

After very extensive and detailed research in conjunction with BlockProof Tech LLC, so [DAO.Casino](#) has some exciting news for the Ethereum industry. In what it is terming Gambling 3.0

, DAO.Casino has found a way to increase interaction speed between DApps' players, without losing any gas costs or security. The study has successfully shown that the generating of a new block approximately every 15 seconds and every transaction taking an average of six minutes can be reduced. This is because Game Channels will run on top of existing blockchains.

What was carried out

Ethererum already offers plenty of opportunities. What DAO.Casino was looking to achieve was to build on that to create what they term as Gambling 3.0, where they are looking to evolve and develop the possibilities within blockchain.

State Channels solve the problem of scalability while increasing the blockchain's speed and efficiency. That's why they were used as a foundation to build around the needs of the gambling market. Each aspect of the research relied on the aspect of trust and finality within these channels, with other factors such as Provably fair random number generation support and instant verification of randomly generated numbers.

The research, with BlockProof Tech LLC, tested for a two-party game, so the scenario of a casino versus a player. It also tried scenarios for any game that requires the PRNG tool to function, and for payment to be easily obtained and simple to trace back.

There was a detailed coverage of protocols that allow two parties to open a game channel, play a game, close the channel and get rewards, without any risk of counterparty fraud. The dispute resolution mechanism was also looked at, as was the value of a Third Person Observer who can make any necessary Smart Contracts updates.

As a blockchain specialist with an increasing set of followers, DAO.Casino was aware how vital trust and security is, as well as betting flexibility and speed of interaction. That's why the research tested a player against a casino, the possibility of a random number generation and the likely probability of a winner after each round. Various studies took place concentrating on different parts of the channel. Griefing and Signidice were also carried out.

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What the research showed

That's how Game Channels were created, with an enabled Signidice PRNG that uses unique digital signatures. Not only that, there is also a dispute resolution mechanism. The potential use of Game Channels technology is not only for casino games. In very interesting news for the iGaming industry, online gaming may also be able to use it.

Having carried numerous tests, BlockProof Tech LLC who carried out the research, has proven that Game Channels can be run on top of existing blockchains. As a result, the interaction speed between DApps players can be faster than the current Ethereum time of every 15 seconds without losing on the security or flexibility factors. It also significantly reduces any possibility of cheating.

The research set-up

Alexander Davydov from the Research Department at DAO.Casino worked alongside Alisa Chernyaeva and Ilya Shirobokov of BlockProof Tech LLC research team.

"This paper describes

"Game

Channels", a novel approach that applies blockchain technology

to the gambling industry. It is well known that blockchain technology has issues with scalability

, as well as transaction times. The longer a blockchain becomes, the more problematic these

issues can become. In the worst case a distinctly user-unfriendly experience results. Many approaches have been tried to mitigate these issues; one of the most promising approaches is that of state channels. This paper describes a modified form of state channels that they refer to as Game Channels. The primary application is to gambling with two participants (dealer/player and player/player)."

"The paper describes the algorithms used from a transaction-based approach, in which each game action is associated with an exchange of data, which may be thought of as a message. Great care is taken in rigorous defining these data

exchanges, which of course are based on strong cryptographic primitives. The paper also presents a dispute resolution mechanism that can be used to mitigate certain common forms of cheating. The exposition is thorough and lucid. All currently known algorithms that are thought to be unbreakable have undergone years of cryptanalysis, simulation and red-teaming, so more work needs to be done, but my initial impression is that this approach shows significant promise.”

Mark Reynolds, a Research Scientist from Boston University and a graduated MIT Ph.D. in Computer Science.

What exactly is Gambling 3.0

Some industry companies talk about 1.0, and staying away from the digital world, while others refer to 2.0, which means they're into iGaming but they're not keen on any further developments. DAO.Casino is looking further ahead. It is introducing an exciting new term for the gambling world. Gambling 3.0 is all about innovation and a desire to use technology to create a greater experience for anyone using DAO.Casino.

The Gambling 3.0 industry is fully regulated by technology. It's all part of the process of building a decentralized protocol for gambling on Ethereum blockchain that ensures the automation of transactions and facilitates interactions between all the industry participants. Creating new and better opportunities for casino operators, game developers, affiliates and players. That includes the possibility of game developers and casino operators creating games and becoming a casino operator. Therefore, not only is it simpler to get involved, but also easier to earn revenue.

Conclusion

The fact Game Channels can be run on top of existing blockchains brings exciting opportunities. It means the interaction speed between DApps players can be faster than the current Ethereum time of every 15 seconds, without losing on the security or flexibility factors. It also means that the potential use of Game Channels technology is not only for casino games. Some types of online gaming may also be able to use it.

Link to the paper:

[GameChannels.pdf](#)