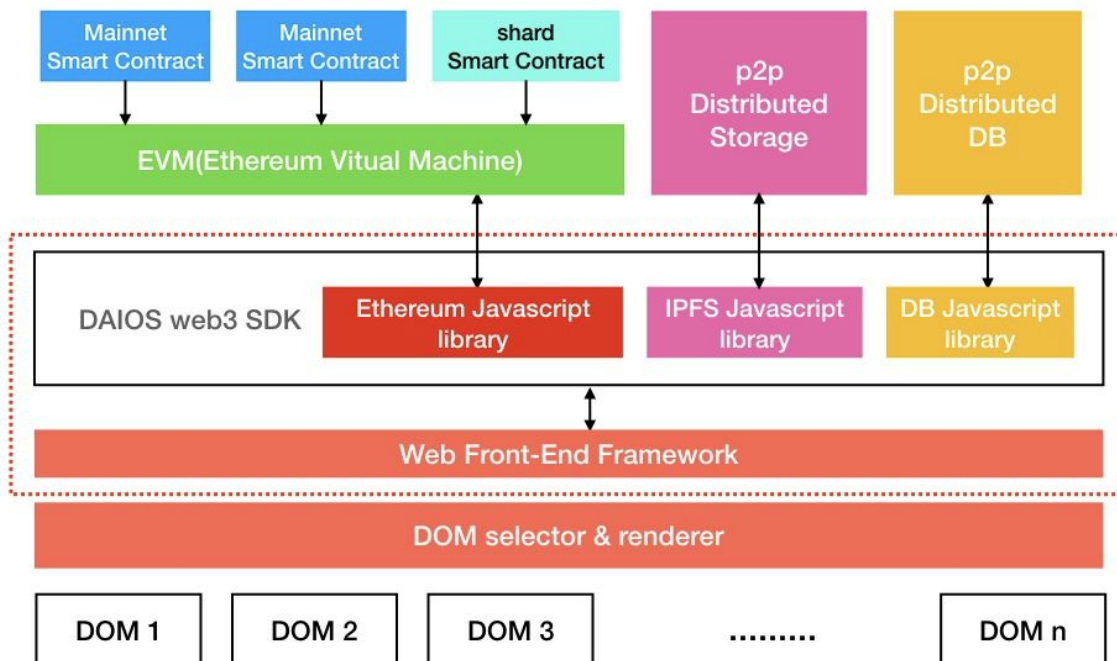
3.5. Integrated Development Environment

The main reason why developers are not attracted to blockchain platforms such as Ethereum is in development complexity. There is inconvenience of the new development language and environment. There are not many decentralized apps (Dapp) developers even on the oldest of the existing platforms.

DAIOS platform provides developers with an innovative and convenient development environment. With the integrated tools of the DAIOS platform, which enables both design and interface front-end development and back-end development and testing of data processing, developers can complete complete apps in one go. It is a very efficient feature that is difficult to find in existing block-chain development platforms, and is currently under preparation for a patent application, and is expected to attract many blockchain and decentralized app developers. As the development environment is optimized, decentralized application becomes more active, the decentralization ecosystem will be activated as more data and users gather, which is the innovation of the blockchain system.

- p2p-based distributed data technology and web front-end framework(react.js, Angular, vue.js), support to android and ios.
- When developing dApp, it can easily develop Docker, WAS, RDB, NoSQL DB and OAuth2.0 which are frequently used together with blockchain technology with server-less structure.
- Provides a module that can interwork with block to collect and learn data using Distributed Computing in Cloud
- Easy interoperation with Ethereum and DAIOS blockchain test-RPC, easy debugging
- vue.js based block chain web3 javascript library, extension of Ethereum web3 function
- Ensuring the versatility of Remix, the Ethereum development tool, providing simultaneous work environment for Solidity and html, css and javascript
- DEOS based dApp Android / IOS porting, UX / UI Android and IOS XML standards support
- Android and IOS resources build, deploy, embed Ethereum bytecode embedding

The DAIOS platform uses the Futuristic technology of the Ethereum camp, which currently has the most dApps. It inherits the sharding and side chain / child chain techniques that are designed to solve the performance and scalability problems of blockchains and provides a more versatile and scalable web development toolkit.



[IDE implementation feature stack]

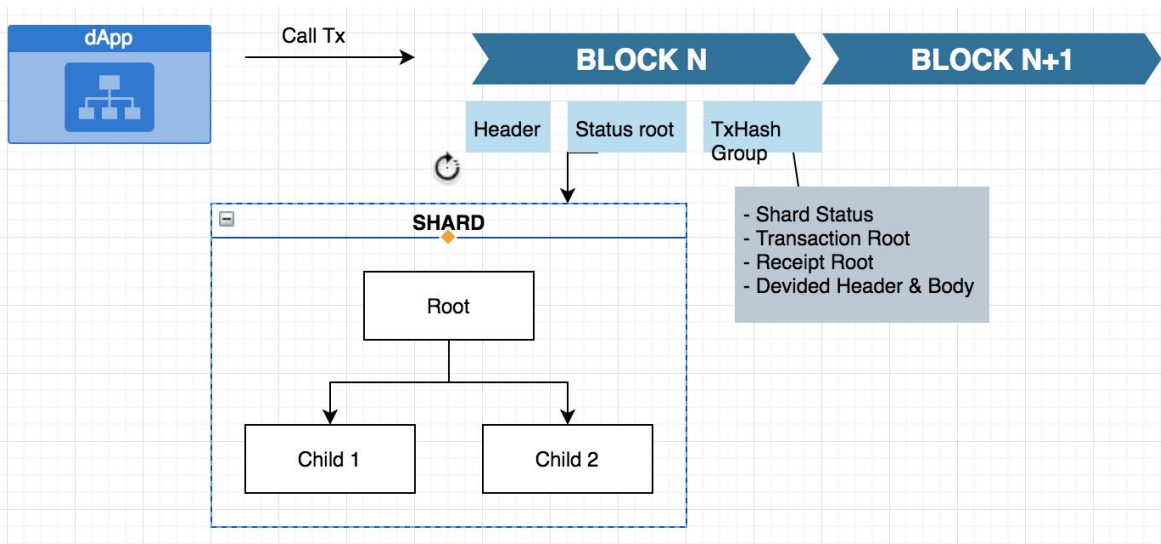
Many developers create smart contracts in Remix tools provided by Ethereum, and web applications are created in other development tools using Web3 which is an ethereum-based JavaScript library. In order to we should use IPFS, so, we should support tools to use IPFS easily, you must load the IPFS application again and set up the interlocking process. To avoid this complex and inefficient workflow, DAIOS provides an optimized SDK for Web resources and loads it into the DAIOS integrated development tool (IDE).

3.6. Decentralized Distributed Storage

We live in connected world run by the internet which connects people and information. It represents connectivity of human life. The fourth industrial revolution with blockchain pushes the connectivity further. However, current web technology is not going to lead the revolution rapidly. Centralized web applications are slow and need complete access to each resource. However, future web should carry petabyte data and supports large volume of real-time data streaming. The future web should enable these easily whenever, wherever even if servers go down. Most of network bandwidth has been used by video streaming, the first biggest and torrent, the second biggest. This explains p2p technology is going to be the basis of super connectivity. DAIOS implements decentralized distributed storage because of preparation for the future web scene. DAIOS powered by artificial intelligence can make rewards fair for people who share data and information. We request service providers and individuals category of data.

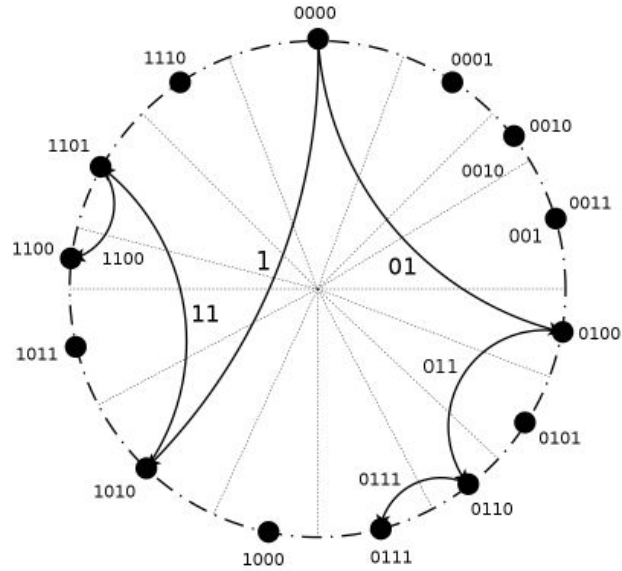
- Status
- Transactions
- Receipt
- Structured
- Unstructured(image, Video, undefinable semi-structured data)

DAIOS uses merkle patricia tree to store transaction data and develop sharding technic proactively to increase searching speed simultaneously with lightning ledgers because merkle patricia tree doesn't guarantee huge scalability likewise Ethereum doesn't.

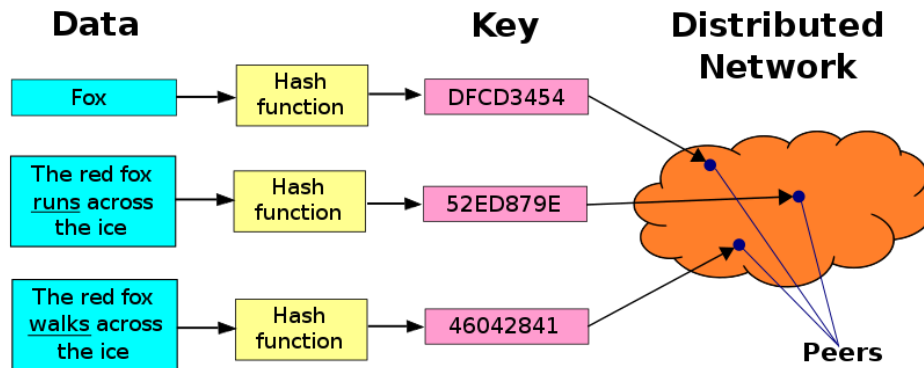


[Ethereum Shard Structure]

Each node who produces data and service value raises up DAIOS platform. We found out new technology which can solve various problems of the internet. IPFS can be one of them that we found. Merkle DAG can manage duplicate files and different branches of files efficiently. Kademila DHT and Coral DSHT can build high-performance p2p networks. IPFS includes Git, GitTorrent, Bitswap and etc.



[Kademila DHT]

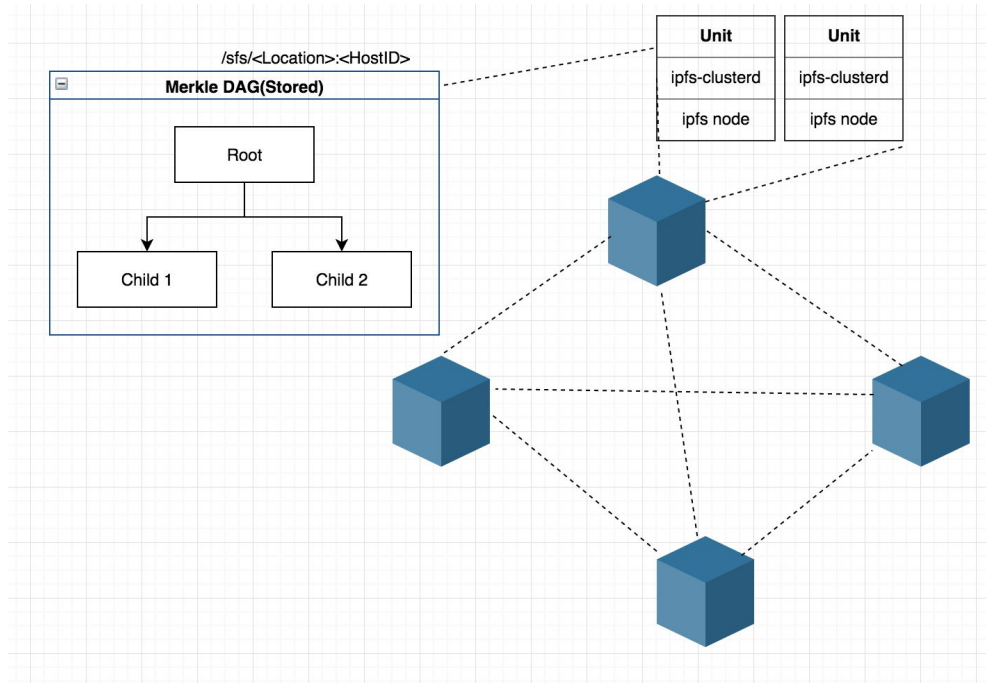


[Distributed Hash Tables]

From here, DAIOS decided to align with our direction to focus on a few matters. We wanted the platform to have a light platform appearance, as well as be able to store the ultimate data. Not all nodes have all the data yet; storing unique data from a single node. We wanted participants to make good decisions, so we we have drawn some criteria on how participants will configure the node based on the initial behavior of distributed storage that will work with VMs

- First contributed data
- Additional contributed data
- Replica of data
- Piece of data
- Each node sets up criteria

through the dApp Contract, you can also replicate the entire data set depending on the type of ByteCode that is read from the VM when it is accessed. The environment for the decentralized data (contributed data) is evaluated as a level to ensure the type of activity that exists within the platform. Basically, if the user saves data in the storage and gets a rating of 10, then a value of 10 is guaranteed for the desired activity



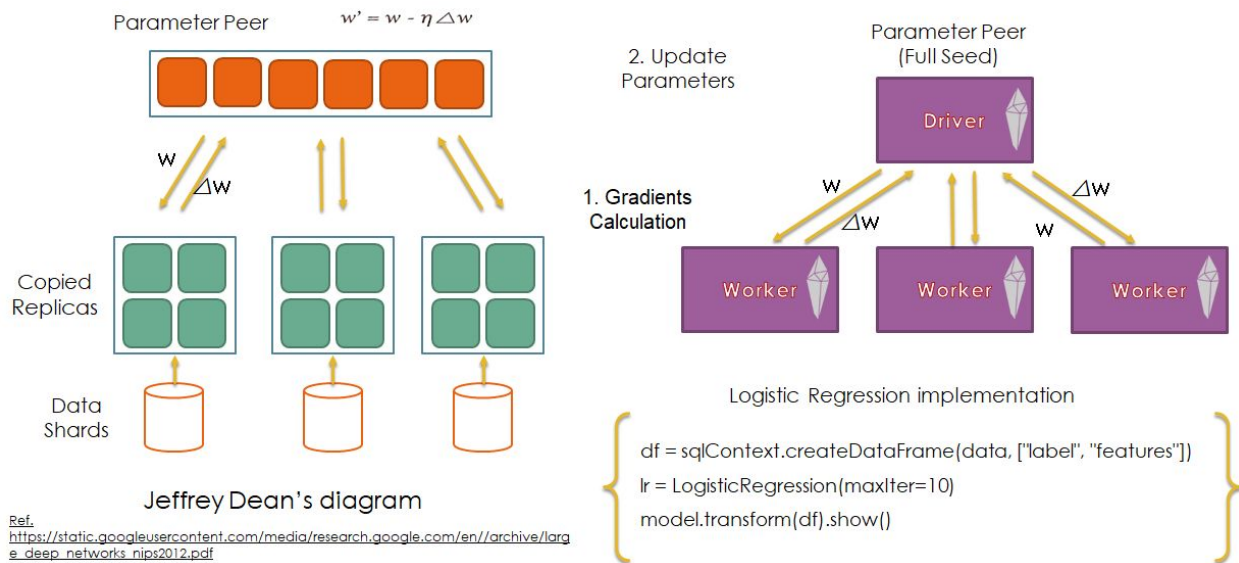
[IPFS implementation diagram]

Participants on the platform can expect a large level of rewards through initial data contributions. However, Maha should be collateralized proportional to the size of data in order to guarantee the data from the beginning. This should be maintained until a replica node is created or the usability grades of data are evaluated through the learning cycle. The initiated data from the first contribution allow additional contributions from other nodes through service or contracts on the platform, thus allowing the value of the data to grow. Initial participants who are rated as high as much as the value of the growing data will receive more compensation. The replica or fragmented data is set up by the initial operation of the distributed repository, according to the execution of contracts, or according to the specification of the system in the cluster. If the seed is recognized as the only replicated seed in the cluster, the rewards for the participants will be high depending on the value of the data. Then, we need to think if malicious users repeatedly upload useful data form as their initial contribution data, and what happens if malicious data are modified little by little. This part is resolved because the pieces of redundant data are organized in the initial attribution tree.

3.7. Decentralized Distributed Computing Machine Share

The current blockchain proves authenticity by sharing all copies of transactions and transaction histories. That's the reason why its speed is slow and its storage capacity is limited. It's not a good fit for the big data processing for AI.

On the DAIOS platform, multiple nodes act as distributed computing processors to divide and store data for each app. Distributed repositories that want to get DAIOS coins in exchange for running AI services tend to choose applications which produce more useful and profitable data, and these data get stored with more copies of the data due to high demand. This means that a distributed computing machine running by decentralized governance can beat existing cloud computing systems economically and efficiently.



[Decentralized Distributed Deep Learning Diagram]

In addition, DAIOS differentiates itself from traditional blockchains. The storage capacity of nodes does not need to be large enough to accommodate all data in the network. Unlike blockchains, where only miners with specialized equipment can participate, DAIOS truly decentralizes, which everyone can equally evaluate blocks. Furthermore, DAIOS ensures a faster throughput than a system that handles all existing data centrally.

3.8. The Improvement in Performance and Scalability

Built on the backbone of its second generation blockchain platform with the application of smart contracts, Ethereum is facing a scalability problem as a platform required to run a variety of applications with low throughput per second (TPS) due to many applications running on platforms and tokens developed from a variety of functional design perspectives. In order to improve this problem, Ethereum Foundation is developing a technique called Sharding that processes all data on the subnets according to the unique functions of the tokens without processing them on the Ethereum mainnet. The DAIOS platform maintains this decentralization philosophy and suggests a standard protocol for interworking with mainnets that can connect with other types of mainnets. This technical approach is to preserve the value of the basic philosophy of the blockchain, such as data ownership verification, decentralization, distribution, anonymity, freedom, censorship resistance, the redistribution of wealth and equality of opportunity. A small number of machines or nodes owning a large number of data and money should not be prioritized in any performance aspect, and technicians should develop technologies that can improve the reality rather than compromise with reality.

- Solutions to scalability, performance issues and different blockchain ecosystem expansion problems.
- Structures that can easily exchange ERC tokens running on Etheriums in a new mainnet.
- Smart contract functions and standardization for blocks of different blockchains

3.9. Privacy

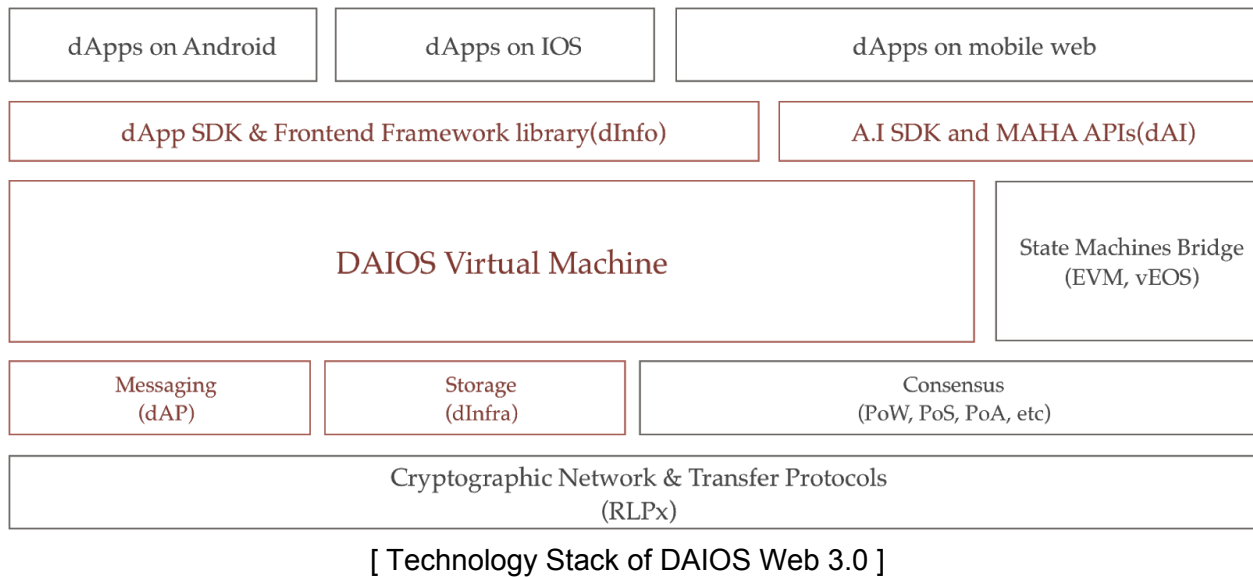
The DAIOS platform resolves the compatibility of speed with privacy, one of the biggest drawbacks of the blockchain, with the Decentralized Anonymous Protocol (DAP) technology. DAP is designed to cover application function requirements that focus on messaging functionality and to adjust the degree of anonymity and security by adjusting the darkness level. That is because it assumes that there are several subnetworks formed by the distributed processing system in the DAIOS mainnet. DAP is also used as an important function of the privacy system of the DAIOS.

By dividing the network into small groups that are guaranteed to be private, mainnet platform has to be able to send and receive sensitive conversations or transfer information to ensure personal privacy while maintaining its network speed on the blockchain. Therefore, application companies can securely process customers' important personal information.

3.10. Scalability to the Web 3.0 Platform

The Web has evolved from the philosophy that anyone can share information on the Internet. From simple text documents to applications that music, pictures, videos or complex media content are embedded, the Web has grown technologically advanced from HTML to CSS, JavaScript, ECMA5, ECMA6, V8 and node.js. These great web-based technologies enrich the Internet and through this, the era of knowledge and inspiration for anyone who can access the Internet has arrived.

Mobile phones have increased the accessibility of the Web, and people are able to access web contents 24 hours a day with the development of communication technologies. However, with the development of the Internet, a process of monopolizing various web contents produced has occurred at the same time. However, with the development of the Internet, a process of monopolizing various web contents produced has occurred at the same time. Therefore, all information can not be shared transparently and other damages such as censorship and filtering, selective information disclosure, access restriction, personal information leaks, and copyright infringement are also happening simultaneously.



Web 3.0 is the next-generation technology concept that will allow more people to use the Internet at a lower cost with the advent of blockchain technology. To achieve this, DAIOS is pursuing a decentralized distributed storage, a decentralized distributed database, and decentralized distributed computing technology that are reinterpreting P2P technology from a modern point of view, and it's designed to be a platform for all of these.

Conclusion

DAIOS is a project driven by developers. We pursue a fair distribution of value on the ideal development environment, ecosystem and the revenue of derived products. DAIOS will support decentralized storages, distributed resource processors (computing), operating environments and development languages, development environments (IDEs) and intelligences, and will continue to put our efforts into supporting them.

Now, we need to think about what all participants can draw through our mainnet we will be introducing. What if a typical IT service is developed and operated on a blockchain basis? What about in artificial intelligence science? What about the development and operation of artificial intelligence / big data services? Many developers will create prototypes based on data published on the DAIOS net, services such as Uber, Facebook, and Airbnb, will try to operate and manage real businesses in our environment. Also, they will be able to implement their own artificial intelligence secretary through a successful model published on the mainnet. Many services are derived and data get accumulated. This valuable data will be more valuable to DAIOS and all participants and will show innovative changes in the development and business services of Windows, UNIX, and Android and above.

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