



REBIT

**Keyboard based
Big Data & AI Advertisement
Blockchain Platform**

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www.rebitai.com

INDEX

Preface

1. Market Potential

1.1 Big Data

- 1.1.1. Big Data Market Status
- 1.1.2. Big Data Market Size
- 1.1.3. Problems of the Big Data Industry

1.2 Digital Advertising

- 1.2.1 Digital Advertising Market Status
- 1.2.2 Digital Advertising Market Size
- 1.2.3 Problems in the Digital Advertising Industry

1.3 Competitiveness of REBIT

- 1.3.1 Competitiveness in the Big Data Market
- 1.3.2 Competitiveness in the Digital Advertising Market

2. Introduction to REBIT

2.1 REBIT Ecosystem

- 2.1.1 Ecosystem Participants
- 2.1.2 Ecosystem Expansion

2.2 REBIT Products

- 2.2.1 REBIT Keyboard (Input Solution)
- 2.2.2 REBIT Phoenix (Big Data & AI Solution)
- 2.2.3 Cash Board (Big Data & AI Solution & Blockchain)

2.3 REBIT Business Model

- 2.3.1 Main Business Model
- 2.3.2 Extended Business Model

3. Token Economy

3.1 Token Mechanism

3.1.1 Keyboard Token (KEYT)

3.1.2 Keyboard Cash (KEYC)

3.1.3 Keyboard Point (KEYP)

3.2 Token Flow

3.3 Token Information

3.3.1 Token Allocation

3.3.2 Use of Proceeds

4. REBIT Technology

4.1 Keyboard

4.1.1 RLMT

4.1.2 Neural Network

4.1.3 AI Language Model

4.1.4 Performance

4.2 Phoenix (Big Data & AI)

4.2.1 Cloud System

4.2.1 Big Data Processing System

4.2.3 AI System

4.3 AD Tech

4.3.1 AD Tech Configuration

4.4 Patents

4.4.1 Korean Patent Application

4.4.2 PCT Application

5. Milestone

6. Team & Advisor

6.1 Team

6.2 Advisor

Legal Notice

Preface

Keyboard is the First gateway of data to digital platform

In the mobile era, the smartphone keyboard is a communication tool deeply embedded in our daily life. Since we communicate our emotions and thoughts through keyboard, it wouldn't be an exaggeration to say the keyboard is the beginning of most data.

Due to the development of mobile and internet technologies and spread of social media services, the amount of data generated by smartphones has increased exponentially, and the conventional quantitative technique is at its limit to analyze all the data from smartphones. Therefore, there are growing interests on collecting unstructured data generated through smartphones, analyzing the collected data, and utilizing the data in the actual services.

However, it lacks efficient ways to collect unstructured data generated from the smartphone. So, the majority of companies can only utilize the structured data input from their own platforms. Also, in order to take advantage of big data, advanced analytical algorithms are required. So, it is hard to process the collected data into meaningful information, and it is even harder to integrate big data in the actual services for commercialization.

The REBIT project will enable all enterprises to easily **1) collect data**, and **2) efficiently utilize big data**. Combining unstructured data from smartphones with structured data from companies can generate explosive synergies and provide companies with more opportunities.

- 1) **“REBIT Keyboard”** is an input solution for smartphone data collection.
It is a proprietary keyboard input solution based on keyboard engine developed for Samsung Electronics' **Galaxy 8 ~ 10 models**.
- 2) **“REBIT Phoenix”** is an artificial intelligence solution for big data utilization.
It is an artificial intelligence solution that enables targeted marketing by determining interests and intentions of users by analyzing big data from input solution.

The REBIT solution will present a new blueprint for data and digital advertising industries, and together with blockchain technology, it will create an ecosystem which will allow global expansion and win-win for participating individuals and companies.

1. Market Potential

1. 1 Big Data

1.1.1 Big Data Market Status

As global competition intensifies, many companies in various fields are working hard to create new values. In particular, after the 4th Industrial Revolution, data is transforming into a new paradigm in business. Converging with artificial intelligence technology, the scope of data use is rapidly expanding in almost all fields such as product development, marketing, and customer relations.

Big data is being actively adopted throughout management of enterprises as well as small and medium businesses, and national administration. Big Data is not only subject of academic research but it is also being used in our daily life; It is being used in existing services and products creating new added values.

In addition, huge amounts of data are being produced more rapidly in the mobile era and enterprises are focusing more on finding applications for big data that came from mobile phones in order to lead the market. The big data market is also evolving from the data analysis based on clear schema and calculable structured data to forecasts & optimization analysis that are based on artificial intelligence, unclear schema, and unstructured big data that is difficult to calculate.

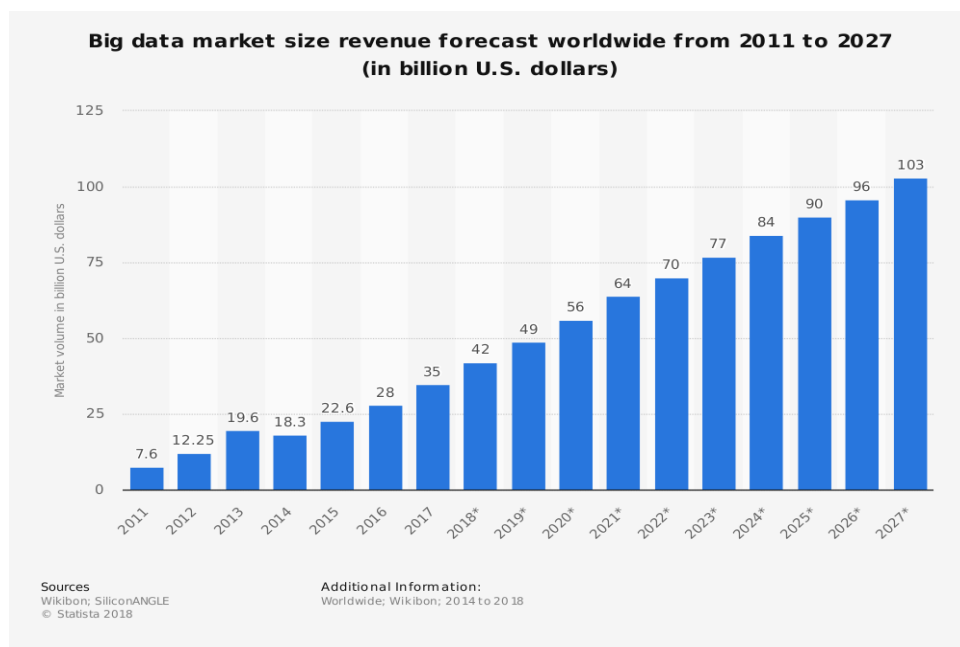
According to market research firm IDC, Big Data is expected to reach 44 zettabytes ($1\text{ZB}=10^9\text{TB}=10^{21}\text{Bytes}$) by 2020, of which unstructured data will reach 90%. Recognizing that 80% of current big data is unstructured data reveals the importance and value of unstructured data collection and analysis.

As the importance and needs of big data in the market grow, many companies will find ways to utilize big data. As a consequence, related businesses will continue to grow. In addition, the unstructured data market, which can provide future behavior predictions and marketing insights, is growing rapidly as well. Also, in order to process large data sets in real time, importance of artificial intelligence and natural language processing technologies is rising.

1 .1. 2 Big Data Market Size

According to Wikibon, Big data market in software and service areas will grow annually 11.4% on average from US\$ 42 billion in 2018 and will reach US\$ 103 billion in 2027. The size of the unstructured big data analysis market is expected to reach \$ 18.02 billion by 2025 from about \$ 2.59 billion in 2016. According to Global management consulting firm McKinsey, the potential economic value of big data is estimated to be a minimum of US\$3.2 trillion to US\$5.4 trillion.

The Korean big data market continues to grow rapidly, according to market analyst firm IDC, and it is expected to grow by 10.9% annually over the next five years to \$ 2.1 billion by 2022.



[Figure 1] Big data Market Size

1 .1. 3 Problems of Big Data Industry

“The amount of data generated by digital devices will increase to about 40% by 2020, but most of them will be lost without analysis.”

Big data is regarded as crude oil of the 21st century. Just like unprocessed crude oil, big data without any analysis is not useful. Many companies are focused on analyzing and utilizing big data. 90% of business leaders consider big data as core resource and fundamental differentiating factor just like talented personnel and capital.

However, there are still only a few companies that use big data properly due to issues such as data collection, system construction, lack of experts, and cost burden, and most companies use existing structured data only or do not use data at all.

The big data market is expected to grow faster and more steadily with the introduction of solutions which make it easier, faster and more efficient to collect and utilize big data.

1.2 Digital Advertising

1.2.1 Digital Advertising Market Status

Existing advertising markets such as TVs, newspapers, PCs, etc. continue to decline, while the digital advertising market continues to grow with the change in usage trend of the media and the expansion of the mobile advertising market. Digital advertising market growth and increasing advertisement amount made the traditional way of advertising inefficient.

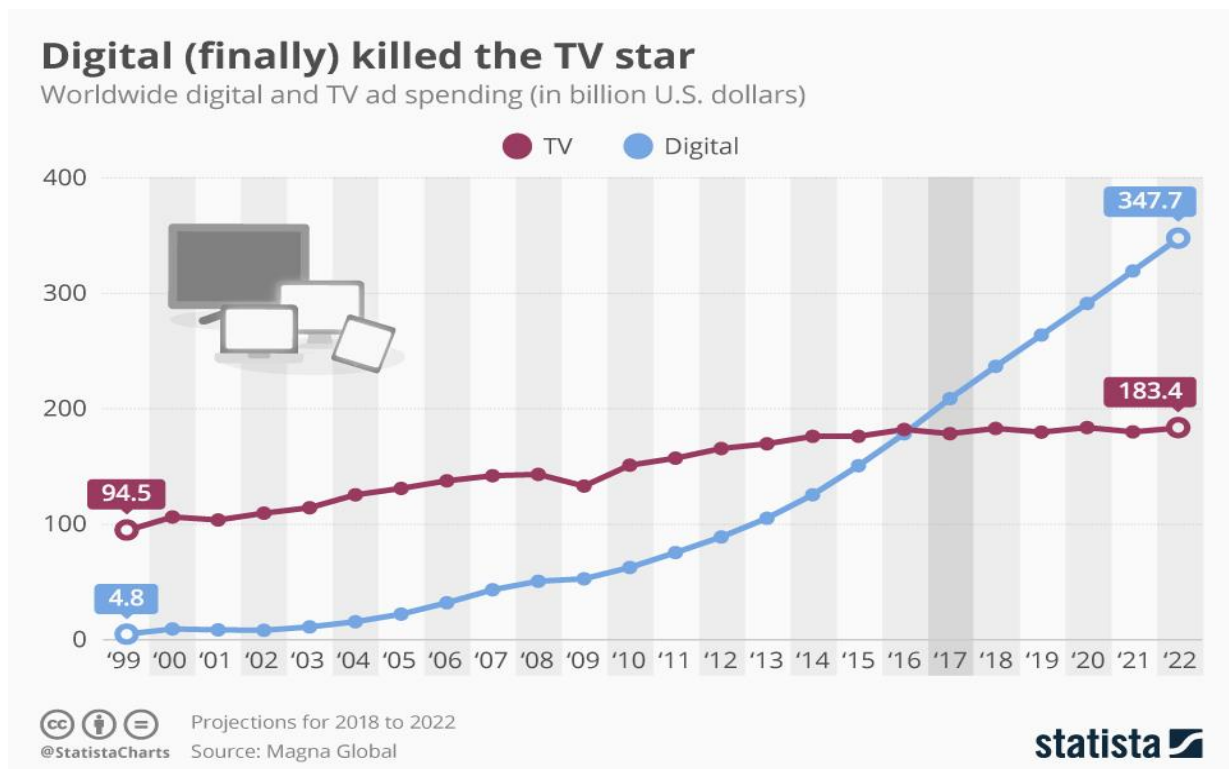
In the digital advertising market, trading advertisement products is becoming automated by using programmatic advertisement method which is based on data analysis and targeting technology. Also increasing number of media types. such as videos, native advertisements. and increasing usage of data, digital advertising is growing as more efficient advertisement products compare to traditional ones.

In addition, in order to use programmatic advertising more effectively, there is a growing interest in data-based digital advertising. DMP (the Data Management Platform) advertising market is becoming active by using data analysis of user behavior information, and demographic information. Tencent announced in May 2015 DMP business as the next core business, and by utilizing unstructured data from Chinese people, Tencent entered US market in September 2017.

In addition, the utilization of big data and artificial intelligence is expected to become more important as necessity of highly efficient advertising method grows and the accuracy of data for targeting is becoming more important.

1.2. 2 Digital Advertising Market Size

According Magna Global report, digital advertising spending in year 2017 was US\$ 207 billion consisting 41% of total spending. By 2020, digital advertisement spending will be over 50% and is expected to reach US\$ 300 billion. In addition, the DMP (Data Management Platform) market, a data platform that provides source data for audience targeting, is expected to grow 15% annually, reaching US\$ 3 billion by 2023.



[Figure 2] Digital Market Size

1.2. 3 Problems in the Digital Advertising Industry

Due to growing digital advertising market, advertisement amount exposed to users are growing exponentially, and efficiency of advertisement is gradually deteriorating. DMP advertising can be a solution for some extent, but in order to use them effectively, there are a lot of problems in data accumulation, analysis capabilities and advertising operations.

In addition, in the digital advertising market, which is dominated by several global companies such as Google and Facebook, users do not receive adequate compensation for advertisements, and the most of the profits are taken by those companies. Of course, there has been reward apps from the beginning of digital advertising market giving users rewards by watching or performing missions, but they are extremely low portion in overall digital advertising market. Also, many users of rewards app are cherry pickers causing low retention rates and sales.

If data-based high-efficiency advertising products and appropriate user reward systems are established, the digital advertising market will grow further but in order to do that technical constraints will have to be preceded.

1.3 Competitiveness of REBIT

“Google knows users’ interests. Facebook knows who their users are. Amazon knows what customers buy.” Since these companies can utilize the information, it makes them the most competitive companies in the world. If companies can collect these data and use it, it is obvious that they will gain a strong competitive edge.

If **REBIT Keyboard** can provide means to collect big data and **REBIT Phoenix** can efficiently utilize big data, we will know the intentions and patterns of consumers and make optimal decisions and perform optimal marketing activities.

With REBIT solutions, all of these will be made easier, faster and more cost effective, creating an ecosystem that everyone can benefit from and which will give us a competitive advantage in the big data and digital advertising markets.

1. 3.1 Competitiveness in The Big Data Market,

Companies are using data for a variety of objectives, such as revenue growths, decision-makings, developments, and services.

Purpose of Analysis		Usage Example	Business Issue	Analysis Objective
Growth	-Revenue Growth (Marketing, Sales)	-Identify potential customer -Identify churn customer	-Reduce cost	-Customer centered performance
Strengthen	-Discover wrongful activity (Prevent Abusing)	-Identify suspicious candidate	-Improve security -Improve Risk management	-Risk & financial management
Improvement	-Production, Test, Maintenance (Improve Capabilities)	-Risk Management	-Process efficiency	-Operation optimization -Strengthen cooperation
Satisfaction	-Offer better price of products (timely response)	-Strategy, Marketing	-Target Marketing -Improve customer experience	- Customer centered performance
Learning	New Market Development	-DB Business -Create New BM	-Enter new business -Information monetization	New business

Source: Gartner (2013), IBM (2012)

For above reasons, usages of big data are gradually growing by many companies, and due to increasing internet speed and number of mobile devices, the importance of usage of big data on individual users are increasing. By combining structured and unstructured data. companies are having deeper understanding of their customers, and are able to make data-driven service based on past history, accurate behavior

prediction, and effective monitoring. These will accelerate development of business beyond expectation. Precise audience targeting through in-depth analysis of individual users can open up endless possibilities such as optimized information feeds and customized contents configurations.

REBIT's solution will provide so-called **servitization** by combining data and existing products & services, and it will read customers mind and predict future for companies and further more create more value to the companies by providing a new direction and a blueprint.

1.3. 2 Competitiveness in the Digital Advertising Market

Unlike TV which is used as a shared media for multiple people, mobile device is strictly personalized media, and for that reason precise targeting to create better value is very important factor. Amazon, which is growing rapidly in the global digital advertising market, uses data-based advertising to catch up leading companies like Google and Facebook; Case like this shows importance of data-based advertisement.

Since most of the unstructured data is generated through smartphones, the “REBIT Keyboard” and “REBIT Phoenix” will enable us to know the intentions and patterns of consumers, and using these data efficiently will allow REBIT digital advertisement products and services more attractive than any other products in the market.

a) High Conversion Rate

By using big data and artificial intelligence, REBIT solution will make precise analysis on the user's intent and pattern, and it will allow timely exposure of customized advertisement. Therefore, advertisement will no longer be a spam for the users, but a useful information which will dramatically increase conversion rates and purchase rates.

b) Active Participation Through User Rewards

If a portion of sales is rewarded according to user contribution, users will become active participants and promoters, which will be a big driver for the digital advertising market. Unlike existing advertisement system where advertising company takes all the profits, REBIT solution will benefit all of the ecosystem participants. Users will be rewarded just by providing simple patterns. Such reward system will be realized more concretely and realistically through blockchain technology and global service will also be possible. Companies will also be active participants in the ecosystem because of high conversion rates and retention rates.

2. Introduction to REBIT



REBIT aims to be a global platform business basing on BlockChain technology, “REBIT Keyboard”, and big data & artificial intelligence system called “Phoenix”.

All participants in REBIT platform will earn rewards based on their contributions. REBIT Keyboard users will receive **REBIT Tokens as rewards**, and companies wishing to use the REBIT solution must **pay with REBIT token**. In order to expand the REBIT platform, partners in various business areas will participate, and all participants will benefit from REBIT platform enabling it to grow continuously.

As the first mover of keyboard blockchain and basing on advanced technology of REBIT Solution, we plan to expand into various new businesses such as data business, digital advertising, solution, and content distribution, and we will bring successful business performances. Based on these achievements, REBIT token will be used in many areas, and consequently the demand for the token will increase.

2.1 REBIT Eco System

REBIT ecosystem consists of 3 elements: the " user" who uses the input solution, the " partner " who uses REBIT Solution and “Phoenix” which is big data & artificial intelligence solution of REBIT. Members benefit from each other through various activities and partnerships within REBIT and form an organic business relationship of value production and redistribution



[Figure 3] REBIT Eco System Flow

2. 1.1 Ecosystem Participants

a) Users

Users are customers who installed and use REBIT Keyboard in their smartphones. Word patterns generated by the input solution are stored on the server as non-identifiable data and become the big data that is the basis of the REBIT ecosystem. Users will use REBIT's input solution and receive a REBIT token as a reward for the pattern data. All the people who use digital devices are potential user of REBIT.

b) Partners

Partners are the customers who pay for using “Phoenix”, the big data & AI solution, with REBIT's tokens. Partners can execute high performance advertisements to targeted REBIT user, or start new business through combining unstructured data and structured data which they possess. Also, in the REBIT platform, various activities such as shopping and digital distribution are possible, thereby enabling new types of marketing activities through the platform. Therefore, REBIT partner not only can have normal product exposure but also various options such as cross exposure, direct inflow, and publishing.

2. 1.2 Ecosystem Expansion

The outstanding functionality and reward system of REBIT's solutions will benefit all ecosystem participants, and REBIT users and partners will continue to grow.

a) Expansion through Functionality

Usually in low-end smartphones, keyboard solutions and languages are not well supported especially in Southeast Asia and South America. Now users can experience Samsung-quality keyboard in those low-end smartphones with REBIT Keyboard. The ability to provide 143 languages is big advantage for scalability and competitiveness.

b) Expansion through Rewards

Keyboard Token (KEYT), which is rewarded to users using REBIT solution, can be used as a powerful tool for global expansion because it can be cashed out through crypto exchanges around the world; Users can earn tokens through various activities on the platform becoming active participants and help platform to grow.

c) New Business

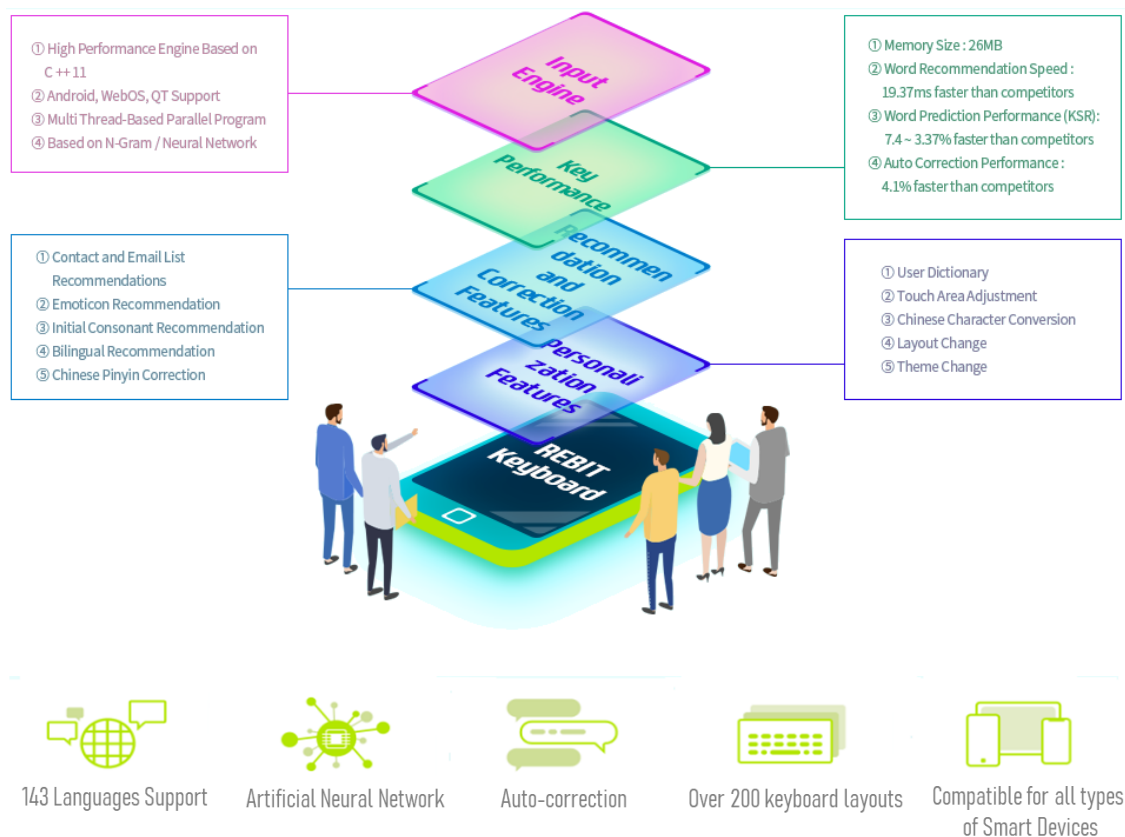
Device identification and KYC certification, which prevent double counting and abusing, will allow us to open new businesses. With Identify authentication various new services such as survey, ranking, real-time search, and voting services can be possible, and these new services will bring more rewards to REBIT users.

2.2 REBIT Products

2.2.1 REBIT Keyboard (Input Solution)

REBIT Keyboard, developed since 2013, is a virtual keyboard for smartphones and other smart devices. “A-Keyboard”, previous name for REBIT Keyboard, has advanced functions such as supports for all type of devices, 143 languages support, auto correction and recommendation, and it is the default keyboard solution for **the Samsung Mobile Phones Galaxy S 8~10** proving its advance technology.

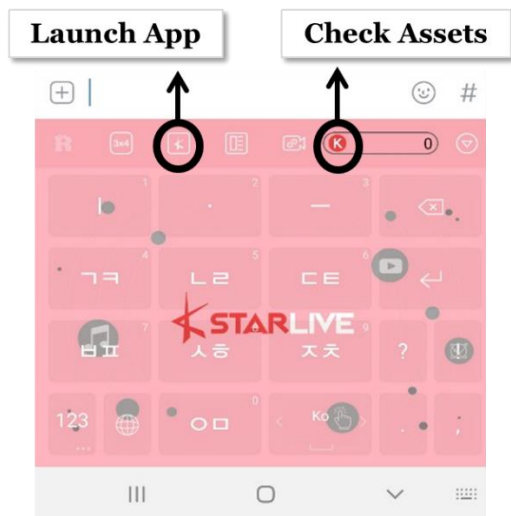
REBIT “A-Keyboard” started its service in Google Store since November 2018 and in April 2020, Daily Active Users (DAU) became **70,000**. Without any marketing users are growing purely because of excellent functionalities of REBIT Keyboard.



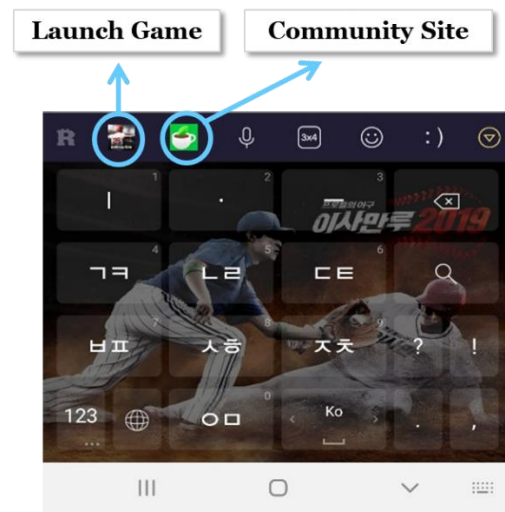
[Figure 4] REBIT Keyboard system

Also since the second quarter of 2019, Partner Keyboards for our affiliated companies have launched. We have contracted with 22 companies for Partner Keyboards including Isamanru game of NetMarble, the company which has market

cap of KRW 8 trillion, and Kstar Live which has 10 million members. In the future, we plan to expand more Partner Keyboard services across various fields.



[Kstar Live Keyboard]



[Isamanru Keyboard]

“Cash Board”, which combines AD Tech and blockchain technology with REBIT Keyboard, will launch in Korea in the forth quarter of 2019, and we expand it as a global service.

a) Input

REBIT Keyboard uses **artificial neural network** which is advanced form of language model basing on statistical learning of N-Gram method; Recognizing the user's intensions and context, it recommends appropriate words or enable users to correct and edit.



b) Language Package

REBIT Keyboard **supports 143 languages world-wide** and by 2019, up to 160 languages will be supported. In addition, for each language **more than 200 keyboard layouts** are optimized, and more than 200 background themes are provided.

Optimized keyboards supporting world-wide Languages	212 languages support considering input habits
Quick and Precise Input	Avg. 17.62% better suggestions and avg. 9.66% better auto correction
Ease of Use	customer satisfaction of 4.9 in market reviews
Shortcut button	Shortcut button to Apps, services, and ads
Various themes	Approx. 200 basic themes and user customizable themes



English(US) QWERTY



Hindi Default



中國語 3x4



Arabic 3X4 Simple



አማራይስጵ Default



한국어 QWERTY

2.2.2 REBIT Phoenix (Big Data & AI Solutions)

Phoenix, REBIT's big data & AI solution, is a big data based AI solution developed since 2013 to analyze behavioral data such as user interests and intentions and predict future behavior. Phoenix consists of a cloud system that collects and stores data, an analytics system that processes the collected big data, and an artificial intelligence system that helps target marketing.

The cloud system consists of data collection, real-time storage, data processing and distributed storage, governance technology, and load balancing technology. The analysis system consists of natural language processing, unstructured and structured data integration and analysis technology, and the artificial intelligence system consists of pattern analysis and advance data processing. Through Phoenix, meaningless data becomes significant information and this will allow additional revenues and activities using targeted marketing and DB.

a) Data Visualization

The data is being visualized which helps to obtain a variety of information and allow quick decision making. Below is the data visualization map of June 12, 2019, where U-20 Men's World Cup soccer semifinals took place.



[Figure 5] REBIT Data Category

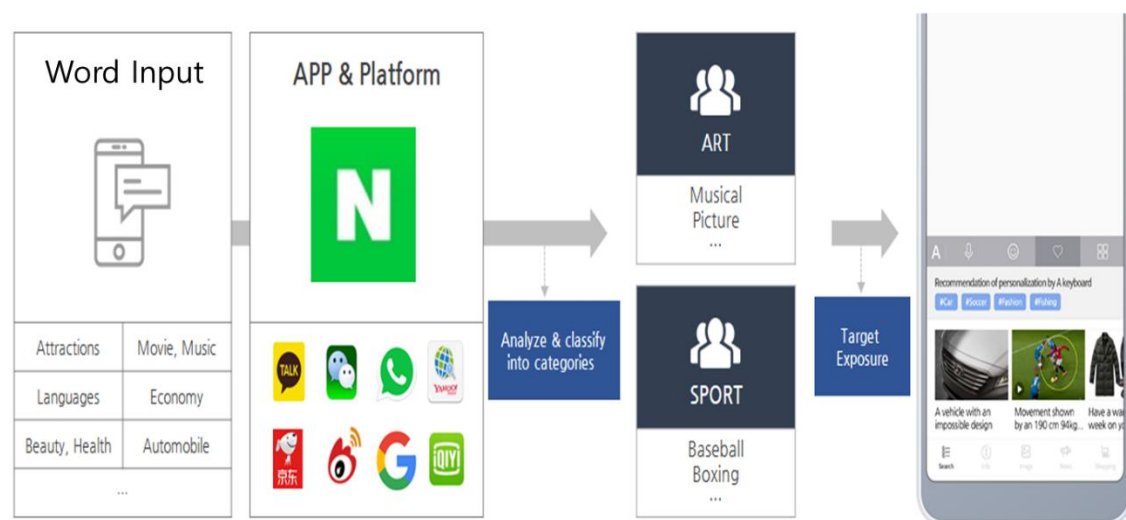
b) Data Category

Data is divided in **12 main categories** such as art, computer, economic, education, etc. Main categories are divided in **144 sub categories** and stored in the system.

ART	COMPUTER	ECONOMY	EDUCATION
Musical Picture Theater ...	Hardware Internet Security ...	Business Financial Trade ...	History Science Math ...
ENTERTAINMENT	GAME	HEALTH	LEISURE
Animation Movie Drama ...	PC game Video game Mobile game ...	Dentist Internal-medicine Plastic surgery ...	Camping Fishing Climbing ...
LIFE	POLITIC	SOCIAL	SPORT
Beauty Travel Food ...	Diplomacy Agency Election ...	Culture Religion Welfare ...	Baseball Boxing Golf ...

[Figure 6] REBIT Data Category

In addition, the data collected through keystroke of user is classified by its source like APPs or other platforms, and the classified data is analyzed using an artificial intelligence algorithm and can be used for various purposes such as target marketing and recommendation system.



[Figure 7] REBIT Data Category Sample

2. 2 .3 Cash Board (Big Data & AI & Blockchain)

Cash Board a global reward platform that combines input solution and blockchain technology. Cash Board consists of input solution of REBIT keyboard and AI solution of Phoenix. Cash Board is the world 's first typing proof tokens which user can earn by typing in mobile phone just by typing.

Based on its strong technology and first mover's advantage, Cash Board plans to expand into various businesses such as data business , digital advertising , and app tech .

a) Cash Board

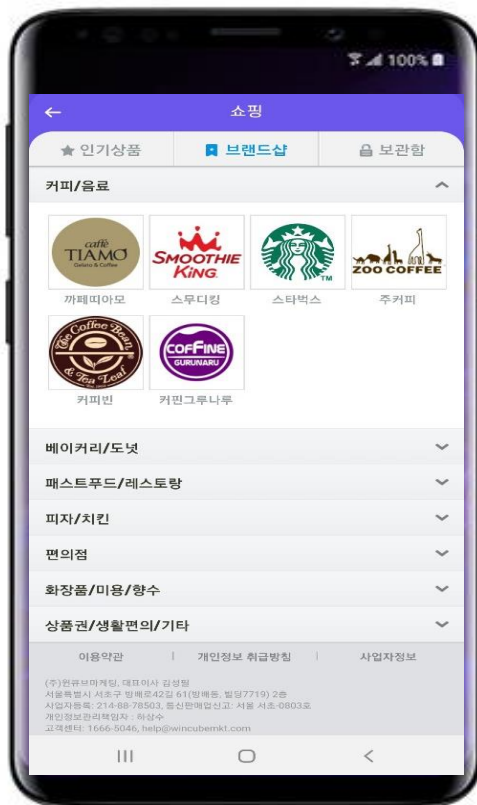
Cash Board users can earn keyboard points just by using mobile phone keyboard and can exchange points for keyboard tokens. Starting in Korea in October 2019, we expand it as a global service..



b) REBIT Wallet

Points and tokens earned by using Cash Board can be stored and transferred by using REBIT Wallet. Other than the wallet function, shopping, gaming, ad reward and various other functions are available. User can sign up after authentication process.





[Shopping]

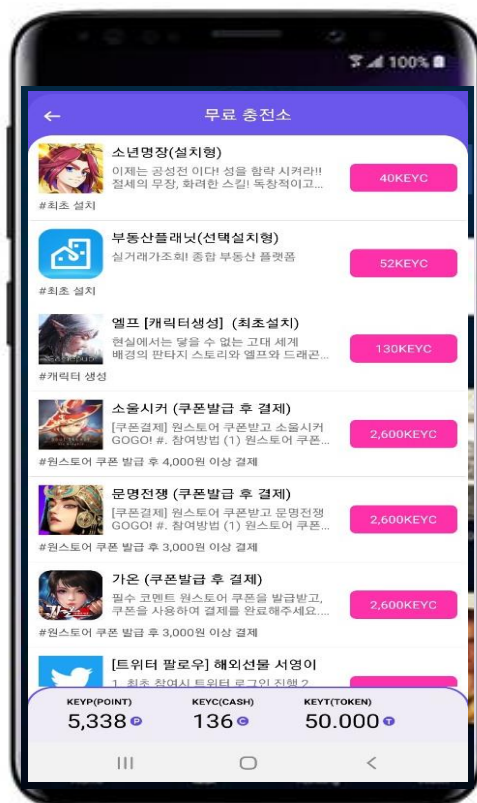
c) Various Content Services

> Various digital contents such as game, webtoon and music can be used.

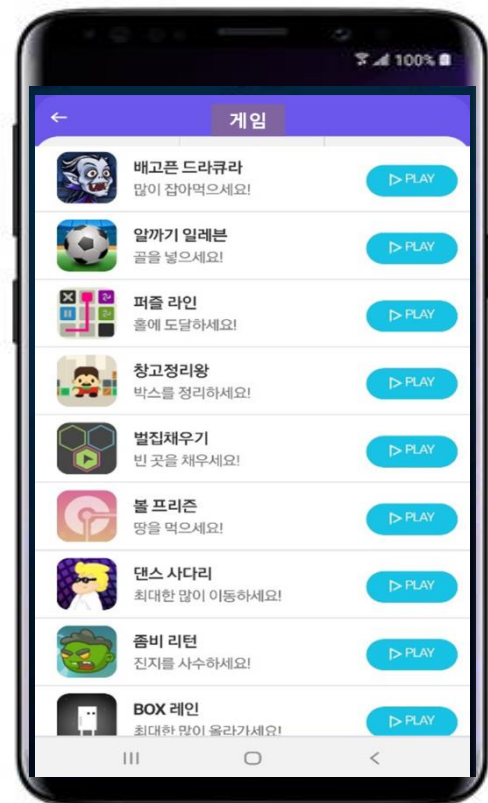
> Real items can be purchased by using Keyboard Cash.

> Customized contents can be provided basing on user patterns saved in REBIT platform.

> Real time service, survey, and poll service can be provide according to user categorization.



[Free charge]



[Game]

2.3 REBIT Business Model

2.3.1 Main Business Model

REBIT's main business consists of **data business and digital advertising business**, and both businesses are based on REBIT solutions

The data business combines REBIT's solutions with products and services of customer companies, enabling the advancement of their existing services, additional revenue incomes and varieties of new businesses. It is also a high value-added business that can be extended from data utilization to data sales.

In digital advertising business, REBIT solution allows exact targeting by analyzing the intent and pattern of users, and based on this we will expand as a more accurate and efficient digital advertising business.

In addition, we plan to expand into various types of additional businesses such as blockchain platform business, big data package products, and content related business.



Data Biz

1. Integration with existing products and services
 - Servitization by combining service and Big data
1. Company (Structured data)+ReBit(Unstructured data)
=Comprehensive Data Business
2. Expectation
 - Product sales, customized service, customer lock-in, increase in customer



AD Biz

1. Audience Targeting Digital AD
 - Timely prediction of customer needs through pattern analysis
1. Data Management Platform (DMP) business
 - Data based ad, data sales
1. Expectation
 - High conversion and retention rate, High performance exposure

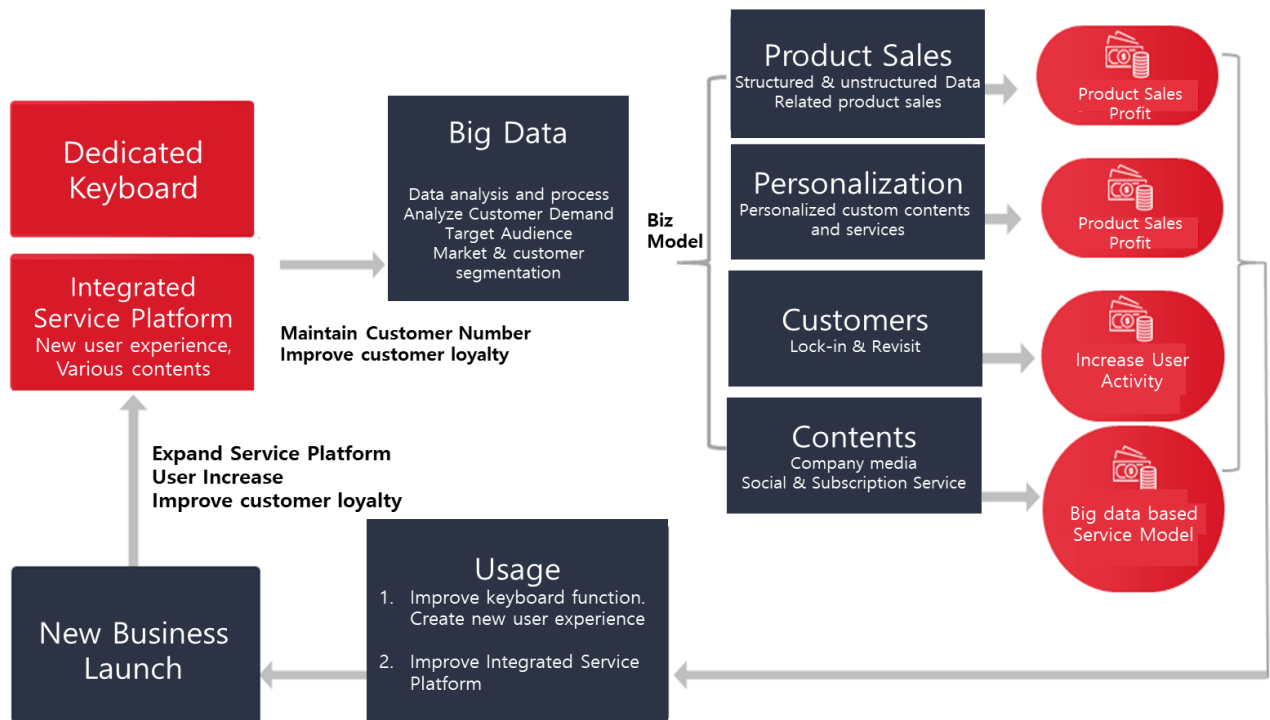


Extended Biz

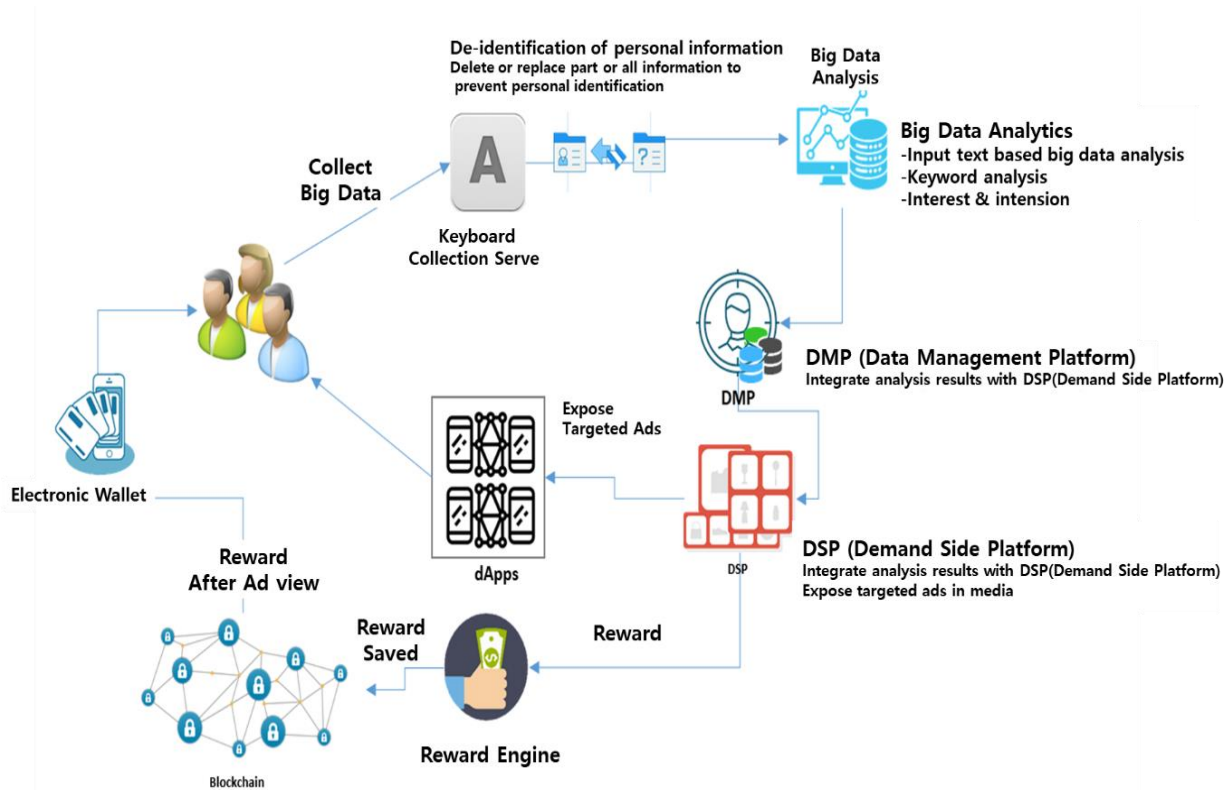
1. Big data package products for small medium service companies
2. Platform business (Digital contents and store)

The basic overview and process of the data and digital advertising business consists of the following forms and can be changed flexibly according to the type of services and products.

a) Data Business Framework



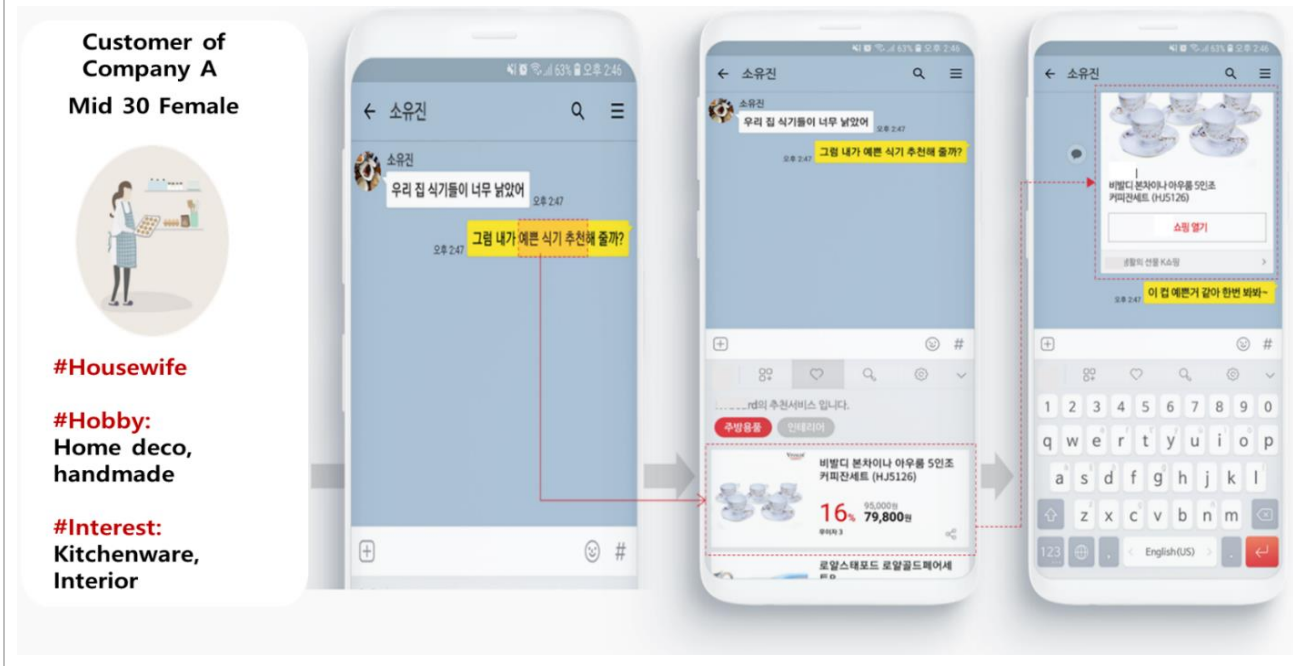
b) AD Business Framework



c) Application Examples

Personalized Recommendation Service

Exposure of personalized custom information and ads through combining corporate structured data with keyboard unstructured data



Real-time content recommendation service

Receive real-time content and information related to keywords entered by users



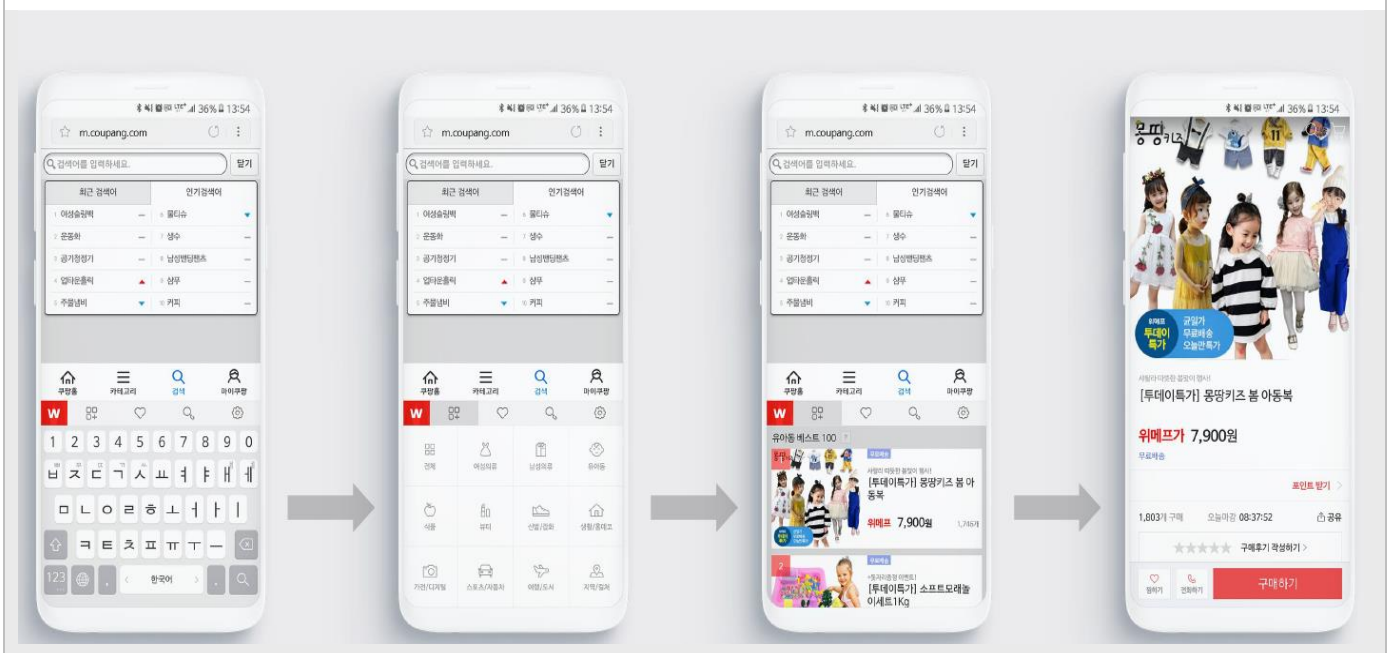
Real Time Targeting Ads Feature

Shows targeted ads according to particular keywords



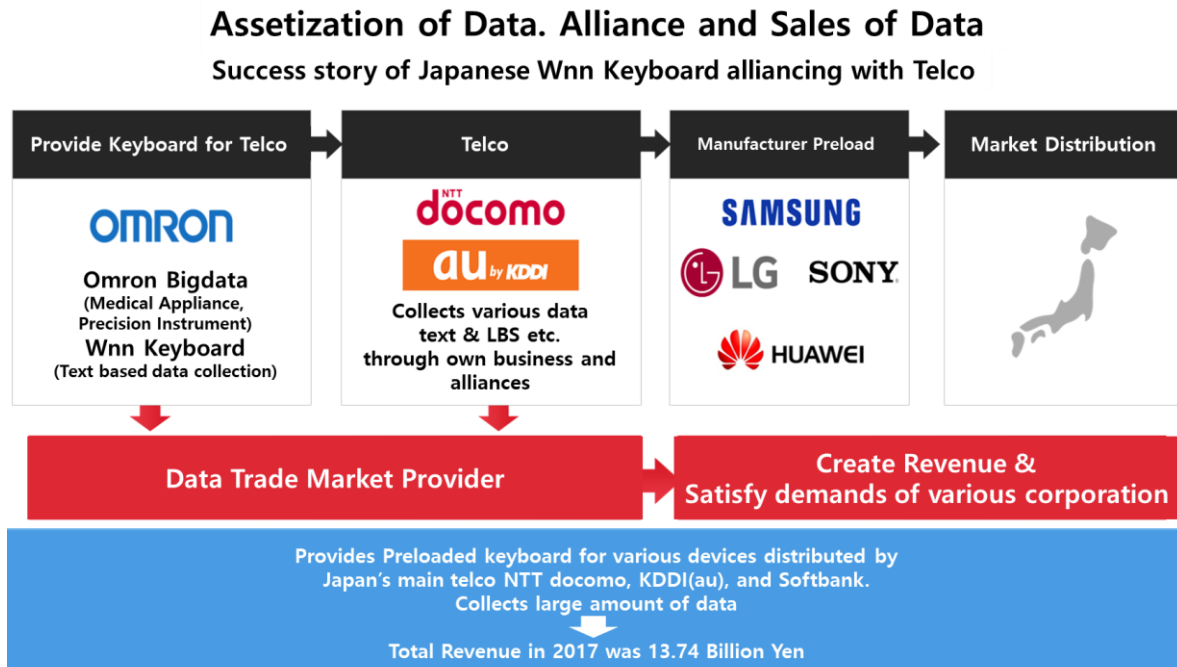
Application linkage function

A single touch can be linked to various applications



2.3.2 Extended Business Model

We will expand into various businesses such as data sales, blockchain platform and data package solution etc. by utilizing data.



In blockchain platform, we plan to carry out services such as “digital content” business including games and webtoons and “blockchain market” that can distribute blockchain-based content .

a) Big Data Package Products

Three types of big data package products for small and medium businesses.

b) Participatory Services

The REBIT platform, basing on device authentication and, provides user-trusted “participatory service” such as real-time search queries, electronic voting, and surveys .

c) Digital Content

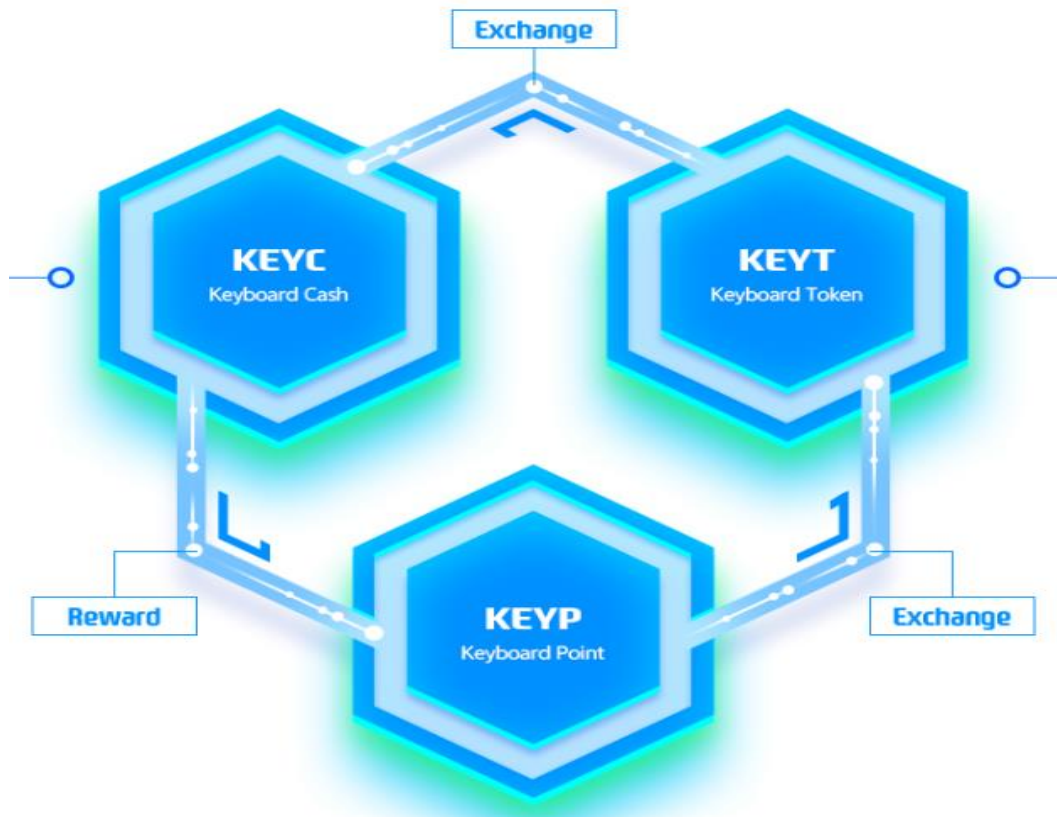
Digital contents services such as games, webtoons and music which can be purchased with Keyboard Cash.

d) Blockchain Market

It can be a place for the promotion or exchange of new coins. It will provide the promotion and download service for blockchain based products.

3. Token Economy

3.1 Token Mechanism



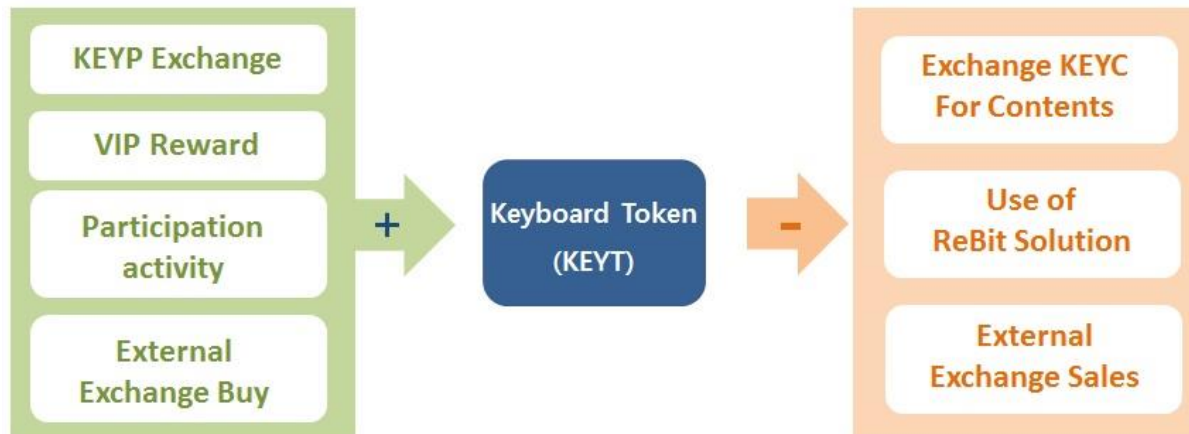
[Figure 8] REBIT Token Basic Form

REBIT tokens consists of **Keyboard Point (KEYP)** , **Keyboard, Token (KEYT)**, **Keyboard Cash (KEYC)**. All members participating in REBIT ecosystem can acquire different kinds of tokens according to REBIT's services and contributions, and the tokens can be used for various products and activities such as digital content, shopping, and sales.

In addition, the three tokens can be exchanged and acquired, encouraging the active participation of ecosystem participants, and allowing a virtuous cycle of token economy.

Each of token can be exchanged automatically in REBIT's trading system by the conditions specified. The acquired KEYP, KEYT, and KEYC are stored in the REBIT wallet, and the REBIT wallet can only be used when Cash Board, REBIT's blockchain input solution, is activated as the main keyboard.

3. 1. 1 Keyboard Token (KEYT)



[Figure 9] KEYT Basic Form

KEYT can be traded and monetized between users through **external exchanges**, and it is based on ERC 20. KEYT is a key element of the REBIT's token mechanism and has intermediary role of using and acquiring other REBIT tokens making it highly useful currency in the token mechanism.

As for the global service of Cash Board, KEYT will be a powerful attraction for users, and it will play an important role in expanding the organic connection of REBIT solutions and platforms, as it is also used as a payment method for enterprises to use REBIT solutions.

How to acquire and use KEYT is as follows.

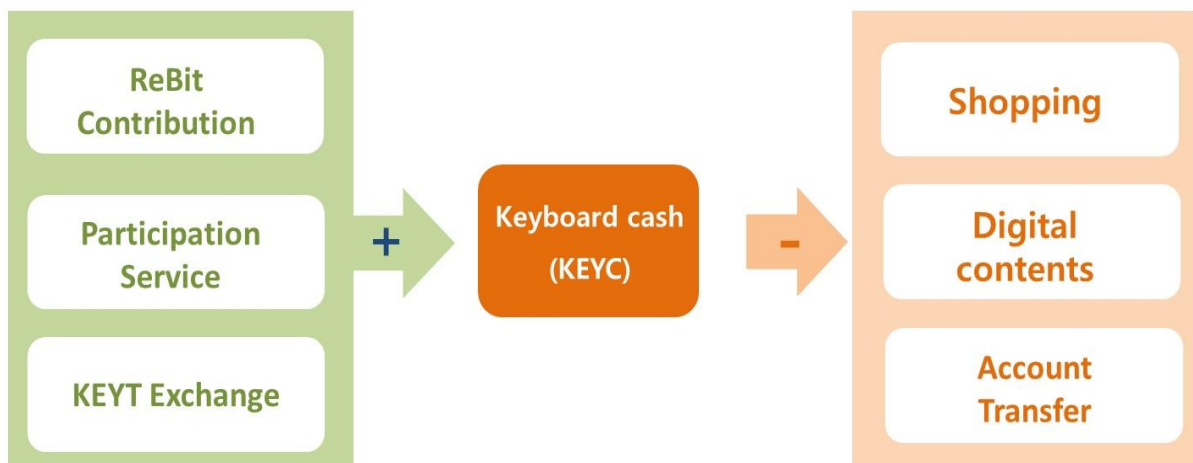
a) KEYT Acquisition

- 1) Exchange from KEYP: If KEYP acquired using the Cash Board reach a certain quantity, it can be exchanged to KEYT according to the exchange ratio. Exchange will occur once a week through internal REBIT trading system, and there is small amount of exchange fee.
- 2) VIP User Reward: Users will be ranked according to their contribution to REBIT and high-level user will receive a certain amount of KEYT rewards. Since the number of KEYTs paid is limited, the number of acquisitions is determined in proportion to the number of users of the upper level.
- 3) Participation Activities: KEYT can be obtained through participatory services such as surveys, and voting services. Also, it can be obtained through airdrops or affiliate offers.
- 4) KEYT can be obtained from other exchanges with fiat.

b) KEYT Usage

- 1) REBIT platform service : Through REBIT's internal trading system, the user holding KEYT can exchange to certain amount of KEYC every month which can be used for contents in REBIT platform. Because the price of KEYT varies according to market, the exchange rate to KEYC will follow that of external exchanges, and small amount of exchange fee will occur.
- 2) Use of REBIT Solution: Companies must pay KEYT to use REBIT's advertising or big data solution. For this, companies need to participate in the REBIT ecosystem or buy KEYT from external exchanges; accounting issues will be handled by a separate company.
- 3) KEYT can be exchanged for fiat through external exchanges.

3. 1. 2 Keyboard Cash (KEYC)



[Figure 10] KEYC Basic Form

KEYC is obtained according to users' **contribution to REBIT solution**. It is not possible for users to exchange with each other directly but it can be transferred to users account for monetization if user holds above certain amount. KEYC can be a measure for user's contribution and important currency for vitalizing REBIT platform and virtuous cycle. 1 KEYC holds value of 1 KRW (1KEYC = 1KRW) and maintains the fixed value.

How to acquire and use KEYC is as follows.

a) KEYC Acquisition

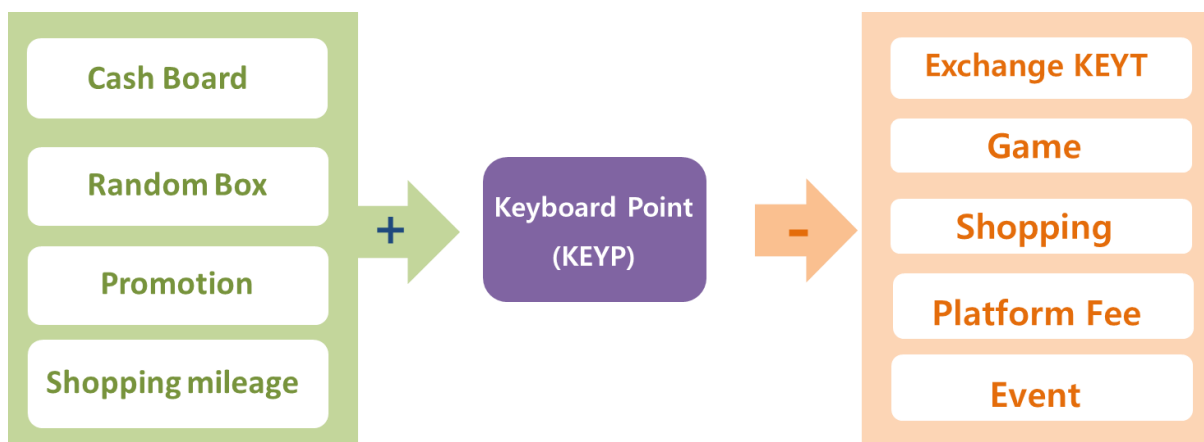
- 1) Contribution: KEYC can be obtained according to contributions from Cash Board and REBIT's platform such as keyboard use, promotion, and advertisement.

- 2) Participatory Service: KEYC can be obtained through events, missions, rankings and more.
- 3) Exchange from KEYT: KEYC can be exchange from KEYT through REBIT internal trading systems. Since KEYT changes in value depending on the market price, the exchange rate of KEYC is determined by the price of the external exchange at the time of exchange, and there is a certain exchange fee.

b) KEYC Usage

- 1) REBIT Shop: Users can purchase various products from REBIT Shop. Various products like food, cafes, and gift certificates will be sold through the shop.
- 2) REBIT Contents: Various digital contents such as games, webtoons, and music can be purchased through REBIT Platform.
- 3) For above certain amount of KEYC, it can be transfer to personal account, and a small transfer fee will occur.

3.1.3 Keyboard Point (KEYP)



KEYP is a currency to encourage the use of Cash Board. It can be obtained through using Cash Board and daily amount that can be obtain is limited. KEYP is a measure for the frequency of Cash Board usage and the contribution to the platform. It can also be exchanged for KEYT depending on the ratio.

How to acquire and use KEYP is as follows.

a) KEYP Acquisition

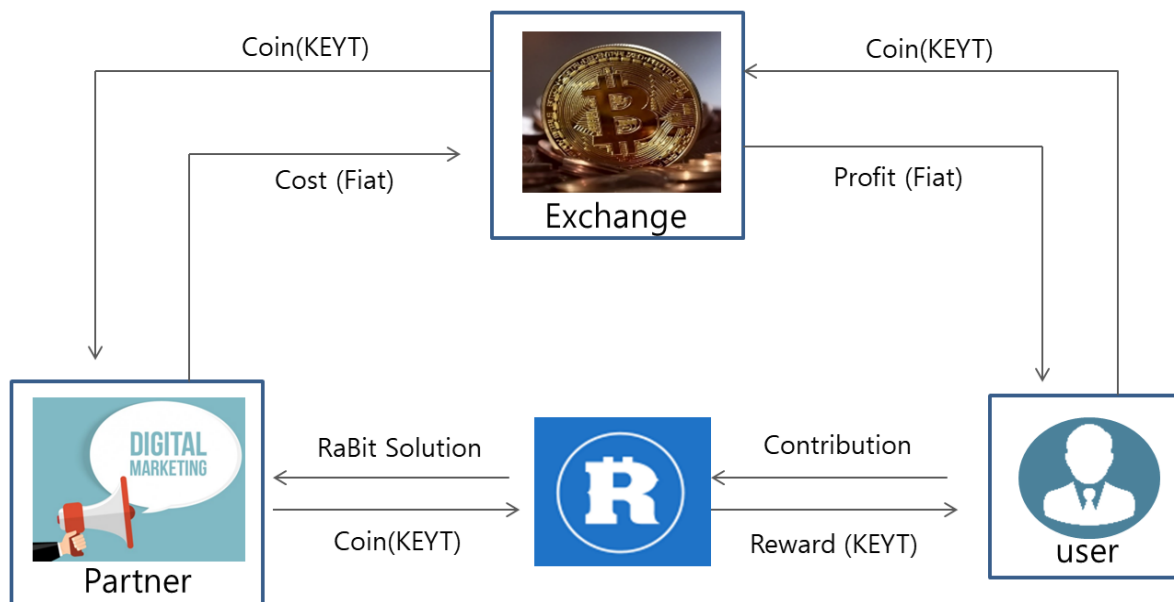
- 1) Keyboard use: After installing Cash Board, certain amount of KEYP can be obtained according to number of keystrokes.

- 2) Purchase Reward: As a mileage, KEYP will be accumulated according to the certain percentage of the purchase amount from REBIT Shop and contents.
- 3) Promotion: KEYP can be obtained through affiliate events and rankings.

b) KEYP Usage

- 1) For over a certain quantity, it can be exchanged with KEYT according to the ratio. Exchange will occur once a week through REBIT internal trading systems, and small exchange fee will occur.
- 2) It is used when participating in an event or mission that can acquire KEYC or KEYT.

3.2 Token Flow



[Figure 11] REBIT Token (KEYT) Flow

Each element of KEYT flow is as follows.

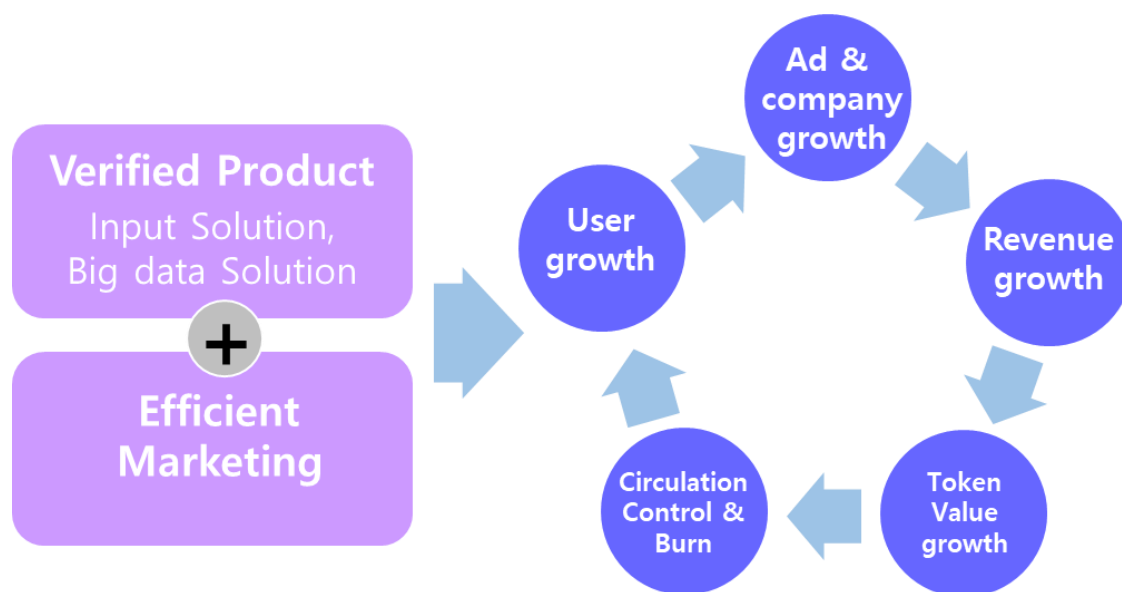
- a) **Contribution** – After installing and using Cash Board, word patterns will be stored in server and by doing this, user can participate in ecosystem of making big data.
- b) **Reward** - Users become active participants of REBIT ecosystem as they receive KEYT as reward

- c) Profit** - With obtained KEYT, user can monetize it through exchanges or purchase digital contents through the platform.
- d) Cost** - To use the REBIT ecosystem, companies and advertisers has to buy KEYT from the exchange to pay with KEYT.
- e) REBIT Solution** - Companies and advertisers pay with REBIT KEYT for ad inventories and big data solution.
- f) REBIT (Big data)** – Users’ word patterns are stored and allow advertisers and corporates to use them efficiently through AI server.

3.2.1 Token Value

As users and alliance partners grow, REBIT’s ecosystem will expand, and this virtuous cycle will make value of REBIT tokens grow stably.

In order to use REBIT's solution, advertisers or companies have to pay with KEYT and purchase directly from the exchange, which plays an important role for the virtuous cycle of the REBIT token ecosystem.



3.3 Token Information

KEYT is based on the Ethereum ERC 20 standard. KEYT is used for basic rewards, and for participation of advertisers and companies in order to maintain and expand REBIT ecosystem. Through data and digital advertisement business model, and the virtuous cycle, the value of KEYT will be able to continuously increase. Besides

business achievements, in order to increase the value of token, controlling circulation speed, purchase increase, and token burning can be considered. The total number of issuance is 2.2 billion, and we will try to prevent inflation and continuously increase the value of tokens by issuance, balancing issuance, buyback and a virtuous cycle.

- ✧ Name: REBITAI Keyboard Token
- ✧ Symbol: KEYT
- ✧ Type: ERC 20
- ✧ Total Issuance: 2,200,000,000 KEYT
- ✧ Smallest Unit: 1×10^{-18} KEYT

3.3.1 Token Allocation

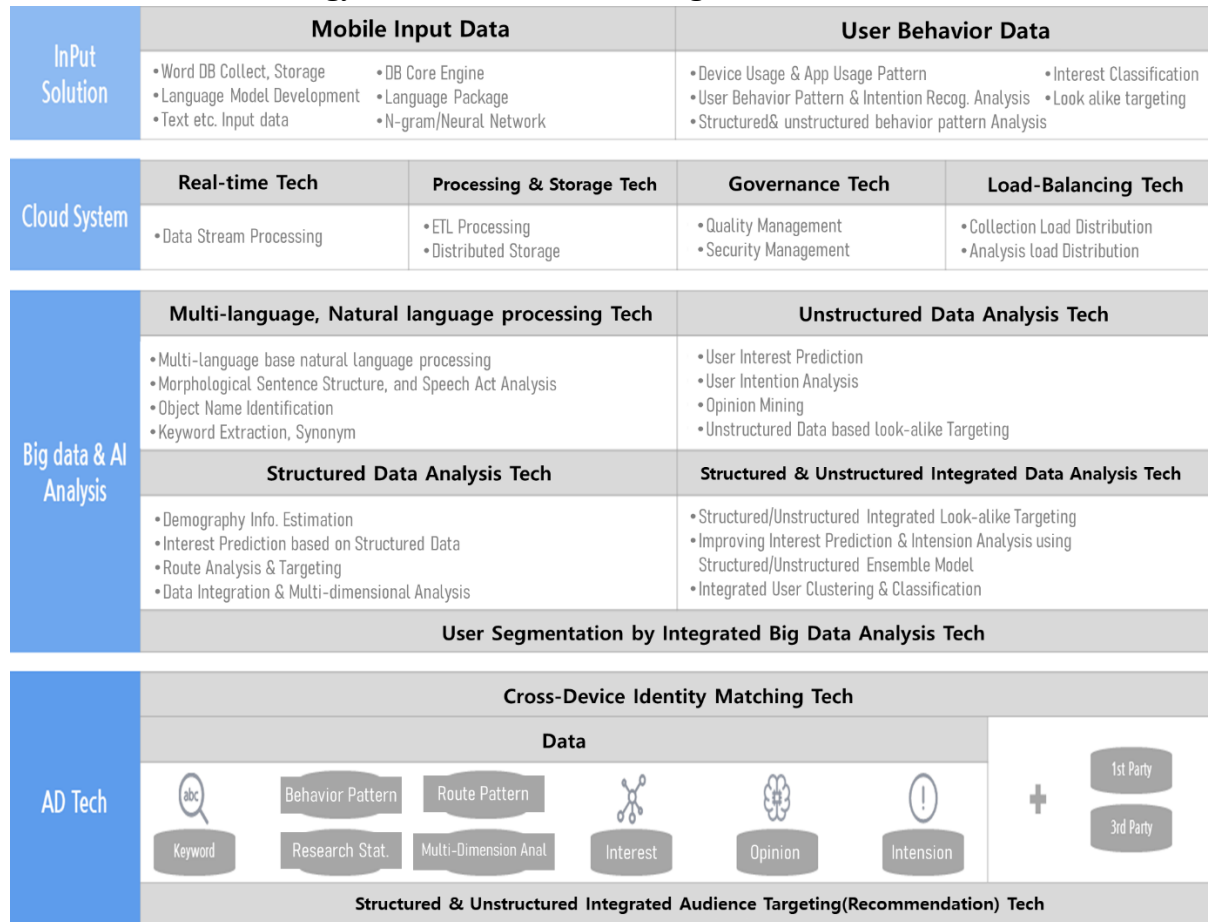
Reward	60 %
Sale	10 %
Company Team & Advisor	10 %
Marketing & Bounty	10 %
Reserve	10 %

3.3.2 Use of Proceeds

Biz Development	30 %
Marketing	20%
Operation	30 %
Strategic Partners	10 %
Other	10 %

4. REBIT technology

REBIT's core technology consists of the following:



[Figure 12] REBIT Technology Architecture

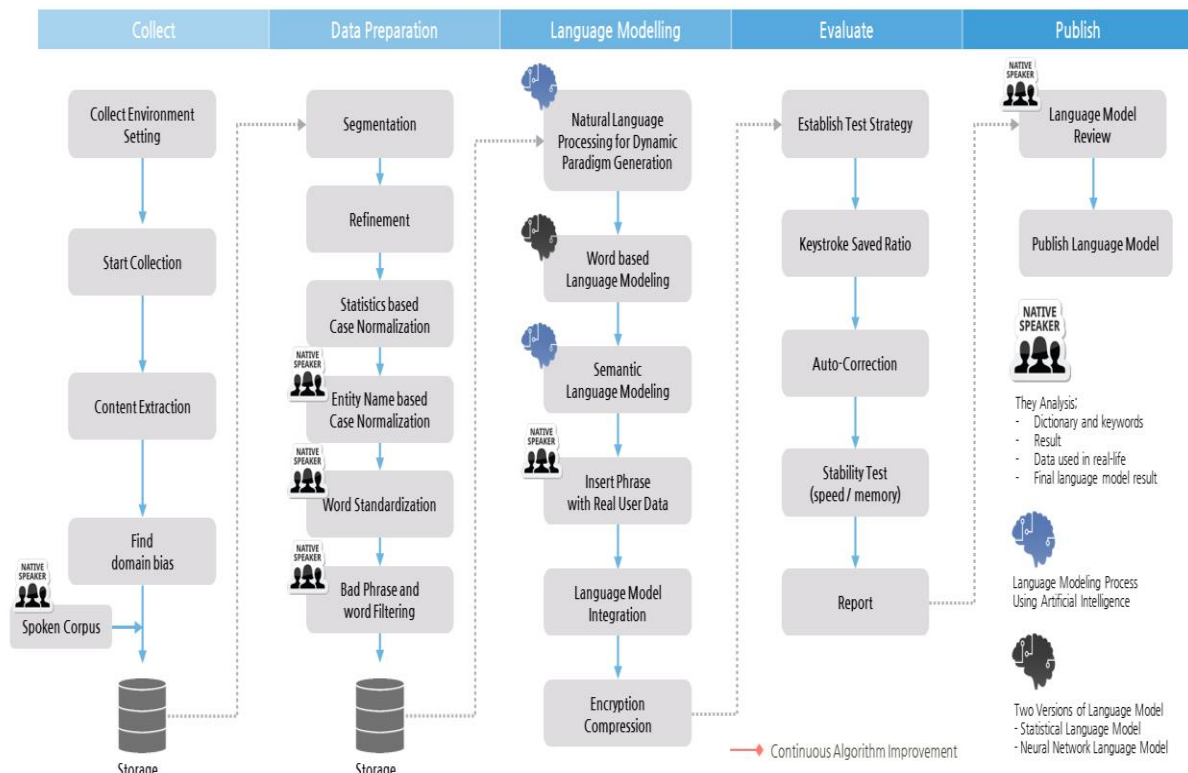
4.1 Keyboard

Developed since 2013, it is an input solution and virtual keyboard for smartphones and various smart devices. It is culmination of RLMT technology, neural network, language package, artificial intelligence, and various technologies, and its technology is already proven by Samsung Galaxy 8 phones.

4.1.1 RLMT

RLMT is **Language Model Generation Toolkit** for optimizing keyboard functions such as pinyin/ Chinese character conversion, word suggestions and typos correction, and also linguistic characteristics of 131 languages are reflected in RLMT. We are continuously improving performance through integration of artificial

intelligence technology, and automated processes, and also advancing its technology through automated validation tool, and validations by native speaker and QA.



[Figure 13] REBIT Technology- RLMT

a) Collect

It is data collection & management process to construct a corpus suitable for the user. We collect and manage corpus which is built from online open collector such as web & SNS, and from offline such as entity name, and headword. In addition, the domains of the randomly collected corpus is managed so that it does not become bias.

b) Data Preparation

It is a process that refines and normalizes corpus, such as slang refinement, spacing, capitalization, synonym processing, abbreviation, and sentence processing for various linguistic characteristics. Refined and normalized corpus can dramatically improve language model performance.

c) Language Modeling

Language modeling is modeling done through analyzing statistical characteristics of language such as words and sentences. LM effects performances of word recommendation and auto correction which increases user's typing efficiency. To improve language model, AI technologies such as natural language process (NLP), and semantic language model are used. For size. To provide optimized model in mobile

environment for size, memory and speed aspects, dynamic paradigm and compression techniques are used.

d) Evaluate

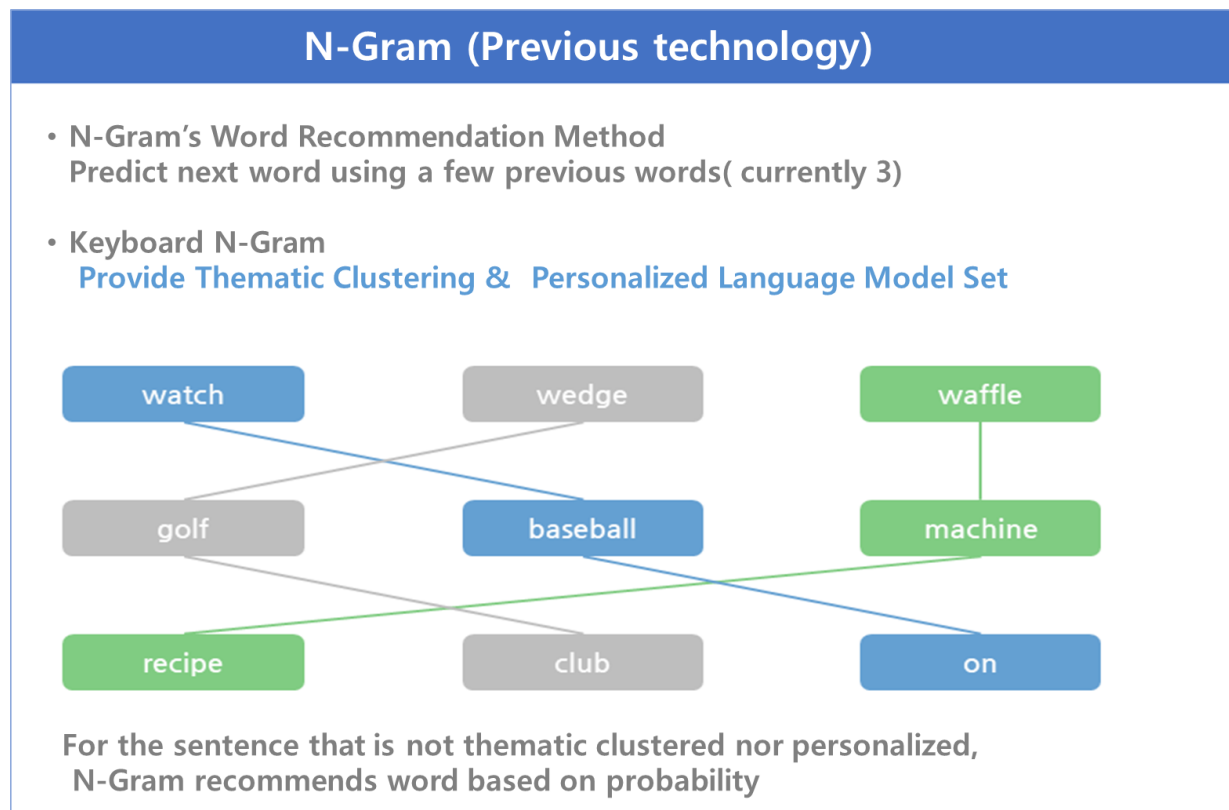
Language Model is distributed after the performance and reliability evaluations. Through the automated evaluation process, evaluations including word recommendation performance, auto correction performance, typing speed, memory, and stability tests are performed for 143 languages. Automated evaluation reduces the time for performance improvements of language models and enables quick response to VOCs.

e) Publish

After completing automated evaluation, Language Model is reviewed by native speaker and QA and then distributed to users through cloud.

4.1.2 Neural Network

Using **artificial neural network**, a technology developed from statistical learning-based language model which is based on N-Gram, user's intention and the context of sentence is recognized, and appropriate word is recommended.



Artificial Neural Network (Latest technology)

- Latest Technology: Predicts next word using multiple words from past
- Keyboard Artificial Neural Network Technology
Recommends word by analyzing words from entire sentence not just from a few words.
- Development is complete for English, Korean, Chinese, and Japanese.
- 5% performance improvement compare to N-gram for English
- Cloud base development & performance improvement for Chinese and Japanese
- Improving performance for various languages.

4.1.3 AI Language Model

The artificial intelligence language model is used to improve the auto correction, and prediction performance of the keyboard. In combination with Artificial Neural Network, a high-quality keyboard program is implemented.

Performance Improvement by Artificial Intelligence

- LM(Language Model) Efficiency & Advancement:
Reduced size of LM, and Improved coverage of word recommendation
- Performance Improvement of Next Word Prediction & Auto Correction:
Overcome limits of statistical method which limits word sequence

	Objective	function	AI Algorithm	Content
Prediction	Improve Prediction Performance Based on minimum Resource	Dynamic Paradigm	RNN(Morpheme-based)	Dynamic Word Generation Improve coverage of LM within limited Resource
	Next Word Prediction Performance	Neural Language Modeling	RNN(Word-based)	Language Modeling generating probability Distribution of Word Sequence
	Semantic word prediction Performance	Semantic Cluster based Language Modeling	Feedforward Neural Network, RNN(Cluster-based)	Clustering words with similar context

[Figure 14] REBIT Technology - AI Keyboard

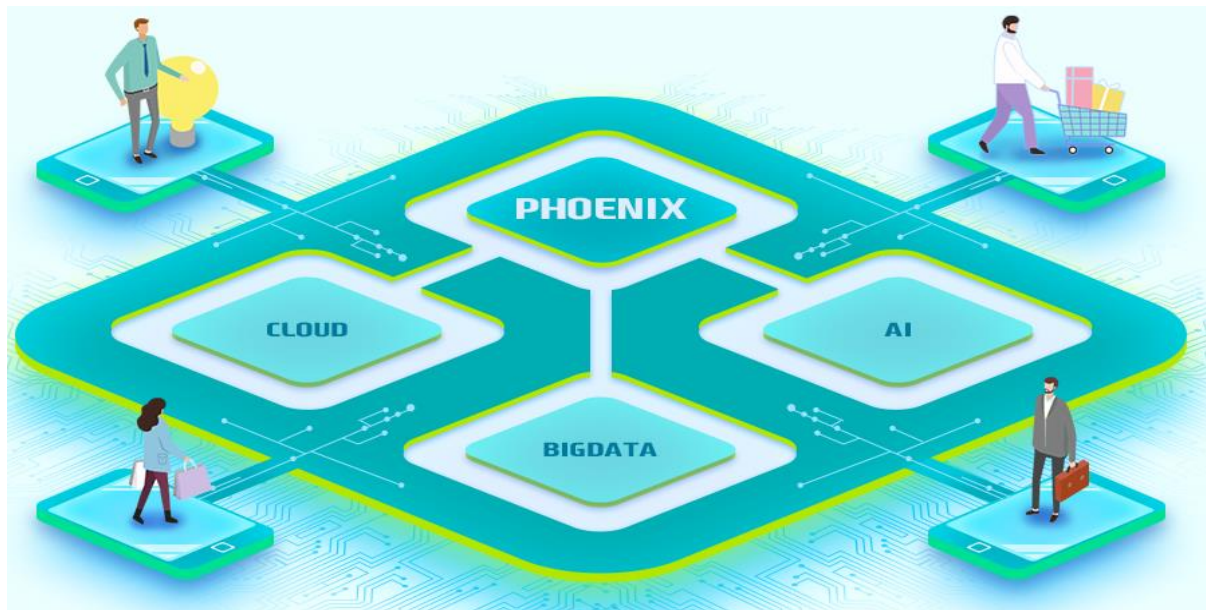
4.1. 4 Performance

REBIT Keyboard uses easy-to-use input engine technology for all smart devices around the world and improves performance by up to 19% over other keyboards. Convenience was enhanced by continuously improving recommendation and auto correction performance for each language, and various user-customized functions such as touch area correction is provided.

	<p style="text-align: center;">Input Engine</p> <ul style="list-style-type: none"> ① High performance engine based on C ++ 11 ② Android, Web OS, QT support ③ Multi-Thread based parallel programming ④ N-gram/Neural Network based
	<p style="text-align: center;">Main Performance</p> <ul style="list-style-type: none"> ① Memory Size: 26MB ② Word recommendation speed: 19.37ms faster than competitors ③ Word prediction (KSR): 3.37~7.4% faster than competitors ④ Auto Correction: 4.1% faster than competitors ⑤ Handwriting recognition speed: 100ms or less
	<p style="text-align: center;">Recommendation and Correction Features</p> <ul style="list-style-type: none"> ① Address Book, Email Recommendation ② Emoji Recommendation ③ Initial Input Recommendation ④ Bilingual Recommendation ⑤ Chinese Pinyin Correction
	<p style="text-align: center;">User Customizable Feature</p> <ul style="list-style-type: none"> ① User Dictionary ② Touch Area Correction ③ Kanji conversion function ④ Change layout ⑤ Theme (custom/download) function ⑥ Personalization learning function

4.2 Phoenix (Big Data & AI)

Phoenix is a big data based artificial intelligence system. Developed in 2013, it analyzes behavior patterns such as user's interests and intentions which enables customized services. Phoenix consists of three parts: a cloud system that collects and stores data, a big data analysis system, and an artificial intelligence system for targeted marketing.



[Figure 15] REBIT Phoenix

4.2.1 Cloud System

a) Data Collection

Phoenix collects two types of data. The first consists of text input data through the input solution, and the second consists of behavioral data from user's device which includes patterns for installing and using apps. In order to protect privacy, these data collected from users go through, de-identification of personal information, anonymization, data deletion, and aggregation using statistical analysis. In addition, it is encrypted and also stored in the manner which it cannot be decrypted to protect privacy. When analyzed content is provide to partners from Phoenix, it will be statistically aggregated data so that personal identification is impossible.

b) Real-Time Storage

Data collected in real time from the user is stored in real time to the server for building big data. This real-time storage technology is the fundamental system of the cloud system for big data.

c) Data Processing and Distributed Storage

In order to process large scale user data in real time, data preprocessing technology and distributed storage technology are used.

d) Governance Technology

In order to reliably manage stored big data in cloud server, long-term quality management system, security management system, and personal information and privacy management system are used under strict control of server administrator.

e) Load Balancing Technology

Large-scale user data stored in cloud servers in real time directly affects the hardware, making it difficult to store reliably. In order to reliably store such big data in cloud server, it uses load balancing technology when data collection and analysis is done.

4.2. 2 Big Data Processing System

a) Multilingual Natural Language Processing Technology

In order to analyze and process multilingual natural language, artificial intelligence recognizes and processes morphological analysis, syntax analysis and speech act analysis. Artificial intelligence technique is used for recognizing individual names such as proper nouns, extracting key words in sentences, and expanding synonyms.

b) Unstructured Data Analysis Technology

By analyzing the behavior big data of the user, the intention of the user can be analyzed and predicted. The unstructured big data can be analyzed by artificial intelligence to identify common characteristics of users, and uses look alike target technique which analyze the users with similar behavior patterns together.

4.2.3 AI System

The AI system can process multilingual natural languages in real time, and can analyze the structured and unstructured data to predict the user's intentions and interests. Artificial intelligence systems are being used for customized services in the integrated analysis platform called Data Management Platform (DMP). Based on analyzed data, artificial intelligence system clusters or classifies users interest,

predictions or intent analysis, and pushes or messages are sent to those grouping for targeted marketing.

a) Advancing Pattern Analysis

User patterns and prediction data analyzed with big data are enhanced more precisely with AI. It is use as look-alike targeting technique which analyzes users with similar patterns by identifying the common characteristics of users.

b) Advancing Data Analysis

Through big data analysis and artificial intelligence, the user's age, gender, or other information can be estimated as demographic information. By analyzing data from website, SNS, and emails, certain quantitative data about a user can be drawn, and it will help making complex predictions.

c) Structured and Unstructured Data Analysis

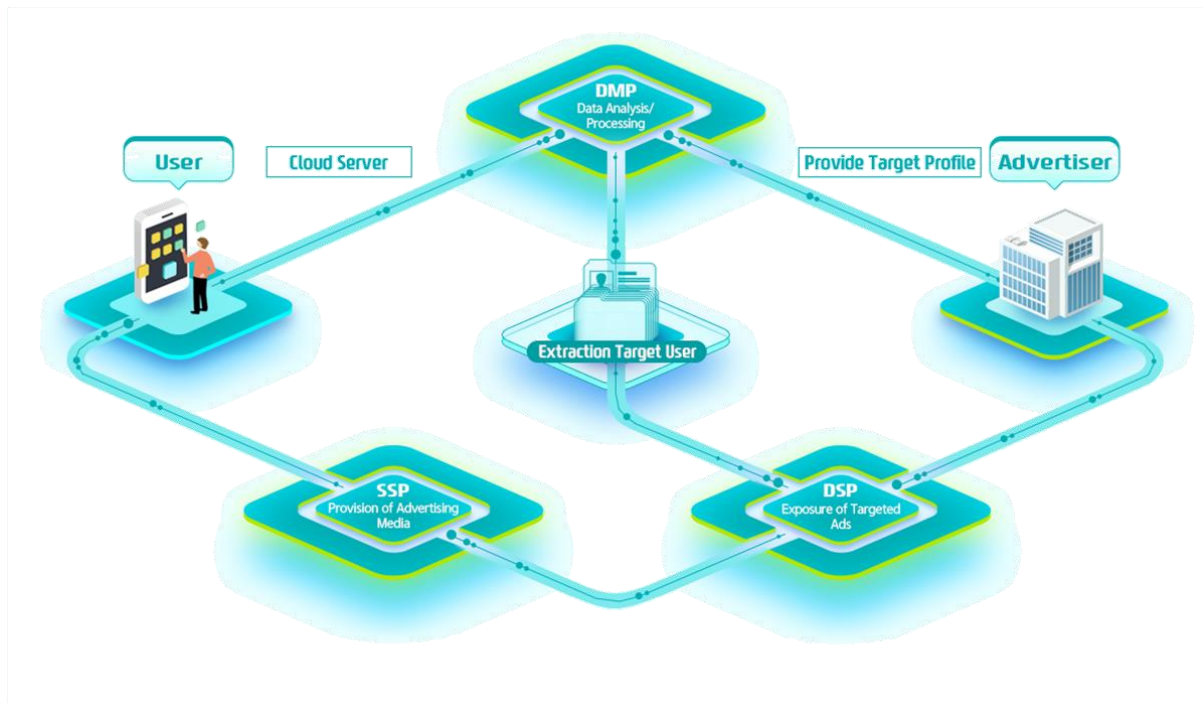
With artificial Intelligence, structured and unstructured big data can be analyzed, and with this analysis, users' interest predictions or intentions analysis can be clustered or classified.

4.3 AD Tech

REBIT's technology, which aims to target users more precisely through big data and artificial intelligence systems, has already been proven through contracts with various companies. REBIT's predecessor, Phill-IT, has signed a contract with global AD network company Yeahmobi for AD Tech business in 2018.

Partner **Yeahmobi** is a global mobile marketing company with more than **200 million global DAU** and **900 million MAU** customers, serving more than 200 countries.

REBIT's AD Tech aims at high-efficiency marketing, consisting of Data Management Platform (DMP), which enables sophisticated target marketing based on data, Demand Side Platform (DSP), and Supply Side Platform (SSP).



[Figure 16] REBIT AD Tech

4.3.1 AD Tech Components

a) DMP (Data Management Platform)

It is a platform that manages big data of REBIT's ecosystem to improve the efficiency of targeting advertisement. User data is linked to DSP and used for targeting advertisement. REBIT DMP improves performance by adding unstructured data analysis in the conventional analysis market where structured data is used. The core technology of DMP is data analysis.

b) DSP (Data Side Platform)

Basing on the analysis of big data, DSP helps exposing ads to the targeted users through suitable media with right pricing. DSP takes role in exposing targeted ads through media which is integrated with DSP.

c) SSP (Supply Side Platform)

SSP is contracted external marketing media or platforms where targeted ads are exposed.

4.4 Patents

The key technologies for keyboard and Phoenix are protected by 8 Korean patent applications, and 8 PCTs.

4.4.1 Korean Patent Applications

No.	Invention Name	Application number
1	Mobile device and method for providing recommended word on virtual keyboard	17-110661
2	Mobile device and method for correcting character string entered through virtual keyboard	17-110662
3	Mobile app apparatus and method of inputting characters according to input action on virtual keyboard	17-166199
4	Method and mobile app apparatus for performing word prediction	18-009608
5	Mobile apparatus and method for providing similar word corresponding to input word	18-37079
6	Mobile apparatus and method for receiving recommended word continuously from a virtual keyboard	18-37080
7	Mobile apparatus and method for classifying a sentence into a multiple of classes	18-38217
8	Mobile apparatus and method for providing similar word corresponding to input word	18-38219

4.4.2 PCT Applications

No.	Invention Name	Application number
1	Mobile device and method for providing recommended word on virtual keyboard	PCT / KR2017 / 014138
2	Mobile device and method for correcting character string entered through virtual keyboard	PCT / KR2017 / 014137
3	Mobile app apparatus and method of inputting characters according to input action on virtual keyboard	PCT / KR2018 / 001061
4	Method and mobile app apparatus for performing word prediction	PCT / KR2018 / 002869
5	Mobile apparatus and method for providing similar word corresponding to input word	PCT / KR2018 / 004621
6	Mobile apparatus and method for receiving recommended word continuously from a virtual keyboard	PCT / KR2018 / 004622
7	Mobile apparatus and method for classifying a sentence into a multiple of classes	PCT / KR2018 / 004623
8	Mobile apparatus and method for providing similar word corresponding to input word	PCT / KR2018 / 004625

5. Milestone

- ◆ **2018' 3Q** Project Launch & Planning REBIT ecosystem
- ◆ **2018' 4Q** REBIT Whitepaper Ver1.
Launch Official Website (www.rabitai.com)
REBIT-KeyBoard Korean Service
- ◆ **2019' 1Q** Partner Keyboard contracts with 5 companies
- ◆ **2019' 2Q** REBIT-KeyBoard's ad service in Korea
Partner Keyboard contracts with 3 companies
REBIT-KeyBoard Global Service
- ◆ **2019' 3Q** Blockchain wallet development
REBIT Wallet Service
AI advanced development
Partner Keyboard contract
- ◆ **2019' 4Q** Cash board Service
REBIT Platform Service (Reward)
Partner Keyboard contract
- ◆ **2020' 1Q** CASH Board ios & Global Service

REBIT Platform Service (shop)
Partner Keyboard contract
- ◆ **2020' 2Q** Smart Vehicle business

Domestic data utilization DMP
Partner Keyboard business
- ◆ **2020' 3Q** Smart Banking (FinTcch)

Preloaded Service 1

REBIT Platform Service (GAME, Webtoon)
Partner Keyboard business
- ◆ **2020' 4Q** Digital AD & DMP

REBIT Platform Service (Publishing)

Preloaded Service 2

Participatory service (Survey, Voting)

Data Banking Service

6. Team & Advisor

6.1 Team



DJ. SHIN
REBIT CEO

- 123Games Corp. CEO
- Data Analytics Specialist
- B.A. in Business, Hanyang Univ.



YOONJUNG LEE
REBIT CTO

- Phill-IT Corp. CEO
- RCS System Corp. CTO
- LNK Corp. CTO
- RECARE Corp. CTO.



PHILLWOO KIM
REBIT CMO

- Wisepeer Inc. CEO
- Samsung Advanced Institute of Technology, Researcher



JOOHYUN KIM
REBIT Keyboard Developer

- Senior developer with 18+ yrs experience
- Data analytics specialist
- B.A. in Mechanical Engineering, Dong Seoul National Univ.



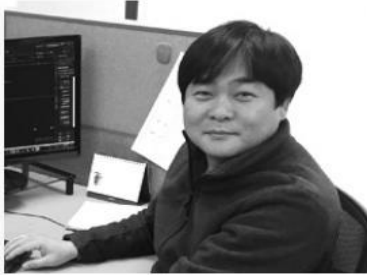
HAIXIAN CUI
REBIT Keyboard Market Architecture

- BTB marketer with 10+ yrs experience
- B.S. in Sociology, Kwansai Gakuin Univ.



HAEYONG PARK
REBIT Keyboard QA TM

- 10+ yrs experience of smartphone app projects
- M.S. in Computer Sci., Kyungpook Univ.



BYOUNGSOO KIM

REBIT Developer

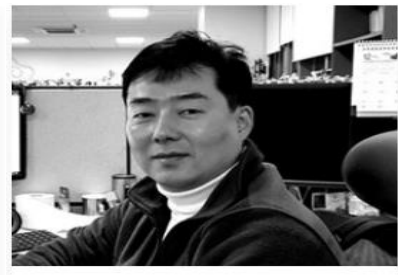
- Senior developer with 20+ yrs experience
- 10+ yrs experience on Game Platform



SOOYOUNG HAN

REBIT Designer

- Designer
- 123Games Corp.



WOOJIN SHIN

REBIT Keyboard Managing Director

- 15+ yrs experience of B2B Sales & Marketing
- M.S. in Electronic Control Engineering, Hongik Univ.



CHANGEUN LEE

REBIT Engineer

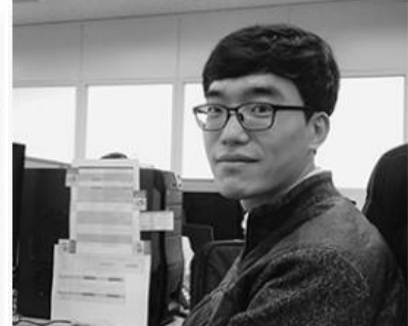
- Senior Web Developer with 7+ yrs experience
- Senior System Engineer with 10+ yrs experience



SUMIN PARK

REBIT Developer

- Senior developer with 10+ experience
- 7+ yrs experience on Game Platform



KYOUNGJIN KIM

Customer Service Operator

- 2+ yrs experience on Game Master



NAYOUNG PARK

REBIT UI/UX

- Web publisher (markup)
- 123Games Corp.



JEWOONG RYU

Customer Service Operator

- 10+ yrs experience on Game Master
- 4+ yrs experience on Business PM
- 123Gamse Corp.

6.2 Advisor



KANGHWAN OH

- Executive Director at SAMSUNG Electornics
- M.S. in Electronic Engineering, Kyungpook Univ.



PAUL YOO

- Digital Melon at CEO
- Cofounder & CEO at Omnitel – Bithumb Shareholder
- Team Leader at LG U+
- Yeonsei Univ, MBA
- Seoul National Univ



SUNGGON BAE

- CEO at spring comes
- Vice President at ACTOZ
- Vice President at EYE DENTITY Mobile
- Professor at DongYang univ,



HEEYONG LEE

- CEO of KStarLive Inc.
- Co-CEO of MEDIVentures Inc.
- CEO of ADVentures Inc.
- CSO of RAM Media LLC,USA
- Strategic Marketing Manager of GROUPON Korea



JONATHAN KIM

- Head of Korea, QuarkChain Foundation
- CMO of Fintech biz, Hanwha Group
- Head of Strategy, Cheil Pengtai



KYLE KIM

- DS Strategy Inc CEO(Coinbase's official agent)
- Huobi Korea COO
- Kiwoom Securities /Leading Securities

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- ① It is written on the assumption that users who read this white paper have a basic understanding of big data, digital advertisement, and blockchain.
- ② The parties are solely responsible for the results determined by referring to this white paper.
- ③ REBIT tokens are provided for REBIT's ecosystem and are distinct from speculative investments.
- ④ Buyer and participant of REBIT Tokens must comply with all laws, regulations and restrictions, and must cover the expenses themselves.
- ⑤ The sale, development plan, and exchange of tokens presented in this white paper may be changed due to restrictions in accordance with laws, rules, regulations, treaties or administrative laws that may apply in the future.
- ⑥ At the time of writing this white paper, except for the use of tokens within platform, nothing was confirmed; such as listing on the exchange or using externally.

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