

# WHAT IS WEECOIN?

Weecoin is a cryptographic, peer-to-peer money transferring system based on smart technologies. The price of Weecoin is expected to be almost stable since the production of new coins is managed by intelligent agents. The system distributes new coins based on a novel mechanism of rewarding called **Proof-of-Contribution (POC)**. Despite the network security is provided by miners, the energy consumed for mining is very low. Mining of blocks and confirmation of transactions run in a matter of a second with almost no delays and fees, through a heuristic method named **Self-Group-Supervised (SGS) Consensus Algorithm** which does not allow the network to be dominated by particular miners. Three groups are rewarded in the Weecoin network: Stakeholders, Miners, and Businesses.



## OUTSTANDING FEATURES



### Multi-Functional Wallet

Given that Weecoin is designed to be used widely by the public and businesses, its official wallet is developed in personal and business versions for various platforms, which will offer different services. In addition to basic Send/Receive, users will be able to pay the bills for purchasing goods or services within a matter of a second through their personal wallets. Weecoin is a coffee-problem-free crypto that serves both individuals and businesses by a two-way QR payment facility. Moreover, the official wallet does have a built-in exchange that provides users with Sell and Buy facilities, making them needless of other exchanges, though they could also utilize major exchanges of the market after listing the coin following the project roadmap.



### Coin Management Agent

This autonomous agent (called CMA) generates coins based on actual demands. It receives and aggregates various demand-driven charts in specific timeframes (for example, daily) from the official wallet and exchanges. The agent first normalizes demand graph by eliminating the inflammatory states, and then generates new coins as much as it covers mining costs and actual demand in each timeframe. The minimum number of coins emitted in each timeframe equals to perennial incentive. In fact, agent explores the status of demand trendline in specific timeframes; if demand is greater than perennial incentive, it produces new coins as much as demand; otherwise the number of generated coins will exactly be equivalent to perennial incentive in that timeframe.



### POC Rewarding Mechanism

Weecoin is a people oriented network, and everybody who contributes somewhat to the expansion and survival of the network receives reward. The amount of cooperation reward paid in each timeframe depends on the number of new coins produced in that timeframe. Produced coins are first deducted by the perennial incentive of mining, and the rest is divided among contributors proportionally. There are three groups of contributors: stakeholders (50% of the rest), businesses that use Weecoin as a payment gateway (30% of the rest), and miners (20% of the rest). Reward payment timings (daily, weekly, etc.) will be determined when the network is launched. Yet, it is a variable measure that can change by POC in response to different situations.



### SGS Consensus Algorithm

Each active node hashes the transactions inside the new block (called **weecut**) and creates Merkle tree. Unlike Bitcoin, Weecoin miners are not looking for a specific *nonce* or finding a hash starting with zero(s). Rather, the node, that generates the hash first, broadcasts it immediately throughout the network waiting for approval of other nodes. If 75% of active nodes confirm the hash (that is, they themselves have generated the same hash), a consensus would be committed and thereby all active nodes will add and save the new weecut into their **weechain**. This is a kind of Self-Group Supervised (SGS) consensus heuristic algorithm and Group Decision Making process in which miners monitor each other's results to confirm or to reject.



### %51, %75 Attack Free

Theoretically and practically, the network is 100% secure, and trust is set up fully decentralized and shared. The 51% attack and double-spending on this network are meaningless since the SGS algorithm does not allow miners/pools to abuse the network, even with quantum devices. The 75% attack may happen when someone owns 75% or more of the strongest full nodes and try to capture all mining rewards. This by no means raises a problem in the network and everybody is welcomed to do so. More importantly, may some ones who take 75% of the network power decide at once to turn the entire network down? Our research shows that the probability of this assumption is roughly close to zero, and it is not possible in practice.



### Unlimited Scalability

Weecoin has two phase of scalability. In the first phase, weecuts are mined by SGS algorithm that allows up to  $10^5$  transactions per second (TPS). The minimum and maximum number of transactions in each weecut is  $10^3$  and  $10^5$ , so the size of weecuts varies between 0.5 MB and 50MB. When the system is launched, mining timeslices are selected every 10 seconds. As the number of transactions and network's hash power increase over time, timeslices are reduced by 0.1 every 10 days, so that it will drop to 9.9, 9.8, 9.7, and finally to 1 second after 900 days. Hence, TPS would be  $10^5$  at best in the first phase. In the second phase, some types of sharding will be developed as required, which allow  $10^8$  TPS with quadratic and unlimited TPS with exponential sharding.



### Involvement of Businesses

Attention of businesses to the system is one of the most critical factors effective in public acceptance and everyday use of Weecoin. Thus, those businesses that utilize the Weecoin network as a payment gateway will be rewarded. All the businesses that perform non-fake transactions with Weecoin will always receive 30% of coins produced in each rewarding period, based on the number and amount of transactions they have had. This is a unique feature that happens for the first time in the world of crypto. Moreover, an intelligent agent controls the risk of abusing system by those businesses that wish to get more rewards through performing fake transactions. It is to keep the network safe place for all the users who exploit Weecoin as reliable system.



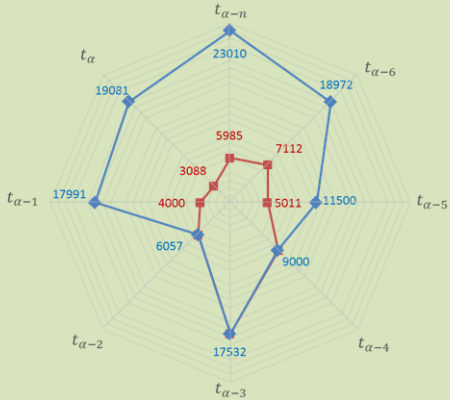
### Stable, not Centrally Fixed

The price of one Weecoin equals to the global average value of grains per kilogram, containing wheat, maize, barley, soybeans, and rice. According to the **International Grains Council (IGC)**, the average price of grains per kilogram is \$0.342 in wholesale and \$0.615 in retail markets. Meanwhile, one Weecoin can be cut to two decimal places for small and cheap purchases. The smallest unit of Weecoin is called Spike, and each Spike is equivalent to 0.01 Weecoin. Based on intelligent production of new coins, Weecoin price is expected to remain stable. What we mean by stable is not to keep the price fixed by a central authority, but it changes in accordance to grains price. **So, Weecoin price will always correlate with one kilogram of grains.**

# COIN EMISSION CURVE

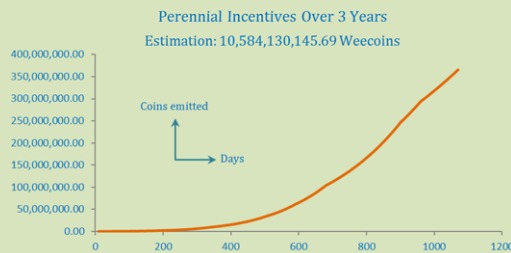
## Coin Generation Scheme

As mentioned, the coin management agent (CMA) produces new coins in response to the perennial incentive (PI) of mining and actual demands in each timeframe ( $t_{\alpha}$ ). A typical output of CMA has shown in the following figure. The blue curve indicates the number of coins produced by CMA in each timeframe, and the red curve shows the amount of PI paid in the same timeframe. If the demand is less than or equals to PI, CMA produces coins only as much as required to cover PI, where the blue curve has met the red one (i.e.  $t_{\alpha-2}$ ,  $t_{\alpha-3}$  and  $t_{\alpha-4}$ ). Otherwise, the blue curve surrounds the red one (i.e.  $t_{\alpha}$ ,  $t_{\alpha-1}$ ,  $t_{\alpha-5}$ ,  $t_{\alpha-6}$  and  $t_{\alpha-n}$ ), where CMA generates extra coins in response to both PI and positive demands.



## Prediction of Perennial Incentive

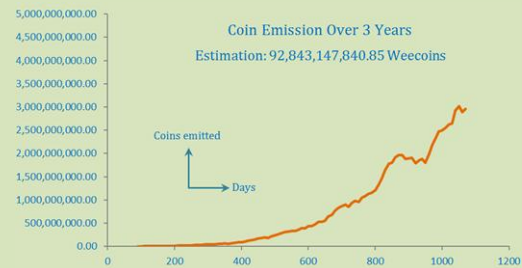
To have an estimation of how many coins will be emitted in the future, we must first calculate the perennial incentive of miners. To perform this, it is necessary to presume some assumptions (refer to the full version of [whitepaper](#)). Suppose we have 7,500 timeslices in the first, for example, 10-day rewarding timeframe, that have resulted in building new weecuts. To simplify calculation, we assume other factors constant in all timeslices. Thus, the amount of total PI for the first rewarding timeframe ( $PI_1$ ) would be 230,250 Weecoins. In other words, the average of 230,250 coins will be emitted during the first 10 days of the network launch, in compensation to miners' expenditure. Figure below shows the prediction of coin emission for PI over the next three years after launching the system.



## Coin Emission Curve

Based on Weecoin's unique features, it is expected that more than \$45 billion will be spent on circulation and use by end of 3 years after launch. This argument mainly relies on price stability and multi-aspects profitability of Weecoin that entails all groups of people and businesses around the globe. The following graph shows the prediction of total coin emission over the next three years after launching the system.

What Weecoin is essentially pursuing is to attract all individual and business entities around the world to exploit the network for their daily financial activities. Tempting rewards along with robust technical features provided by Weecoin will definitely go towards the rapid expansion and usage of the network among people.

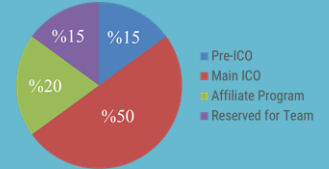


Weecoin Price: \$0.615    Initial Coins: 188,000,000    Soft Cap: \$10,880,000    Hard Cap: \$46,070,000    Pre-ICO Coins: 28,200,000    ICO Coins: 94,000,000    Discount: 20% to 70%

## Project Development Costs

Evidently, such a technical project needs a considerable amount of budget, including human resource compensation, mining equipment, workplace, and advertising. These are in addition to business-to-business (B2B) marketing expenditure as Weecoin aims to encourage businesses to be involved with the network. Consider also the cost required for listing Weecoin on major exchanges of the market, plus the overhead cost derived from all the mentioned spending. The minimum and maximum budget required for development and expansion of the network is \$10,880,000 (i.e. soft cap) and \$46,070,000 (i.e. hard cap), respectively. It has been targeted to acquire needed budget through a coin distribution process.

## Coin Distribution Chart



# RESEARCH PARTNERS

As Weecoin is an academic-based project, a group of researchers, from the following universities, are currently making contributions to the project.



## ROADMAP

