



SACHIO VR-ESPORT COIN

Virtual Reality Electronic Sports, a unique E-Sports crypto currency based on the blockchain network.

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1. Overview of Sachio

Sachio(Virtual Reality Electronic Sports) are tokens for VR video games and eSports that will be issued on the Ethereum platform. Using Sachiotokens, players will be able to participate in eSports competitions, receive remuneration, and receive tips. Furthermore, viewers will be able to not only watch matches but also place bets on certain matches, and this will create economic incentives for players. A new ecosystem will be created based on this going forward. By developing a comprehensive platform targeting the VR video game market, we will make it possible for both players and viewers to engage in networking, spectating, and cheering with regard to VR eSports, and to enjoy exciting VR video games. In addition, through this project, we will aim to provide a decentralized platform that will serve as the global standard in Asia, Europe, and so on, and to popularize eSports in VR.

2. VR

2-1. History of VR to date

It is said that the world's first head-mounted display (HMD), a device used for virtual reality (VR), was created about half a century ago in 1968 by the computer scientist Ivan Edward Sutherland of the United States. This is thought to be the starting point for the graphical user interfaces (GUI) and computer graphics (CG) that are used in the world today.

Nevertheless, the HMD that was created at that time of course still lacked versatility and practicality. It hung from a ceiling, and was unable to reflect simple elements in a virtual world.

Later on in 1980, VRL Research launched an HMD called the "EyePhone" together with a glove-shaped input device called the "DataGlove." These two devices did not become popular because they were still too expensive for the general public.

In 2012, VR was reinvigorated as a result of the Oculus Rift. The development version of the Oculus Rift at that time greatly expanded the world's knowledge regarding VR. The commercial version was launched in March 2016, and as result of the Oculus Rift, the awareness of VR technology in the world significantly increased. Unlike past VR devices, it is "low priced, easy to use, and high quality" so it has enabled a greater number of people to enjoy the technology of VR.

Since the "Oculus Rift" became known to the world, many companies have been developing their own devices, and a wide range of head-mounted displays have been released including "GearVR," "HTC Vive" and "PS VR."

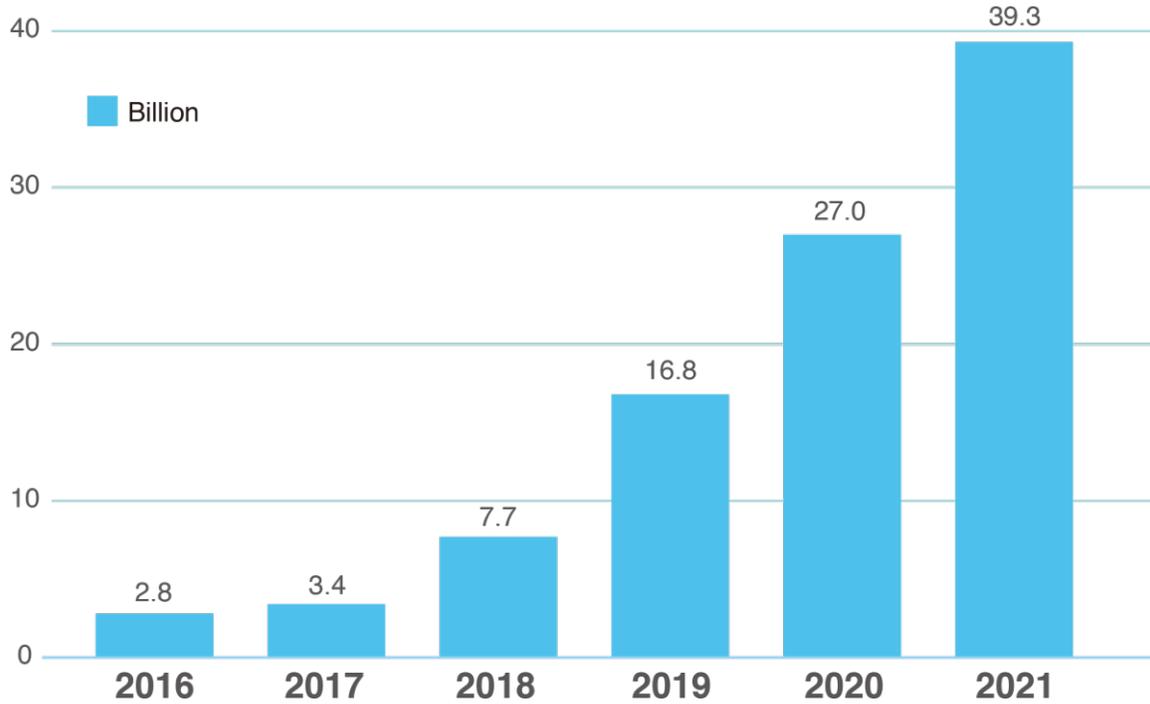
Currently, a result of such products, an environment has started to develop in which VR technology can be enjoyed even in ordinary households.

While VR technology had been considered "still too expensive for the general public," the steady releasing of devices has increased opportunities for people in the world to easily try out VR. Against this backdrop, it seems that at this time in history, half a century after Ivan Sutherland's invention, this technology is making significant progress.

2-2. VR market

According to a survey by the US research firm SuperData ("Augmented and mixed reality earnings are set to surpass virtual reality by 2021"), it is expected that the global market for hardware, software, and other services related to VR/AR/MR will grow to about \$39.3 billion in 2021.

Forecast for VR/AR/MR hardware and software market



Expectations are particularly high regarding the growth rate of this market in the AsiaPacific region, excluding the United States and Japan. The 2018 market with regard to consumers related to the eSports market, which we are targeting, is expected to reach a global total of \$6.8 billion.

Going forward, development will be carried out targeting not only Japan but all of Asia, and our location VR pod is already set for introduction at 3,000 stores in Asia alone. Thus it seems that there is a favorable environment for us, in which a tailwind from the market will be received.



2-3. Challenges regarding VR

As was mentioned in tracing the history of VR, head-mounted displays and other hardware for experiencing VR are still far from being widespread in the market. This is especially apparent with regard to hardware. In the United States, while Hollywood has been proactively investing in the field of VR, the market is still at a very early stage. In China, which has the largest market after the United States, although hardware manufacturers are steadily emerging, each manufacturer has been deploying a different platform so there is a lack of content.

The same can be said of cryptocurrencies. The field of VR does not have any content that can be considered “killer” so it is difficult for companies to formulate business plans and determine scale. Also, from the perspective of users, there are few opportunities to experience VR, and as such, the environment enabling the provision of VR content is limited.

Furthermore, in terms of VR content, there are few examples of success that can be shared with the world, so the necessary criteria for making decisions regarding VR is vague.

One issue that many companies are facing with regard to VR is the “method for moving.” Something that people who have tried VR have perhaps experienced is that in VR spaces, moving with an ordinary controller sometimes causes vection, visually induced selfmotion illusion, and this sometimes causes “video game motion sickness.” In the case of experiencing VR video games from a first-person perspective, the size and location of the VR space in the real world (a home or an entertainment facility) has an impact on design.

3. eSports

3-1. Overview of eSports

eSports, an abbreviation for “electronic sports,” are sports video games that can be enjoyed via the internet regardless of physical distances. These video games are currently gaining popularity centering on South Korea, and many users are enjoying them online. For example, in the case of eSports with regard to the video game “Dota,” which is currently one of the world’s most popular video games, global competitions are being held in which the winners are awarded significant sums of prize money.

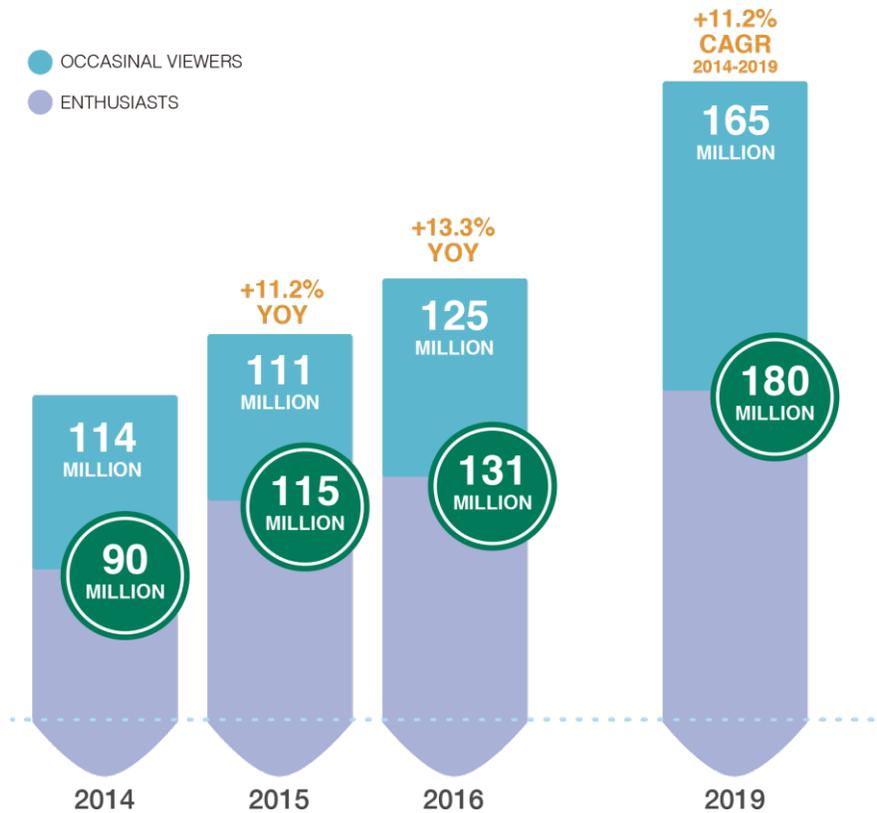
Participants in eSports (or groups of people similar to teams that are referred to as “clans” or “guilds,” etc.) can create channels related to video games through an internet relay chat (IRC).

In the case of eSports, the content consists of not only playing games but also enjoying watching other people’s games. As a result, users who “like video games but don’t have time to play them or are not good at playing them themselves” are incorporated, and the streaming market in this regard has been growing significantly. Stream viewing has been garnering attention as a medium of advertisement for getting people to start video games, and there are channels for various video games. Amid this situation, Twitch.tv, a live streaming site specializing in video games that has been in service since 2011 (and was purchased by Amazon in 2014), boasts 1.5 million streamers per month and over 100 million viewers. The live streaming of video games also takes place on YouTube. Due to the existence of demand in this regard, in South Korea where eSports are highly popular, there is a television channel specializing in eSports called “OGN.” In 2016, eSports television shows rapidly grew in the United States, and the number of viewers tripled in the span of one year. In light of these factors, it is clear that there is growing demand regarding the “viewing of eSports.”

3-2. eSports market

In addition to South Korea, which has served as the spark for eSports, booms in popularity have been taking place in regions such as Europe, the United States, and China, and the growth of the eSports market has been accelerating in the Asia region as well.

On January 25, 2016, a survey company announced analysis results in the Global eSports Market Report stating that the size of the eSports market in 2016 would grow to 463 million dollars.



From Newzoo / Global eSports Market Report

According to this report, the size of the eSports market in 2015 reached approximately 325 million dollars, up 67.4% from 2014. In 2016, growth of 42.6% is anticipated, and major events are expected to be watched by 131 million eSports fans and 125 million general viewers. In addition, if growth at about 40% continues, the eSports market will reach towards 1 billion dollars in 2019.

In addition, it has been announced that eSports will be added as a medal category in the Asian Games to be held in China in 2022, and that eSports will take place as a demo category in the 2018 Asian Games in Indonesia. Further growth of the eSports market is expected due to these factors as well.

3-3. Challenges regarding eSports

Accompanying the growth of this market, challenges have arisen with regard to eSports that are similar to those regarding general sports, such as dishonest behavior, the harassing of opponents, and the breaching of contracts.

Players have been disqualified for doping aimed at the enhancement of performance during competitions. There have been a variety of other dishonest acts as well, such as cheating. While very few players engage in such behavior, this is a serious problem that disrupts player ethics and the balance of video games.

Although some countries impose penalties including imprisonment for such dishonest behavior, it is not clear whether such measures act as a deterrent with regard to players.

There are other factors that detract from the attractiveness of eSports as well. eSports competitions are currently held at one physical location where the players gather, and this method of holding competitions ends up decreasing opportunities for participation due to circumstances related to the players' schedules and travel distances, and thus lowers the quality of participating players. In the case of eSports, while it should in essence be possible to participate in competitions from anywhere in the world where there is internet access, physical distances cause transmission lags, so there is no choice but to hold the competitions in a single physical location using a single wired LAN network. Although competing from remote locations is possible, there is a tradeoff with transmission speed. As a result, opportunities for participation by players cannot be sufficiently ensured, and the "attractiveness of watching eSports" ends up being lost for viewers.

Furthermore, there has been a trend of excluding teams and individuals who have won a competition from participating in other competitions. It seems that the intention of this is to spread out the available prize money and give a wider range of players the chance to win it. Nevertheless, excluding players within the still limited population of competitors in eSports does not seem to sufficiently take into consideration competition quality and spectators, as mentioned above, and thus results in a loss overall, making it a problem.

4. Aim of Sachio

4-1. Aim of Sachio

Our aim and the vision that we would like to realize is familiarizing more people with the freshness, fun, and interestingness of the technology VR, seeking the spread of eSports through VR more than anyone else, and taking action in this regard going forward.

The motto of our team is "plus ultra."

Plus ultra: aiming to reach as-yet-unseen new worlds that lie beyond, continuing to strive for excellence every day, and never being satisfied with existing devices, technologies, solutions, and content.

Long ago, the Strait of Gibraltar was considered the world's end. The Pillars of Hercules that towered above the world's end warned explorers not to go any further, with the words "ne plus ultra" (nothing further beyond). Nevertheless, it is said that King Charles I of Spain encouraged explorers to "take risks and strive for excellence" in order to give them the bravery to seek the New World, using the motto "plus ultra" (further beyond). We believe that there is an expansive as-yet-unseen "new world" that lies beyond the technologies of today. We hope to serve as the mainstream that can continue to provide true fun, interestingness, and worldviews that are still unknown.

Our strength is setting up VR pods (machines) not only in Japan but also locations worldwide. We are considering a mechanism that will make it possible for users to easily experience VR video games by using the items that we have already deployed, and to engage in video games with tokens in the future.

SachioLtd envisions the following four platforms for the spread of VR eSports.

1. Multi-device matching platform
2. VR eSports holding platform
3. Viewing platform
4. Betting platform

4-2. Multi-device matching platform eSports begin with the matching of competitors, and when playing VR video games, head-mounted displays are needed. Nevertheless, there are numerous manufacturers of head-mounted displays (hereinafter “HMD”), and the video games that can be played differ for each manufacturer. A “multi-device matching platform” is a platform that enables communication to be established in a single space even when there are HMD of different manufacturers. The platform that we offer resolves the current problems related to the matching of competitors (barriers to matching resulting from HMD; not understanding how to receive requests for matching; not being able to carry out matching due to not participating in a certain community). In terms of a specific vision, we envision being able to establish communication through a chat or the like in a VR space, and then players who have been matched there being able to play against each other right away.

While ordinary competitions will of course be possible, with the matching platform that is defined here, a system can be offered that enables players to agree to engage in a competition in which a designated participation fee is paid and then the winner receives the participation fee as a reward.

In the case of regular interpersonal video games, even when there is competition, there is no prize money associated with wins or losses. Nonetheless, it seems that if an economic incentive arose for persons who are enthusiastic about eSports, this might encourage more players to develop their skills in video game competitions and lead to more passionate playing. We believe that such passion could lead to the development of VR and the spread of eSports going forward.

Furthermore, on matching platforms, avatars and private rooms could be created, which could be customized by using tokens. In the future, we plan to engage in collaborations with popular video games, characters, and so on, and thereby increase the number of users on the platform going forward.

4-3. VR eSports holding platform

As for platforms for the holding of competitions, we will carry out development in order to make it possible for a wide range of competitions to be held, with VR eSports as the target. In eSports, Dota 2 is remarkable for its long history, popularity, and fame. League of Legends (LoL) also has many users, and competitions that are held offer large amounts of prize money.

[Ranking of past competitions by total prize money]

First place: Dota 2 The International 2016, total prize money: 20,770,640 USD

Second place: Dota 2 The International 2015, total prize money: 18,429,613 USD Third place: Dota 2 The International 2014, total prize money: 10,931,103 USD

Fourth place: LoL World Championship 2016, total prize money: 5,070,000 USD Fifth place: Dota 2 DAC 2015, total prize money: 3,057,521 USD

Currently, whenever official eSports competitions are held, there is a significant amount of labor, and huge costs must be paid that include expenses for promotion, marketing, attracting customers, finding sponsors, and so on. We will offer a platform that will make it possible for volunteers (players) to hold competitions by themselves. This platform will make the holding of competitions simple by providing the necessary functions for this, such as automatic event progress, the conversion of participation fees into prize money, and secure automatic distribution.

On the platform, there are two types of competitions that can be held: (1) competitions that volunteers (players) hold by themselves, and (2) official competitions that the administration side holds on a regular basis.

(1) When a player holds a competition, that person decides the video game, event schedule, number of participants, participation fee, prize money distribution ratio, and so on, and then recruits participants. When a participant wishes to participate in a competition, that person enters by paying Sachiotokens as the participation fee. After this, the competition and matches are carried out. Once the winner has been decided, the prize money is distributed in accordance with initially specified prize money distribution ratio.

(2) There are also competitions that the administration side holds on a regular basis. For these, a tournament format is envisioned, with no limit on the number of participants. The tournament bracket automatically expands in accordance with the number of participants (auto-scales) so dozens or even hundreds of people can participate. The participation fee money as well as prize money prepared by the administration side can be automatically distributed to the top finishing players.

4-4. Viewing platform

It is envisioned that in the future, video games using integrated-type HMD, which will be common, will become widespread and an environment will be created in which such games can be viewed even in ordinary households, so we will develop a viewing platform for maximum utilization of the attractive features of VR. This platform will make it possible to easily watch eSports from inside the same VR space as players, and not have

to go to an eSports competition venue—something that was previously impossible. As a result, viewers will be able to watch competitions in real time, and give tips to players using tokens.

4-5. Betting platform

Users watching competitions will not only be able to view but also place bets on competition outcomes.

When players compete against each other, the players' odds of winning will be calculated based on their track record and so on. The odds will fluctuate and shift to the optimal rate as watching users place bets. When a player wins, that person will be able to receive 10% of the amount that was bet on him/her, as prize money. The payment of winnings to watching users and payment of prize money to competition winners will be carried out utilizing smart contracts.

As for the process, a player first of all needs to make his/her games eligible for betting. When two players allowing betting have been matched, their game is eligible for betting. In order to prevent dishonest behavior such as the fixing of games, rather than making all games that have been matched eligible for betting, only matched games that meet certain criteria (which will be announced at the time of launching the platform) will be made eligible for betting. After a game eligible for betting has been announced, watching users can send the amount of tokens that they want to bet, to any of the ETH addresses that have been assigned to each player. After sending, once the game has started, as with the aforementioned viewing platform, watching users can tip players. After the winner has been decided, that person is paid an amount equal to 10% of the amount bet on him/her, as prize money. Also, the users who have placed a bet correctly predicting the winner execute a smart contract and are automatically paid their winnings based on the odds that were calculated. The administration side is paid 10% of the amount that the losing betters bet.

5. Selling and buying back tokens

In the case of Sachio, taking into consideration players who are not familiar with cryptocurrencies, tokens will be sold on the platform. The planned methods for purchasing tokens on the platform are credit card, PayPal, and cryptocurrencies, and the sales price will be the average selling price of Sachiotokens on exchanges where they are listed plus 5%.

On the platform, there will always be a certain number of tokens that are held and sold. If many tokens have been sold and there are few remaining, they will be purchased and procured from the market on a regular basis based on certain conditions. As for these conditions, we have set forth two patterns. The first is cases in which the number of

remaining tokens held has fallen below a certain level. As shown in the example below, in the case that the number of remaining tokens has fallen below 10% of the number initially held, a purchase from the market will be carried out. The second pattern is purchasing from the market on a regular basis, regardless of how many remaining tokens there are. Initially after the start of operations, the number of tokens that have been depleted will be purchased from the market in order to return the balance to the initial number held, every three months.

For both of the abovementioned patterns, the conditions will be made fluid, and changes will be made going forward, comprehensively taking into consideration the status of use of the platform and the liquidity of tokens.

[E.g.]

We are carrying out activities on a day-to-day basis in order to achieve the abovementioned roadmap. First of all, a token sale will be carried out in the second quarter of 2018. After this, the above-stated matching platform beta (β) test will be implemented, and development will be carried out going forward. We already hold rights for the handling of location VR pods, and as such, we will work hard to increase awareness regarding the attractiveness and potential of VR eSports based on our project targeting all token holders, video game players, and viewers.

Furthermore, we will prepare a software development kit (SDK) in order to popularize the Sachioplatform, and we intend to strengthen our connections with video game development companies.