Information contained in this white paper is subject to change from time to time before the official release of the final version of the NeoWorld game portal, as the NeoWorld team may deem fit.

NeoWorld Blockchain Sandbox Game

White Paper

THE FIRST BLOCKCHAIN SANDBOX GAME IN THE WORLD

Version EN 2.2

This White Paper is available only on www.neoworld.io and may not be published, reproduced or passed on to any other person without the prior written consent of the NeoWorld team.
# Content

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content</td>
<td>2</td>
</tr>
<tr>
<td>1 Executive Summary</td>
<td>3</td>
</tr>
<tr>
<td>2 Gameplay</td>
<td>5</td>
</tr>
<tr>
<td>2.1 Background</td>
<td>5</td>
</tr>
<tr>
<td>2.2 Core Functions</td>
<td>7</td>
</tr>
<tr>
<td>2.3 Elementary Resources</td>
<td>8</td>
</tr>
<tr>
<td>2.4 User Generated Contents</td>
<td>9</td>
</tr>
<tr>
<td>3 Economic System</td>
<td>10</td>
</tr>
<tr>
<td>3.1 Usage Scenario</td>
<td>10</td>
</tr>
<tr>
<td>4 Technical Information</td>
<td>11</td>
</tr>
<tr>
<td>4.1 Structure</td>
<td>11</td>
</tr>
<tr>
<td>4.2 Components</td>
<td>11</td>
</tr>
<tr>
<td>5 The Distribution of NASH</td>
<td>14</td>
</tr>
<tr>
<td>5.1 Information about NASH</td>
<td>14</td>
</tr>
<tr>
<td>5.2 Distribution</td>
<td>14</td>
</tr>
<tr>
<td>5.3 Foundation Structure</td>
<td>15</td>
</tr>
<tr>
<td>5.4 Roadmap</td>
<td>16</td>
</tr>
<tr>
<td>Important Notices</td>
<td>17</td>
</tr>
</tbody>
</table>
1 Executive Summary

NeoWorld is a multiplayer online sandbox game that runs on the blockchain. In Unity-Powered 3D virtual environment, players purchase lands, construct buildings, invest and operate businesses, like in the real world. NeoWorld is also a social platform where players could not only chat, but also develop complex relationships, manage the community and accumulate wealth from within.

Key words: game, sandbox game, game economy, user-generated content, blockchain token economy.

What is NeoWorld?

- **Virtual World**
  NeoWorld is a virtual world based on blockchain ideologies, with its own digital currency and digital assets recorded on-chain. Players use the virtual currency, NASH, to bid the lands where they can build and develop. Developed areas would provide employment opportunities for other players to earn NASH. In its system, both employer-players and employee-players will be rewarded with NASH as they contribute either labour (attention) or capital.

- **Collaboration**
  NeoWorld creates a game model that emphasizes on collaboration. In the process of accomplishing tasks in NeoWorld, players simultaneously play a variety of inter-related roles, from employers to employees, from content creators to distributors, and to consumers. As relationship develops and strengthens, NeoWorld will form a social network and collaborative community akin to the real world.

- **Sparking Creativity**
  Players are able to create avatar, contents and designs using elementary materials in NeoWorld. They can also create their own games or interactive applications using scripts and mini-programs, and deploy those in their properties to generate income from other participating players.
Project Concept and POA Mechanism

- **Project Concept**
  Virtual world simulation games like Second Life are always compromised by the conflict of interests between game operators and player communities, and lack of real incentives. NeoWorld offers a token-based economic model to address these issues, where contents are purely user-generated and users are fairly and transparently rewarded.

- **POA (Proof of Attention)**
  We believe everything about attention is valuable. When players turn their attention from the real world to this virtual world, to create content, upgrade facilities or simply view ads, they deserve to be rewarded. The overall intrinsic value of NeoWorld will steadily increase, as the virtual world continuously accumulates vast amounts of “attention”. To measure and distribute the value to the community, NeoWorld has designed the PoA mechanism and the NASH token, rewarding content generators, distributors and consumers using a dynamic formula.

Roadmap

The NeoWorld project comprises three phases, based on the development of blockchain technology and infrastructure:

- **Bronze Age.** NeoWorld will introduce NASH token and complete its core game functions, e.g. simulation and multiplayer online interaction. Players are able join the community via PC-based client portal and use NASH in NeoWorld.

- **Silver Age.** NeoWorld will migrate partial functions, e.g. community voting, to the best-fit public chain then, e.g. Loom, Zilliqa or EOS. Third-party content upload and review (by the community) functions will be incorporated into the game and the economy.

- **Golden Age.** NeoWorld will release APIs to community, and players will be able to create interactive contents and mini-applications. Community election mechanism will be ready, and the NeoWorld Foundation will phase out and be replaced by the community elected governance team.
2 Gameplay

2.1 Background

NeoWorld is a habitable planet discovered by mankind in the course of exploring the universe. On this vast planet, the habitants build and develop civilizations generations after generations. NeoWorld habitants collect resources, build factories, found businesses and collaboratively create the new world in history.

The main land comprises of 40,000 pieces （200x200） of land parcels of the same size. The owner of land parcels can develop the land parcel and change the landscape in the way he wants, or build constructions, scenes or even interactive contents.
Every piece of land parcel is adjacent to another, making it access from anywhere. Players use their avatars to explore the virtual world, traveling from one piece of land to another, chat with other avatars and interact. Point to point transports, i.e. telepoints, will be available at the later stage of the game when the world is large enough.

The developer of the game, the NeoWorld team, provides elementary resources for players to design and build their land parcels as well as their avatars.
2.2 Core Functions

The players are free to explore the virtual world, in order to collect resources and take part in projects that require collaborative work. The NeoWorld will only flourish when its habitants work collaboratively.

Land parcels are key to the NeoWorld. Players use NASH, the only virtual currency in the NeoWorld, to purchase or bid for land parcel. Player can build more facilities on the land parcel they own to increase the value of the land, and garner more traffic and attention from the community. At the later stage of game, interactive contents will be supported and players will be encouraged to design their own interactive facilities to attract attention. Furthermore, players are free to form groups, communities, or any form of alliances and organisations in the game.

Different types of facilities offer different functions in the game, and have different requirements to build and develop. This means most of the complex facilities will require collaboration of players who excel different and complementary skill sets. NASH will be the virtual currency for players to transact and decide the economies between a group of players.
Like the real world, players could invest in their land and facilities or themselves to increase the attributes. They do so by locking up their NASH for a certain period of time in the NeoWorld.

### 2.3 Elementary Resources

NeoWorld has six types of elementary resources, upon which the NeoWorld is built:

A) Land

Each NeoWorld continent has 40,000 pieces of land parcels. Player purchase from auctions or from other players the land parcels and build facilities on the land parcels. When all the land parcels of a continent are sold out, a new continent will be opened.

B) Facilities

There are three types of facilities, namely, mining, businesses and interactive. Mining facilities are for players to collect resource materials necessary to build anything in the game; businesses are for players to enhance the value of their land parcels and attract traffic; interactive facilities are for players to design and build interactive contents.

The number and types of facilities on a piece of land parcel contribute to the value of the land. Some facilities support collaborative work and provide employment opportunities for other players. Players are free to alter the facilities on their land parcels.
C) Wonders

When a piece of land parcel meets certain conditions, e.g. a target value of the land or a target attribute of the land parcel, the owner of the land is offered a chance to build a wonder. Wonders are limited and unique in each continent, i.e. players will have to race to build wonders. Wonders will significantly improve the value and all attributes of the land.

D) Building materials

To support the construction of facilities, there are a few types of building materials that have to be collected beforehand, namely wood, stone and steel.

E) Avatars

Each player has a virtual avatar. Avatars present in 3D format and can be dressed and modified in the later stage of the game. Avatars can virtual chat with each other and interact with preset actions and gestures. Each avatar has a set of characteristics and skill sets, reciprocating different types of works required in the collaborative works in the game.

F) Telepoints

Telepoints are point to point transport services. Telepoints are scarce resources as well in the game, and its constructions and usage will both consume NASH.

2.4 User Generated Contents

NeoWorld will encourage user to design contents based on the elementary resources provided in the game, e.g. building a theatre for stand-up comedy, hiring avatars to perform and charging audience a NASH ticket. Players with artist talent can design buildings, furniture or costumes for others and sell their designed items in the game.

Players can submit their designs to the NeoWorld team to publish in the game. In the later stage of the game, such process will be on-chain and the decision on whether to include a new item in the game will be made by the committee formed by the players in the game. The game will seek to support a variety of creative contents and be compatible to most mainstream forms of content formats.
3 Economic System

The NeoWorld has only one type of currency, NeoWorld Cash (“Nash”). NASH is used for all transactions and settlements.

The total supply of NASH is fixed. The NeoWorld team or any game operator in the future is not able to alter the total supply of NASH; neither can the NeoWorld team or any game operator alter the number of other resources, e.g. land, for its own profits. The proceeds generated from the initial sale of land or any facilities will be circulated back to the game, based a variety of mechanism, e.g. level of participation, content generation, community contribution, etc.

The NeoWorld team will levy a fee on every transaction made between players. The fee will be used to cover game-related operational costs.

3.1 Usage Scenario

Players can be rewarded by NASH for completing task in the game. Tasks can be designed by the NeoWorld team, such as login awards or community voting; or tasks can be designed by other players, e.g. collaboratively working on a building a facility, or providing services in a completed facility. In addition, players can purchase NASH from crypto exchanges or other players.

NASH can be used to purchase items in the game, including land, facilities or items and contents created by other players.

Players can choose to lock up a portion of their NASH for a period of time to increase the attributes of their land, facilities and avatars.

All prices and transactions are determined by market and the NeoWorld team or any developer in the future, by design of the game mechanism, is not able to influence or control the market.
4 Technical Information

4.1 Structure

The fundamental design of the game is to create a tokenised free economy in a virtual world. Given the fact that at the date of this white paper, there is no prevailing cost-efficient blockchains that may support the computation, data interchange, storage and transfer required of a 3D game, the NeoWorld team decides to only implement a reasonable part of the game on the blockchain. This is a compromise made by the team to balance gaming experience, which is the critical element of any game, be it blockchain or not, and game transparency. The NeoWorld team foresees that in the near future, new blockchain technologies will be developed to support a more comprehensive implementation of any game on-chain, and the team will take its best endeavour to utilise such technologies in the NeoWorld.

1. Get character and environment data
2. Get visual data if not yet downloaded
3. Get instance data
4. Load important config (tax rate, land limit etc)

4.2 Components

To better support the players who are keen to create contents for NeoWorld, the NeoWorld program comprises three inter-related parts:

1) The NeoWorld client

The NeoWorld client is the game itself, in which the players explore the NeoWorld virtual world and interact with others, as described in earlier chapters of this white paper. The client is online and support multiplayers. Despite the first version of the client is PC-only, the NeoWorld team has delineated plans to develop mobile and other mainstream versions of the game, to suit the needs of different players.
2）NeoWorld Development Suite（NDS）

The NeoWorld program will include a development suite (“NDS”), for players to design contents suitable to be used in the game. The NDS will include a studio for design interface, EzGameGuru program for new users, NeoWorld API, as well as free design resources that are already available in the game for players to kick start their creation. The NDS will be linked to the CAL to be compatible to third-party contents.

3）Copyrighted Asset Library（CAL）

To encourage players to provide indigenous ideas and contents, NeoWorld program will support an independent Copyrighted Asset Library (“CALy), a content uploading and browsing platform for players to manage and exchange contents. Currently, CAL will be based on IPFS, subject to the launch and development of the IPFS network, to support on-chain storage of large files and provide a unique address and timestamp for each piece of content.

As illustrated in the chart above, CAL utilises the IPFS network (subject to the successful launch of IPFS, or any prevailing blockchain storage network then) to achieve on-chain storage and protection of large data:

1) A player uploads content to the IPFS node and generates a hash address for the content;

2) The player purchases an ERC721 token in CAL to store the hash address in the metadata of the token. As the ERC721 token is unique, only the player who has created it will own the ERC721 token, thus creating a timestamp, establishing that at the point of time the token is created, the
player owns the hash address, which in turns points to a unique piece of content in the IPFS network;

3) Players browse contents on the graphic interface provided by CAL, e.g. a client portal or a website. Contents displayed are encrypted for browsing only and not downloading;

4) Players wishing to purchase a piece of content have to complete the transaction in CAL or its underlying smart contracts on chain.

The CAL will ensure contents created by the players are registered, traceable and protected. The NDS and NeoWorld Suite will follow the CAL mechanism to ensure that third-party contents are time-stamped, providing timeline evidence in the event of intellectual property disputes.
5 The Distribution of NASH

5.1 Information about NASH

NeoWorld Cash (“NASH”) is the only currency in the NeoWorld. NASH is an Ethereum token based on ERC223 standards and compatible with ERC20 standards. The total supply of NASH is 100 billion.

Contract address on Ethereum: 0x0a255f700b16c0acf5673565c757b94fb38b27f2

For more information about NASH, please refer to the website: www.neoworld.io

5.2 Distribution

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>20%</td>
<td>PoA Mining</td>
</tr>
<tr>
<td>30%</td>
<td>Content Creation Incentive Pool</td>
</tr>
<tr>
<td>5%</td>
<td>Risk Control Fund</td>
</tr>
<tr>
<td>15%</td>
<td>Marketing</td>
</tr>
<tr>
<td>25%</td>
<td>NeoWorld Foundation</td>
</tr>
<tr>
<td>5%</td>
<td>Founding Team</td>
</tr>
</tbody>
</table>

- **PoA Mining**

A portion of the NASH will be dedicated to the players who are active in the game and taking efforts to build the NeoWorld. Players will be able to build facilities on their lands or work in facilities to earn NASH. Every year, 10% of the remaining Mining pool will be released to the players, based on their activities in the game.

- **Content Creation Incentive Pool**

NASH will be rewarded to players who create and design contents in the NeoWorld. Every year, 10% of the remaining Content Creation Incentive pool will be released to the players, based on the quantity and quality of the contents.

- **Risk Control Fund**

A portion of the NASH will be used to stabilise the prices of NASH and other tradable items in the game or elsewhere, in order to hedge risks arising from volatile markets.

- **Marketing**

To promote the NeoWorld game, especially in its early stage, the NeoWorld team will allocate 15% of the
token for marketing activities, including but not limited to customer acquisition, collaboration with opinion leaders, roadshows and meet-ups, media releases, etc.

- **NeoWorld Foundation**

  The NeoWorld Foundation will hold in trust 25% of the token and its main purpose is for the development of the NeoWorld game. The NeoWorld will organise resources to ensure each of the milestones of the game is delivered according to the roadmap. The NeoWorld Foundation will also develop an ecosystem to partners who are interested in participating in the development and promotion of the NeoWorld.

- **Founding Team**

  The Founding team will hold 5% of the token as incentives. The tokens held by the management will be released equally in 5 phases from the point the game goes online and every six months therefrom.

### 5.3 Foundation Structure

The NeoWorld Foundation will be responsible for the entire project, including game development, promotion of the NeoWorld, establishing the ecosystem, etc. The sub-committees of the Foundation are as follows:

**Content Management Committee:**
- Design gameplay and ensure the balance of game stats
- Provide ample supply of resources to empower players to build complex communities;
- Assist the in-game governance by players’ communities;
- Other game content related issues.

**Technical Committee:**
- Develop gaming scripts and smart contracts;
- Review blockchain technologies and revise the design of the NeoWorld accordingly;
- Other technical aspects of the NeoWorld game and its components.

**Economic Committee:**
- Promote the use and circulation of NASH;
- Manage the Risk Control Fund;
- Monitor the NeoWorld economies and release in-game economic data;
- Invest in NeoWorld-related ecosystems;
- Other economy related issues.

All committee members will be appointed in July 2018 with one year tenure.
5.4 Roadmap

The NeoWorld project comprises three phases, based on the development of blockchain technology and infrastructure:

- **Bronze Age.** NeoWorld will introduce NASH token and complete its core game functions, e.g. simulation and multiplayer online interaction. Players are able join the community via PC-based client portal and use NASH in NeoWorld.

- **Silver Age.** NeoWorld will migrate partial functions, e.g. community voting, to the best-fit public chain then, e.g. Loom, Zilliqa or EOS. Third-party content upload and review (by the community) functions will be incorporated into the game and the economy.

- **Golden Age.** NeoWorld will release APIs to community, and players will be able to create interactive contents and mini-applications. Community election mechanism will be ready, and the NeoWorld Foundation will phase out and be replaced by the community elected governance team.
Important Notices

This white paper is available only on www.neoworld.com and may not be published, reproduced or passed on to any other person without the prior written consent of the NeoWorld team.

The NASH tokens are not securities, debentures nor units in a collective investment scheme or business trust.

This white paper is a technical document that outlines the functions, gameplays and development plans of the NeoWorld game. This white paper is not intended to be a sale or offering document for any sale or subscription of the NASH tokens or any digital contents in the game, whether it is created by the NeoWorld team or any third party content providers.

No regulatory authority has reviewed or approved any information in this white paper. The publication, distribution or dissemination of this white paper does not imply that applicable laws, regulations or rules in any jurisdiction have been complied with.

No information in this white paper should be considered to be business, financial, tax, legal or general advice in relation to becoming a NASH token holder. Any figures, plans or projections are intended to be illustrative only and must not be regarded as warranties or representations of actual or future results. Any purchase of NASHs must not be viewed as an investment to achieve returns but as a means to facilitate the gameplay set out in the NeoWorld game.

This white paper is not intended for distribution in any jurisdiction where the application or the sale of tokens as set out in this white paper is regulated or prohibited.

Representation and Warranties

The NeoWorld, the NeoWorld team and/or any of its related entities, its officers, shareholders or directors, do not make or purport to make any representation or warranty or undertaking in this white paper or in connection of the NeoWorld and/or the NASH token to any person, including any representation, warranty or undertaking relating to the truth, completeness and accuracy of the information in this white paper.

As a user of the NeoWorld game and its related programs and/or a holder of NASH, you represent and warrant that:

You agree that the NASH tokens are neither securities nor units in a collective investment scheme or business trust. Before registering for the NeoWorld game and/or purchasing any NASH, you agree to furnish personal information and documents which may be requested by the NeoWorld team or a party engaged by the NeoWorld team from time to time for the purposes of conducting customer due diligence, and that any
information furnished by yourself is true and accurate, and that you have not withheld any material information. You, your associates, your businesses enterprises (in which you are beneficial owner) or family members are not on any sanctions or terrorist list issued by Singapore or any other jurisdiction. You, your associates, your businesses enterprises (in which you are beneficial owner) or family members, have not committed any previous criminal offences, and that you have not used any proceeds of crimes or tax offences (whether belonging to you or otherwise, and whether directly or otherwise) in the NeoWorld game or for the purchase of NASH. You understand the NeoWorld team and/or any of its related entities are not providing you with any investment or financial advice, that you are acting of your own volition and have sought your independent financial, legal or other professional advice where appropriate. You are not a citizen, resident (tax or otherwise) in any jurisdiction in which the sale or purchase of NASH tokens prohibited and you will not hold the NeoWorld team and/or any of its related entities, its officers, shareholders or directors, for liabilities for damages or losses arising therefrom.