GPC

Graphic Processor Coin

table of contents

What is GPC

GPC is a platform for everyone to “mining” crypto currency easily.
Since the blockchain technology is developing rapidly, the “miners” are getting more important. We will provide mining services which does not require a large-scale capital investment or complicated operation management, and makes anyone on this planet to be able to join “mining” business.
With this platform anyone can easily participate in “mining” business to create own true basic income.
Make your own basic income quick and safely

Why do we need “Mining”?

The price of Bitcoin and some other crypto currencies has been soared drastically these past months and it seems to be overheated. There are some factors causing this heat. Some invest money to get capital gain. Some are interested in using Bitcoin for shopping. Some appreciate its low transaction fee. But the most important part of crypto currency is “block chain” technology.
“Block chain” is the main reason why people are so much attracted in the crypto currencies. “Block chain” is a "distributed trading book which is impossible to be tampered with by anyone and can be viewed by anyone", and the general framework of virtual currency is formed by this “block chain”. This “block chain” technology can be applied to any industries, and make it possible to develop unalterable ledgers that participants operate together under certain rules.

People start to apply block chain technology to various industry fields. For example, in energy industry, they try to keep the record of the consumption of electricity at each household on the “block chain”, to make it possible to pay the electricity charges by virtual currency, to integrate electric power retailing and electric power sales through self-generation on the block chain in the United States. In addition, in the medical field, by developing a block chain for electronic medical record, they try to make it possible to joint treatment record of patients among related medical institutions, to disclose the clinical information to clinical researchers keeping the personal information concealed. And not only the private sector but government agencies are paying attention to block chain technology. In government agencies, there are various ledgers that manage people, organizations and assets, such as registration, tax collection ledger, electronic voting, but all of them are not

allowed to be tampered with, transparency is required, history of change has to be kept one by one. Block chain will play an important part.

To provide a safe and free mining environment to everyone, now GPC prepare to provide mining pools that use browser mining and block chains, also will provide mining machines (CAR MINING) that can be easily installed in gasoline cars.

What is “mining”?

"bitcoin" is a pioneer of crypto currency, which has the largest trading volume, has become known to both worldwide as well as in Japan. We also hear the keyword "mining" bitcoin frequently. What is the meaning of "mining"? How does it relate to the crypto currency?

What does it mean “mining”?

The meaning "mining" is digging up something. So, how does the crypto currency associate with this word "mining" and what does it mean?

"Mining" in the crypto currency industry means to contribute by using a computer to the task of recording transactions of crypto currency such as Bitcoin, and gaining newly issued crypto

currency as a reward. "Mining" came from the image "dig up (= get) crypto currency not yet issued".
What kind of action does it mean to contribute to the task of recording the transaction of the crypto currency? And who is mining and why do you need “mining”? Can you make money with “mining”?
We would like to explain the current trend of mining.
This virtual currency has no centralized administrator like the central bank. Here is a question, who does keep the soundness of the crypto currency, who does record the transaction information?
“Mining”work plays a important part in this. Individuals and corporations engaged in mining work are called as "miners".

What does “mining” work mean?

We have explained that mining is the task of recording transactions of crypto currencies. Let me explain about mining work a little more deeply.

Transaction records of the crypto currency in the whole world are recorded on the ledger "block chain" in the Internet. In this block chain, transaction records are linked like a chain according to a certain rule, and the information is updated. Mining refers to work that the minor "approves" this transaction record and connects to the end of the chain.

Although it seems easy in order for a minor to approve a transaction record, it is necessary to solve a difficult mathematics puzzle by using the computation function of the computer. Then, only the miner who solved this puzzle first will be given "approval right", and the miner will obtain crypto currency by exercising the right and completing the approval work.

In other words, for one transaction, only one minor can earn rewards. Miners are always involved with the competition "to solve this puzzle earlier than anyone”.

What do you need to earn rewards from mining?

In order to earn rewards from mining, we must overcome the competition of solving complicated puzzles as quickly as possible. And to solve the puzzle you need a computer. In other words, in order to win this competition and earn a reward, you need a high-performance computer as many as possible

When the bitcoin began to be issued, the existence of mining was not well known yet. Also, as the number of miners was still not many in the world, even if individuals use their home computers, it was possible to win this competition somehow.

However, now 2018, with soaring price of crypto currency, many companies have already started this mining business. And, because of a large amount of high-spec PCs due to large capital investment, it is almost impossible for individuals to win this "competition".

In order to earn rewards through mining, it is necessary to make upfront investment to survive this competition.

What is "mining factory"?

There are words "mining factory". According to the word, it refers to factories of mining. There are a lot of companies in the world which operate mining business using a huge "mining factories".

What do they have in the mining factory? A huge number of personal computers, cooling devices such as fans and emergency power supplies, etc

In order to win the competition of mining as many as possible, the computer installed in the mining factory will continue to operate at full capacity. In order to prevent the computer itself from being destroyed by heat generated by a computer that continues to operate at full speed and to prevent a decrease in computing speed, a cooling device is required.

And they need power to run the computers. This stable supply of power becomes a life line for mining factories. This is why we need an emergency power supply in case. In addition, they need "people" for power and computer management. In order to win the competition, they need to use the latest computers and keep them upgraded.

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Will the mining business profit as a business?

Mining work costs a lot. As initial investment, capital investment related to computers, cooling devices, power supply is necessary, and personnel expenses and electricity bills are applied as working capital. One of the features of the mining work is that this electricity bill becomes a huge amount of money.

The profit from the mining business will be raised only after keeping all of these costs within the remuneration (crypto currency) obtained by "approval" of the virtual currency transaction.

On the other hand, the number of companies engaged the mining business is now increasing rapidly. The more rivals you have, the more you need to compete by increasing the number of high-spec computers. In addition, the crypto currency obtained as a reward has a high expectation and a risk of crash. Depending on the price move of the market price, there is also a risk that it will fall from deficit surplus and fall to the deficit.

Increasing Alto Coin and Expanding Mining Market

The concept of virtual currency was born, bit coins were born, and virtual currencies other than bit coins are also increasing day by day. The mining and mining business has expanded its market scale as well as the birth of virtual currencies other than bit coins. Virtual currency other than bit coin is called alto coin. Even in Alto Coin, rewards for mining and mining work are obtained as well.

On the other hand, the mining market which has already made Red Ocean. It is expected that a certain business size and investment will become necessary in the future for entering the business.

Furthermore, the demand for Manning is expected to grow as a result of the service utilizing the block chain and the alto coin to accelerate in the future.

There is also data that the power consumption of bitcoin already exceeds the consumption of 159 countries in the world.

Source: https://powercompare.co.uk/bitcoin/

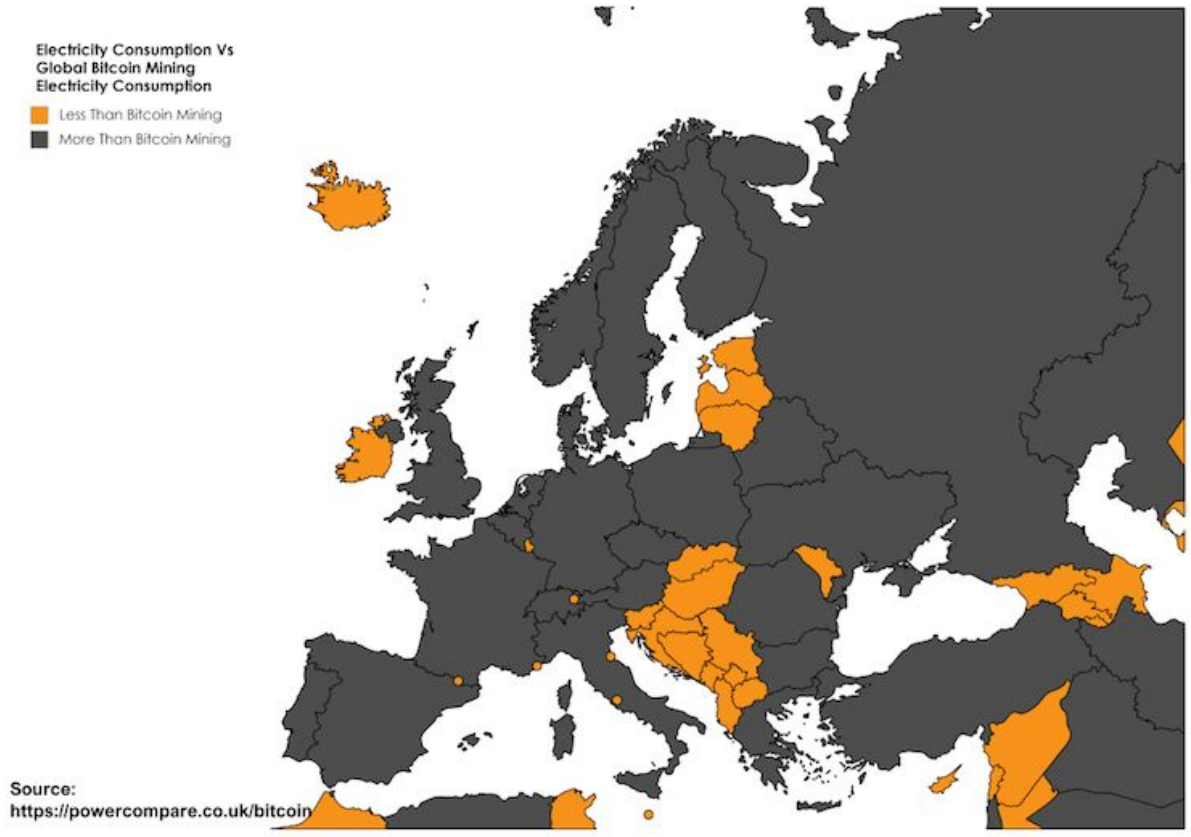
Power consumption problem of bitcoin mining

While the bitcoin is making a big leap towards the main stream, it seems that the soaring price is not just the transaction price of bitcoin.

According to the latest research, this popular virtual currency has announced that it consumes more electricity than the power of more than 20 countries in Europe.

According to Power Compare which is the British energy price comparison platform, the total amount of electricity consumed for bitcoin mining - the calculation process that is necessary to incorporate transaction records on the block chain, is estimated more than the total power consumption of 159 countries.

“159 countries” include Ireland, Croatia, Serbia, Slovakia and Iceland.

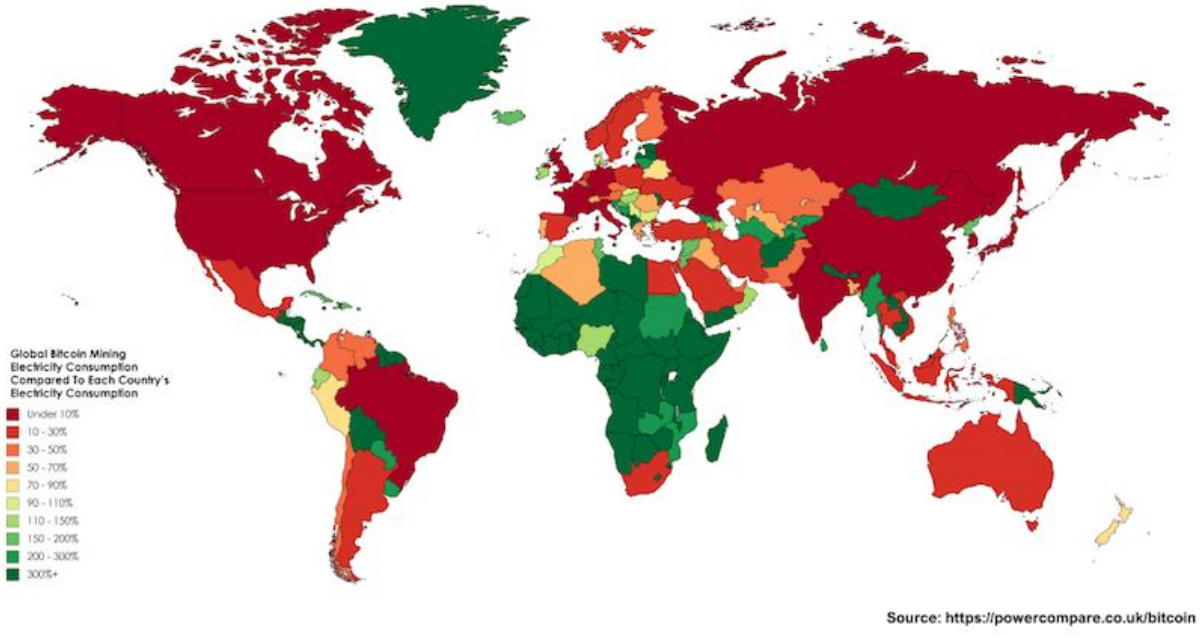


Which European countries consume more or less electricity than the amount consumed by global bitcoin mining

There are no countries in Africa, except these three countries (South Africa, Egypt, Algeria,) exceed the power consumption of bitcoin mining.

And Power Compare says that it is also a matter of time to overtake Ecuador, Puerto Rico and North Korea's power consumption as its power consumption continues to increase.

The following is a more detailed figure.



Source: https://powercompare.co.uk/bitcoin

Power Compare further expects the bitcoin's annual power consumption to be 29.05 TWh, roughly 0.13% of the total power consumption of whole world.
If the bitcoin miners set up a single autonomous country, it will become the 61st power consuming country in the world.

Considering this power consumption problem, you understand easily reason why the bitcoin mining community was so desperate about adopting SegWit 2 x.

According to Power Compare, bitcoin mining has risen nearly 30% even in the last 30 days in this consumption.
In addition, they predict that if the bitcoin power consumption continues to increase at this pace, the power used for mining around the world will surpass the total UK power consumption in October 2018.
What is the total amount of this power consumption in terms of money?

Researchers expect this total annual power consumption to be equivalent to US $ 1.5 billion.

However, as this estimate is calculated taking into consideration that mining is mainly done in areas where the price of electricity is cheap, in reality it may actually be higher than this expected price.

Observations of CoinPost

The problem of mining consumption like this has been discussed from the early days.

Because there is a deep relationship between electricity usage and environmental problems, the world depends on energy using fossil energy (petroleum, coal, natural gas) which is considered problem, so the natural ecosystem collapses etc. It has triggered various environmental problems in various places.

Furthermore, since such fossil energy is finite, it is inevitable that each country's response to electricity consumption will become stricter.

There are many crypto currencies to change mining method from using the Proof of Work algorithm which consumes a lot of power, but the bitcoin (No.1 currency in the world) and the bitcoincash (No.2 currency in the world) still apply this POW mining method.
Some people say that mining business eventually will be regulated in many countries.

In connection with the high performance of machines used for bitcoin mining in this way, taking into account the fact that it has risen by nearly 30% in the last 30 days, and the scalability solution at the core of the bitcoin problem is postponed currently, we need to hurry to solve this problem as soon as possible.

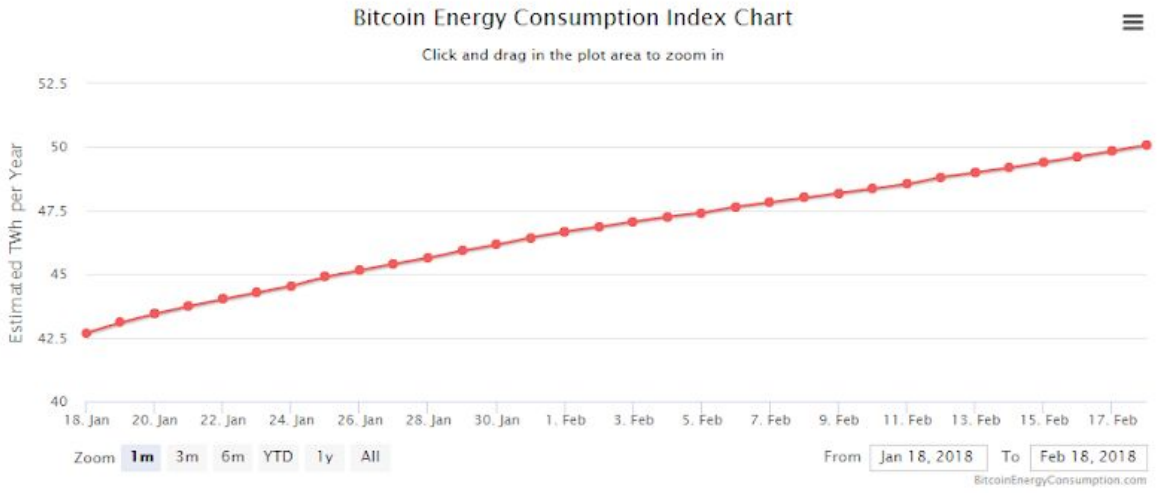
Therefore, we are trying to solve these problems by concentrating on browser mining and car mining.

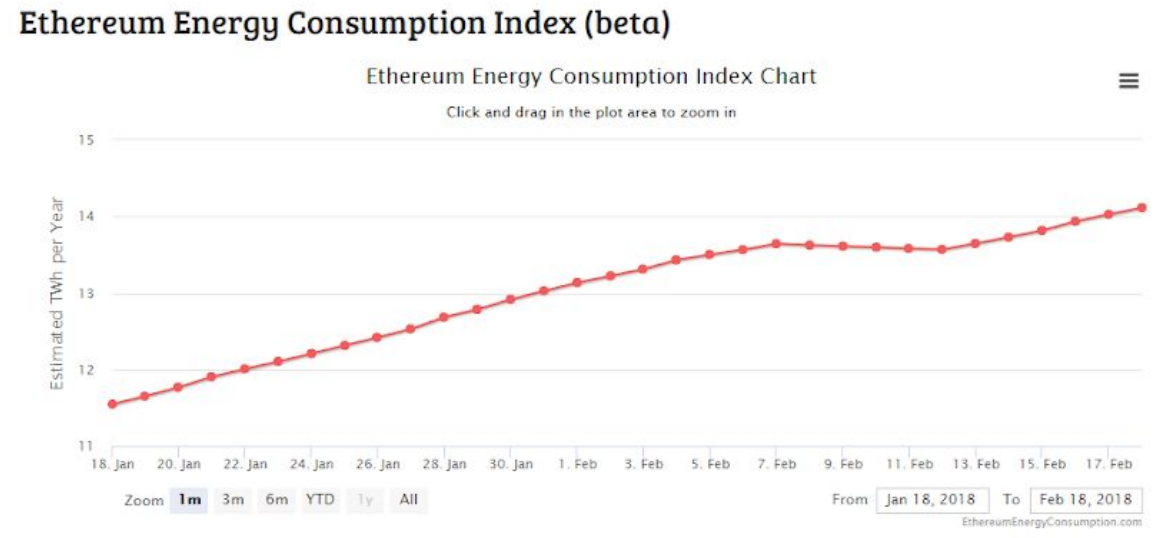
About browser mining and its specification

Although mining crypto currencies such as BTC are generally done by dedicated machine with high specifications, GPC is designed to do mining without special machines and facilities.

Mining can be done just by browsing the homepage prepared by our company, or using the API.
Although processing power is inferior to personal computers, mining can be done even with smartphones.

Power required for the following chart, BTC, Ethereum, mining is increasing year by year, BTC is Portugal, Ethereum is comparable to the country's annual electricity used in Slovenia..





Therefore, GPC has been designed to enable efficient mining with less power.

Overview

The main challenge of a web-based Blockchain is to translate the core Blockchain components to the web platform:

- Network for establishing P2P connections.
- Storage for persistent keys and Blockchain data.
- Crypto for hashing, signing and verifying.

In addition, the protocol must be streamlined for the constraints of the web:

- Compression of Blockchain data to sync within seconds instead of hours.
- Instant and scalable transactions so over-the-counter payments are practical.
- Simplicity means we do only one thing and we do it better than anyone else: payments.
- Blockchain Parameters streamlined for our browser-first approach.
- Cross-Chain Compatibility with other Blockchains such as Ethereum for advanced smart contract features.

Network

GPC's peer-to-peer network uses WebRTC and WebSocket connections.

There are two types of nodes in the GPC network: Backbone Nodes and Browser Nodes. Both types use the same isomorphic JavaScript code base.

Backbone Nodes are based on NodeJS and run on servers. They communicate with each other via WebSockets, and they act as entry point and signaling server for Browser Nodes to establish browser-to-browser WebRTC connections.

Browser Nodes are built upon browser engines and therefore they are completely installation-free. To connect to the network, they establish a WebSocket connection to at least one Backbone Node.

Once they have established their first connection, they start to establish browser-to-browser connections using the Backbone Node as signaling server. Browser Nodes can also act as signaling server for further browser-to-browser connections.

In the long run, Browser Nodes will mainly be light-clients, and they won't necessarily participate as miners. Their main purpose is to establish consensus quickly to prove their accounts' balances and send transactions into the network. Serious Miners might prefer to run mainly Backbone Nodes for performance and convenience reasons, even though we want to keep the benefit of running a backbone node low in order to balance incentives in the direction of our browser-first approach. Moreover, even Browsers running light-clients will contribute resources to the network:

They share the (compressed) Blockchain data with other browsers to reduce the network load on the backbone nodes.

Storage

Browser Nodes use the IndexedDB API to store Blockchain data and keys on the user's hard drive. Since the browser can't store gigabytes of data, we compress the Blockchain with the Mini-Blockchain scheme (see

```
(function() {
  'use strict';

  //check for support
  if (!('indexedDB' in window)) {
    console.log('This browser doesn\'t support IndexedDB');
    return;
  }

  var dbPromise = idb.open('test-db2', 1, function(upgradeDb) {
    console.log('making a new object store');
    if (!upgradeDb.objectStoreNames.contains('firstOS')) {
      upgradeDb.createObjectStore('firstOS');
    }
  });

})();
```

Compression). In the beta testnet, the private key is
stored unencrypted and gets deleted if the user clears his browser history.
In the mainnet we will have much higher security standards:
With Chrome’s Storage Persistence API the data survives even if you clear your browser data. The private key will always be stored encrypted. Furthermore, we will provide users with a simple app to backup their key in a printed paper wallet. We are also planning on supporting cold-wallets via Web USB or Web Bluetooth .

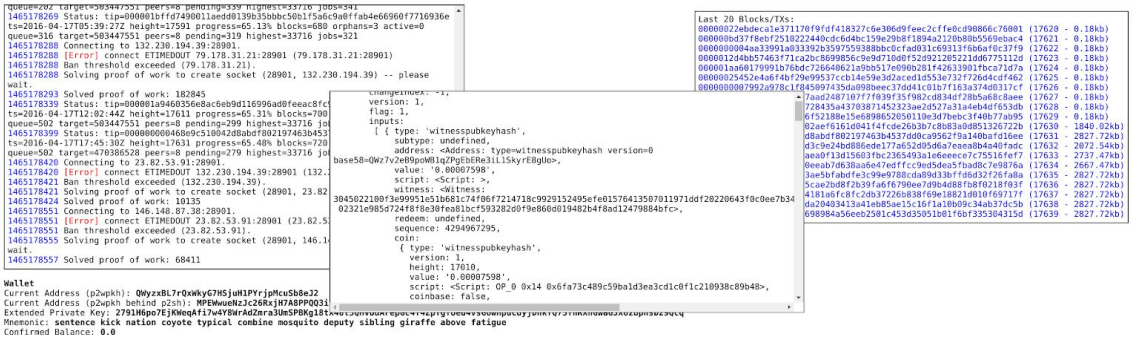
Crypto

Since performance is security relevant, we need performant crypto primitives. A JavaScript implementation would not be sufficient.

Proof-of-Work Algorithm: We will use a more sophisticated PoW in the mainnet because SHA-256 will lead to centralized mining. The mainnet PoW should be memory-hard & low energy for truly decentralized mining with regular hardware. There is no final decision on any specific algorithm yet.

Proof-of-Stake Algorithm: We would strongly prefer to switch to a Proof-of-Stake Algorithm in the long run to get to a more energy-efficient Blockchain system. We are following the research of other projects such as Ethereum .

Digital Signing Algorithm: We use Ed25519 because it uses “nothing up my sleeves parameters” chosen for performance and it is becoming an industry standard.



Streamlining the protocol for the constraints of the Web Platform Compression

It is nonsensical to have web users download gigabytes of Blockchain data to establish consensus. Especially in the case of a weak network connection, which would make this nearly impossible. So we need to compress the data such that light-clients can synchronize within seconds.

We are planning to implement a Mini-Blockchain Scheme
It simplifies transactions. The end user doesn’t need to deal with the concept of unspent outputs. Only an account and a balance is contained.

The user can download only the headers of the Blockchain plus simple cryptographic proofs for account balances,which breaks down to downloading only a couple of hundred kilobytes instead of gigabytes without losing trust or security.

Old blocks can be discarded because the complete state is stored in the Accounts Tree.

Nano clients can use signed checkpoints to keep the headers chain constant size. Additionally, the full Blockchain up to each checkpoint will be provided for download to make public verification of these checkpoints easy. We will proceed to implement the Mini Blockchain Scheme as per development plan.

It is easy to listen for balance changes.

Simplicity
Ethereum already solves the smart contract problem better than we could ever do. We do not try to compete in this field. We want to be compatible with Ethereum such that GPC users can easily use Ethereum's smart contract features if they want to.
There is one exception to the "no smart contracts" approach: For the Lightning Network there will be a hashed timelock contract hardcoded into the protocol.

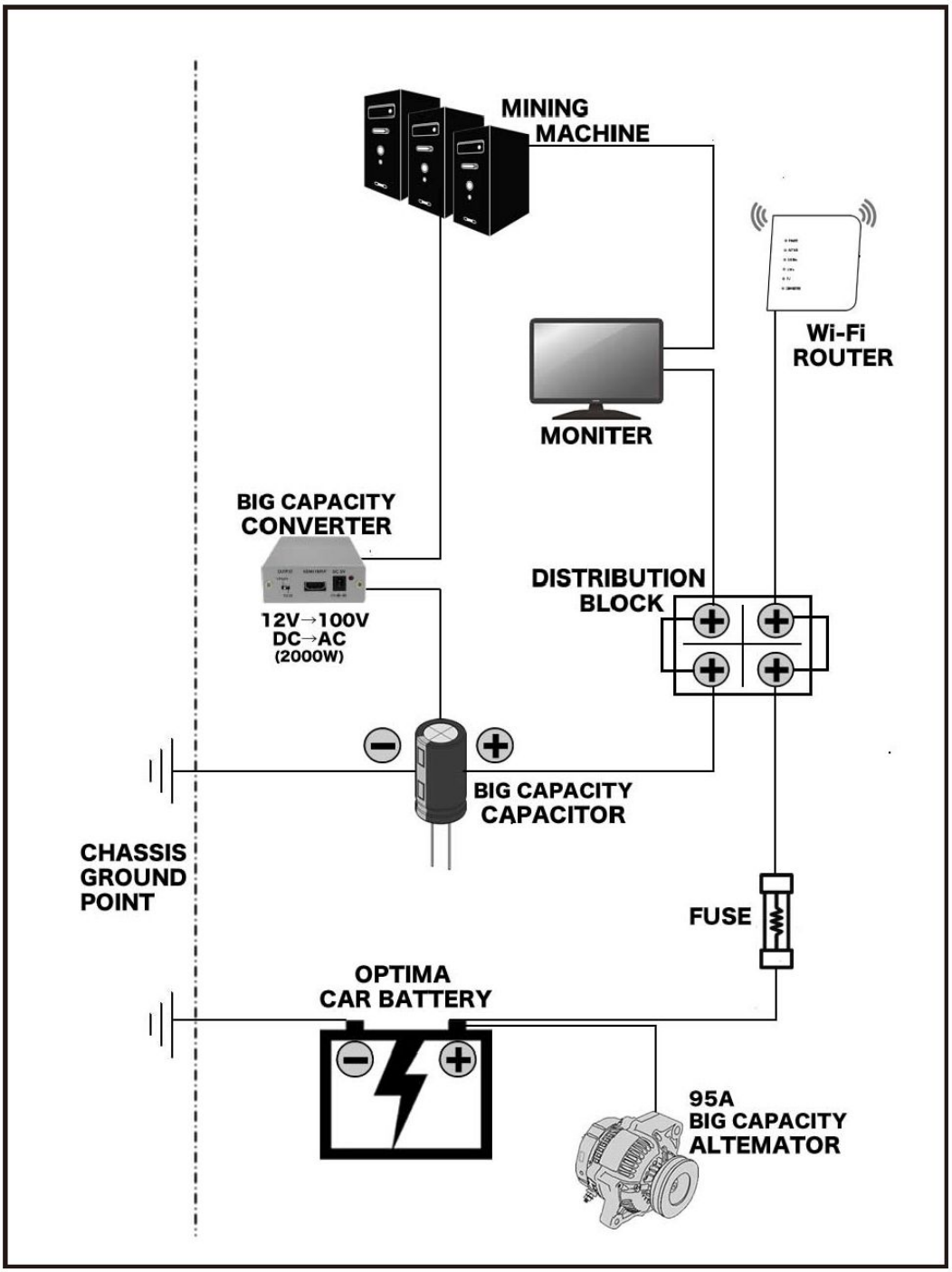
Cross-Chain Compatibility
Hash Timelock Contracts not just allow off-chain transactions and scalability. We will use them for cross-chain transactions to become compatible with the great work of projects like Ethereum and Bitcoin. This allows GPC users to use the advanced smart contract features of Ethereum and it allows users of other cryptocurrencies to easily exchange into GPC without an intermediary.

Conclusion
Using this method will solve the above power consumption problem

Carmanning

For solving power consumption problems GPC is putting the most emphasis on mining using gasoline vehicles. Mining is done as long as you are driving by installing it in taxi, bus, transportation truck etc which originally has a lot of operation for a long time. By using electricity generated while driving a gasoline vehicle without waste, it is possible to "use the power that was discarded without using new electricity". Although there are minor tasks, we have already mined successfully with simple demonstration experiments, we will actually run 3000 km around 2018 / April and obtain empirical data. After that, we will continue to verify such as miniaturization and review of the cooling process and will start selling car mining equipment from 2018 / September to contribute to zero power consumption.

CAR MINING SYSTEM



Contribution

This contribution adopts a method of gradually financing by separating it into three phases so that our activities will be more understood and the cognition will be expanding.

[Financing]
The goal is to set aside the purchase amount of GPC token by contribution participants to procure a total of 20,000 ETH.

Fund raised amount: 20,000 ETH
SoftCap：1000ETH
Total number of GPC preparations: 3 billion GPC

[GPC Token Price]
Contribution will be traded at a fixed price on ETH basis.
1 ETH: 50,000 GPC

[Purchase restrictions]
Set purchase limit per account.
Minimum purchase amount: 1 ETH
Maximum purchase amount: 1,000 ETH

[Schedule]
This contribution adopts a method of gradually procuring funds.
We will also carry out a general model Early Bird Bonus.

Duration from token Crowdsale event start	GPC/ETH	HongKong 9 pm start
1st 5days	50000	Time up or 100 million GPC reached.
2nd 5days	45000	Time up or 90 million GPC reached.
3rd 5days	40500	Time up or 81 million GPC reached.
4th 5days	36500	Time up or 72 million GPC reached.
5th 5days	32800	Time up or 63 million GPC reached.
6th 5days	29500	Time up or 54 million GPC reached.
7th 5days	26500	Time up or 45 million GPC reached.
8th 5days	23800	Time up or 36 million GPC reached.
9th 5days	21400	Time up or 27 million GPC reached.
10th 5days	19200	Time up or 18 million GPC reached.
11th 5days	17200	Time up or 9 million GPC reached.

Core Team Member

HideMi Takeuchi CEO

Isaac Leung CTO

Billy Chan CFO / CMO

In Conclusion

Thank you for being interested in GPC's plan. We eagerly hope to contribute to create comfortable and safe society, using wonderful invention – blockchain technology, To solve power consumption problem, this is the mission imposed on us, and we will surely achieve this plan to make the mining easy to everyone and to support the block chain technology. Keep an eye on GPC.