

BitShares PLAY Non-technical Whitepaper

1.0 Introduction

Bitshares PLAY (PLAY in short) Leverages the block chain technology, attempts to establish a decentralized autonomous game platform. Any third party can develop various provably fair games, including types that are never seen before. These games feature entertainment and fairness at the same time. Meanwhile, PLAY embodies the function of random number generation (see appendix for technical details) and custom asset and exchange are accessible to third-party developers, providing fairness and asset issuing with convenience and technical support.

2.0 Functionality

2.1 Type of games supported by PLAY

On-chain games refer to games that run its entire logic on the block chain and that are independent from any external centralized institutions (no risk of trust)

2.1.1 games on probability

Typically, Dice, Chance Coin and etc.

2.1.2 Quiz games

The guesswork of whether something will happen or how something will happen in the future.

For example, whether celebrities will get married or divorce in a specific amount of time

Data needs to be put into the blockchain after events happen off-line. On Bitshares Play, which leverages DPOS, the job can be done by delegates. Because delegates are elected by PLAYshares holders, we believe the results of vote are reliable. (If the result is obviously false according to facts, the consequence is shared by the PLAY shares holders who elected the delegates, which means it will fall on the whole community, in which sense, it is still fair.)

2.1.3 Multiple-person vote-based SPG

This is a brand new interactive multiple-unit game proposed by ByteMaster.

An example can best illustrate the mechanism. Chess would be different from its traditional form whereby only two people are involved, while on the PLAY platform there would be two groups of users. Every ID has its color field, making it a game between the black and the white game. How a round should be played will be determined by the group's vote and the weight of each ID's vote depending on the balance in the account of the ID.

This is an unprecedented type of game, even for the cryptocurrency field.

2.1.4 Chess Games

This type of game includes simple chess game and possibly board games and pokers.

2.1.5 Probability and Strategy Combined

This type is a combination of 2.1.1 and 2.1.4 which require both luck and planning, like Cannot Stop and Bingo.

2.2 The definition of Decentralized Game Asset and P2P exchange

Traditional games have the concept of game assets and equipment. PLAY allows users to issue custom assets, which means game developers are allowed to issue their own customized assets (either game tokens or gear objects), and realize deposit and withdrawal inside the games or control the total amount of assets by reading the asset ledger on the blockchain. At the same time, the tokens and gear objects are exchangeable on the platform of PLAY. Players can freely purchase or sell these assets, through which, inter-server and inter-game p2p economic systems are established, replacing traditional asset issue models.◦

If on-chain games as described in 2.1 gains enormous user base, PLAY is expected to welcome more game developers to issue their assets for users' attention. By then, custom assets' qualification bidding could also be introduced as one of the possible profit models when huge user base offers possibilities for many other revenue channels.

PLAY encourages exchange and market to be built in traditional games to realize decentralized game asset exchange without the necessary process to get familiar for the third-party platforms.

3.0 Introduction of PLAY's built-in Random Number Generation (RNG)

Random numbers are used in many scenarios when their generations have been a problem for very long. A general principle is, the generation of random numbers is better to be done without any control of a particular individual. Therefore, to make a future block the source of random number is still unreliable, because the randomness is still in the end decided by a certain individual and it is impossible to prove whether the regarding individual is honest.

PLAY adopts a distributed algorithm for random number generation , leveraging delegates in the DPOS structure to provide the randomness. PLAY delegates generate private key data and publish the hash of the key data when a block is published.

In the end the random number employed is generated by a successive multiple (at least 101 or more) number of key data, so that as long as one delegate is honest and hasn' t leaked his data,◦ we can safely assume that no one could know the random number generated in the end, making the number fair and reliable.

Appendix:

Development Roadmap

A basic asset transaction, ID, CP accounts and built-in exchange and models of exchange and trading.

B on-chain game platform (including 1 or 2 on-chain game demonstration), custom assets issue, deposit and withdrawal, API reading

C light wallet

D Quiz game, third-party game developer integration