Plasma is built on the condition that everyone is very compliant, but it is virtually impossible to achieve this.

And when there is wrong information in Root Hash, everyone has to quit, it is a strange behavior…

I have studied plasma for a while, and I just made a simple plasma contract for decentralized games using token. I have following questions:

1. What consensus algorithms are possible to use in plasma chains? For a small company, it's hard to use POS, and POA can't convince people. How can I use an unconvincing chain support a convincing chain?
2. How high is its TPS? Is there any online application using plasma? you know if you want to challenge someone, you need to upload all Merkle tree key node. so it is impossible to achieve 100,000 TPS.

Below is my smart contract URL:

github.com

tsai50702/solidity/blob/master/plasma_for_token.sol

```
pragma solidity ^0.4.19;

// Pig World Chain (aka PWC is a Plasma solution) // We are under heavy development, and use ether for test environment.
// using the PICO (ERC-20 Token) for production Environment.

// PWC let the pig world platform is totally decentralized & p2p game. // PWC preliminary estimate TPS: 10,000

//--------

//Roles in PWC //verifier, player, dealer, challengeWithdrawal

//--------

//Main function in PWC //submit header, deposite, withdraw, challenge, prove a challenge

//--------
```

This file has been truncated. show original

I add some function like: Punishment mechanism

And a new role in the plasma ecosystem: verifier

1. To become a verifier, someone need to pay a guarantee fund.
2. The verifier can agree to the withdrawal before it can takeout.
3. So when someone challenges, the verifier will be punished if the challenge is successful.

Welcome to comment on my smart contract.

(At the top of the contract is a simple token transfer function. You can change to ERC20 Token Standard if you want.)