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Introduction
A World Built Through Games

- The Internet of Games
The Internet of Games

The internet of games is the network of videogames, electronic media, software, consoles, internet devices and personal computers with gamers, software developers, and videogame publishers which enables these subjects to connect and exchange data.

We are a boundless virtual playground where gamers and developers live, explore, discover and connect with everything videogames. We are the internet of games.

Playgroundz is “The Internet of Games”
About Us

We are a development/publishing studio with over 10 years of videogame and network development services under our belts. Our teams combined history spans over 100+ years of knowledge and experience in the technology space. We have won numerous international awards including the Prestigious Game of the Year and Programmer of the Year awards from the Korean Government. Our team is dedicated and passionate for Games, Gadgets, Toys, Technology and of now Blockchain!

**SUPERBEAT: XONiC**
2015 Vita Game of the Year Award
ATOMIX.VG

2015 Vita Game of the Year Nomination
PlayStation Lifestyle

2015 Vita Game of the Year Nomination
PlayStation.Blog

2015 Music Game of the Year Nomination
PlayStation.Blog

**DJMAX Technika**
2009 Most Popular Game of the Year
Korean Ministry of Art

2009 Arcade Game of the Year
Arcade Heroes

2009 3rd Place Arcade Game of the Decade
Arcade Heroes

**DJMAX Fever**
2009 1st Runner Up for Best PSP Music Game
IGN

**DJMAX Portable 3**
2010 1st Runner Up for Best Rhythm Game of the Year
OSV
Our Story

In 2007 we created, designed, and published a rhythm and music based game called DJMAX Technika with a team of 40 employees. The game received acclaimed reviews and international awards and created a loyal following from around the world. The Korean government awarded us with the prestigious Game of the Year award.

Upon launching we learned about the gaming community and how vast and communal they were once they found other people who enjoyed the same games or had interest in the same genre of games. These gamers were able to find each other through social networking in online forums and YouTube channels. Gamers love to share and trade tips, secrets, and achievements.

But our biggest discovery was when we realized there lacked a platform to allow these gamers to freely do one of the things they love most, which is buy/sell and trade their old games and rare games or have a system to let their online friends borrow their games.

This is when we first came up with the idea of Playgroundz. We wanted to create a platform that was easy for the gaming community to buy/sell and trade their games based on a social trust system that utilized the social awareness of the community to ultimately help you make decisions on your transaction and who you transact or make trades with.

Everyone in the gaming community loved the idea and all agreed there was a need for this so we began to design it.
Project ‘Yellow’

We began our journey when the team first conceptualized and identified the project Yellow in early 2012. Our goal was to connect users through videogames, toys and geek culture so they may transact with one another without any authority or restrictions so we named the project Nitty (Niche + Community). The project was released and we achieved many milestones in our first year.

Nitty Milestones

- Oct 21, 25: 1000th Club, 10,000th Registered Member
- Sep 3, 4, 9: 5,000th Registered Member, 500th Club, 1st Club to hit 1,000 members
- Aug 27: 1st Club to hit 500 members
- Nov 1: 1st Club to hit 2,000 members
- Dec 29: 15,000th Registered Member
- Dec 31: 1st Club to hit 3,000 members
- Mar 16: iOS Beta launched
- May 25: 100th Club
- Jun 17: 1,000th Registered Member
Videogame Market
2.2 Billion Gamers and Growing

- Current Overview
- Future Outlook
According to Newzoo, in 2017 the videogame industry generated $108.9 billion in game revenues with 2.2 billion gamers spread across the globe. This was an increase of $7.8 billion from the year before. The industry has seen a 5-10% growth year over year for a decade.

### 2017 Global Games Market

Per Region with Year-on-year Growth Rates

- **US TOTAL**: $25.1Bn
- **EUROPE, MIDDLE-EAST & AFRICA**: $26.2Bn, +8.0% YoY
- **LATIN AMERICA**: $4.4Bn, +13.9% YoY
- **ASIA-PACIFIC**: $51.2Bn, +9.2% YoY
- **CHINA TOTAL**: $27.5Bn
- **NORTH AMERICA**: $27.0Bn, +4.0% YoY

**2017 TOTAL**: $108.9Bn, +7.8% YoY
According to Newzoo, in 2017 the videogame industry generated $108.9 billion in game revenues with 2.2 billion gamers spread across the globe. This was an increase of $7.8 billion from the year before. The industry has seen a 5-10% growth year over year for a decade.

2017 Global Games Market
Per Device & Segment with Year-on-year Growth Rates

In 2017, mobile games will generate

$46.1Bn

or 42% of the global market
Future Outlook 1/2

The market projections predict a steady growth for the next 3 years.

2016 - 2020 Global Games Market
Forecast Per Segment Toward 2020

2016
- TOTAL MARKET: $101.1Bn
- 25% Boxed/Downloaded PC
- 4% Browser PC
- 31% Console
- 10% Tablet
- 29% Smartphone

2017
- TOTAL MARKET: $108.9Bn
- 23% Boxed/Downloaded PC
- 4% Browser PC
- 30% Console
- 10% Tablet
- 32% Smartphone

2018
- TOTAL MARKET: $115.8Bn
- 21% Boxed/Downloaded PC
- 4% Browser PC
- 30% Console
- 10% Tablet
- 35% Smartphone

2019
- TOTAL MARKET: $122.7Bn
- 20% Boxed/Downloaded PC
- 3% Browser PC
- 28% Console
- 10% Tablet
- 38% Smartphone

2020
- TOTAL MARKET: $128.5Bn
- 19% Boxed/Downloaded PC
- 3% Browser PC
- 28% Console
- 10% Tablet
- 40% Smartphone
Future Outlook 2/2

Analysts also speculate that the huge mobile growth in China will help grow the games market even further.

2013 - 2020 Chinese Games Market
Revenues Per Segment 2013 - 2020

TOTAL MARKET
+13.6%
CAGR 2016-2020

---|---|---|---|---|---|---|---
Mobile | Other

- **2013**
  - Mobile: $2.3Bn
  - Other: $11.2Bn
  - Total: $13.8Bn
- **2014**
  - Mobile: $4.5Bn
  - Other: $7.1Bn
  - Total: $18.0Bn
- **2015**
  - Mobile: $7.1Bn
  - Other: $4.5Bn
  - Total: $21.2Bn
- **2016**
  - Mobile: $11.2Bn
  - Other: $5.4Bn
  - Total: $24.6Bn
- **2017**
  - Mobile: $14.6Bn
  - Other: $5.3Bn
  - Total: $27.5Bn
- **2018**
  - Mobile: $17.2Bn
  - Other: $5.8Bn
  - Total: $29.9Bn
- **2019**
  - Mobile: $19.5Bn
  - Other: $6.1Bn
  - Total: $32.0Bn
- **2020**
  - Mobile: $21.3Bn
  - Other: $6.3Bn
  - Total: $33.7Bn
Crowdfunding 1/2

1. Problem

Crowdfunding is a system that allows people to contribute funds for future projects based on early concepts. Similarly, game crowdfunding allows gamers to contribute money in advance to developers to help develop new games. This has been proven very successful for small development studios and indie teams on existing platforms such as Kickstarter and Indiegogo.

For example: “WASTELAND 2”, which had been halted in development due to lack of funding, was able to continue development by receiving $2.9 million in 35 days through crowdfunding. Gamers showed their support and the developers received 3 times their original goal. The game launched in 2014 to critical success.

However, not all stories end successfully.

In 2013 a developer proposed a project to develop the game “Mighty No.9”, a spiritual successor to the popular “Megaman” franchise. During this time, a proper Megaman game wasn’t released for almost a decade and fans were eager to donate to see the project come to life. The project was successfully backed by over 67,000 participants with a total of $3.8 million within just one month.

Although the project was successful in terms of funding, an onslaught of problems followed. The project didn’t reach any of the promised milestones and was delayed numerous times. The development took almost double the time they guaranteed and eventually finished but launched to lackluster reviews. The fans accused the developers of quality issues and undelivered gameplay promises and were upset with the overall experience and end product.
Crowdfunding also presents a huge problem with the trust of the donated funds. The fundraisers for “Project Phoenix” raised funds for their project but then spent a million of those dollars to developer other game projects secretly. Other projects like “The Stomping Land”, where successfully funded and the team just disappeared with the money. The crowdfunding platforms don’t provide the means for investors to monitor and make sure their funds are being vested and used correctly. This current system is flawed because it lacks the proper solutions to stop these funding abuses.

2. Solution

The Playgroundz Platform provides a new videogame crowdfunding service for gamers with blockchain technology called “Mineral”.

Mineral crowdfunding features a vesting system where funds vest according to milestone deliverables. This prevents the recipient party from receiving full funding from the start. The funds will be deposited on blockchain with smart contracts that are supported with multi-signature functions. The contributors and the developers agree on milestones, deliverables and terms and the funding amounts are only paid after a certain number of contributors approve them. If the contributors don’t approve the milestones, they can then decide if the funding is to proceed with new terms or be refunded back. Since the entire funding process is based off of IOG token and smart contract, nobody including the receiving party can stop or modify it. In addition, everyone can also check the development process through Block Explorer without limitations. We believe this will keep the developers on track and honest but more importantly, this will keep the donations safe. Also, by using IOG tokens as the form of donation, gamers and developers across the globe can create and sponsor crowdfunding campaigns regardless of their country and currency.
Tips and Q&A 1/2

1. Problem

Gamers often face a lot of challenges and have difficulties progressing through some of their games. Although, they can find help and content on search engines like, the information usually lacks the perfect solutions and oftentimes provide false information.

In the current game space, each game community is usually formed according to the gamers gaming platforms like PS4, Xbox One and Switch and not the game itself. This causes the game information to split across different communities instead of unifying it as one. This also causes friction for both the game and gamer because it acts as a barrier that slows down the game and community’s growth.

Gamers often face a lot of challenges and have difficulties progressing through some of their games. Although, they can find help and content on search engines like, the information usually lacks the perfect solutions and oftentimes provide false information.
2. Solution

The Playgroundz Platform provides a new knowledge sharing service for gamers with blockchain technology called “Navi”.

Navi is a game knowledge sharing service done through a question-answering system with incentives. It aims to bring all information about games to one place without any bias or boundaries.

Navi uses a compensation system for the collection of good quality information and the determination of false information. In this system, a questioner posts a question and puts IOG token as a reward. Then the questioner adopts an answer that was helpful and the user who has responded to the question obtains the IOG token as a reward. Also, if a user provides the tips or know-how for other gamers, the user can also earn IOG tokens through donations.

As we see in Wikipedia’s case, people have the tendency to share their knowledge with others even when it’s free. With Navi, we believe we can collect good quality question-answer information for games because not only do we provide a system for gamers to connect and share their knowledge, we also provide a reward system.

Also, by using IOG tokens as the form of reward, gamers across the globe can connect and share their information regardless of their country and currency.
Marketplace 1/2

1. Problem

Videogame bartering for physical or digital items plays an important role for both the gamers and game industry.

January 2018 Software Spending Trend

Physical software spending grew 34% versus year ago, the highest January SW growth since 2007 when a 53% gain was posted.

The second-hand market for physical games such as console games and PC games is estimated at about $10+ billion/year and the item trading market for digital games is estimated at about $30+ billion/year. This proves that the user-to-user transactions are a growing blue ocean market for the game industry. However, the existing platforms also have their share of problems.

The most popular trading platform, eBay, prevents sellers and buyers from connecting directly with each other. Due to the nature of virtual game items, this becomes a problem for the buyers and sellers as they must often communicate with each other directly to trade their items.

Craigslist, another platform with a large North American user base, has been plagued with fraudulent cases simply due to the fact that there are no systems that protect its users. Although there are mediation platforms which provide transactions safely through escrow, the high fees make it hard for cheap goods to be bartered with.
The Playgroundz Platform provides a secure and easy-to-use marketplace service that utilizes blockchain called “Aki”.

The buyer who wants to trade, transfers the item value amount with IOG tokens, which then gets deposited on the blockchain according to the Escrow Smart Contract. Then, when the buyer makes the confirmation for the trade, the IOG token is paid to the seller. Both sellers and buyers can trade securely and the transaction status such as deposits can be confirmed by anyone using blockchain. In addition, users can trade at the lowest commission because they use IOG tokens. Essentially, everyone across the world can use Aki together since there will be no currency exchange problems.
1. Problem

In recent years, the rapid growth of the game industry has led to the flood of releases. On average over one thousand games get released monthly. Gamers now have too many games to choose and play with and not enough time. With so many choices, the gamers need a good system besides keyword-based search engines to find the perfect game suited for them.

For example: If a gamer is searching for a good story game and types “beautiful story game” they will get results like “bakery story”.

Although game platforms like Steam produce better recommendation results than search engines, it’s still limited in scope because it only finds games for their platform. Hundreds of good games, created by the efforts of thousands of developers, just disappear each month because they cannot find the target users efficiently.
The Playgroundz Platform offers a personalized game recommendation system for gamers. Through the Playgroundz Platform, gamers can value or review the games they have played. The games valued by the gamers are registered into their Playgroundz game list, and the user now has the ability to create their own virtual game collections. The Playgroundz Platform matches gamers who share similar characteristics using machine learning algorithms. These algorithms can help identify and recommend new games catered specifically for each user. As users value more games, the game collection increases and the recommendation algorithm becomes more accurate.
Marketing 1/2

1. Problem

This timeline represents past, current and future-forecast worldwide videogame advertising spend from 2010 to 2020. The spending is expected to reach $4.12 billion in 2018 which will be up from 2010’s $2.7 billion.

While the digital ad market continues to grow, the CPI (Cost Per Install) and CPA (Cost Per Action) marketing effect for simple installation is starting to decrease. The marketing costs continue to rise due to the increase in number of downloads required for the top rank visibility, reflecting variables such as user engagement, execution number, and other various changes that occur in the market. Publishers are starting to figure out that CPI and CPA methods are not getting them loyal users.

In essence, the publishing dollars are currently being spent on attracting the mass but also acquiring low-quality users that might not have any value or Return on Investment (ROI)
Marketing 2/2

2. Solution

The Playgroundz Platform offers a variety of services for gamers. By tracking the game habits of gamers using Big Data Analysis and Machine Learning on the Playgroundz Platform, we can anticipate what games the users will like in the future in advance. This allows us to build a personalized, targeted advertising system that is well above the level of the current keyword-based advertising system.

Through the valued and enrolled games stored in the Playgroundz Platform, we can calculate what gamers have liked in the past, what they currently like and what future games they could like. With the Navi service, we can help players come back to old games they would love to enjoy again and also recommend the perfect games they haven’t played yet. Beyond the current one-off marketing advertising platforms, we will be able to make a personalized lifestyle marketing campaign that analyzes the user’s game lifestyle. This will be very important in boosting the lifetime value (LTV) and the return on ad spend (ROAS), which are key factors for the digital marketing industry.

Pre-registration Campaign
Build a brand
Predict potential users

Engagement Campaign
Focus on maintaining existing users based on a strong community

Pre-Launch
Launch
Established
Mature

Playgroundz Marketing Start

Acquisition Campaign
Look for signals of interest like engaging with the pre-launch campaign, joining a community, watching posts in feed

Retargeting Campaign
ROAS through Community
Playgroundz Platform
Google of Games

- Playgroundz System
- Key Features & Benefits
- Features for Gamers
- Features for Developers & Publishers
- MVP
Playgroundz System

Playgroundz is best described as a “Google” for videogames. It is a platform for videogames and game-related services. Playgroundz will be a gateway to a videogame database where developers and gamers can come and virtually do anything game-related. We are simply creating a new gaming ecosystem where everything videogame-related is decentralized and belongs solely to the players and developers.

Playgroundz has identified five main areas of concern within the Game Industry and has built a service to address each one. We believe that each service will solve real problems and contribute greatly to the development of the game industry.

Mineral
Mineral is a crowdfunding platform for gamers and developers. Multisignature technology helps you track and monitor funding until the end of a project.

Aki
Aki is the marketplace platform for gamers. Escrow services using smart-contracts allow you to trade securely and transparently.

Gems
Gems is the Playgroundz Game Collection service to help gamers organize their game collections and data.

EyeQ
EyeQ is the Playgroundz AI to help identify and recommend new games catered specifically for each user.

Navi
Navi is a Q&A service for games. A reward-based knowledge-sharing service provides high-quality information.
Key Features & Benefits

In Playgroundz, the key features will benefit the gamers, developers and publishers!

- **Reward System**: Users get rewarded fairly for their data contributions.
- **Safe Marketplace**: Barter safely with escrow Tokens.
- **Social Communities**: Allow users to meet, connect and socialize through forums and chats.
- **Game Database**: Key Information for all videogames.
- **New Discovery**: Find new uses for your games.
- **Unique Transactions**: Users can barter directly for new transactions like renting and sharing.
- **Explorability**: An endless amount of content to explore.
- **Better Development**: Directly connecting developers with their users.
- **Immutable**: Our system creates permanent records for users and the general public.
Features for Gamers 1/2

In Playgroundz, the Gamer is the priority. They can use the system to connect with other gamers and games, as well as find new titles they are looking for while getting rid of their old ones. By being a part of the Playgroundz system the gamers are automatically contributing unique game data and will be rewarded for it. For the gamer, Playgroundz can be seen as a game itself; you act, progress and get rewarded.

1. Game Database

The Game Database contains key information for all videogames and platforms. Users can browse the database to find information on every single videogame ever created. The data will include a wide variety of content ranging from simple stuff like package art and release dates to more in-depth information like development history from the developers and stock rarity and ownership to see who all the people who own the game.

2. Game Network

The Game Network allows gamers to connect through the game title rather than the console which eliminates the current platform segregation issues. Gamers on different platforms can finally connect!

3. Game Communities and Social Network

Users will be able to meet, connect and socialize for games. The Social Network allows all users to communicate publicly or privately.

- Live Chat with all the users on the game page
- Posting news and updates
- Communicate through Public Chats
- Add friends and private message directly with one another
Features for Gamers 2/2

4. Game Collection System

My Collection is a virtual display of your entire physical and digital game collection for personal or public viewing. Gamers can now follow games they own, play, want, or have an interest in. Users can tag their physical game by uploading a picture into the database. Playgroundz will also incorporate various platform API’s that allow accounting binding for all of the gaming platforms. This new system will help gamers collect and organize their games as well as find new, hidden and rare gems!

5. Smart Game Recommendation

Our Big Data & Machine Learning AI features a smart game recommendation system that curates new and unique feeds for the gamers that are not currently available anywhere else.

6. Marketplace & Escrow System

Users can use IOG Tokens through our Escrow System for all transactions including buying, selling, trading and borrowing. The escrow will also provide safety for users to trade digital accounts and items.
Features for Developers & Publishers

Playgroundz will create a new development ecosystem by giving developers across the globe the necessary development resources, network and environment to make great games.

1. Developers Can Obtain True User Data

   The Game Database gives developers the opportunity to access their player base directly and obtain raw play data as well as communication access without any publishers in between them. This gives the developers substantial information to improve their games.

2. Asset Sourcing with IOG Token

   The Metadata section features Asset Sourcing where programmers, artists, designers, writers, and musicians can all upload their resources and outsource or donate them to others through IOG Token.

3. Gamers Can Crowdfund New Games, Modes and Features

   Both developers and players can come together and use the Playgroundz Crowdfunding system to help make new features, modes, and even new games. In fact, a portion of Playgroundz’s earned revenue will even Fund and Publish new projects through a voting system with a portion of the earned revenue.

4. Advertisement Transparency

   The Playgroundz Advertisement payment system operates on the basis of Blockchain technology. An automated payment system will use smart contracts to provide maximum transparency and flexibility for advertisers.

5. Lifecycle Marketing (Long-term Marketing)

   A lot of advertisers are focusing on the first event after install (retention, action, etc.) which gives you a first shot of the user quality, but nothing about long-term engagement.

   • We focus on Lifetime Value (LTV) and Return on AD Spend (ROAS) KPI.
   • We provide solutions to reach the right audiences at each stage of the game lifecycle.
Playgroundz Technology
Groundbreaking

- Platform Components
- Architecture
- Blockchain & Smart Contracts
- Scalability
- Data Storage
- User Privacy & Security
- Big Data & Machine Learning
- Recommendation System
Platform Components

Application Layer

- Web APP
  - Wallet
  - Core
  - Browser

- Mobile APP
  - Wallet
  - Core
  - Biometric Verification
  - Browser

- Third Party

RESTful JSON/HTTPS

Business API Layer

- Service Lambda
- API Gateway
- Development SDK

Foundation Layer

- Playgroundz Framework
  - Big Data
  - AI
  - Analytics
  - Escrow
  - Advertise System
  - Marketplace System
  - Blockchain
  - Core
  - Identify
  - Open API
  - Rewards
  - Inventory
  - Community System
  - Crowdfund System

Tasks Service

- Smart Contract

User

IOG Token
Architecture

Playgroundz is composed of each function being a modularization as a component. Each component uses light mechanism to be created as the minimum unit, performing as a service between each other’s communication. This fast architecture quickly enables development and test, thereby providing flexibility in terms of expansion and management of system.

Playgroundz consists of 3 layers.

1. **Application Layer**

   Playgroundz perfectly supports web and mobile platform. Based on core framework, and according to each platform, customized framework is structured and adapted with biometrics solution such as face or finger scan.

   All applications are easy to utilize with intuitive interface, and user-friendly designs.

2. **Business API Layer**

   Through JSON/HTTPS protocol, applications connect with Playgroundz framework. Even if core framework or systems are changed, it sustains the maximum compatibility and minimized the amending work.

   Third Party can access the Playgroundz ecosystem through our SDK. The SDK observes security policy reflected upon Playgroundz framework and provides accuracy and flexibility. In Playgroundz, the third party will encourage us to create additional services. Along with users and Investors, it will be a great help in growing the Playgroundz platform.

3. **Foundation Layer**

   AKA the core layer of Playgroundz. Modularization components such as AI, utilizing Big Data and Machine Learning, and Escrow, using Smart Contract are driven in the Playgroundz framework.

   All necessary policy and algorithms are included in the Playgroundz platform. Also, along with safety, diversity, expandability, security, and function, all requirements will be satisfied.
Blockchain & Smart Contracts

Blockchain combined with Smart Contract is a core technology which makes the ecosystem of Playgroundz safe and transparent.

Blockchain is dispersed ledger system in millions of computer networks, where each recorded node cannot be erased or changed randomly by the users. Information about Blockchain is encrypted and protected from the third parties.

Smart Contract is a digital contract, and when a certain condition is met, the code is put into effect automatically. When Smart Contract is distributed, the contract terms can’t be changed. All transactions that are occurred from the Marketplace and Advertisement System provided by the Playgroundz platform will be distributed via Smart Contract. In Smart Contract, every data is recorded permanently in Blockchain, making all transactions in Playgroundz platform safe and transparent.

How will Playgroundz Marketplace on a Blockchain work?

All the information for purchased items in Playgroundz Marketplace are given with unique PMIP (Playgroundz Marketplace Item Profile), encrypted and saved in Blockchain.

PMIP consists of diverse information which is item and trackable information. It also consists of digital container which can save numerous records. Internal records in PMIP are saved in timely order. Including hash and time stamp of previous record, it is composed of minor blockchain ledger inside each PMIP.

All transaction history is done safely through Smart Contract. It can be traced or viewed whenever permanently.
Scalability

The Playgroundz IOG token is ERC20 compatible and plays an important role in the Playgroundz ecosystem such as Marketplace, Rewarded Community, and Advertisement System. Ethereum is an innovative platform which expanded the possibility of Blockchain. However, compared with the growth of Blockchain, the transaction speed of Ethereum is very slow. There are many problems such as influence of the main chain due to the slow speed of side chain.

Compared with development and growth speed of the Playgroundz platform, if the issues of Ethereum platform are not solved, we are planning to develop EOS, Waves, Quantum or Blockchain platform to relocate. In this case, IOG token will be automatically traded 1:1 with the new coin in the new platform.

Data Storage

Playgroundz takes advantage of large volumes of data. We seek for dispersed, decentralized spirit without any inspections. However, decentralized and dispersed platforms are being developed and the stability is not certified. Also its function does not fit to the requirement of Playgroundz. In the beginning of development, in order for the convenience of function and development, data is saved and managed with centralized and concentrated form.

When the Playgroundz system is stabilized and the technology is well advanced for the dispersed platform, we are planning to transfer the data to dispersed storage such as IPFS, Swarm, and Bluzelle.

User Privacy & Security

We think of user’s personal information, security and protection as the top priority. We constructed a multi-level security system to block hacking or identity theft problems.

Playgroundz will obey GDPR (General Data Protection Regulation), and protects user’s data privacy according to its standard.
Big Data & Machine Learning

The Playgroundz system utilizes Machine Learning technology for data collection, analysis and anticipation modeling. As Machine Learning platform, Google’s TensorFlow is used, big data analysis technology uses text mining based on natural language processing, opinion mining and cluster analysis.

Collecting all traceable activities including user game collection, evaluation, posts, replies, and sharing to analyze patterns and traits. These data are used in all domains of Playgroundz system such as recommendation system, advertisement system, and marketplace matching system. And those who provided data are rewarded with incentives.

Playgroundz Machine Learning Architecture

All collected data are not provided to the third party, protected and saved according to personal identity security rules.
Recommendation System

The recommendation system in Playgroundz is based upon PG-Metadata that borrows Quantum theory\(^{(1)}\) from Netflix. PG-Metadata exceeds the common level of metadata. It records not only objective data of game including the genre, the published date and the production period and so on, but also subjective information of game including the ambience of game (future-oriented or horror), the graphic concept (dreamlike or retro), the complexity of game story (linear, inverted or retrogressive) and the game difficulty, etc. In addition, it even records the time to clear and whether or not a game has the original story of a novel or movie. Conceptually, it records all information about game construction.

The recommendation system uses Model-based Collaborative Filtering Algorithm. The most important thing is the latent model algorithm. Rather than comparing the similarity of original items, it extracts conclusion by interfering the patterns and causes of preference included in the data via algorithm ways. Through this kind of model, we can enable accurate and reliable recommendations. The core technique of potential pattern interference is developed via algorithms such as Bayesian Network, LDA (Latent Drichlet Allocation).

PG-Metadata registered by a user should be agreed by more than a certain number of users. Lastly, it will be registered after the acknowledgement of Playgroundz system. When it is registered successfully, both a registrant and an inspector of the PG-Metadata receive a certain amount of incentive (Pointz). Such an incentive system gives many users a strong motive to participate in building and validating vast game databases actively and voluntarily.

Quantum theory\(^{(1)}\): The project taken the lead in by Todd Yelin of Netflix. When metadata of a movie is written, it makes the metadata filled with necessary information according to about 36-page guidelines. It is the key project of Netflix recommendation system to understand the composition of contents at the quantum level.
Playgroundz IOG Token
Tokens Were Made for Games

- IOG Token
- Why Participate?
- Future Plans
- Token Ecosystem
- Token Sale
- Token Distribution
IOG Token

Playgroundz is composed of IOG Token following ERC 20.

IOG token is the major settlement method in the Playgroundz Platform. It is utilized in every domain including settlement of advertisement, community, crowdfunding and marketplace.

It is perfectly compatible with ERC20 standard. It can easily transfer or save in Ethereum Wallet or Playgroundz Wallet just like MyEtherWallet and Metamask. IOG token will not be issued after the Token Sale. Right after the Token Sale, one can attain IOG token only through various activities in Playgroundz Platform or many other transactions.

Based on reciprocal communication between user, developers, and publishers, the Playgroundz Platform provides an economic system, which enables virtuous cycle of IOG tokens.

Why Participate?

Simple, Playgroundz belongs to the gamers and the gaming world. Blockchain gives us an opportunity to create a decentralized game world for everyone! We would just be the honored group taking the lead to get this started.

Secondly, because it affects you. Believe it or not, you’re a gamer. Videogames have become a part of our lifestyle and whether you’re at home on a console or entertaining yourself with your mobile device, you have most likely played a game once in your lifetime.

Videogames are the future of entertainment and this is your chance to help mold it.

Future Plans

After first establishing the database and building a community. Playgroundz will develop new revenue models.

• Playgroundz Publishing (Funding new titles)
• Playgroundz Accelerator (Seed of investment)
• Membership Programs
• Game Subscriptions
• Game Streaming
Token Ecosystem

- Investor
- Buyer
- Questionner
- Advertiser
- Developer
- Seller
- Answerer
- User
- Contributor
- Validator
- Exchange

- Mineral
  - Crowdfunding
  - Investor → Developer

- Aki
  - Marketplace
  - Buyer → Seller

- Navi
  - Q&A Service
  - Questioner → Answerer

- Advertisement
  - Advertiser → Playgroundz

- Game Database
  - Playgroundz
  - Contributor
  - Validator

- Playgroundz

- Whitepaper v1.0

- 7. Playgroundz IOG Token | d. Token Ecosystem
Token Sale

Proposed Structure

- Ticker: IOG
- Tokens: 2,200,000,000 IOG
- Inflation: N/A
- Private pre-sale cap: 220,000,000 IOG

Token Distribution

- Industry Reserve: 35%
- Foundation: 25%
- Board of Advisors: 10%
- Private Token Sale: 10%
- Early Investor: 15%
- Bounty: 5%

Locked Structure

- Industry Reserve: 30% locked (10% yearly release)
- Foundation: 16% locked (8% yearly release)
- Early Investor: 12.5% locked (1 year release)
- Total: 58.5% locked
Roadmap
The Next Level

- Accomplished Milestones
- The Road Ahead
Accomplished Milestones

- **April 8, 2008**: PM Studios forms to develop and publish games
- **Nov 21, 2012**: Garage Cell formed w/ $125K seed
- **2013**: Built prototypes and functions
- **Nov 1, 2013**: Angel Round raised $700,000
- **Apr 1, 2014**: Launched web site
- **Oct 2, 2014**: Nitty goes into a new direction with blockchain
- **Aug 14, 2015**: Playgroundz is born
- **Dec 1, 2015**: Project Yello begins
- **Jan 16, 2016**: Project Yello becomes Nitty
- **Mar 16, 2016**: Beta launched on App Store
- **May 1, 2016**: Began Android version
- **Jan 10, 2017**: Team decides to replace niche with games
- **Nov 20, 2017**: Whitepaper v1 complete

The Road Ahead

The Playgroundz development budget and milestone schedule.

*Please refer to the excel document playgroundz_wpattachment
Playgroundz Team
Award Winning Game Developers

- Development Team
- Executive & Operation Team
- Advisors
Development Team

Playgroundz was conceptualized and created by PM Studios, Inc. an established videogame developer/publisher since 2007. Throughout the past decade, PM Studios has created games for numerous platforms which include PlayStation 4, Xbox One, Nintendo Switch, PSP, PS Vita, Arcade, PC Online, iOS and Android. Our most recent hits include Barbie Fashionista for Mattel, Superbeat Xonic, Chef Curry with Stephen and Ayesha Curry and Just Skate with Justin Bieber. We recently got some amazing new Blockchain developers to join us as well. The 30+ team members at PM Studios will apply all of their videogame knowledge and connections to develop their most important work to date, Playgroundz!
Executive & Operation Team 1/2

**Michael Yum** CEO, Founder
Mike has developed and published over 40 games throughout his 13-year career. He’s also a passionate and dedicated gamer with 200+ PSN Platinum trophies and over 2000 physical games in his collection.

**David Hung** COO
Dave spent 15 years in finance specifically in boutique investment banking handling mergers & acquisitions for private Fortune 500 companies.

**Peter Jung** CFO
Peter co-founded PM Studios with Michael Yum in 2007. Peter recently sold his other company Crew Knitwear for $50+ million.

**Dongpil Lim** CTO
Dongpil also known to the gaming world as Feels was the lead programmer for Technika. Dongpil also won the Programmer of the Year award from the Korean Government in 2010.

**Seong-uk Jeon** Art Director
Seong-uk also known as Panax to the DJMAX fans was the Art Director for the DJMAX Metro Project which includes Technika, Black Square and Clazziquai Edition. Now known simply as Justin, he leads PM Studios’ Art Division and oversees all projects as the Art Director.
Jiho Jeong  System Architect
Jiho previously developed Altools Windows applications during his time at ESTSoft. He was part of the Community System Architecture team for hanafos.com which was one of the most popular portal sites in South Korea. Jiho has also programmed security solutions for one of the largest security companies in the world called Softforum. He is now the Lead Database and Server Architect for PM Studios.

Hogeun Kang  Operations Director
Hogeun is a rare industry veteran who has experienced all types of videogame cycles and environments which include arcade, console, PC online and mobile. His ability to adapt to new platforms makes him an excellent leader for the next phase for games.

Sarah Choi  Lead Artist
Sarah has worked on several DJMAX projects and was a lead artist for Technika 2. Her work extends beyond games and has worked as an artist with major brands like Nike and Converse. She is consistently growing as an artist and will bring her amazing abilities to Playgroundz.

Steven Yum  Producer and Project Manager
Steven comes from EA Mobile, where he helped create and release numerous titles under EA’s most famous brands which include The Sims, Madden, and Command & Conquer. He now works at PM Studios as a Publishing Producer and helps bring developers games to market.

Federico Perez  Marketing Manager
Federico has been in the industry for five years and leads creative and technical elements of several marketing initiatives including data mining, community management, web collateral development, lead generation, channel partner cultivation, as well as customer platforms and acquisition strategies.
Advisors 1/2

Game

Louie Reyes
VP at Capcom and formerly at SEGA and PlayStation

Greg Essig
Former Apple Appstore Manager

Philippe Erwin
Former VP of Warner Bros Interactive Group

Maria Essig
Google Playstore Manager
Advisors 2/2

More to be announced.
References
Sources

- Videogames
- Market
- Big Data & Advertising
Videogames

Videogames
https://en.wikipedia.org/wiki/Video_game

The internet of things

Videogames as medium

How videogames changed the World
https://www.youtube.com/watch?v=32wN4I1DWlo

History of Gaming
https://techcrunch.com/2015/10/31/the-history-of-gaming-an-evolving-community/

How videogames advanced computer and 3D technology like GPUs

How videogames changed popular music
https://www.newyorker.com/culture/cultural-comment/how-video-games-changed-popular-music

Videogame AI is changing the world (Machine learning)

DICE isn’t allowed to talk to the community

EA admits defeat for Battlefront 2
Market

Global Games Market 2017

Used Games Sales

Game Market Data
https://www.statista.com/topics/868/video-games/

How Games became a $100B industry
Big Data & Advertising

Digital Ad beats TV in 2017
https://www.recode.net/2017/12/4/16733460/2017-digital-ad-spend-advertising-beat-tv

Are CPIs worth it
https://growthbug.com/are-cost-per-install-campaigns-worth-it-4c5d41649deb

Solutions on Lifecycle Marketing
https://www.facebook.com/business/news/Solutions-for-every-stage-marketing-your-game-on-Facebook

Prelaunch Marketing

Rising Game Advertising Cost
http://www.mobyaffiliates.com/guides/mobile-app-advertising-trends
https://appsamurai.com/app-marketing-strategies-are-cost-per-install-cpi-campaigns-really-worth-it
https://pagefair.com/blog/2017/adblocckreport

Data Fraud
http://www.mobyaffiliates.com/guides/mobile-app-advertising-trends
https://venturebeat.com/2015/12/10/33-of-all-programmatic-ad-impressions-on-mobile-could-be-fake
https://static1.squarespace.com/static/57901762725e2547f073e884/t/587810fec534a5ef66e-5da48/1484263680001/FINAL_
https://theandpartnership.app.box.com/s/qt8ahj4led6h77b2dsbsa1bnu07wxqcm

Advertising
https://www.facebook.com/business/news/Solutions-for-every-stage-marketing-your-game-on-Facebook
https://www.facebook.com/business/success/game-insight#
http://www.pocketgamer.biz/comment-and-opinion/65939/why-retargeting-is-the-new-user-acquisition-for-mobile-games/

Big Data:
https://www.grandviewresearch.com/industry-analysis/big-data-industry