PRASM NETWORK

AI-BASED DECENTRALIZED BIOINFORMATIC NETWORK
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1. Backgrounds

1) Development & Application of Bioinformatics

With the development of new technology, bioinformatics has been seeing a lot of changes while altering its fundamental paradigms. In particular, the development of digital devices is going beyond the limits of existing bioinformatics and exploring new realms. Wearable devices are providing us with the kind of information that is not easily collected. For example, MUSE allows us to detect changes occurring in the brain, and SleepDoc measures the amount, not only of physical activities, but also the volume of sunlight you are exposed to.

A lot of applications and mobile devices are improving the overall health of the body by exploiting bioinformatics. This ability was beyond our capabilities just ten years ago. Elf emit and Thync work on the brain to improve the quality of sleep and mental health, while oMass offers low frequency massage functions. As knowledge develops and intersects, new perspectives and services emerge. Parsley Health offers membership-based o2o wellness services based on functional medicine. In functional medicine, diseases are attributed to deteriorated physical functions, so Parsley Health focuses on nutritional approaches and psychological approaches to put bodies back in shape. idDNA is a device that offers customized skin care and diet programs, based on genetic tests. The testing technologies are developed to diagnose your health through hair, urine and saliva analysis, instead of blood tests. With this technology, visiting a hospital isn’t necessary. The genetic tests are also so highly developed that not only DNA but also microDNA can be screened from these samples. Multiple technologies have been simultaneously developed and are now fused together. In the process, a lot of bioinformation has been formed and applied. However, bioinformation is not properly integrated due to the absence of platforms that allow integration and application. This process should greatly promote human health and yield greater profits. There is a need for a new system that can integrate and manage bioinformation.

2) Advent of Transhumanism

Transhumanism is emerging as a new approach that is trying to improve mental and physical qualities with the help of science and technology. With the improved quality of life in general, human interest in a longer life and upgraded intellectual and physical abilities is continually expanding. Actually, a variety of Nootropics have been developed to improve brain function. The development and application of bioinformatics is now one step closer to transhumanism.

3) BlockChain & Bioinformatics

Ten years after Satoshi Nakamoto established the concept of blockchain, it has now spread to various fields of life. The concept of blockchain is based on digital ledgers where a transaction between involved parties is recorded. As the content of digital ledgers comes to include financial transactions, medical information and many different kinds of events and documents, blockchain’s application is spreading as well. Blockchain technology is being applied to bioinformatics. In medicine, many different projects are underway with all different themes, such as MediBloc, MedicalChain and Aston, which record medical information with blockchain technology. SweatCoin that rewards its users with tokens according to the workout they do, and Lympo that tokenifies data accumulated on wearable devices, etc. Blockchain technology offers an opportunity to renovate existing wellness systems. A lot of bioinformation has been gained through all different channels. Once integrated through blockchain technology, it can allow the owner of bioinformation to check their own data, which means the owner can take the initiative in his or her own wellness and not the third party. Again, bioinformation is connected with your life log and can show you which influences change your life and how that affects your health. It will dramatically challenge the medical scene where human beings can diagnose and improve their own physical states by themselves.
1. Backgrounds

4) Big Data & Artificial Intelligence

Data accumulated eventually becomes big data. Existing centralized systems require enormous hardware infrastructures to process big data, while decentralized systems can be distributed through computing. When encrypted and saved in blockchain, bioinformation can be kept secure as well. Those participating in the bioinformation data process can play the roles of nodes in bioinformation.

By analyzing collected big data and identifying interrelations between many factors, we can now explore how the human body works. The protocols to diagnose human health states and find solutions to human health problems, will be refined and sophisticated with more and more bioinformation. The computing source for AI will be backed up through distributed computing.

5) Data Tokenification

Cryptocurrency is an indispensable factor in maintaining the blockchain system, and it has been facilitating blockchain systems to grow in itself. It has also proved that rewards for individual nodes lead to contributions from the entire system. In addition, it shows that decentralized systems can be an alternative to centralized systems.

In the existing systems, bioinformation was concentrated in particular institutions. The added value that originated from bioinformation was not credited to those who produced the bioinformation, but to the institutions. However, in the decentralized bioinformatic network, rewards for bioinformation can go to those who have actually contributed to its creation. Those who contribute to the bioinformatic network can be rewarded with cryptocurrency tokens. The rewards will attract voluntary participation, so the network can grow and develop further.

The purpose of a bioinformatic network is to diagnose and improve the participants’ health. Thus, its growth and development will help to improve a participants’ health more closely. The relationship between the participants and the network is mutually beneficial, contributing to each other’s development.
The mission of PRASM is to help people advance both mentally and physically individually. The decentralized bioinformatic network enables a participant to hold agency over their own wellness, not commissioning it to a third party. PRASM Project develops protocols that help people reach better states, mental and physical, based on bioinformatics.

The vision of the PRASM project is to allow people to create an ecosystem of wellness in which everyone can contribute to themselves and each other: it a virtuous circle that the PRASM Project pursues. The actions of a participant can have positive effects on others and the whole eco-system. The developed eco-system is beneficial to every participant. For this reason, the PRASM Project researches a reward model and token economy.
3. Token Economy

1) PRASM Tokens

PRASM Token is a token system based on blockchain. It is issued in proportion to the contribution a participant makes. It encourages participants to make contributions actively to the network. That is to say, a participant contributes to the network with the bioinformation from his or her body and receives tokens as reward for it.

2) Types of rewards

The participants, who contribute to the network with their bioinformation are offered three types of rewards.

(1) Rewards for Big Data Contribution

The process in which bioinformation is produced and collected can be broken down into two areas: it can be collected through IoT devices without the third party’s intervention, or through a service provider’s participation through a wellness service. Wellness service providers are again broken down into either a direct service provider or an indirect service provider. Direct service providers are those who communicate with users or interact with them by providing direct services, including consultants, trainers and medical staff. Indirect service providers are those who contribute to the collection of bioinformation, though not engaging in the interactions with users, such as researchers at medical institutions. They contribute to big data accumulation in the network, by producing and collecting bioinformation. This helps PRASM protocols to become sophisticated. These participants who make contributions so big data can be accumulated are provided with PRASM rewards.
3. Token Economy

(2) Rewards for Bioinformation Use

The ownership of a piece of bioinformation lies with whom the bioinformation is about. Thus, those who want a certain piece of bioinformation need to obtain the right of use from the owner. Rewards can be exchanged for the use.

The owner and the user of bioinformation can define the values through transactions. Owners will create quality bioinformation to improve the value of their existing bioinformation, which will greatly benefit the development of the network.

(3) Rewards for Quests

To verify theories or products, bioinformation is produced in tightly controlled environments. Producing a certain theory requires controlled situations. Aside from bioinformation already produced, the collection process of bioinformation needs to be designed for a particular purpose, and the bioinformation should be produced and collected accordingly. People can participate in the quest for creating or collecting bioinformation, which are designed to serve particular purposes. The purposes can vary in the forms of events or campaigns, from weight loss over a certain period of time, to verifying how effective a product or therapy is.

The network lowers the hurdles in the procedures or systems of the existing clinical verification, since collecting bioinformation is easier within the network. It also makes the processes transparent, readdressing the imbalance of information and improving stability.
3. Token Economy

3) Use of Tokens

If you offer your bioinformation to the bioinformatic network, you are rewarded with PRASM tokens. Then, AI analyzes your bioinformation and recommends solutions that suit your health states. Participants can purchase the solutions from the PRASM platform, and they can use their PRASM tokens for purchases. The following are the solutions the PRASM network is recommending.

**Customized Lifestyle**

Based on your bioinformation, we recommend life styles that are customized for better physical and mental states. You can purchase a variety of goods that suit your needs from the PRASM platform.

**Customized Wellness Checkup**

Based on your bioinformation, we will inform you of additional wellness checkups, if needed. If you need additional checkups, the PRASM platform can offer you the service. The medical institutions in the PRASM network offer you checkup services on the PLASM platform.

**Customized Wellness Service**

Participants can identify the right wellness services for their needs on the PRASM platform. The wellness services are face-to-face services but can facilitate long distance capabilities. The service providers can participate in the PRASM network and offer their services. Through the PRASM platform, members can be connected with other participants in other areas and countries.
4. Bioinformatic Models

PRASM bioinformatic network integrates bioinformation through blockchain. Its data model is designed to save bioinformation effectively and use it appropriately.

1) Kinds of Bioinformation

**Original information**
Original information is the information about a human body itself. Original information can be obtained through many different channels, and on

**Vivo activity**
Human bodies are dynamic and moving endlessly. The information about vivo activities occurring in different human bodies is integrated into a blockchain, as well.

**Environmental factors**
Human beings are affected by their environments. The platform, thus, collects information from environmental factors and researches their influence on human bodies.

**Wellness service**
Wellness services are available to improve your physical states and to better bodily functions.

**Kinds of participants**
Those who participate in the bioinformatic network are largely two groups: participants and solution providers. Participants create bioinformation and participate in the network while wellness solution providers provide wellness solutions through the platform. The solution providers are again broken down into two groups – direct solution providers and indirect solution providers. Direct solution providers communicate with users or offer solutions directly, such as consultants, trainers and medical staff. Indirect solution providers offer solutions without interactions with users, such as researchers at medical institutions, device developers and many different suppliers of products and services.

2) Layers of Bioinformation

Accounts, Raw Data & Acquisition Channels (Prevention of prejudices), Solutions, accumulation of a groups bioinformation

<table>
<thead>
<tr>
<th>Accounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>An account has a role. Basically, everyone has an account as a participant. Solution providers are given extra roles. Thus, it is possible that a person could have several accounts with varying roles.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Raw Data &amp; Acquisition Channels</th>
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<tbody>
<tr>
<td>Bioinformation includes not only the raw data that is measured and collected but also the channels and methods through which the data is measured. It is meant to identify the possible biases or errors that might occur according to the channels and methods through which the data is measured.</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Group Bioinformation</th>
</tr>
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<tbody>
<tr>
<td>Group bioinformation is formed as more participants’ bioinformation is accumulated. It’s possible to compare many different groups to explain an individual’s current state. This identifies the affecting factors out of the common natures between groups or the unique natures of a group, and to trace the changes of the physical states of a group, and to identify what influence some factors have on the groups.</td>
</tr>
</tbody>
</table>
4. Bioinformatic Models

Protocols & Solutions

AI diagnoses your physical state based on your bioinformation and suggests solutions for improvement.

It is made possible through protocols that are developed from the existing bioinformation data. What a participant selects, and puts into practice out of the suggestions, is again collected as data, which is evaluated to show how the information selected contributes to the participant’s health. During the whole process, AI continuously learns, upgrading its protocols.

Some solutions can be recommended to a participant according to the protocols. The participant selects and puts them into practice, and it is possible to figure out what significant changes the solutions make to the participant’s physical state. In case of services, the difference a service provides, from another provider in the same service, is also monitored.

3) Nodes of Bioinformation

Every participant plays the role of a node in the bioinformatic network. A participant connected to the network through a device he or she owns, shares data, and plays the node in a group genetically connected.

A solution provider becomes a bioinformatic node between his or her provided solutions. He or she also shares the bioinformation produced from his or her wellness examinations, services or products.
4) Ownership and Licenses of Bioinformation

<table>
<thead>
<tr>
<th>Bioinformation Ownership</th>
<th>Bioinformation License</th>
</tr>
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<tbody>
<tr>
<td>Bioinformation ownership lies with the one whose bioinformation is offered. Bioinformation defines its ownership in itself. Thus, bioinformation can be used to identify the owner.</td>
<td>A bioinformation owner is rewarded for the bioinformation shared. The one who wants to use a certain piece of bioinformation pays for the license of the bioinformation to the owner.</td>
</tr>
<tr>
<td>A bioinformation owner can be given rewards by sharing his or her bioinformation in the bioinformatic network. He or she can check the kinds of bioinformation shared, scopes of sharing, and the targets of sharing. The owner can control all of them.</td>
<td>The ownership has priority over its license, and the use of that information is provided to the owner. The ownership or license of the secondary information, made by processing a piece of bioinformation, lies with the one who makes the secondary information.</td>
</tr>
</tbody>
</table>

5. Architecture

- **Blockchain device**
  - the basic architecture that includes database, consensus algorithm and networks.

- **PRASM protocol**
  - a protocol for bioinformatics collection, integration and analysis. The protocol is operated and developed by AI.

- **PRASM platform**
  - a virtual space in which participants and solutions are connected Blockchain device + PRASM protocol + PRASM platform
6. Roadmap

2018 Q1
- Global Partnership Sign & Expansion - North America
- Global Partnership Sign & Expansion - Asia
- Development of IoT gateway for Bioinfo-monitoring, Development of Cannabinoid solutions

2018 Q2
- PSM exchange, Development of Decentralized Platform / AI-based protocol / microRNA personalized solution
- Token Sales and Listing, Establishment of Integrated Wellness Center
- Launched beta version of application for mobile devices, management system for solution providers

2019 Q1
- Issue amount and exchange rate
  - 4,000,000,000 tokens
  - (Token exchange rate 1 ETH=70,000)

7. PSM Token Issuances

Token Bonus

- PRE SALE: 10%
- EARLY BIRD SALE: 5%
- CROWD SALE: 0%

(BONUS rate due to period)
6. Roadmap & 7. PSM Token Issuances

(Bonus rate due to ETH contribution)
(This rate is applied during whole period.)

- From 1,000ETH under 3,000ETH: 5%
- From 3,000ETH under 5,000ETH: 7%
- From 5,000ETH: 10%

Bonus rate for institutional investors or angel investors who signed separated contract might be determined regardless of above conditions, in case, token sales could be closed before public pre sale and crowd sale.

Token Sales Period

- PRE SALE: 2018.05.28 03:00 ~ 2018.06.03 15:00
- EARLY BIRD SALE: 2018.06.03 16:00 ~ 2018.06.10 15:00
- CROWD SALE: 2018.06.10 16:00 ~ 2018.06.17 15:00

Token sale can be closed earlier by institutional investors and/or angel investors. In case that token is sold out during token sales period, token sales can be closed immediately. Tokens not sold during sales period will be burnt.

Token allocation

- 50%: Token sale, 2,000,000,000 tokens
- 10%: Reserve, 400,000,000 tokens
- 14%: Members & Advisors, 560,000,000 tokens
- 26%: Marketing & Strategy, 1,040,000,000 tokens
8. Members and Partners

**Tomoyuki Uchida PhD**
Dr. Tomoyuki Uchida is from Japan and completed doctoral program at the University of Tokyo. He was awarded Excellence award of Artificial Intelligence Society Study Group. He founded a start-up while studying abroad and succeeded in buying out to listed companies. He was CTO at Digital Garage and is CEO at Smart Trade.

**Mark A. Reder**
Mark A. Reder is a US attorney and medical tourism businessman. He does global legal consulting and is in charge of CLO at SkyMedicus which is well-known medical tourism company.

**Kwon, Yonghyun MD**
Dr. Kwon Yonghyun is a medical doctor, healer and entrepreneur from Korea. He graduated Korea University Medical College and completed Graduate School of Health Promotion. He has practiced aesthetic medicine and functional medicine at Bloom Clinic, took part in Humanscape as a co-founder. He is a founder and CEO at HALO Korea which is functional medicine based personalized healthcare start-up.

**Park Minsuk**
Park Minsuk is from Korea and builds professional career at several global corporations and start-ups. He has managed brand development and has launched many brands successfully.

**Raymond Kurshals**
Raymond Kurshals is from U.S and well-known master of pilates. He has been an Olympic coach, certified Chiropractic/Osteopathic practitioner and professor of Ohio State University and Boulder University. He is in charge of CEO of Santa Fe Pilates center.

**Kim Sungjin**
Kim Sungjin is from Korea and is a famous serial entrepreneur in healthcare industry.

**Myung, Kyungsu**
Myung, Kyungsu is from Korea, Embedded system engineer & entrepreneur.

**Edwin Chang MD**
Dr. Edwin Chang is from Malaysia and a doctor of family medicine and an stem cell expert who has more than 15 years of clinical experience. He trains doctors in several academy and advises global medical equipment and pharmaceutical companies. He is an owner doctor of Klinik Mediskin.

**Kim, Jinhong**
Kim Jinhong is an energy healer and meditation instructor from Korea. He is certified Access CF, CEO of Reconnective Healing center in Korea and rising star in Korean meditation industry.

**Tan Ti Kai MD**
Dr. Tan Ti Kai is from Malaysia and a medical doctor who specialized for aesthetic and functional medicine. He was trained Malaysian National University Hospital, has been in charge of medical director at Dita clinic, KM clinic and Monarch Medispa.
8. Members and Partners

**ADVISER**

**Bill Choi**
Bill Choi is from Canada and has been executive for more than 25 years in energy sector of North Americas and Asia. He is vice president of Canadian Council of Commerce in Korea and CEO of G&G Global Solutions. He has advised global companies such as SK energy, Petro-Canada and Sunoco.

**Terence Loh**
Terence Loh is from Singapore, takes charge of asset management in Northern Asia region at J.P. Morgan. He co-founded Dorr fund, Blue Run ventures, Vision Knight fund and administer asset of 4 billion USD to invest in IT, Retail, Media and Healthcare sector. He is CEO and Co-founder of Novena Global Lifecare Group.

**Park, Hyunsuk**
Park Hyunsuk is an entrepreneur from Korea and selected as ‘30 under 30’ of 2017 by Forbes.

**Marco Poliquin**
Marco Poliquin is from Canada and build a career of IT development. He takes part in blockchain project such as NapoleonX and Aitheon and is an advisor for Asobi Coin.

**PARTNER**

**ASIA CANNABINOID RESEARCH**
http://www.asianlink.com

**DNA Link**
http://www.dnalink.com

**Nuri Bio**
http://www.nuribio.com

**HALO**
http://www.haloheal.com

**NOVENA GLOBAL LIFECARE**
http://www.novenalifecare.com

**NOVI medical aesthetics**
http://www.novimedical.com

**YORKBRIDGE**
http://yorkbridgecapital.ca

**Blockchain Times**
http://www.blockchaintime.co.kr

**Pilates Santa Fe**
http://www.pilatesantafe.com

**SUNIN BIO**
http://www.suninbio.com

**klinikmediskin**
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**CREATIP**
http://creativips.com

**FITFLOW**
http://www.fitflow.com

**SMART TRADE**
https://smarttrade.com.ph

**SU medical**
http://www.sun-medical.co.kr

**SKYMEDICUS**
http://www.skymedicus.com

**HMP Law**
http://www.hmplaw.com

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9. Others (Legal Issues, etc.)

Any information in this document (henceforth “White Paper”) shall be available only for those who have received it for the sole purpose of evaluating PRASM and PSM tokens.

PRASM (including PRASM foundation, its members, employees, and subsidiaries) has this White Paper to provide detailed information about the team and the platform the PRASM team is planning to create to those who have keen interest in PRASM. Therefore, this White Paper is not intended to solicit investment to PRASM team or platform. As this White Paper is based on information of the time when it was written, there is no guarantee that any information contained herein will be relevant in the future as well.

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In a case where you have used (including, but not limited to, referring to or having as a basis) this White Paper to, inter alia, make your own decisions, you are responsible for all of the consequences regardless of whether they are advantageous or disadvantageous. In other words, you should be aware that the PRASM team shall not compensate, indemnify, or take responsibility in any way for any damage, loss or debt, etc. that incurs to you as a result of using this White Paper.

**Anti Money Laundering (AML) Act**

Buyers must agree to not be engaged in money laundering, illegal currency trade, and any other prohibited activities in any way through PSM tokens of PRASM or other related derivatives (if any). Each participant should be aware of the fact that they are not allowed to, directly or indirectly, sell, exchange, or dispose of PSM tokens and other related derivatives for the purpose of money laundering.

**02 Important Issues**

Due to frequent change in related policies, laws, regulations, technology, economy, and other factors, information contained herein may not be accurate, reliable, or final and may be subject to changes. This White Paper is provided only as a reference. The PRASM team does not take any responsibility for accuracy and legitimacy of the information provided. If you want to participate in the platform, you should not solely depend on the information in this White Paper. We recommend participants conduct their own research before sponsoring.

In essence, this White Paper is a business proposal or promotional material and is not legally binding in any case. All information set out herein is only for reference, and token buyers should take extra caution for themselves.