

WHITE PAPER

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# **Pantao, Nectar, Ambrosia, Manna, Soma and Amrita**

## **– Concept of A Super Token –**

### **Situation**

Blockchain based tokens offer a broad variety of solutions to many economical, political and social challenges. These so called cryptotokens can be used in many forms and for countless purposes.

The first cryptotoken to attract the attention of the common audience has been Bitcoin. The name Bitcoin implies that Bitcoin should be considered to be a means of payment. Therefore, many people refer to Bitcoin as a cryptocurrency. Soon after Bitcoin gained some degree of popularity many other cryptocurrencies entered the market. Except for Litecoin, most of those so called altcoins did not bring up substantial improvements.

The next major evolutionary step came with Ethereum. Ethereum has been designed to store arbitrary code in a public, decentralized ledger. Now everybody can build their own cryptotokens that can represent a contract, a currency, a share of stock, a voting right, a membership or anything that can be reflected by a written agreement or a set of instructions – even a company, country or state.

### **Problems**

It seems to be a law of nature that all novelties, even if they are obvious improvements, replace the existing not abruptly but in a time consuming gradual process. As of the time of writing, there are two major aspects that obstruct the propagation of cryptotokens.

First, even though a lot of effort has been done to get rid of the quiriness and nerdy appearance of cryptocurrencies, the majority of consumers is overstrained by the pace of development and the amount of changes this new technology comes up with.

Second, due to the relatively small capitalization of cryptocurrencies and the comparatively small number of market participants, the exchange rate volatility is remarkable. Speculation oriented traders take their chances. Risk averse people stay away from cryptotokens even though their decision might not be a rational one.

### **Objectives**

The creation of a supercoin, as described in this white paper, does not intend to substitute the existing tokens or coins. Its main purpose is to make it easier for the less technical affine to adopt cryptotokens.

This shall be accomplished mainly by

- using generally accepted technologies and tools
- taking out the risky and speculative elements
- implementing fixed trade margins
- keeping investment chances
- putting in a value growth guarantee
- being based on crypto and fiat tokens
- allowing offline real world trades
- giving the same earning potential to late comers as well as to early adopters yet rewarding early adopters

### **Simple usage**

*using generally accepted technologies and tools*

The Pantao super coin is a cryptotoken based on the Ethereum network. It can be traded with any software that is suitable to deal with Ethereum tokens.

Applications like the MetaMask browser extension make it easy and convenient for the average internet user to trade tokens against goods and services. There is only little technical knowledge required to pay with peer-to-peer tokens.

### **Minimum value at any given time**

*taking out the risky and speculative elements*

Paying with cryptocurrencies on a pure peer-to-peer basis goes along with the risk of fluctuating exchange rates. As long as shop owners have to pay their suppliers and taxes in fiat currencies, they need to use the services of specialized 3<sup>rd</sup> party exchange companies.

Risk averse consumers don't want to be invested in cryptocurrencies, that sometimes lose 10 or more percent within minutes.

The supertoken system we introduce assigns a minimum exchange rate (or virtual intrinsic value) for any given past, present and future time.

I.e. there is a factor in price calculation that is linked to a timestamp. In other words, the token's minimum value (in terms of "price") rises from time unit to time unit at a fixed rate.

The time unit is arbitrary. For reasons of practicability, we chose a 1-minute-interval. At every full minute (MSG: Minutes Since Genesis) the Virtual Intrinsic Value (VIV) of the token rises by a set rate VIG (virtual intrinsic growth), resulting in the factor

$$\left(1 + \frac{VIG[\%]}{100}\right)^{MSG[\text{minutes}]}$$

Say, VIG is set to 0.0001 percent. Then VIV rises within one month (43,200 minutes) by

$$\left(1 + \frac{0.0001}{100}\right)^{43200} = 1,0441$$

That means, in this example, the token gains 4.41 percent in value every month compared to its base value (Token Base Value TBV).

VIG is fixed with the creation of the coin. Later on we will see that is useless – or even contraproductive – to be greedy and set this value to an unrealistically high value. VIG should be selected carefully in order to keep the token alive for a long time!

We could create a token (called XYZ-Token) based on XYZ-Coin. At the time of token creation (Genesis Time) 1 XYZ-Token is worth 1 XYZ-Coin. If VIG is set to 0.0001 percent, then after one month 1 XYZ-Token buys 1.0441 XYZ-Coins.

There is still a lot of speculation in it. If during this month XYZ-Coins drops by 10% regarding its price in Dollars, then the owner of the XYZ-Token loses 6.03% (in Dollars). This is less than the original 10 percent, but it is still a loss.

On the other hand, if XYZ-Coin gains 10%, then the XYZ-Token owner wins 14.85% instead of 10%.

By the way, the above formula makes this not only true for the first month but for every month!

Not everybody is a cryptocurrency enthusiast who doesn't lose nerves when the coin's price drops. So why not tie a token to a fiat currency like US-Dollar or Euro. That's not a new idea. But why – except for being able to pay peer-to-peer online – do you need a token, if it represents exactly 1 Dollar or 1 Euro?

In the real world you can still pay very conveniently with metal coins and banknotes. Cryptocoins have only few advantages in real world deals.

Imagine your banknotes would be worth the more the longer you don't spend them. This is called deflation. Everybody would try to consume as little as possible. Economy would slow down dangerously.

A token that represents a fiat currency and has a VIG Virtual Intrinsic Growth must have a second built in price factor. This price factor must be fine tuned with the VIG rate. That is why it is very important not to set the VIG to a greedily high rate!

## **Trading incentives**

### *implementing fixed trade margins*

In a world where people are forced to pay invoices and taxes with fiat currencies there must be a strong incentive – besides speculation – to give away metal coins and paper notes.

The seller of a cryptotoken must see a benefit to give away their tokens for fiat money. Up to now the main incentive has been expecting rising or dropping exchange rates. This kind of speculation always leads to frustration on one or the other side.

The implementation of a logarithmic fixed trade margin solves the problem of a deflationary coin or token, and it satisfies the seller as well as the buyer.

In addition to the VIG factor as explained above, a second factor has to be included in the price calculation. Whenever someone buys any amount of tokens they must be able to sell a smaller amount at a higher price. For example, Alice buys 1000

tokens for, say, 10 Dollars each. Then she must be able to sell 100 tokens for, say, 11 Dollars each (plus 10%) to Bob. Bob then sells 10 tokens for 12.10 Dollars (plus 10%) to Charlie. Charlie sells 1 token to Debbie for 13.31.

None of them has to wait for the exchange rate to rise. Each of them can take profit by trading their coins/tokens (for goods, services or fiat currency). That margin has to be greater than the built in rise of the VIV Virtual Intrinsic Value within the time between buying and selling. It doesn't matter how many tokens one accepts, everybody can take profit either by trading their tokens or by keeping them – regardless of any speculation on rising or falling exchange rates.

The fine tuning can be done by adjusting the Discount Rate (DR) and the logarithmic base b where n is the number of tokens:

$$\left(1 - \frac{DR[\%]}{100}\right)^{\log b(n)}$$

If, for example, DR is set to 10 percent and b is 10 (which is ideal for real world applications), then the buyer of the tokens gets a 10 percent discount on buying 10 tokens and a 19 percent discount on buying 100 tokens. The effect is that someone who accepts 1000 tokens will realize an immediate 10% profit when spending (trading/selling) ten times 100 tokens. The persons who accept 100 tokens can also realize 10% profit if they spend 10 times 10 tokens. And so on: Those who take 10 tokens profit by spending 10 times 1 token.

Is this kind of a pyramid scheme? No!

Even if a person accepts a coin/token without spending it quickly, it will soon be worth more. Read the above chapter about VIG. If VIG is set to 0.0001 percent, after two months and a few days the token's value has risen by 10 percent. That means, that both kind of users will be rewarded. The ones who spend their tokens quickly get an immediate reward of 10 percent. The ones who keep their tokens have to wait for a few weeks. It pays to opt for tokens instead of staying invested in fiat money.

Those users who prefer cryptocurrencies to fiat currencies choose a token with a cryptocurrency TBV Token Base Value. The VIV Virtual Intrinsic Value (the regular price) is calculated by this formula:

$$price[TBV] = \left(1 + \frac{VIG[\%]}{100}\right)^{MSG[\text{minutes}]} * \left(1 - \frac{DR[\%]}{100}\right)^{\log b(n)} * TBV$$

**No rigid coding**

*keeping investment chances*

Now that we know the regular price at any given moment it is trivial to create a smart contract which automatically calculates the exchange rate and allows only trades at the exact and correct exchange rate.

For general considerations, we refrain from such rigid coding. Though all initial token supply should be done exactly to the price that is given by the above formula, all market participants must be able to give away their property for free or to any bargained price, be it below or above the regular price. It is a fundamental right to be generous!

**The exponential showdown**

The downside of such obvious benefits becomes visible after some time – if no appropriate measures are taken at the time of token creation.

All TBVs Token Basic Values have a limited supply:

No more than 21 million Bitcoins can be mined. The theoretical maximum amount of Bitcoins is about 2,099,994,997,690,000 Satoshi ( $\sim 2 \cdot 10^{15}$ ).

From January 2009 (Bitcoin Genesis Block Time) to January 2017 the Euro money stock M1 grew from 4,100 bn to 7,200 bn. This is an average annual increase of about 7 percent. The bitcoin supply in the upcoming eight years will grow at an average annual rate of about 3 percent. In the years between 2025 and 2033 the bitcoin supply growth rate will decrease to an average slightly above 0.5 percent.

Other than with bitcoin, whose development can be reliably calculated in advance, fiat currencies might be inflated or deflated at the whim of central reserve banks. Since fiat currencies are highly speculative in this respect, even moderate VIG rates may lead to irrational results – though history teaches that this is unlikely to happen.

Due to the fact that the bitcoin supply is limited by design, any constant VIG Virtual Intrinsic Growth will outrun the Bitcoin TBV Token Base Value sooner or later. One might think that for tokens with limited supply (like Bitcoin and all Bitcoin clones) a deceleration factor should be introduced. But this would destroy the reliable and desired growth effect. The different approach we chose does without such a limiting deceleration factor. Whenever a

token represents more value than is supplied by the Base Token (a cryptocurrency, a fiat currency, a real world share of stock or any smart contract), it undocks from its Base Value and further on exists as an independent value. If at that time there should be a demand for a similar token, a new one can be deployed. Before that time, deploying an additional token based on the same TBV is as useless as almost every bitcoin copycat altcoin is. Sensible market participants are well advised to cling to the genuine token instead of splitting forces.

Supertokens can live forever – even longer than the base currency exists – provided the VIG is set to a reasonable value.

### **The correct initial supply**

Initializing the logically correct supply of tokens is so counter intuitive that it might lead to many futile discussions – probably held in a pseudo-religiously apologetic manner.

The amount of initial tokens should not be changed later on, even if the tokens represent a coin that is still in the mining phase! Any amount of initial supply reflects a distortion of intrinsic value to some degree (which prefers early adopters). The quicker the token is expected to propagate the higher the initial supply should be. For tokens representing un-premined crypto coins the initial supply should be roughly half of the targeted amount. For the Bitcoin related token the initial supply, therefore, should be 10,500,000 tokens. For reasons of practicability, the token can be based on mBTC (1/1000 BTC). Consequently, the initial supply must be 10,500,000,000 tokens. A Litecoin representing token based on dLTC (1/10 LTC) should have an initial supply of 420,000,000.

Fiat currencies are less stringent, in terms of predictability. Due to their extremely high potential of value decrease (7% p.a. and more), 1/1000 M1 leads to an outrun in about 100 years – provided a constant inflation rate. An initial supply of 1/1000 M1 is a very strong incentive to engage in supertokens rather than in fiat money. As cryptotokens replace fiat currencies more and more, the loss of fiat value will accelerate dramatically. The initial supply of the Euro based token should be 7,200,000,000.

Though it is not exactly correct, the calculation for the USD based token should follow the same rule. The differences can be tolerated; they are small enough to be ironed out quickly due to exponential effects.

The initial supply of an Ether based supertoken is much harder to determine. A thorough examination shows that 5,000,000,000 tokens (cETH: 1/100 ETH) should be sufficiently close to the perfect initial supply value.

Too greedy initial supplies lead to an immediate undock of the super super token!

### **TBV selection**

At the time being, we suggest to set up five tokens and one super token. We call them Ambrosia, Amrita, Manna, Nectar and Soma. The super token is named Pantao. About the meaning of the names please read below.

Even though they are deployed a few days earlier, we put the tokens on market on 18 October 2017 18:15 (unix minute 25139055), exactly three – two – one – zero days after the Bitcoin Genesis Block.

All coins are value neutral at the time of their creation. As explained above, this means that all acquirers, including the creators and future users have exactly the same earning potential!

Explaining the reasons for selecting these values goes beyond the scope of this white paper:

Token	TBV	initial supply (x base)	VIG	DR	b	base
Ambrosia	cETH	5,000,000,000	0.000146	6.5	10	1,000,000
Amrita	dLTC	420,000,000	0.000156	7.0	10	1,000,000
Manna	EUR	7,200,000,000	0.000206	9.3	10	1,000,000
Nectar	mBTC	10,500,000,000	0.000139	6.2	10	1,000,000
Soma	USD	1,800,000,000	0.000256	11.7	10	1,000,000
Pantao	mix	4,300,000,000		8.7		



1 Pantao token represents

0.105	Nectar
0.167	Ambrosia
0.211	Amrita
0.245	Soma
0.272	Manna

This allows for reliable payment and price calculation on one hand and creating different kind of financial instruments on the other hand.

Even users who want to concentrate on – you may call it old fashioned or outdated – real world offline transactions alone can do any transaction based on one or the other token. Conservative get-and-forget investors can simply store fiat based tokens (Manna and Soma) in paper wallets and know their value for any given future date.

These tokens can be safely mortgaged or used for repayment plans.

Novelty oriented users engage in crypto based tokens (Ambrosia, Amrita and Nectar).

Those who want the best of both worlds invest in Pantao.

### **Naming**

**Pántáo** is the pinyin word for the Chinese mythological Peaches of Immortality. Pántáo is consumed by the immortals due to their mystic virtue of conferring longevity on all who eat them.

In the ancient Greek myths, **ambrosia** is sometimes the food or drink of the Greek gods, often depicted as conferring longevity or immortality upon whoever consumed it.

**Nectar** is derived from Greek “nektar”, the favored drink of the gods.

**Manna** is an edible substance which, according to the Bible and the Quran God provided for the Israelites during their travels in the desert during the forty-year period following the Exodus and prior to the conquest of Canaan.

According to the ancient Indian Rigveda scripture, drinking **soma** and **amrita** produces immortality.

And, as you may already know: **FORETHER** is forever :-)

AMB            Ambrosia forether.net cETH base  
                  0xC481718E7d515BAE6f58227f19616b9220ff5368

AMR            Amrita forether.net dLTC based  
                  0x53918C93f41A6962Af196a0C6d06728FA7e084Fe

MNA            Manna forether.net EUR based  
                  0x548d498a866A06D8215ed86b68F3e0E8A32F93dE

NCT            Nectar forether.net mBTC based  
                  0x1Ba8151A02228e9d058890104B5002b6070882f8

SMA            Soma forether.net USD based  
                  0xb67B6A4290E1b281cEdD75E48F0195F6A29fA652

PNT            Pantao forether.net  
                  0x68d10E0e9D922999d7CB1dB59a5E55051977B6E0

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