Blockchains:
A System of Rewards

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Problems we seek to solve:

- Using a single longest blockchain greatly limits the rate of data being fed into the system.
- High levels of redundancy and network/storage costs make the blockchains inefficient.
- Speeding up this rate by reducing the Proof of Work algorithm's complexity is not advisable, because it would allow attackers to create blocks faster than the peers in the network.
- Current blockchains are vulnerable to the 51% attack.

Proposed Solution

For convenience, the proposed system shall henceforth be called Blockchain Fabric.

Let us assume we have data of size x to feed into our network. This data can be anything - election votes, documents of identity, transactions, etc. A user needs to pay for such a service.

A detailed explanation follows...

The proposed system is based on two factors - namely **Easiness** and **Bots**

Time Easiness

Time easiness tells you how much to charge for creation of block based on time duration from the creation of last block. The sooner a block is created, more it is charged.

Space Easiness

Space easiness tells you how much to charge for creation of block based on the size of data fed into the block. The more the size of data in a block, more it is charged.

Impact of shifting to Easiness

1. This prevents users from spamming the network with requests without incurring very high costs.

2. Prevents users from demanding too much space in a single request.

This system encourages nodes to feed data into system by **splitting them into parts and feeding them into multiple blockchains**. This can be compared to feeding data across parallel lanes instead of a single lane.

Bots:

Definition:

A **Bot** is nothing but a smart contract written to handle feeding data into our **Blockchain Fabric**. A user of this network simply requests the bot to store the data. The **Bot** decides how and where the data gets stored, once the user has paid.

Security:

Since users cannot directly write data into the network, but do it through Bots instead, we ensure an extra layer of security.

This lets us overcome more obstacles inherently present in blockchain technologies and create a truly efficient solution

IPFS usage:

Data written is handled through **IPFS protocol**. This overcomes problems, such as:

1. True decentralisation of data. There exists no central point to cut off access.
2. Deduplication means high storage fidelity and efficiency in terms of storage and network costs.
3. Vastly lower access time latency, due to the P2P nature of the network.

Blockchain File:

When data needs to be fed into the network, the bot determines the most efficient way of distributing the data. It splits the data into blocks, and sends each block pseudo-randomly. This history is maintained through the IPFS file object, called the Blockchain File.

Blockchain File Spec:

- Blockchain file table which consists of unique blockchain ID and a pointer to its corresponding Blockchain's genesis block.
- Block details:
- Block's maximum size.
- Previous block – Next Block time delay.
- Penalty, if delay.
- Peer table which contains a table of all the peers connected to the network and the pledge status of each peer made on a bot.
- Current Bot controlling the network.

Market Opportunities:

The unique blend of IPFS, blockchain, Bots and multithreaded storage brings about unprecedented opportunity. The Blockchain Fabric is extremely versatile and scalable, and can handle any kind of data agilely.

1. Confidential documents of large size, to which only specific people on the network should have access. Eg, A company's trade secrets.
2. Identity documents Eg: Driving License, Passport.
3. Universal transaction system. Eg: BTC, FileCoin
4. Distributed Content Delivery Network. Eg: Decentralised Communication client

Current progress & Summary

Github URL:
https://github.com/gadsater/genhack.

Summary:

In this presentation, we have outlined the idea for creating an ‘evolved’ form of the blockchain technology. We believe that the future of technology lies in such complex systems which assure us security, freedom and convenience.