Blockchains:
A System of Rewards

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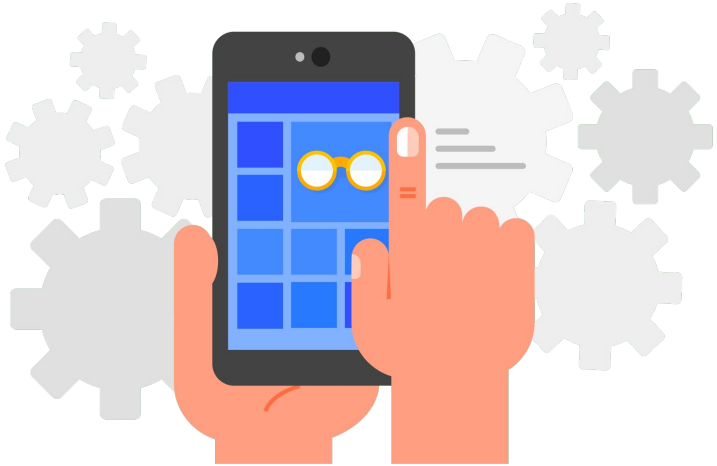
Problems we seek to solve:

- Using a single longest blockchain greatly limits the rate of data being fed into the system.

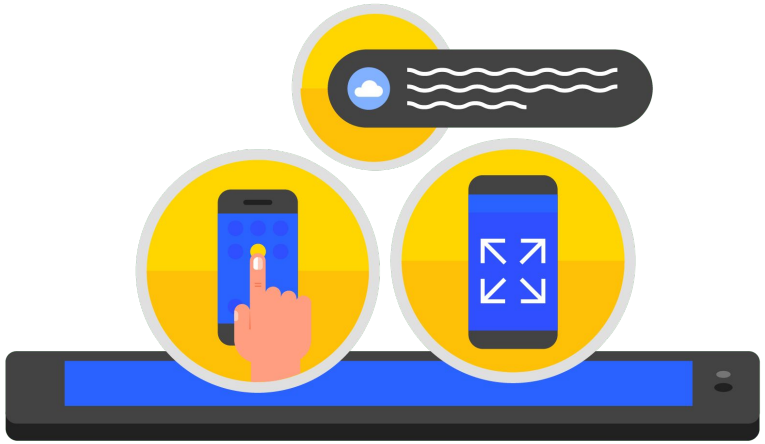
- High levels of redundancy and network/storage costs make the blockchains inefficient.



Problems we seek to solve:

- 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.



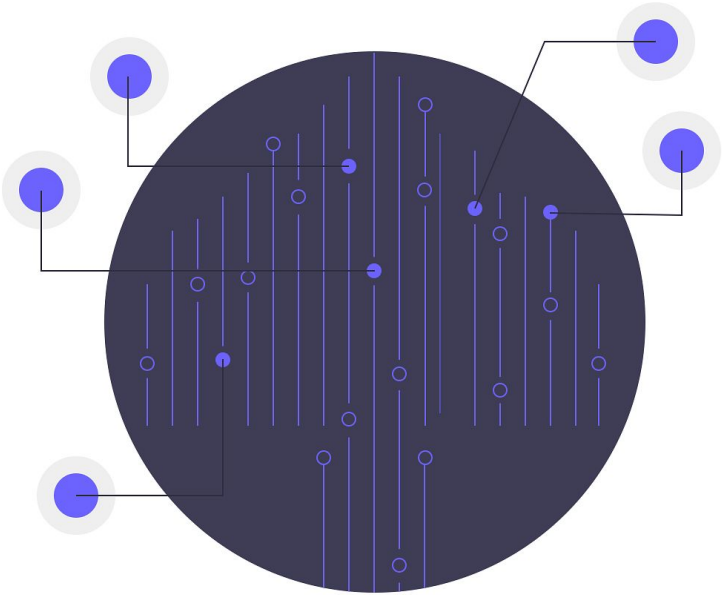
Solution?

Introducing, the *Blockchain Fabric* system.

Proposed solution:

We seek to create a completely new algorithm to solve the problem that Proof of Work tries to solve, without the added overhead of high gas price, slow transaction speed, etc.

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



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

Easiness

Parameters to supercharge the blockchain protocol

What is Easiness?

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.

3. Allows network to efficiently distribute workload and hence improve efficiency of the protocol.

4. Bots can determine cost of transaction, and helps replace Proof of Work algorithms.

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.

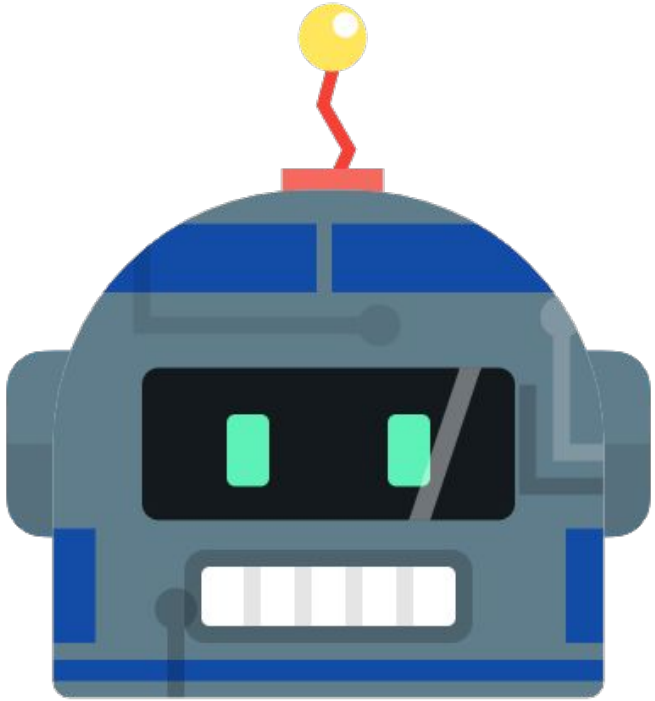
Bots

Smart contracts enhancing security and performance

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.

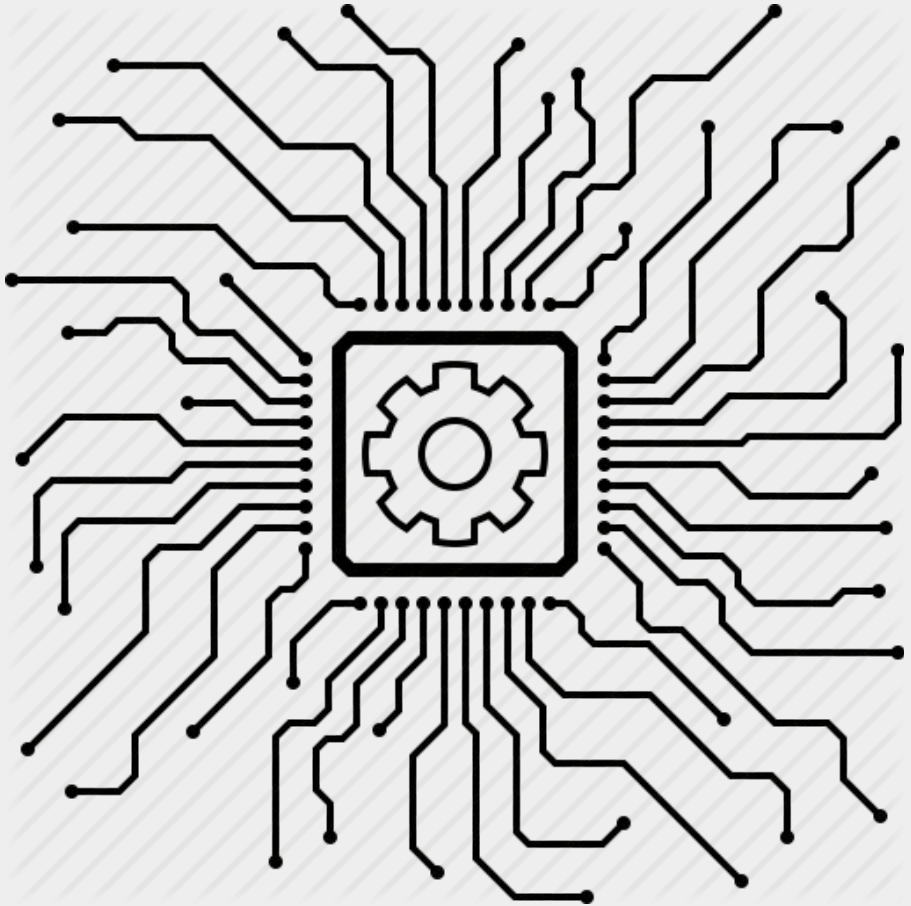
This lets us overcome more obstacles inherently present in blockchain technologies and create a truly efficient solution.

IPFS Usage

1. True decentralisation of data. There is 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.

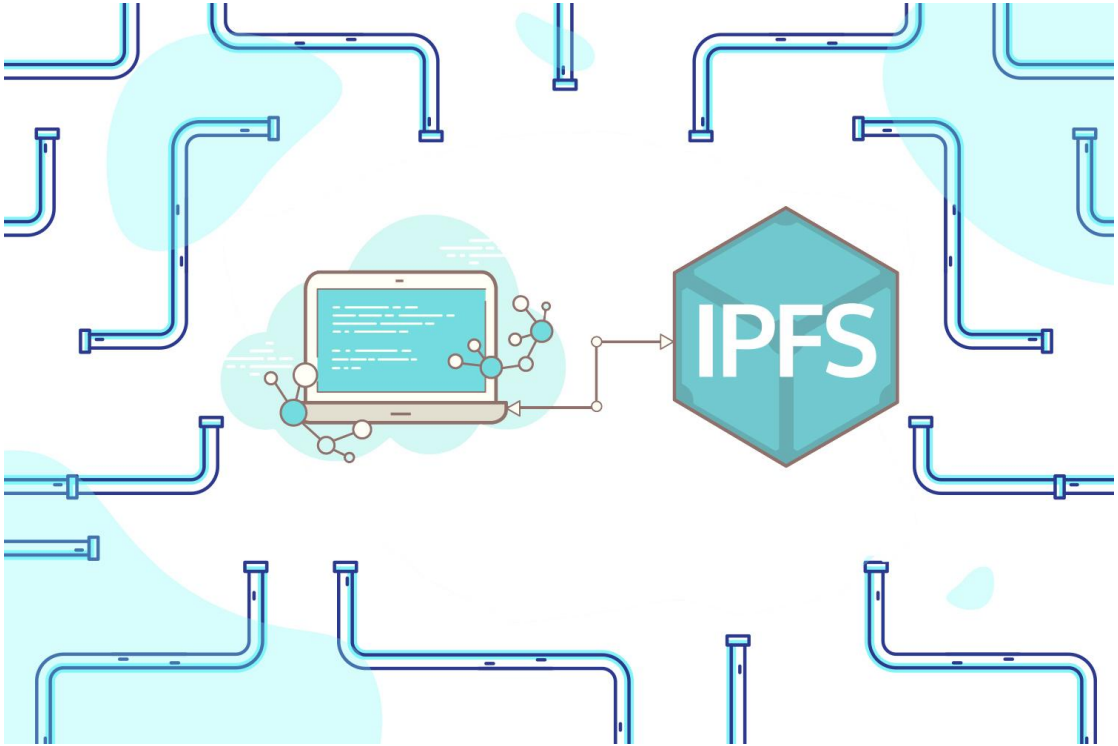
Blockchain File

The soul of Blockchain Fabric.



The Concept

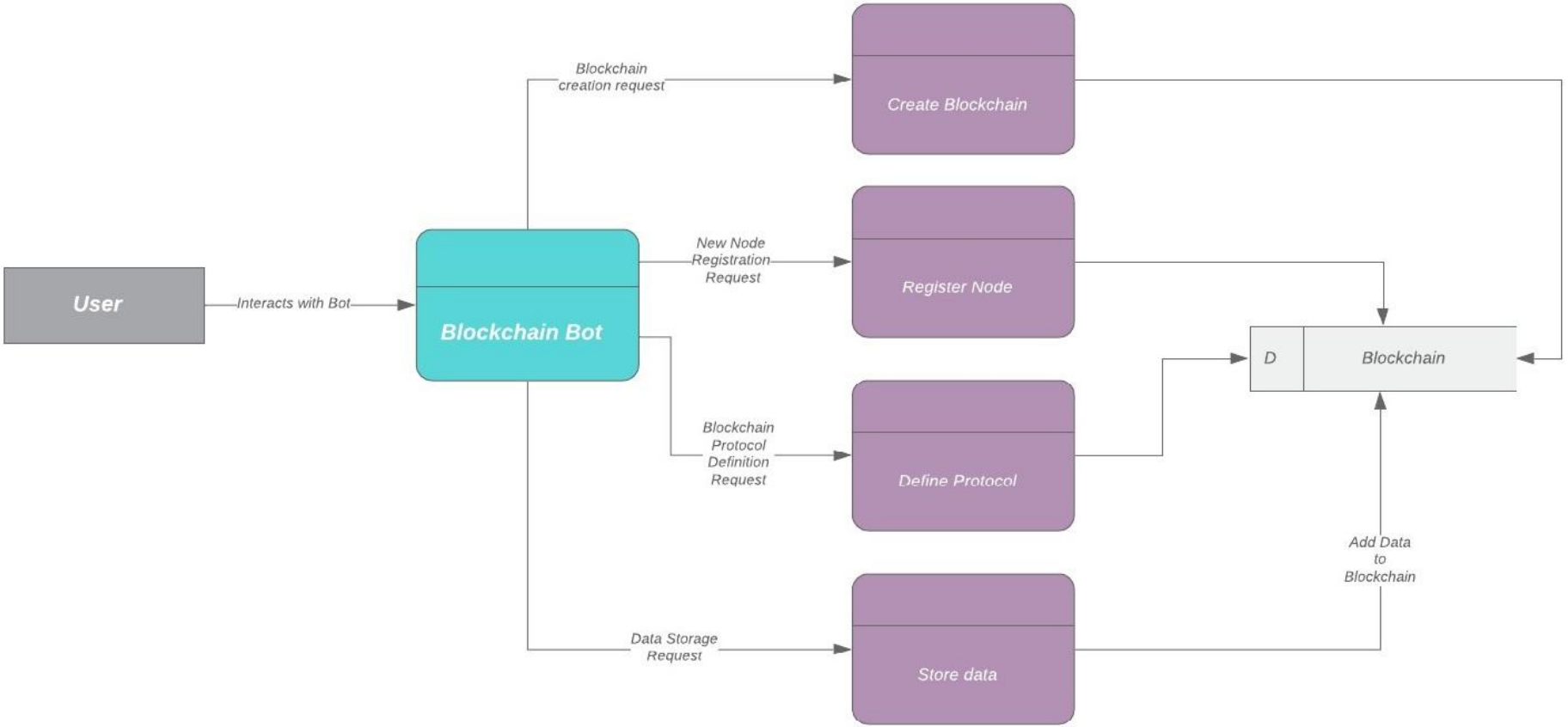
When data needs to be fed into the network, the bot determines the most efficient way of distributing the data. It splits the data into blocks, and sends each block pseudo-randomly. This history is maintained through the IPFS file object, called the Blockchain File.



Blockchain File Specification

- Blockchain file table which consists of unique Chain 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.

Data Flow Diagram


User
Interacts with Bot
Blockchain Bot
Blockchain creation request
Create Blockchain
New Node Registration Request
Register Node
Blockchain Protocol Definition Request
Define Protocol
Data Storage Request
Store data
D
Blockchain
Add Data to Blockchain

Market opportunities

Analysis of existing solutions and how we are better

Unique Selling Point:

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.

Real World Applications

- Confidential documents of large size, to which only specific people on the network should have access. For example, company trade secrets.
- Identity documents Eg: Driving License, Passport.
- Universal transaction system. Eg: BTC, FileCoin
- Distributed Content Delivery Network. Eg: Decentralised Communication client

Current progress

https://github.com/siddharthsham/genesis

Completed:

- Implementation of Bot API
- Implementation of P2P protocol

In progress:

- Integration of IPFS service

Summary

In this presentation, we have outlined the original 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.