CPIT

A stable coins with a central bank intelligence algorithm

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ABSTRACT

In today’s global integration, what kind of trading medium do people need to use to implement the trading process? The answer is a common currency like the US dollar. However, the world is diversified. Because of the protection of each economy, the US dollar cannot be freely circulated as people hope. Even in the field of cross-border settlement, which is widely used today, the US dollar settlement is also derived from the strong EU and rises China’s competition! Especially the US dollar has long since deviated from the gold standard.

The emergence of Bitcoin and Ethereum seems to give us hope, but until today, ten years later, Bitcoin can’t be used as a trading medium for ordinary people like the US dollar. Price fluctuations are hindering Bitcoin Ethereum and other digital currencies One of the biggest obstacles to widespread use. At present, there is no central bank behind the cryptocurrency to implement monetary policy, so it does not ensure the stability of the purchasing power of the currency, which means that the change in demand will bring huge fluctuations in prices. If users can't ensure the stable purchasing power of their digital assets, they will never replace the original stable currency with the cryptocurrency as the trading medium.

We need a stable cryptocurrency like Bitcoin and Ethereum but with low volatility, This is the original intention of our design CPIT.

We first pay tribute to the designers of Basis, Nader Al-Naji, Lawrence Diao and Josh Chen! For fully decentralized and the central bank intelligent algorithm agreement based on The quantity theory of money, they give the true direction and theoretical cornerstone. This is because we used to be one of them.

We decided not to disclose our identity and use the new name in the developer community, Due to the suspension of the Basis project.
We simply locate the CPIT, Before this white paper:

**CPIT is a stablecoins.**
But unlike the current stablecoins, of the form of fiat currency mortgages (such as USDT), because they are
No decentration, the endorsement of bank deposits makes them more like the digital representation of the
dollar, and the dollar itself is centralized.
It is also different from a stablecoins (such as dai) in the form of a mortgage digital asset. Although it achieves
decentralization, the automatic liquidation procedure will damage the interests of the users of the stable
currency and is forced rather than by their will.
CPIT is based on the quantity theory of money, using intelligent central bank algorithm to achieve stable
price, without manual intervention, but through the intelligent algorithm to achieve the balance between
supply and demand of CPIT.
CPIT will calculate and adjust the credit supply of the CPIT according to the exchange rate change (such as
the change of CPIT/USD exchange rate) through the protocol algorithm. This monetary policy implementation
approach is similar to that used by global central banks today. The difference is that CPIT is decentration,
strictly enforces protocol algorithms, and does not require human intervention. It is also because of this that
CPIT can be understood as an algorithmic protocol based on central bank policy.
The stable price is composed of three mechanisms: speculator adaptive, storage of multi-asset stable pool,
CPIT supply algorithm protocol.

**CPIT is the global currency - The post-dollar era.**
CPIT will abandon the dollar in the future and switch to CPI (consumer consumer price index) or a basket of
goods. When food and oil use the price of CPIT, CPIT will be widely used as a trading medium, and even really
start to replace the dollar in trading volume.
CPIT will show the world its technology and opportunities: to develop an independent, transparent and
monetary policy that is more stable than any central bank's monetary policy. What does this mean for the
future?

CPIT requires three phases to become a universal currency:
The CPIT is released based on the sidechain technology.
Anchoring the US dollar as a guide, opening the API to the exchange to enter the stable price stage.
Determine the exchange rate through the Schelling point mechanism to anchor CPI or a package of goods, and
detach from anchoring the fiat money.

There are three basic functions in any currency: means of exchange, unit of account and store of value. We
believe that price stability is a stepping stone to the widespread use of money. In this white paper, we will
introduce CPIT, the first robust, decentration, cryptocurrency that is secured by agreements to ensure price
stability. Specifically we will discuss the following points:

- Application case for stablecoins: A valuable application case that proves that “price-stable
cryptocurrency will be your best choice”.

- CPIT pricing principle: Based on the quantity theory of money, the CPIT protocol uses an intelligent central bank algorithm to achieve a stable price.
- “The post-dollar era”: What the world economy will look like with CPIT.
- Other attempts to stablecoins: Why are other attempts to stablecoins not "stable”?

**CPIT Principle of value stability**

The price stability mechanism used by CPIT is connected to the economic principles on which any central bank depends. The most important principle is called the “The quantity theory of money”.

In this section, we will explain the following:

- The quantity theory of money combines long-term price levels with the supply and demand of money.
- How the CPIT protocol monitors changes in demand based on changes in exchange rates with linked assets.
- How CPIT achieves price stability: a detailed description of decenteration token stabilization agreement and how to “stable”.
- How does the CPIT protocol determine the expansion and contraction of token supply based on exchange rates.
- How these actions enforced by the agreement motivate speculators to use CPIT as a trading medium, even in the short term Help maintain the CPIT hook.

**The quantity theory of money**

History shows that with market ups and downs, people are more likely to make crazy and panic decisions in a fragile economy. During the economic boom period, people have sufficient economic conditions and high purchasing power, which has led to an increase in the price level, which also fuels the demand for wage increases, which means that people will have more money. It is such an "inflation spiral" that took place in Germany in the 1920s, Brazil in the 1980s and Argentina in the 1990s.

In the same way, during the economic recession, people are afraid of buying things, causing prices to fall, and then people further postpone purchases, causing prices to continue to fall. This is the so-called "deflation spiral" - this happened almost in the economic crisis of 2008. In both cases, any responsible central bank can intervene to cut off these highly disruptive feedback loops. But how did the central banks intervene?

Imagine having a certain price level in an economy—for example, a predefined “package of goods” is worth $100. Then the quantity theory of money believes that if you multiply each person's bank deposit by 2, then the same "package of goods" will be worth $200 in the long run. Why? Although the nominal currency of each person has doubled, the actual value of the goods remains the same. This means that people should be willing to buy goods of the same value in twice the previous currency.

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This principle is vice versa: if we put half of people's savings, then in the long run, the same "package of goods" should be worth only 50 dollars.

Extending this concept, we considered a situation in which “the central bank tried to calm inflation”. High price levels and continued growth mean that people are “too willing” to spend money. In order to restore the price, we can limit this so that they have less money (as for how to do this, we will not talk about it for the time being). The same applies to deflation - people are not willing to spend money, we give them more money. This simple and important idea is that the central bank is stabilizing the price. Made by the grid. Although the central bank's tools for implementing monetary policy may be esoteric and difficult to understand, such as open market operations and un-invested capital, the high-ranking central bank can accurately accomplish the following two things:

• Expanding the money supply: If the central bank finds that the price level continues to fall, they pull the price level up by increasing the money supply.
• Shrinking money supply: If the central bank finds that price levels continue to rise, then they put the price water by reducing the money supply go down flat.

The expansion and contraction of the money supply can work because, as stated in the quantity theory of money, the long-term price level of an economy is directly proportional to the total supply of the currency in circulation. The following is one of the examples of this theory to maintain a stable coin price like CPIT:

• Suppose you want to implement a fiat money hook like CPIT for $1 = 1 token. Then, according to the exchange rate with the linked currency, the supply of tokens can be increased or tightened proportionally.
• First, let's talk about the total demand. Conceptually, total demand describes the total number of people's demand for tokens:

  Total demand = token price \times total number of tokens in circulation

  This is also known as the capitalization of the token, because the capitalization also describes the total value of the token.

• If x is used to indicate the amount of tokens in circulation, that is, the amount of tokens supplied. Assuming the demand growth over the past few months has made the token current price at $1.10, then:

  Demand = $1.10 \times x

• To make the token recovery pegged to $1, assuming the demand is constant and let y be the expected circulation quantity, then:

  Previous demand = $1.10 \times x \quad After demand = $1.00 \times y \quad Previous demand = After demand

• The y that is solved is the token supply of $1.10 for the token to be restored to $1.00:

  \[ Y = X \div 1.10 \]

As roughly estimated above, the quantity theory of money found that if the transaction price of CPIT is temporarily set to p, too high or too low, then the agreement can multiply the long-term price to $1.00 by multiplying the existing supply by p.

There are also some technical details that we will cover in subsequent chapters, including how fast the

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2 [https://www.federalreserve.gov/monetarypolicy/reservereq.html](https://www.federalreserve.gov/monetarypolicy/reservereq.html)
protocol needs to respond, etc. but the core idea is to maintain long-term hooks—just measure the CPIT price and adjust the token supply accordingly. Just fine.

**CPIT Agreement**

We find that, based on the quantity theory of money and the design use of CPIT, the number of CPIT requirements is linearly expanded over time, and the agreement achieves a long-term balance by increasing the number of CPIT rewards for each newly created block. At the same time, in a fixed period of time, as long as the token supply can be adjusted in time according to the market price of the token, the CPIT can be maintained for a long time to be linked to $1 or CPI. So how does the CPIT protocol measure the price of the token? How is the expansion or contraction of the token supply adjusted? Here, we will answer these questions by fully describing the CPIT protocol. At a higher price level, the agreement can be understood as having the following characteristics: while having the "full technical performance of traditional cryptocurrencies" (like Bitcoin):

- Linked assets are set by agreement. First, the agreement defines a linked asset. Can be USD, any Other fiat currency, indices (such as consumer price index) or any "package of goods". Then the agreement defines a target price for the CPIT in its linked assets - for example, 1CPIT = $1.
- Monitor the exchange rate and determine the price by the Block chains will obtain CPIT/USD exchange rates through Oracle System. This can also be achieved by decentration, which will be explained later.
- Blockchain will increase or decrease the amount of CPIT tokens based on exchange rate deviations.
  - If the transaction price of CPIT fluctuates within a small range, the agreement will automatically open the one-way exchange channel of the stable pool.
  - When the transaction price fluctuates downward, increase the number of Producer and lock more CPIT to reduce the circulation.
  - When the trading price fluctuates upwards, the CPIT airdrop to the node, allowing more CPIT to enter circulation.

It seems easier to understand the CPIT protocol compared to the Fed. Like the Fed, the CPIT blockchain monitors price levels and adjusts the supply of tokens through open market operations—this includes adding Producer to our system and rewarding CPIT to the Producer. Like the Fed, such operations are based on the quantitative theory of money, predicting the underlying assets and generating long-term price indicators. The following is the details of the CPIT protocol.

**Determination of the exchange rate of tokens**

First, explain how the blockchain gets the CPIT/USD exchange rate. Since this type of information is not related to the blockchain technology itself, CPIT can only be implemented through the Oracle System, a system that uploads external messages to the blockchain, in several ways:

- Trusted sources of information: The easiest way to do this is to upload an existing exchange to a blockchain from a single source (such as Coinbase, Real-time currency exchange rates for Kraken or other large
exchanges. This is obviously a big point of centralization, but it is a value. I have to mention it. A trusted source of information is an easy way to launch this protocol safely, even if part of the decentralization is sacrificed. Advantage. In any case, this is an effective way to provide CPIT/USD real-time exchange rates for the CPIT blockchain project.

Although we also hope to be able to integrate into the exchange as soon as possible - because we are in the CPIT project with several outstanding tokens in the world. Fred Ehrsam, co-founder of Coinbase and one of the Kraken board members of the French exchange, has been intimate contact, but we have noticed that if the CPIT agreement wants to obtain a strong exchange rate, it cannot rely on the exchange, especially in the initial release phase, in order to ensure that the CPIT price is within the control of the agreement.

• In addition, the CPIT/USD exchange rate does not take the liquid currency market between CPIT and USD. In fact, the exchange rate can pass calculated by any currency that is measured by CPIT. For example, if CPIT is listed on the token-fiat currency exchange. In case of trouble, the CPIT/USD data source can obtain the CPIT/Bitcoin exchange rate in the currency exchange in advance. This is achieved by separately including the Bitcoin/USD exchange rate.

• We can even create a CPIT-priced market more creatively, observing the CPIT prices of commodities with known dollar prices. The price changes and uses this to estimate the exchange rate of CPIT/USD.

Stable Pool

Quickly restore price anchors by storing a stable pool of multiple assets.

A stable price pool is set in the agreement, and various digital assets such as CPIT and ETH are stored in the stable price account corresponding to the stable price pool (hereinafter ETH is used as an example). When the CPIT price fluctuates, the agreement will automatically open the exchange channel:

• If the CPIT trading price fluctuates by 0.1% and the CPIT reaches $1.001, the CPIT one-way exchange channel in the stable pool is opened. Anyone can exchange the $1.00 ETH to 1CPITt, which is equivalent to automatically adding more CPIT to leave. The stable pool will enter circulation, and the CPIT will soon return to $1.00.

• If the CPIT trading price fluctuates by 0.1%, and the CPIT reaches $0.999, the ETH one-way exchange channel in the stable pool is opened, anyone can exchange 1CPIT for ETH worth $1.00, and more CPIT enters the stable pool. This is equivalent to automatically reducing the CPIT in circulation, and the CPIT will soon return to $1.00.

If the value of the asset of the cryptocurrency in the stable price pool accounts for the ratio of the circulation capitalization of the CPIT, which is greater than or equal to the price fluctuation ratio of the CPIT, the stable pool can fully achieve the goal of stabilizing the CPIT price:

Stable price pool asset value / CPIT market value ≥ trading price volatility.
Multiple reverse adjustment

From the analysis of the results of the stable pool, the number of digital assets in the stable pool account will change every time the exchange channel is opened, especially when the price of the CPIT transaction fluctuates greatly. That is, when the CPIT trading price fluctuates upward, the CPIT in the stable pool decreases. When the CPIT trading price fluctuates downward, the ETH in the stable price pool decreases. To maintain the stable number of CPIT and ETH in the stable pool, multiple reverses are designed in the agreement Adjustment Program:

- When the CPIT trading price fluctuates by 1%, the agreement will air drop the CPIT of n to the node:
  \[ n = (\text{current transaction price} - 1) \times \text{current liquidity} \]
  After n CPIT is air to the node, the actual liquidity will be greater than the actual demand, and the CPIT transaction price will be downward. As a result, the CPIT flowing out of the stable pool will return to the stable pool.

- When the CPIT trading price fluctuates by 1%, the agreement automatically increases the number of M Producer:
  \[ m = (1 - \text{current transaction price}) \times \text{current liquidity} / 10000 \text{CPIT} \]
  When the user becomes the producer, the ETH flowing out of the stable pool will be replenished, and the in flowing CPIT will become. The deposit of the producer will not participate in circulation. (The follow-up ecological part explains the source of the stable pool)
  
  We know that the amount of CPIT assets in the stable pool account will be supplemented during the block creation process. The amount of ETH assets will determine the stability of the CPIT trading price when it fluctuates downwards. Therefore, we must first analyze the source of ETH in the stable pool:

  - In the initial release phase, when a user applies for Producer or a light node, the ETH get in the stable pool.
  - When the CPIT trading price fluctuates 0.1%, the stable pool is opened for one-way exchange, and the exchange rate is $1.00 for ETH=1CPIT, which is lower than the exchange rate to attract more users to transfer ETH to the stable pool.

  - When the CPIT trading price fluctuates downward, the agreement automatically increases the number of Producer, user transfers the ETH to the stable pool, and the Producer is obtained, and the number of ETH in the stable pool account increases.
  
  Thus, the CPIT agreement can fully realize the rapid response and price stability when the CPIT price fluctuates upward. However, when the CPIT price fluctuates downward, we must also consider the instability of the ETH quantity and ETH value stored in the stable pool account, and even the special moments such as the black swan event, the CPIT transaction price is crazy (a very The imaginary hypothetical scenario) fluctuates downwards, which depends on the "bond currency" system.

Rapid contraction at special moments through the "bond currency" system

To shrink the supply of CPIT, the CPIT agreement defines two tokens. We give a clearer definition:

- CPIT:Temporary known as tokens, it is the core token of the system. They are linked to the dollar and
attempt to be the price benchmark for the exchange. The price expansion is designed to maintain a peg to the dollar.

- CPITBonds: Temporarily referred to as bond currency, such tokens will be issued and auctioned by the blockchain when the CPIT transaction price fluctuates by 20%. The bond currency itself is not linked to any currency, and each bond currency can be used as 1CPIT in some future cases. Since the newly issued bond coins are sold at less than 1CPIT at the open auction, you can expect the subscribed bond coins to bring a very competitive premium and “interest”. Then the conditions for redeeming the bond currency are:
  - The blockchain is creating and allocating a new CPIT, which means that it has been determined that the supply of CPIT needs to be expanded;
  - The bond currency has not expired, which means that the time after the bond issuance is less than 5 years;
  - All CPIT bonds issued before this bond currency have been redeemed or expired;

Supply contraction

The supply contraction is carried out in such a way that in order to destroy the CPIT in circulation, we must appropriately encourage the token holders to “lock” their CPIT for future returns. This can be achieved by issuing and selling bond coins through the blockchain. CPITBonds are sold in public auctions and often cost less than 1CPIT. In return, in the case of a system expansion and all old bond currencies have been redeemed, we have a promise that the bond currency can be "future can pay 1cpit" as long as the bond has not been redeemed and is still in 5 years Validity period.

First, let's explain this public auction system. In order to sell the CPITBonds, a continuous auction mechanism runs in the blockchain – the bidder can develop the bid price and the number of bids for the new bond currency. In other words, auction participants can figure out how many CPIT they want to pay for each bond and how many bond coins they want to bid at this price. For example, someone wants to buy 100 bond coins at a price of 0.9CPIT. When the blockchain decides to shrink the token supply, it chooses the highest bid order and converts the holder’s token to the bond currency until enough CPIT is destroyed, as follows:

- Suppose the system needs to destroy 100CPIT;
- Suppose there are two orders in the order list: 1. Acquire 100 CPITBonds at a price of 0.8CPIT; 2. Purchase 100 CPITBonds at 0.4CPIT;
- The system will complete the order 1 and give the order 1 user 100 worth of 100*0.8 = 80CPIT. Then complete part of the order 2, giving the user 50 coins worth 50*4 = 20CPIT. A total of 100CPIT were destroyed.

The agreement sets an artificial bottom line for the price of the bond currency to ensure that it will not be able to withstand future transactions due to excessive borrowing. We currently set this bottom line to 0.1CPIT. As far as the price fluctuations of the bond currency we have simulated, the exchange rate is fully able to meet the broad needs of the CPIT demand model. A detailed description of the special content will be published later.
**Repayment of CPITBonds**

When the supply needs to expand, first, the blockchain counts all outstanding bond coins in order according to the issue time. We refer to this ordered series of bond coins as the Bond Queue. Create a new CPIT token in the expansion blockchain and assign it as follows:

- CPITBonds holders pay first, following the principle of first-in, first-out (fifo) order: if there are outstanding CPITBonds, the block The chain converts 1:1 into CPIT in the order of the CPITBonds sequence. For example, we need to create 100CPIT, then the longest batch of outstanding CPITBonds will be converted into 100CPIT. In other words, this kind of first The first-in, first-out sequence encourages people the sooner they participate in the reward, the earlier the CPITBonds will be in the next bond Redeem the currency before it is issued.
- If the CPITBonds has been fully cleared, the system will allocate the remaining CPIT proportionally to the Producer. For example, We need to create 100,000CPIT, there are 100 Producer in the system, and the remaining unredeemed CPITBonds are 0, In the case, then each Producer will receive 1000 CPIT.

In order to prevent the rear speculators from paying too much attention to the new CPITBonds due to the long queue of CPITBonds sequences, we have added a valid date to the CPITBonds. The longer the CPITBonds sequence grows, the longer the CPITBonds that is placed behind the sequence is waiting to be paid. And this will cause the price of new CPITBonds to fall - because speculators will start to demand higher returns because of the extra time and risk. But if the price of the new CPITBonds drops to zero, then the system can no longer continue to tighten the supply - a price of 0 means that no one will be willing to use CPIT to exchange CPITBonds. In order to prevent this from happening, even if it has not been redeemed, we will forcibly give all the CPITBonds in the sequence a five-year "validity period". The definition of the validity period has been strictly simulated to ensure that even in the case of price fluctuations, the five-year period is enough to form a robust system, and the price of the CPITBonds will be high enough. We reserve details for this to be discussed later.

Conceptually, the CPITBonds sequence is similar to US Treasury bonds. Just as the US government will issue Treasury bills and include them in national debt until the payment is made, the CPIT system issues CPITBonds, joins the CPITBonds sequence, and then waits for payment. When there is too much treasury bonds, the decline in confidence in treasury bills will lead to an increase in future borrowing costs, which will ultimately be reflected in future inflation, higher future taxes or future defaults. By limiting the length of the CPITBonds sequence and automatically clearing the old CPITBonds, the CPIT does not allow its future stability to be so "heavy". On the contrary, the quantitatively issued CPITBonds with a valid period is transparent enough to pay a tax for its future stability. In other words, this hits the current higher borrowing costs (expressed as the unit price is too high when the CPITBonds sequence is short) and the lower borrowing costs when we really need it (expressed as the CPITBonds price is too low - otherwise the CPITBonds sequence will be too long) to achieve a balance.
In general, the expansion mechanism can also be understood through the following examples:

• Suppose there are 500CPITBonds in the bond currency sequence, 200 of which were issued five years ago. At the same time, there are 20 Producers in the system.
• Suppose the system needs to create 1,000CPIT.
• The system automatically invalidates the 200 old CPITBonds, leaving the remaining 300 CPITBonds in the sequence. If the system requires less than 300 CPIT, redemption of these old CPITBonds is sufficient. However, the system needs to create 1,000 CPIT, so the 300 old CPITBonds will be redeemed first.
• The system also needs to create 700 CPIT. So the system evenly distributes the 700 CPIT to the 20 Producers. So each Producer will receive 700/20 = 35 CPIT for use immediately.

Price response

The quantity theory of money is long-term. When the blockchain takes action to expand or contract the supply of tokens, is the exchange rate responsive enough?

Some people may worry about whether the CPIT agreement can respond to price changes instantly. In particular, the protocol quantifies the processing of the response to the time period, which means that once the system is impacted, the price becomes abnormally low or abnormally high before the protocol responds. In addition, even if the agreement responds immediately, the quantity theory of money of this monetary policy is only for long-term prices. So how can we ensure that the exchange rate quickly returns to the peg level?

The agreement has designed a stable pool program. When the CPIT trading price has just fluctuated, the stable pool will open the corresponding one-way exchange channel to ensure that the CPIT trading price fluctuations are the fastest constraint.

The key point is that when the speculator finds that the price is below the peg and he believes the agreement will respond quickly and the price will eventually be corrected, then he will be motivated to buy the CPIT – because he expects the current Falling prices can make the agreement "capitalized" in response.

But the actual result is that the price will rise back to the previous hook even before the agreement makes any response. Similarly, when speculators raise the price of CPIT too high (higher than the hook), then he may short, but doing so puts pressure on the price and recovery hook.

Speculators taking long and short strategies can also be understood as providing liquidity for CPIT peak demand. The buffer is applicable until the agreement responds and after the agreement has been responded to (before the long-term price predicted by the number of currencies is effective). Therefore, as long as there are sufficient liquid assets and the providers of these liquid assets believe that the CPIT agreement can restore the CPIT supply to the peg level before the liquidity is exhausted, then we should expect no matter what the token price and what kind of asset or index Hooks, the deviations that occur will be minimal.
APPLICATION CASE OF STABLE COINS

Market expansion

People living in developed countries often think that it is natural to have a stable currency. If you are born in the United States, you can use the dollar without restrictions, or use the euro arbitrarily within the EU, and then you will wonder why the world needs a stable currency. However, in countries with weak systems and unstable currencies, hyperinflation is very common. In these markets, we strongly expect to have a price-stable cryptocurrency.

According to a public report in the third quarter of 2017, Egypt is experiencing a high inflation rate of 32% per year, 23% in Argentina and 16% in Nigeria, and this is only data for some countries with relatively stable government – remember there are also countries like Venezuela, which currently have an annual inflation rate of around 741%, which is even more serious in 2018. What if your assets are evaporating at a rate of 741% per year? Faced with the rapid depreciation of local currencies, people are looking for other outlets, and often the first choice is to flock to the US dollar. This phenomenon is called “dollarization.” In general, there are three forms:

• First, a large percentage of people will pay in US dollars without local government coordination, rather than local currency. Real In fact, in some countries in Central Asia and sub-Saharan Africa, there is no official coordination as soon as possible, and the US dollar is also the amazing speed develops into real money. For example, in the two years from 2006 to 2008, the dollar in the Seychelles region The ratio has increased from 20% to 60%.

• Second, although government capital controls can effectively limit the “transit” of the US dollar, citizens of the country may still have a demand for the US dollar. During the period of capital control in Argentina from 2011 to 2015, the dollar black-blue dollar (for the black market dollar-Argentine) was an open secret. At that time, the daily trading volume of the black market dollar was between $10 billion and $40 billion, and the exchange rate was 25% to 30% higher than the official offer. These black market exchange rates are even publicly released in large local newspapers, although this is illegal in the eyes of the authorities.

• Third, the extreme development of currency depreciation will likely result in the government’s decision to switch to the US dollar, as in Zimbabwe in 2009. Today, the entire country is in demand – ensuring the daily transportation of dollar notes and coins.

Is there an opportunity for this? Whether the government supports dollarization or not, citizens, banks and governments will incur large expenses on the “import” of the US dollar. However, if it’s a cryptocurrency - a cell phone can transfer millions of dollars - this seems to be a great alternative to paper dollars in all dollarization scenarios.

Finally, it is concluded that there are indeed many people in countries with high inflation rates using Bitcoin. However, Bitcoin does not really liberate people from the local unstable currency – because its own

3 https://tradingeconomics.com/country-list/inflation-rate
price is not stable. For example, if Bitcoin is in a period of depreciation, then from a usage perspective, there is no significant difference from the local depreciating currency. As long as a few times, people will start to seek new, stable alternative currencies very clearly - then there needs to be such a currency. Therefore, the stable price of the currency will become the killer of the rapid depreciation of the currency in the developing economies. In extreme cases, the next country that has given up its currency, like Zimbabwe, is likely to accept and use a stable digital currency compared to the “import” transition to dollar notes and coins.

Immediately, Christine LaGarde, Managing Director of the International Monetary Fund, proposed in his speech in 2017\(^5\):

For countries with weak institutions and unstable currency prices, instead of accepting the currency of another country, such as the US dollar, it is better to realize that the use of digital cryptocurrency is also growing. In this regard, we call it Dollarization 2.0.

The experience of the IMF shows that there is a threshold for this, and once this threshold is exceeded, the coordination of new currencies will change exponentially. Dollarization, in Seychelles, for example, jumped from 20% cent in 2006 to 60% per cent in 2008.

However, why should citizens hold cryptocurrencies instead of dollars, euros or pounds? Because it will be better than getting notes easier and safer, especially in remote areas. Also, because cryptocurrencies actually become more stable.

For example, they can be issued in 1:1 against the US dollar or “Basket of currencies” by a reliable, pre-set gauge. Then, the algorithms that can be monitored are managed by an “intelligent rule” that even reflects the changing macroeconomic environment. The token is issued completely and transparently. In many ways, cryptocurrencies pose challenges to existing monetary and monetary policies.

"THE POST-USD ERA"

By linking to local currencies, the cryptocurrency shoulders the efforts of all central banks to secure the purchasing power of money. In other words, the CPIT peg to the dollar makes it efficient to mimic the Fed’s efforts to stabilize the dollar. But if CPIT is favored by more and more users over time and becomes as popular as credit cards, cash or the dollar itself, it will replace the dollar as a universal cryptocurrency.

Linked CPI (consumer price index)

If CPIT starts to take up a large share of global trading volume, then we can assume that some commodities are first sold at CPIT pricing. In such a world, the CPIT protocol can update hooks to assets or indices that are

independent of any local currency—most likely linked to crap-denominated “packages”. This is similar to the Fed’s current link to CPI to maintain the stability of the dollar’s purchasing power. If developers find that their built-in inflation is good for the economy or the system, then the new link can even take into account inflation targets of up to 2%, just like the Fed.

We envision a range of potential advantages of this mechanism. First, unlike the Fed, CPIT implements monetary policy through a transparent decentralization algorithm with no direct human input. We acknowledge that there may be unknown risks in a fully automated monetary policy. But we also believe that since CPIT is the first verifiable agreement for fully automated monetary policy technology, we will see the research progress of this algorithm’s monetary policy as usage increases.

In addition, the monetary policy implemented by the CPIT agreement linked to CPI is independent of any government. At a higher level, we believe that the government will provide its citizens with two key services to maintain control over the money supply: verifiability and price stability. In terms of verifiability, the government helps protect citizens from counterfeit currency; in terms of price stability, the central bank helps stabilize macroeconomic needs and, in some cases, manages unemployment. This is what the Fed calls “double mission”. With the advent of Bitcoin and its solution to the “double spending” problem, the need for centralized verifiability has disappeared. For the first time, CPIT eliminates the need for decentralization. However, perhaps because of good intentions and consideration of “absolute protection”, those governments with integrated central banks always have the incentive to print money to avoid fiscal debt. We envision that once citizens choose CPIT technology rather than local currency, an independent, transparent, crypto-based monetary policy will provide society with unprecedented responsibilities in history.

**Linked to CPI (consumer price index) or exchange rate measurement of a package of goods**

Decentralized Schelling point mechanism: This completely decentralized approach is to determine the exchange rate through the Schelling point mechanism. Its operation process is roughly as follows:

- Anyone in the mechanism can vote based on the average exchange rate over the past 5 minutes;
- All voting results are consolidated and cleared every 5 minutes and calculated based on the proportion of tokens held by the voters. In other words, the more tokens you hold, the more weight your vote will have;
- The weighted median obtained is the true exchange rate; in addition, the estimates at the 25% and 75%th positions after weighting are calculated;
- Users who guess between the 25% and 75% positions will receive a preset quantitative CPIT as a reward. This reward not only encourages people to vote, but also encourages everyone to form a consensus mechanism;
- Users whose guess values are outside the 25% and 75% may be penalized for cutting some shares.

By "weighting according to token ownership", "selecting the median" and "consensus reward mechanism", as
As long as no one in the CPIT voting has more than 50% of the voting rights, the plan largely protects itself from being affected by bad actors. In order to motivate enough users to participate in the voting, the development of reward mechanisms and punishment rules are necessary.

If the design of these incentives is correct, then the result is that CPIT can provide bitcoin (if a miner claims that he mines more than 50% of the CPU, then he is equally vulnerable) and Ethereum (whether the POS mechanism should be implemented) the same level of security. But we firmly believe that we can make cpit develop steadily by setting the right incentives. In any case, the Schelling Point mechanism provides an effective way to link CPI (consumer price index) or a package of goods exchange rates for the CPIT blockchain project.

One final point: If the CPIT Linked to CPI, then the critics are likely to say "it can only meet one of the Fed's current two missions." To be more specific, it can achieve price stability, but it will ignore unemployment. But this shortcoming can actually be solved - think about how the Fed stabilizes the level of employment? Think more creatively, which is actually similar to the hourly price of stabilizing labor.

Imagine that during the economic turmoil, the decline in the demand for labor in the enterprise led to a decline in the price of workers' labor, which ultimately led to unemployment. To alleviate this situation, the Fed has increased the printing of money to help the economy, and expects the economy to re-employ manpower through this currency, pushing labor prices back to high places. But the CPIT protocol can create a token for the unemployment problem like the Fed - CPIT can simply include labor prices in the exchange rate and upload it to the blockchain. To be more specific, in the "a package of goods" used to calculate CPI, the CPIT protocol will simply include the average unit labor time price of workers in the entire economy. Through this minor revision, we believe that CPIT can maintain the Fed's "dual mission" while maintaining the decentralization advantages of completeness, transparency and protocol execution.

Avoid macroeconomic depression
Imagine the circulation of a cryptocurrency that transcends the world of fiat currency. All savings are made through Bitcoin, and all goods are priced and paid in bitcoin - from groceries to petrol, from new cars to new homes. So, if a certain bitcoin loan service caused a series of subprime loans to deteriorate, it eventually caused the recurrence of the 2008 economic crisis?

Because there is no "Bitcoin FED", the risk of a recession turning into a full-scale macroeconomic recession is real. Many economists believe that the Fed’s move in the 2008 economic crisis saved the world from another Great Depression. The logic behind this belief is simple. Imagine that we are in a period of economic recession, the demand for commodities is declining, and the reduction in people’s purchasing power usually means that prices fall. But since faced with falling prices, why do you want to renovate your home at 10 bitcoin instead of waiting until next year when the value may fall to 5 bitcoins? So, demand will fall further, leading to further prices. Fall, and so on, go back and forth and enter a cycle of prophecy that is constantly self-fulfilling. This phenomenon is known as the "deflation spiral", and this phenomenon is known because during the economic crisis of 2008, this phenomenon caused great damage to productivity. Keynesian economics believes that these highly destructive spirals can be broken by expansionary monetary policy,

6 https://en.wikipedia.org/wiki/keynesian_economics
which creates more money during periods of falling prices. However, this is not possible with existing cryptocurrencies because their money supply is fixed. On the other hand, this smart expansion of the money supply is what the Fed did in 2008 to prevent the resurgence of the Great Depression, and it is the built-in content of our CPIT agreement.

The rapid development of cryptocurrency technology can provide better quality services for people in high-inflation economies than local currency; provide digital asset traders with a more convenient and stable asset than cash; promote cryptocurrency capital markets and The formation of a complete blockchain economy. In such a future world, the government will do a good job of "supporting this kind of cryptocurrency that is still stable in the face of macroeconomic turmoil." In fact, even if the government does not do so, citizens will even ask for it.

OTHER ATTEMPTS TO STABLE COINS

We believe that an in-depth understanding of previous attempts and similar projects that are being tried is critical to our development. Below, we list all the similar stable currency trials we know, and in our opinion, why they didn’t succeed:

BitShares (BTS)

The following explains how Bitshares (bts), a stable currency, works:

- First, there are two types of tokens, Bitshares (BTS) and BitUSD, which are similar to CPIT.
- BTS has designed its original Market Linked Assets (MPA) exchange for BitUSD using its blockchain, so there are always people willing Sell these two assets.
- People can do two things: “do more” BitUSD - wait for their value to get revenue; or “short” BitUSD - means Earn profits when prices fall;
- If you choose “do more” BitUSD, you only need to buy it in US dollars according to its listing price - if the subsequent price rises, you can sell and get profit at the market price;
- If you choose “short” BitUSD, depending on the exchange rate, you will buy a $1 BTS, and the blockchain will lock it for 30 days, and then there will be several nuances:
  ◇ If the price of BitUSD rises, then the BTS you get will decrease after 30 days.
  ◇ If the BitUSD price rises sharply, you may be asked to make a margin call or lose all BTS.
  ◇ If the BitUSD price falls, you will get more BTS. In this case, when you put your $1 BTS into the blockchain, the blockchain will do the following:
    Δ created a new BitUSD.
    Δ The new BitUSD was sold to someone and thus effectively increased the supply of BitUSD.
    Δ This is also the “short” phenomenon in real life, but you don’t need to worry about “short”
the currency you only need to sell the BTS and buy it back. As for the profit and loss, it depends on the specific price of BitUSD.

- BitUSD only exists when people want to participate in short-term tightening. If no one wants to use the BTS to tighten the supply of BitUSD, there is no BitUSD at all.
- You can sell BitUSD to someone, or you can automatically repay it to someone who has a short contract. If you choose the latter, the supply of BTS will increase, pushing up the price of BitUSD.

In general, the BTS protocol has several flaws that are completely destructive for the implementation of a stable currency:

- The BitUSD link is used by BTS as the ultimate lender to maintain and support the fragile self-reinforcing mechanism, not the agreement itself. The reason why the BTS is worth $1 is because everyone thinks it is worth $1. Because of this, people continue to be short and only keep their prices floating above $1. If one day, people think that BitUSD should be worth $100, then the balance will be adjusted to $100. The most likely reason for maintaining such a long-term stable price is that the BTS as the ultimate lender can force it to be linked to $1 when someone attempts to break the balance. But the cost of doing so will undoubtedly get higher and higher, and then it will lead to the complete collapse of BitUSD as a stable currency. By the way, when we explain this to our friends, he immediately suggested that we raise millions of dollars to destroy this mechanism and link the balance to a new price, which is undoubtedly profitable. - George Soros In this way, the Bank of England was successfully destroyed. Please note that this is quite different from CPIT agreement, which enforces a negative feedback loop to ensure that its price is tied to $1.

- The original intention of BTS was not to “become a stable currency” but to “become a market forecast”. Even in our opinion, the above deficiencies are enough to completely destroy a stable currency, but it is also important to keep in mind that BTS is far more effective than stable currency. Big - it is a broad market forecasting mechanism. You can place a bet on anything through the platform. Because of this, we guess (even if we are not sure) that the original intention of bts research and development is not even a stable currency, and you have it on its platform. BTS is just a pleasing coincidence that proves how widespread their platform applications are.

Maker Dao

We personally think the Marker Dao project is somewhat difficult to understand. In other words, we do believe that it is a problem as a widely spread “intermediary currency”.

- Agreements based on user asset reserves are mostly vulnerable to “black swan events”. The MakerDao protocol we understand needs to be collateralized by ETH, and to subsidize MakerDao tokens, which are about half of the total value of ETH, according to the exchange price. Because The subsidized MakerDao token is less valuable than the mortgage, so MakerDao’s contract can always ensure that its token is held. The person can get a compensation of 0.5 ETH - as long as the value of ETH is not cut more than half. If you really cut more than half It seems that the agreement is that MakerDao needs to immediately "append" a deposit worth 0.5 ETH, but this will lead to
disasterSexual price fluctuations.
We don't know how the MakerDao mechanism handles this problem. In addition, this seems to be the problem faced by all reserve-based agreements. On the contrary, if the price of the token begins to decline, the CPIT agreement can easily issue more CPITBonds. If after a period of time, the unmanned person is willing to purchase the bond currency due to the long sequence, the CPIT agreement will expire after the old bond currency expires. The amount of demand recovery is re-linked as soon as possible.

Nubits

The mechanism of this project is very interesting, but we have found some features that we think are enough to undermine mainstream adoption.

The mechanism of this project is very interesting, but we have found some features that we think are enough to undermine mainstream adoption.

- Tokens are created by “voting the token custodian”. When people demand new tokens to maintain the hook, they must vote for a custodian to receive the new tokens, and then pray that the custodian will put the new tokens into the transaction to guarantee the token price. Normal hook. In our opinion, this mechanism is too weak. On the contrary, the new CPIT is issued to the Producer, which can be spread all over the world.
- Does not depend on any exchange rate. It seems that people only decide the price of the tokens by voting according to their own wishes. This is obviously too fragile, because in our view, there are times when people have some illegitimate motives to increase or decrease the exchange rate to their advantage, and then cause the hook to break. In addition, it seems that the hook of this project is not as highly accurate as CPIT or BTS.
- Depositing interest on tokens will result in long-term inflation. In order to propose tokens from circulation, Nubits provided token holders with a one-year “storage” interest. This can be done, but a year later, when they want to raise the principal plus interest, it will cause a surge in the supply of tokens. We are very skeptical about whether Nubits will solve this problem in the future, because they don’t seem to have a mechanism that really reduces the supply of tokens.

Tether

This project is very interesting, but in our opinion Tether is not a cryptocurrency - they store exactly $1 in reserves for each Tether coin, and then assure people that whenever they can be destroyed by destroying Tether to Dollar. For us, this is basically like a company taking deposits and then issuing its own tokens, much like the eGold approach of the 1990s. Although this can certainly work in the short term, we believe that this reserve-based approach has huge flaws. Tether and other reserves-based projects can provide short-term advantages for token stability, but this approach sacrifices most of the advantages of cryptocurrency — decentration and anonymity.

- There is a huge risk for all companies that use the currency as a reserve - just like eGold - there
is always the possibility of being shut down. Tether team has exceeded the legal restrictions on regional currency holdings by regional banks, and it is not clear how long they can escape.

- For Tether or any other reserve-based token, the holder has full control over the money supply, and this alone can cause the project to fail.
- These tokens can never really replace the fiat currency. Because they do not have any built-in monetary policy. If Tether is always a fraction of the dollar supply, its stability will be completely compromised because the Fed no longer affects supply. In contrast, CPIT spot monetary policy provides a smooth transition from the current linked currency to the future linked consumer consumption index.

Libra

At the time of this white paper, we got the news from the Libra white paper. We can't understand Facebook's behavior. Although Libra's goal is to become a global currency to replace the US dollar, but completely different from CPIT: Facebook turns out to be the alliance chain. The way, this is completely contrary to the original intention of Nakamoto and Vitalik to build a blockchain, because Facebook can not achieve decentration, although BM lost part of the decentration of EOS in order to improve TPS,

But the decision is still in the hands of users, miners and maintainers. controlled by multiple agencies, is more like a sub-dollar issued with blockchain technology, which is not what we want.

Libra still has three issues to face:

The first problem is that the endorsement of the dollar requires KYC, which will make another feature of the cryptocurrency disappear - anonymity. Whether the cryptocurrency without anonymity will be recognized by the user, we are in doubt.

The second problem is that, as faced by USDT, it is impossible to give a full proof of bank deposits, because this huge amount of dollars will exceed the local laws in any country or region.

The third question is: Similar to what Basis faced at the time, Libra's release will impact the existing status of the fiat currency. At present, Facebook is facing the Fed and even the US Congress, the European Union and other governments or economies. The result is that Libra has become a digital dollar, but after becoming a representative of the FED, can Facebook's Libra be accepted by other economies?

Below, this white paper begins with a more important section on how to release CPIT and build a CPIT ecosystem. The following contents include:

- CPIT ecosystem: How to quickly form a complete ecosystem to keep the CPIT stable.
- Two important features: a description of the stable pool and the automated trading system.
- Node building and revenue: Get huge benefits for users, miners and community builders.
- Special rewards: Engage early adopters to participate in the construction and development of ecosystem.
CPIT ECOSYSTEM

From the experience of the Basis project, we understand and value the importance of “ecological construction and development speed”, so we take into account the interests of all participants in the CPIT agreement. For early entrants, the agreement will give more benefits, especially those who have great contributions in ecological construction, and the agreement sets special rewards.

In order to allow more non-technical users to easily understand the source of their interests, in the eco-section we will reduce the terminology and use as easy to understand language and graphics as possible to illustrate what we want to present.

We will invite the Producer and the Core users of ecosystems to join our community maintenance, because for CPIT, we adopt a decentration, chain-down and chain-based governance approach: first, the chain community will reach an upgrade plan, and then the chain will be User voting, support for more than 1/3 of the number of votes can be implemented, otherwise no one can modify the agreement.

Unlike the high-volatility cryptocurrency such as Bitcoin and Ethereum, when the CPIT price reaches the anchored $1.0, the income of the investor or eco-builder in the CPIT is not derived from the price fluctuation of the cryptocurrency, It comes from the continuous increase in the number of CPIT.

By the end of 2018, the market value of cryptocurrency is about $350 billion. In theory, the corresponding demand for CPIT circulation is about 350 billion CPIT. It is assumed that by 2022, CPIT-priced "a package goods", will be linked and CPIT becomes a universal encryption. the demand for CPIT may reach about 200 trillion which is also the amount of Fed's issuance to the US dollar.

So from the initial 7.83 million CPIT into the stable pool as the initial assets, to 350 billion and the final demand of 200 trillion, CPIT needs high-speed growth to meet market demand.

Founding issue

ETH-based smart contract sidechain technology
Consensus mechanism: DPOS (main chain POS)
Asset transfer verification method: asymmetric two-way anchor
Asset transfer custody mode: spv proof mode
Privacy Transaction: Ring Confidential Trading Algorithm
The total number of issues is 5,000,000,000 CPIT (ERC20)

10,280,000CPIT for early ecological construction
10,280,000CPIT for early ecological construction
4,989,720,000CPIT through the block reward
4,989,720,000CPIT for block rewards
EARLY ECOLOGICAL CONSTRUCTION

Into the Stable pool
Inject 7,830,000 CPIT into the stable pool, theoretically, satisfying 303 Producer nodes, 3000 main light nodes, 9000 light node margins in three network segments.

Private promotion website reward
A total of 1,000,000CPIT, through the detection of the private promotion website, can get 200CPIT rewards every month, until 1,000,000CPIT rewards are all issued.
- Any CPIT user can download the website installation package, build a private promotion website, and upload promotional materials and materials.
- After the user's private promotion website is online, fill in the website address in the CPIT wallet to check through the block link.
- Detect and promote the website connection rate on the 1st to 10th of each month, and award the reward every 15-20 days.

Early promoter reward
A total of 1,000,000 CPIT, each eligible advertisement will receive 100 CPIT rewards until 1,000,000 rewards are fully issued.
- Any CPIT user can post information about CPIT via Twitter, MicroBlog, Block Forum, etc., click or comment more than 10,000 times.
- Send us an E-mail to provide information and receive a CPIT wallet address.

Exchange cooperation reward
With a total of 450,000 CPIT, we will recognize the exchange's open CPIT trading pair after the CPIT price reaches $1.0.
- The exchange for the first open trade pair rewards 200,000 CPIT.
- The second open trade pair rewards 100,000 CPIT.
- The third open exchange pair rewards 50,000 CPIT.
- The fourth open trade pair exchanged 30,000 CPIT.
- The exchange for the 5th open trade pair rewards 20,000 CPIT.
- The exchanges for the 6-10th open trade pair are awarded 10,000 CPIT.
- Send us an E-mail to provide information and receive a CPIT wallet address.
PARTIAL TECHNICAL DESCRIPTION

Create CPIT Wallet on Side Chain

The CPIT side chain wallet is created by the private key of the Ethereum main chain account. When the Ethereum account address is imported or created on the side chain, the private key generates a CPIT wallet on the side chain, and the private key manages the main chain Ethereum account address and the side chain CPIT wallet address, the CPIT wallet is created as a new node.

Due to the adoption of the RingCT algorithm, the transaction records on the side chain are not disclosed to non-traders, which protects the user's transaction privacy.

Set up three accounts in the CPIT wallet.

- **Margin account**: When there is a corresponding amount of CPIT in the CPIT wallet in the margin account, you can apply to become the light node, main light node, Producer node.
- **Storage account**: Only the CPIT in the storage account will be counted. When the agreement performs CPIT expansion, the airdrop ratio of the node is determined by the number of CPIT of the storage account in the wallet. When the agreement is added to the Producer node, the application of the CPIT of the storage account to enter the margin account is preferentially accepted.
- **Trading account**: When the user wants to sell CPIT, the CPIT needs to be transferred to the trading account, and the CPIT of the trading account is locked on the side chain.

It is free for the user to transfer money to other user wallet addresses on the CPIT side chain, but it is necessary to consume the Gas when moving the CPIT from the side chain wallet to the ETH account address on the main chain and operating the CPIT on the main chain ETH account address.

New node initialization

When the CPIT node is created, the system randomly generates the node id. The node id is fixed and the local node is marked as local-CPIT. The new node connects to other nodes in the network through the node id of the prefix node.

The new node initialization needs to store 10CPIT in the CPIT wallet to complete. The system first reads the public node information, and after the ping-pong handshake is completed, it writes it to the K bucket. The new node automatically searches for the 7-layer prefix node according to the Merkel tree connection relationship and sends 0.5CPIT to each node. When the node’s dit is greater than dkt, it is recorded as a K-bucket node, and the block information is synchronized. The new node automatically sends 5CPIT to the root node, and sends 1.5CPIT to the stable price pool to complete the initialization.

Node discovery

In order to maintain the connection with the peer node, by default the CPIT node will send the version
information to the peer node at least once every 10 minutes. Version contains the version information of the node, the block information and the time from the remote node.

Once this message is received by the peer, it must reply with a verack. If it is willing to establish a peer relationship, it will send its own version message. Once the peer relationship is established, the node can send getaddr and addr messages to the remote node to obtain other peer node information. If no reply is received for more than 10 minutes, the node will consider the connection broken and mark the NODE ID.

The node opens the CPIT wallet running node at least once a day and keeps it online for 30 minutes. Otherwise, other peer nodes think that the connection is disconnected and cannot provide the latest block information, which will not generate the Merkel block reward for the day.

**Nodes Set**

node, synchronize all blockchain data, including various block bodies, transaction lists and other related information. The entire node does not need to rely on Merkel proof to verify the data.

light node, downloads the block header whenever there is a block appearing on the network, instead of downloading the state of the full amount of data, and sends a request for the Merkle proofs of the specific state required by the client to the primary light node. Instead of using LevelDB directly for direct storage.

main light node, the primary light node receives the Merkle proofs request for the specific state required by the client, uses the distributed hash table in the Merkel tree structure to track the prefix node, and checks the light node/ Full node status information, and store the results of the three MPT calculations of staetrie/txtrie/receiptrie.

Producer node, the only node with the block right in the CPIT side chain, when the hardware configuration of the coinage node is low, the root node/parent node/child node/leaf node, or parallel node is automatically entrusted according to the Merkel tree structure. Synchronize blockchain data, including Header and Body.

**Merkel Patricia**

CPIT improves the ability of Ethereum Merkel Patricia tree to resist denial of service attacks (DOSa ttack) in the side chain. There are at least three or more parallel nodes in each hierarchical tree, and the primary light node uses distributed hash tables to track the prefix nodes to reduce the depth of the tree, which also avoids the soft fork risk of the side chain. That is, when a node in the same tree exits or is not connected to the network, the primary light node first sends a Merkel proof request to the same node through the NODE ID instead of looking down the node, especially when paralleling in the same tree.

When a light node is included in a node, a larger number of parallel nodes are very important. It is because of the Merkel tree that the CPIT node can be built and run on all private computers, laptops, and smartphones.

The root node, parent node, child node, leaf node and parallel node of the same layer form a basic tree. Numerous basic trees form a larger Merkel tree. Nodes are connected by node id to form a tree. In theory, As long as there is a full node connection in the entire Merkel tree, the entire CPIT network can be guaranteed
The Producer node and the light node need to rely on the full node synchronization information in operation, so the whole node will be obtained according to the relationship between the number of Producer nodes/Main light nodes/light nodes and node id in the basic tree—Merkel District Block rewards.

**Sharing**

CPIT agreement uses Sharing to improve TPS, and uses the node id link in the Merkel tree for cross-chip communication to ensure metadata synchronization, which makes network fragmentation robust. Each shard has 3000 light nodes, 1000 main light nodes, and 101 Producer nodes. When the number of nodes exceeds the maximum number, the newly added nodes automatically enter the next network fragment.

The CPIT agreement settings: within each network segment, produced by 101 seed nodes in sequence. The block speed is 15 seconds, which requires 6 nodes to confirm. Each network fragment creates 5760 blocks in 24 hours. When a new Producer node is added, the seed node is automatically replaced to ensure that the total number of Producer is 101.

**Create block rewards**

Create block rewards. At the beginning, each newly created block will be rewarded with 4cpit. When the guaranteed holding exceeds 1 million cpit, the protocol will automatically detect the growth rate t of the guaranteed holding at the end of each month, and adjust the amount of cpit of the new block reward according to the T value:
$T = \text{guaranteed holdings at the end of the month} / \text{on the first day of the month}$

If $t$ is less than 1.3, the reward for the new block is 1CPIT;
If $t$ reaches 1.3, the reward of the new block is 2CPIT;
If $t$ reaches 1.5, the reward for the new block is 4CPIT;

When $t$ is more than 1.5, the protocol implements the expansion airdrop, and more CPIT is airdropped to the nodes to increase the circulation of CPIT;

Airdrop quantity $n = (t-1.5) \times 0.3 \times \text{guaranteed holding quantity}$

The proportion of automatic expansion airdrop to nodes:

• $n \ 80\%$ to air drop all nodes according to the monthly average air drop percentage of each node.

• $n \ 20\%$ is only airdropped to the coinage node, which is divided equally by all the coinage nodes.

In the early days of ecological construction, each block rewarded 4CPIT and generated 2,3040CPIT in 24 hours.

101 Producer nodes received 40\% of the block awards, 1000 main light nodes received 33\% of the block awards, 3,000 light nodes received 17\% of the block awards, and the full node received 9\% of the block awards. The stable pool gets 1\% of the block reward.

When there are less than 101 Producer nodes in the segment, less than 1000 main light nodes, and less than 3000 light nodes, the unrecognized CPIT enters the stable pool.

When the CPIT price reaches $1.0, each newly created block reward is increased to 5CPIT to accommodate the explosive demand for the exchange's open CPIT deal. Thereafter, whenever the CPIT in the stable pool is reduced by 10\%, the newly created block reward is increased 1 CPIT.

In the early days of eco-building, early adopters of the protocol set up to use less ETH to convert to CPIT:

Initially, users only need ETH worth $0.5 to redeem to 1CPIT. As the number of CPIT tradable quantity, the ETH value needed to convert 1CPIT increases from $0.5 to $1.0 (expressed as CPIT price from $0.5-$0.99).

tradable quantity $= \text{total number of users in the CPIT wallet}$

When the tradable quantity reaches 10,000,000 CPIT, the exchange rate of 1CPIT reaches the anchored $1.0. Early joiners obtained CPIT through the following "two important functions."

In the simulation run, we found that increasing the number of nodes and encouraging users to hold more CPIT will speed up the CPIT price and cause the CPIT to anchor $1.0 as early as possible. Conversely, if the CPIT flows back to the stable pool, it will slow down the CPIT price. Therefore.
TWO IMPORTANT FUNCTIONS

Stable pool for two-way exchange

When the CPIT price is between $0.5 and $0.99, the ETH exchange CPIT channel is opened. The user writes a redemption quantity greater than or equal to 200CPIT in the wallet. The system automatically calculates the required ETH quantity according to the real-time price and checks the ETH account balance. The user's ETH automatically transfers to the ETH account address corresponding to the stable pool, and the user's CPIT wallet receives To CPIT.

When the CPIT price is between $0.5 and $0.99, open the CPIT is exchanged for the ETH channel. The user writes the number of CPIT exchanges in the side chain CPIT wallet. The system automatically calculates the required ETH quantity according to the real-time price. The user's CPIT automatically transfers to the CPIT wallet address corresponding to the stable pool and the user's ETH account address receives ETH. It can be seen that when the user converts the CPIT into ETH through the stable price pool, only the benefit of the increase in the number of CPIT can be obtained, and the interest of the price increase cannot be obtained.

When the CPIT price reaches the anchored $1.0, the stable pool closes the ETH to the CPIT channel. However, the stable pool permanently retains the CPIT redeemed ETH channel for the Margin account. (1CPIT = $1)

Automatic trading system

Thanks to the technical principles of the Ethereum main chain and the CPIT side chain, the agreement sets up an automated trading system, and the trading process is automatically completed in the main chain and the side chain, without manual intervention.
In the early days of ecological construction, the price executed by the automated trading system was synchronized with the price of the stable pool ETH exchange CPIT. At a CPIT price of $0.5-$0.99, the buy limit to less than 200 CPIT, and after the CPIT price reaches $1.0, the buy limit is cancelled.

The buy user writes the purchase quantity in the CPIT wallet, the system automatically calculates the required ETH quantity and checks the number of ETH in the side chain wallet. When the ETH quantity is insufficient, the system calculates the difference and transfers the ETH to the specific SPV address on the main chain. The SPV address is locked and a Simplified Payment Verification is created to be sent to the sidechain. When the number of ETH in the wallet on the side chain is satisfied, the buy user’s buy form will be displayed on the side chain.

After the selling user selects the buying form of the buying user in the CPIT wallet, the system automatically checks the selling user’s CPIT wallet, and if the CPIT quantity satisfies (greater than or equal to) the number of purchase orders, the transaction will be automatically executed.

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**Automated trading is very important in the ecosystem.** Before the exchange opened the CPIT trading pair, a convenient, fast and secure trading channel was opened between the user and the user. After the exchange opened the CPIT transaction, the automatic trading system was also The user provides a special channel with completely anonymous transactions.
NODE CONSTRUCTION AND REVENUE

In the early days of eco-construction, the CPIT agreement set a phased preferential process for early entrants: the CPIT exchange price increased from the initial $0.5, based on the increase in liquidity and eventually reached the anchored $1.0. In this anchoring process, the stable pool can be used to reserve sufficient digital assets, and the earliest subscribers can get twice the benefit of the CPIT price increase.

CPIT is a stablecoins, so after the price reaches the anchored $1.0, the interest of the CPIT node is no longer the price of the cryptocurrency itself, but the number of CPIT multiplied and increased rapidly.

After the initial 7.83 million pieces of CPIT entered the stable pool as the initial assets, how much will the number increase? We refer to the market value of the stablecoins-USDT of 3.2 billion USDT - need to have a 408 times increase in quantity, and these growth They are all rewarded to nodes in the network through newly created blocks. The demand for future CPIT is equivalent to the market value of all cryptocurrencies of 350 billion, and then to the global currency of 200 trillion, the demand will increase by 10 million times, so the participants of the CPIT ecology, especially the early joiners, Will get very huge benefits.

In the early days of ecological construction, the stable pool provided 303 Producer nodes / 3,000 main light nodes / 9,000 light nodes for margin exchange. When the number of CPIT transferred out of the stable pool reaches 7.83 million, the ETH exchange CPIT channel is closed unless the reason for the increase in the price of the CPIT makes it open again.

Create a CPIT wallet and run initialization, which is a new node connected to the CPIT network.

The core process of the new node initialization is to automatically search for the 7-layer prefix node according to the Merkel tree connection relationship and send 0.5CPIT to each node, then send 5CPIT to the root node and 1.5CPIT to the stable pool to complete the initialization.

From this we know that the initialization of the new node in the suffix node will bring a huge amount of CPIT to each node that has already been run, which is also the first source of revenue for each CPIT participant:

In the CPIT network, each node receives 5.0CPIT sent by the parent layer node and receives 0.5CPIT sent by each node in the 7-layer suffix node.

![CPIT Diagram]

Below we will follow the different nodes to explain how to build (expand) nodes to get benefits.
Full node

Create a CPIT wallet storage 10CPIT and run initialization, the whole node has been set up, the node needs to perform node discovery every day, synchronize the latest block information, and the whole node without node discovery can not get the Merkel block reward.

Source of income:
• The suffix node initializes the sent CPIT: parent layer 5CPIT, and each node in the 7-layer suffix node is 0.5CPIT.

• Merkel. Block Reward: The full node does not directly receive the reward for the newly created block, so the agreement increases the block reward for the light node/primary light node/money coin node in the Merkel basic tree by 10%. Give the full node in the base tree. No matter which layer of the basic tree the whole node is in, it can be rewarded according to the connection relationship of Merkel tree. We define this reward as the Merkel block reward, which is obtained as follows:
  ◇ The root layer node obtains the parent layer node 2%/Child layer node 2%/leaf layer node 2%.
  ◇ All parent nodes share 10% of the root node /10% of the same layer node.

• Eco-Building Reward: All nodes receive 2% of the parent node's margin.

• Merkel Eco-Reward: The agreement increases the eco-construction rewards earned by nodes in the Merkel Basic Tree by 80% and rewards them to other nodes in the base tree. Regardless of which layer the node is in the basic tree, it is possible to obtain the ecological construction reward according to the connection relationship of the Merkel tree. We define this reward as the Merkel ecological reward, which is obtained as follows:
  ◇ The root layer node obtains the parent layer node 30%/Child layer node 20%/leaf layer node 10%.
  ◇ All parent nodes share 10% of the root node /10% of the same layer node.
**Light node**

In the margin account has 200CPIT, you can apply to expand to a light node. 30% of the deposit will be used for ecological construction awards. 70% of the deposit is free and can be transferred from the margin account for redemption or trading at any time. The light node qualification expires when the margin is partially or completely transferred out.

Source of income:

- The suffix node initializes the sent CPIT: parent layer 5CPIT, and each node in the 7-layer suffix node is 0.5CPIT.

- Block Reward: Light nodes can directly receive rewards for newly created blocks, with 3000 light nodes per shard equaling 17% of newly created block rewards.
  ◊ When the newly created block reward is 4CPIT, the light node gets 1.3056CPIT every 24 hours.
  ◊ When the newly created block reward is 5CPIT, the light node gets 1.6320CPIT every 24 hours.
  ◊ Whenever the CPIT in the stable price pool is reduced by 10%, the reward of the newly created block is automatically increased by CPIT, and the number of block rewards obtained by the light node increases simultaneously.

- Ecological construction rewards: Light nodes receive 5% of the parent node's margin. In all suffix nodes, when the ecological construction award is only received by the interval node by 2%, the remaining 3% can be obtained.

- Merkel Eco-Reward: The agreement increases the eco-construction rewards earned by nodes in the Merkel Basic Tree by 80% and rewards them to other nodes in the base tree. Regardless of which layer the node is in the basic tree, it is possible to obtain the ecological construction reward according to the connection relationship of the Merkel tree. We define this reward as the Merkel ecological reward, which is obtained as follows:
  ◊ The root layer node obtains the parent layer node 30%/Child layer node 20%/leaf layer node 10%.
  ◊ All parent nodes share 10% of the root node /10% of the same layer node.
**main light node**

In the margin account has 1,000CPIT, you can apply to expand to the main light node. The light node can be upgraded to the primary light node after the margin account is supplemented with the CPIT. 30% of the deposit will be used for ecological construction awards. 70% of the deposit is free and can be transferred from the margin account for redemption or trading at any time. When the margin is partially or completely transferred, the primary light node qualification is invalid.

**Source of income:**
- The suffix node initializes the sent CPIT: parent layer 5CPIT, and each node in the 7-layer suffix node is 0.5CPIT.
- Block Reward: The primary light node can directly receive rewards for newly created blocks, with 1000 primary light nodes per shard equaling 33% of newly created block rewards.
  ◇ When the newly created block reward is 4CPIT, the main light node gets 7.6032CPIT every 24 hours.
  ◇ When the newly created block reward is 5CPIT, the main light node gets 9.5040CPIT every 24 hours.
  ◇ Whenever the CPIT in the stable price pool is reduced by 10%, the reward of the newly created block is automatically increased by 1CPIT, and the number of block rewards obtained by the main light node increases simultaneously.
- Ecological construction rewards: The primary light node receives 10% of the parent node's margin. In all suffix nodes, when the ecological construction award is only received by the interval node 2%, the remaining 8% can be obtained. When the ecological construction award is only received by the interval node by 5%, the remaining 5% can be obtained.

![Diagram](image1)

- Merkel Eco-Reward: The agreement increases the eco-construction rewards earned by nodes in the Merkel Basic Tree by 80% and rewards them to other nodes in the base tree. Regardless of which layer the node is in the basic tree, it is possible to obtain the ecological construction reward according to the connection relationship of the Merkel tree. We define this reward as the Merkel ecological reward, which is obtained as follows:
  ◇ The root layer node obtains the parent layer node 30%/Child layer node 20%/leaf layer node 10%.
  ◇ All parent nodes share 10% of the root node /10% of the same layer node.
**Producer node**

In the margin account has 10,000CPIT, and you can apply to expand the Producer node. After the light node or the main light node supplements the CPIT in the margin account, it can be upgraded to the Producer node. 30% of the deposit will be used for ecological construction awards. 70% of the deposit is free and can be transferred from the margin account for redemption or trading at any time. The Producer node qualification expires when the margin is partially or fully transferred.

Source of income:

- The suffix node initializes the sent CPIT: parent layer 5CPIT, and each node in the 7-layer suffix node is 0.5CPIT.
- Block Reward: The Producer node can directly receive rewards for newly created blocks, and the 101 Producer nodes of each shard are equally divided by 40% of the newly created block rewards.
  ◦ When the newly created block reward is 4CPIT, the Producer node gets 91.247525 CPIT every 24 hours.
  ◦ When the newly created block reward is 5CPIT, the Producer node gets 114.05940CPIT every 24 hours.
  ◦ Whenever the CPIT in the stable price pool is reduced by 10%, the reward of the newly created block is automatically increased by 1CPIT, and the number of block rewards obtained by the Producer node increases simultaneously.
- Eco-Building Reward: Get 15% of the parent node's margin. In all suffix nodes, when the ecological construction award is only received by the interval node 2%, the remaining 13% can be obtained. When the ecological construction award is only received by the interval node by 5%, the remaining 10% can be obtained. When the ecological construction award is only received by the interval node by 10%, the remaining 5% can be obtained.

- **Merkel Eco-Reward:** The agreement increases the eco-construction rewards earned by nodes in the Merkel Basic Tree by 80% and rewards them to other nodes in the base tree. Regardless of which layer the node is in the basic tree, it is possible to obtain the ecological construction reward according to the connection relationship of the Merkel tree. We define this reward as the Merkel ecological reward, which is obtained as follows:
  ◦ The root layer node obtains the parent layer node 30%/Child layer node 20%/leaf layer node 10%.
  ◦ All parent nodes share 10% of the root node /10% of the same layer node.
SPECIAL REWARD

Air drop award for agreement expansion
When the CPIT trading price fluctuates by 1%, the protocol will randomly rate the CPIT of n to the node:
Airdrop ratio:
• A 50% airdrop is given to the Producer node, which is equally divided by all Producer nodes.
• 50% airdrop to all nodes, based on the number of CPIT in the Storage Account.
For example, the protocol needs to create 100,000 new CPIT and airdrop. There are 500 Producer nodes in the system. There will be 50,000 CPIT divided into 500 Producer nodes, and each Producer node gets 100 CPIT.
There are also 50,000 CPIT airdrops for all nodes. If the total number of CPIT in the user Storage Account in the side chain is 500,000, the ratio of airdrop is 5/50=10%. when a user's storage account has 10 CPIT. will get 1CPIT of airdrops. When a user's storage account has 100 CPIT, it will get 10 CPIT.

Ecological core reward
• The core of ecological promotion:
Six nodes in the parent layer are initialized, and the total margin of all suffix nodes reaches 100,000 CPIT, Get 1% of all node margins.
• The core of ecological construction:
There are 6 nodes in the parent layer to complete initialization. The total margin of all suffix nodes reaches 500,000 CPIT. At the same time, there are 2 ecological promotion cores in the suffix node, and 1% of the new margin under the ecological promotion core is obtained, and other new margins are obtained 2% reward.
• The core of the ecological community:
There are 6 nodes in the parent layer to complete the initialization. The total margin of all suffix nodes reaches 1 million CPIT. At the same time there are 2 ecological construction cores in the suffix node, and 2% of the new margin under the ecological promotion core is obtained, and 1% of the new margin under the ecological construction core is obtained, and other new margins are obtained 3% reward.

Early entrant offers
Initially, early users only need ETH worth $0.5 to redeem to 1CPIT. As the number of CPIT tradables increases, the ETH value needed to convert 1CPIT gradually increases from $0.5 to $1.0, which allows early entrants to not only benefit from increased CPIT numbers. but also the benefits of CPIT price increases.(Please read the attached table for detailed exchange rate changes)

The margin of early participants will float
For the root node that wants to be the light node /main light node/Producer node, the margin will be reduced by 5% when each parent node completes initialization. The margin can be reduced to 70% at most, that is, after the 6 parent nodes complete the initialization, the 7th node completes the initialization margin and will not float.
Ensure that the down floating proportion of the holding quantity corresponds to the circulation quantity:

When the circulation reaches 0.5 million cpit, the parent layer adds a full node to ensure that the holding quantity will float down to 4%.

When the circulation reaches 1 million cpit, the parent layer adds a full node to ensure the holding quantity will float down to 3%.

When the circulation reaches 2 million cpit, the parent layer adds a full node to ensure that the holding quantity will float down to 2%.

When the circulation reaches 5 million cpit, the parent layer adds a full node to ensure that the holding quantity will float down to 1%.

**Contact information**

If you have any ideas or want to participate in the project, please feel free to send an email to the email address on the first page.

For the latest version of the white paper please visit:

www.cpitoken.io
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