GeoDB

A Decentralized Big Data Sharing Ecosystem

GeoDB Coin ($GEO) - Token Bonding Curve Offering

Motivational & Implementation Paper

1.- Introduction

Three years ago we started building GeoDB, a blockchain-based ecosystem with a unique vision: Improving the current Big Data industry while solving great inefficiencies of a growing market, on top of which the next wave of worldwide innovation will be based on.

It is our mission to engineer a decentralized architecture that will allow peer-to-peer, trusted, efficient, fast, open and transparent data transactions between market participants. And at the same time allowing users to regain many of the data rights that were lost along the way of the digital revolution. Ownership, privacy, and value should have never been taken away from users themselves.

Over these three years our mission has remained unshakeable, but we've learnt a lot during our development process. Those learnings have become challenges that the team is constantly tackling to solve.

GeoDB is a project that depends on massive adoption for its success. In order to encapsulate large amounts of user-generated data for such datasets to have value, the number of users acquired must be massive. And for this to happen we must ultimately generate organic market demand.

As you all know, our network token, the GeoDB Coin ($GEO ERC-777) is the tool used for both rewarding users for their generated data and as payment to acquire data sets from the ecosystem. Therefore, the $GEO token is an asset that represents data value in the form of a tradable virtual asset.

Bearing the above in mind, protecting the value of the reward unit (GeoDB token - $GEO) during the initial stages of the network launch is of paramount importance.

Even though a strong offer (data capturing) is highly probable due to the reward system (our first data-capturing platform is already showing high organic growth with more than 40,000 active wallets worldwide which means people are willing to share data in exchange for a known alternative asset), time will be needed in order for the "data lake" to mature and be deep enough to rally buyer's attention. Thus robustness must be built through a) Data distribution, b) Quality of data captured.

Having said this, and based on current platform metrics, we expect a wide and fast distribution of rewarded $GEOs from moment one of our mainnet launch. This brings further challenges to our model: How to

protect our reward unit ($GEO) against speculation and an ever growing number of circulating tokens due to our ongoing incentive mechanism.

Additionally, we know that a system whereby holding $GEO tokens vs dumping them in the market must be designed. So, how is it possible to provide additional value layers for $GEO token holders that will achieve the following goals?

a) Incentivize long term $GEO holding.
b) Reduce of $GEO circulating supply.
c) Increase of return paths for $GEO holders in addition to price appreciation.
d) Foster $GEO trading liquidity.
e) Improve $GEO accessibility.
f) Provide long term stable $GEO price appreciation.

The present crypto market is currently seeing the blossoming of **De**centralised **Fi**nance (**DeFi**). A global and open alternative to every financial service today — savings, loans, trading, insurance and more — accessible to anyone in the world with a smartphone and internet connection.

DeFi is redefining the current financial establishment and is creating countless opportunities for Blockchain/Token based projects. DeFi offers us the opportunity to enhance the value proposition for $GEO token holders within the boundaries of current financial decentralised architecture.

We are developing a DeFi mission and strategy into GeoDB's scheme that will allow us to:

1) Provide decentralised liquidity for $GEO tokens.
2) Mitigate $GEO token financial risks.
3) Build a set of tools to incentivize holding vs dumping.
4) Create a tradable financial decentralized standard on top of the user's data value.

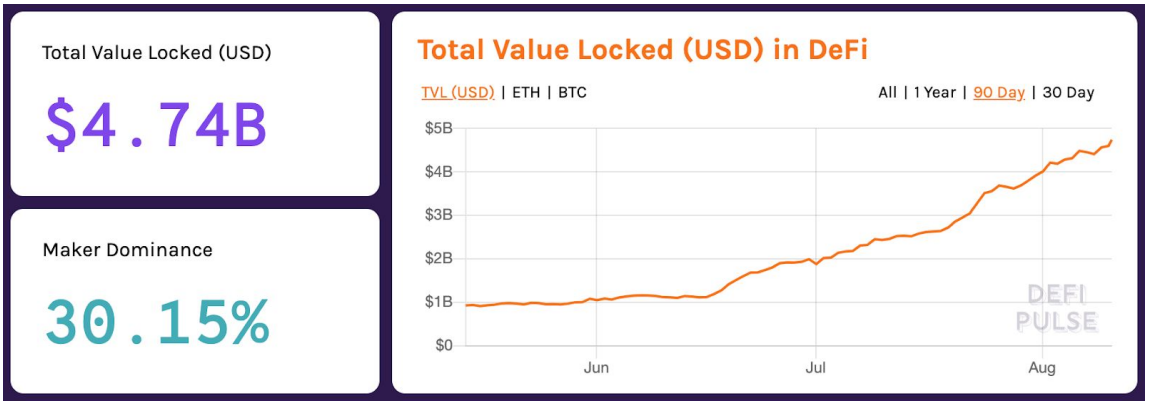
This paper gathers the goals and the implementation of the first phase of GeoDB's DeFi strategy which will start by means of a Bonding Curve Token Offering with which we will be funding our long term additional Defi tools and actions.

2.- Goals & Challenges

Recent reports show that the decentralized finance ecosystem has hit a new milestone with over $4.6 billion locked[1]. The value continues to increase day after day. While the DeFi ecosystem boasted massive growth last year, 2020 has already dwarfed 2019 in comparison. Interestingly, of the $3.9 billion growth this year, $3.5 billion came only from the last two months.

Furthermore, Maker & Compound, both decentralized finance applications, maintain its stronghold as the largest DeFi applications by value locked with more +$1.3 billion and $800 million locked assets respectively.

[1] All values referring to DeFi markets are obtained from https://defipulse.com on august 10th



DEFI PULSE	Name	Chain	Category	Locked (USD) ▼	1 Day %
1.	Maker	Ethereum	Lending	$1.43B	6.83%
2.	Compound	Ethereum	Lending	$837.3M	2.61%
3.	Synthetix	Ethereum	Derivatives	$666.5M	7.64%
4.	Aave	Ethereum	Lending	$547.2M	-6.30%
5.	InstaDApp	Ethereum	Lending	$315.3M	0.46%

Information obtained from https://defipulse.com on august 10th

Observing this early industry trend, it seems obvious that GeoDB can take advantage of the numerous opportunities that the space is now offering, by leveraging on already existing DeFi tools which are starting to be used by a large number of projects.

As we mentioned before, we will insert a DeFi mission and strategy into GeoDB's scheme so that it allows us to reach the following goals:

1) Provide decentralised liquidity for $GEO tokens

Crypto trading has, in the past, taken place mainly through **C**entralized **Ex**changes (**CEX**s), which use traditional order books and order matching systems for price discovery and trade execution. CEXs, in the way in which they are centralised, control private keys to those assets "sitting" in a trader's account, thus providing a bottleneck in the form of deciding which tokens can be traded in their platforms.

The ethos of the decentralised movement is based on foundational pillars in the form of open source, permissionless, and immutable non-custodial networks.

In order for the above to be achieved, it is of paramount importance to redirect the flurry of activity that at present takes place through CEXs to **D**ecentralised **Ex**changes (**DEX**s), which function through market making algorithms. Liquidity from external agents must be provided to those DEXs,

and this has taken the form of liquidity pools that provide **A**utomatic **M**arket **M**aking (**AMM**) capital in a decentralised non-custodial fashion.

We believe in a future redistribution of trading activity from CEXs to DEXs, and thus we take it as our responsibility to create the necessary systems and mechanisms to provide decentralised liquidity to the $GEO token in the form of fostering the creation and capital allocation to $GEO liquidity pools.

2) Build token risk mitigation

When a wallet/user holds $GEO tokens, its risk/exposure is 100% invested in the success of the $GEO network. It is in every token holder's interest to factor stability or financial risk-mitigating inputs into the equation, which should come in the way of having the $GEO token provide a stability in the form of a basket of assets through a mixed exposure to both $GEOs and stable coins, and thus reducing overall volatility and inherently strengthening its value proposition.

3) Build a set of tools to incentivize holding vs dumping

One basic way to mitigate volatility is to provide incentive mechanisms for long term token holding versus selling them in the short term. Such incentives must be incorporated to the token economic schemes and structures that supersede $GEO token's primeval reward mechanism, and must take into account and put to work all tools now available through the use of DeFi protocols and hyper-liquidity provision whilst reducing systemic risk stacking.

4) Create a tradable financial decentralized standard on top of the user's data value.

Bringing together the provision of decentralized liquidity, long term holding incentive systems, and diversifying risk through exposure to stable coins beyond GEO, will provide a context in which token holders will have additional options to holding GEOs and waiting for their market value to appreciate whilst strengthening liquidity and organic price discovery.

Bearing the above in mind, the execution of GeoDB's DeFi strategy, will allow tokens to evolve from a pure data value encapsulating mechanism to a financially robust decentralised-driven asset that provides value to its holders and generators, including relatively stable returns and strengthened value appreciation over the long term.

3.- Implementation Phases

GeoDB is designing its DeFi structure in two phases;

1.- A first phase whereby early stage capital formation and liquidity bootstrapping are achieved through an open sale of $GEOs, of which 50% of the proceeds will be destined for GeoDB development, and the rest to fund the development of GeoDB's full DeFi strategy. In the first instance, 25% of the overall proceeds will be destined to seeding a Uniswap liquidity pool to provide decentralised liquidity for $GEO tokens and token holders besides traditional CEXs.

For the token sale allocation process details please visit Section 5.

2.- A second phase where token holders are incentivised to hold GEOs in the long term. This will be achieved via generation of yields derived from operating in the DeFi market in all its extension (most probably a mix of staking, liquidity provision, liquidity bootstrapping, yield farming, etc) and enhancing GEOs crypto economics and rewards system. The remaining 25% of proceeds from the DeFi portion of the offer will be used to seed the full DeFi strategy (complementary to the liquidity pool, which shall be announced prior to the mainnet launch in November.

4.- Technical Approach

Blockchain or DLTs (we will use both terms interchangeably, being **DLT** an acronym for **D**ecentralized **L**edger **T**echnologies) are possibly one of the most elegant technical proposals conceived by mankind to solve an inherently complex problem.

These technologies are based on an absurdly simple idea, to make several entities keep a copy of all the information in a network. Although at first it may seem that this does not provide great added value, we quickly realize that this allows us to provide solutions that expose unique features such as the immutability of information, transparency in operation or the removal of centralized elements in governance.

But we must not fall into the error of confusing the basis of the technology with the technology itself, because even though the basis is simple, having this common copy of information among the participants, while ensuring their correct behaviour, is a highly complex and exciting technological challenge.

DLTs combine distributed computing techniques with cryptography concepts and game theory ideas, where proposals are materialized in concise solutions that are the result of a deep analysis in which the aforementioned elegance lies.

For this reason, when analysing any proposal in this field, it is advisable to reflect on both what one wants to do and how one wants to do it. In this section, we will try to offer a guide to the reader that will help him/her to make this reflection in our case.

We will start with the first element, our token, the $GEO. The $GEO is an ERC-777[2] utility token that is backward compatible with the ERC-20[3] standard. What does this mean? That it brings together the best of both standards, with additional features over the ERC-20 standard that make it safer and easier to use and can be seamlessly integrated into any solution developed for the ERC-20 standard.

Most DeFi solutions are being deployed on the Ethereum network and, in order to make them compatible with as many existing tokens as possible, almost all are focused on the use of ERC-20 tokens, which makes the range of solutions we can use in our proposals, either through integration or adaptation, extremely wide. Even more importantly, the availability to use multiple solutions will make our proposals much safer, an extremely critical element to consider as our technical analysis progresses.

[2] https://eips.ethereum.org/EIPS/eip-777
[3] https://eips.ethereum.org/EIPS/eip-20

DLT solutions are robust, and huge amounts of money move around them. Users, often lured by siren calls of cryptography and its virtues, sometimes get carried away by the general enthusiasm around a given proposal. In general, a DLT solution is much more robust than a non-DLT one, but it is not always so, and a poorly designed solution can lead to catastrophic and irreversible consequences. That is why we must try to advance on the shoulders of giants and try to use, whenever possible, those solutions that have been analyzed and audited by third parties.

As users of DLT solutions, we have the enormous advantage of transparency, whereby everything is reflected, immutably, in the public domain. This allows the community to quickly become aware of flaws and propose new solutions that solve and/or mitigate them, the ecosystem security growing increasingly safer as time goes on. And yes, DeFi protocols, even in their initial stages, have already been exposed to different problems that the community has been able to face and solve, from which safer and more resilient solutions have emerged. To be up to date with potential problems we refer the reader to the following link https://defirate.com/hacks/.

We talk openly about this because we believe that the most intelligent approach to building a secure solution is to put special emphasis on potential attack vectors, avoiding the incorporation of any element that does not offer full guarantees to its users. Therefore, as a rule of internal self-regulation, in the most critical and sensitive elements, we ensure that we only use tools that have been audited and previously tested in other projects.

Starting from a set of audited tools and using our ERC-777 token backward compatible with the ERC-20 standard, let's take the first step that will allow us to advance in the proposal of our DeFi strategy, the deployment of a bonding curve smart contract in Ethereum that allows for the distribution of $GEOs.

A bonding curve smart contact is simply a smart contract for the distribution of a certain crypto token, which is acquired by exchanging a required counterpart at a fixed cost given a predefined curve. Thus, by establishing a bonding curve smart contract in which the $GEO is the main crypto token and ETH is the required counterpart, anyone can exchange ETH for GEOs.

At the time of deploying a smart contract of this type, the developer is free to provide it with as many characteristics as he/she wishes, from the shape of the curve that will determine the cost of each token, the nature of the accepted counterpart, initial and/or final prices, quantity of tokens available for distribution, minimum or maximum quantity of tokens to be acquired in a specific transaction, and many other aspects.

We will now review the decisions that have been made by our team in order to deploy our bonding curve smart contract which, for the sake of brevity, we will refer to hereafter as the bonding contract.

a.- General approach

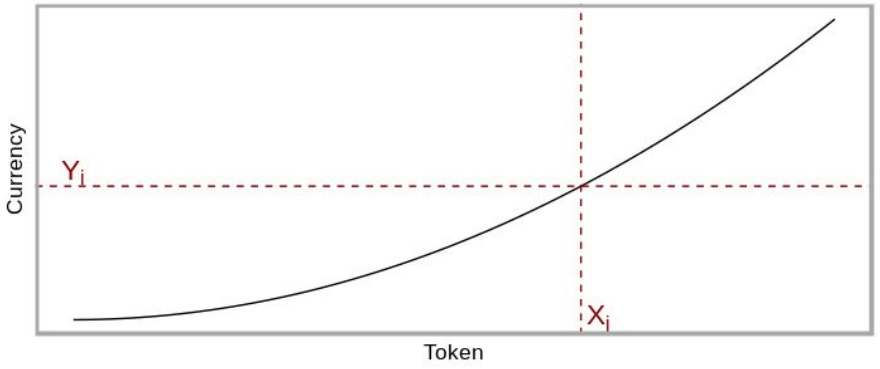
In the previous lines, strong emphasis has been placed on the need to provide a solution that is as safe and resilient as possible, and this begins with a strong self-restraint in our proposal. The fewer features supported, the less risk there is of an attack vector surfacing. Following a lean approach, we focus on the minimum proposal that allows us to do the above in an extremely secure way.

In addition, with our distribution offer we seek to capture the general behavior of investors in such a process, as well as grant a discount to those who participate at an early stage in order to have a fast, dynamic and equitable distribution. The curve used in the bonding contract will be modeled to maximize this behavior.

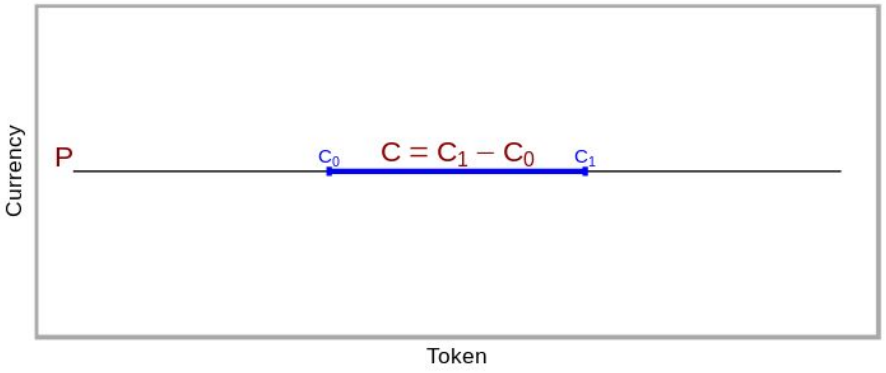
b.- Shape of the curve

The shape of the curve determines the cost of each individual token that is exchanged as the distribution progresses.

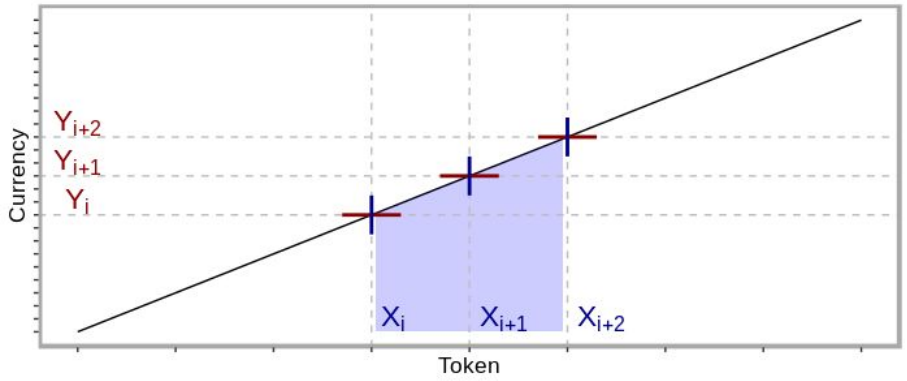
If we look at the X and Y axes of the following graph, Y_i represents the amount of currency Y to be sent to the contract to acquire the X_j token.



The most trivial bonding curve is one that is modeled by a constant function in which all tokens have the same price, P, and the acquisition of a quantity, C, of tokens is computed simply by the product P*C.



A typical way to model a bonding curve is by means of a increasing linear function, in which each new distributed token will always require a larger counterpart than the previous one, being this increment equal to a fixed value, that is, being X_i, X_{i+1} and X_{i+2}, three consecutive tokens to be distributed and Y_i, Y_{i+1} and Y_{i+2} the three corresponding counterparts, it is fulfilled that, (S_A) $Y_{i+2}>Y_{i+1}>Y_i$ and that (S_B) $Y_{i+2}-Y_{i+1}=Y_{i+1}-Y_i$ for all i in the domain $[0, T-2]$, being T the number of tokens to be distributed.

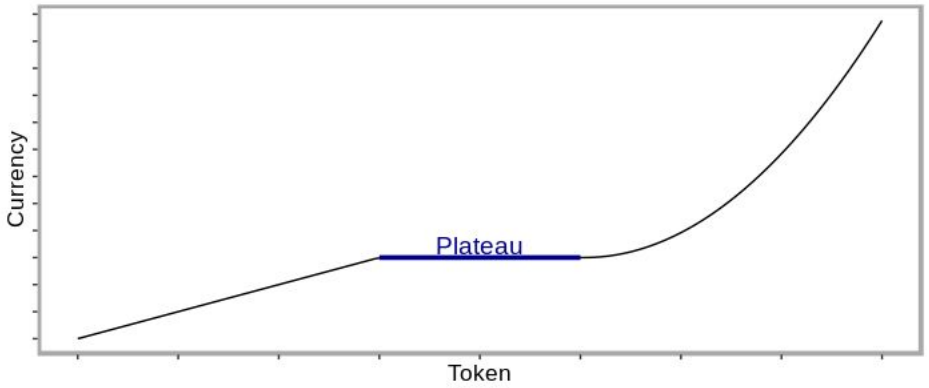


Although in this case it would be possible to manually define a simple formula to compute the cost of an amount of tokens, in those cases where the function is not constant it is usual to model the cost by integrating the bonding curve in order to compute the area contained under it. Ultimately, it will be the computational complexity required to calculate this value, that will lead us to define the cost computing function, since the amount of gas that the user will have to use to operate with the bonding contract will depend on this complexity.

When we previously introduced increasing linear functions, we have noted the statements in the mathematical formulation by S_A and S_B.

S_A determines curve increment, that is, that each token requires a larger counterpart than the previous one. When talking about increase we must differentiate in turn between increasing functions and strictly increasing functions. In a strictly increasing function, each token will require a larger counterpart than the previous one (as in S_A), while if a token could require a counterpart equal to the previous one (although it could never require a lower counterpart), the formula being slightly different (S_A') $Y_{i+2} \geqslant Y_{i+1} \geqslant Y_i$.

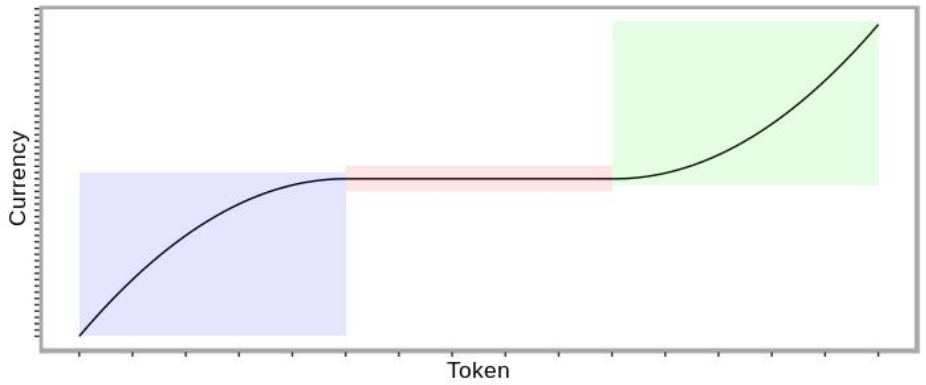
On a practical level, the difference between a strictly increasing curve, S_A, and an increasing curve, S_A', is that the latter may have plateaus, which, leading to the distribution of tokens, may be desirable (in case we want to encourage a specific behaviour).



S_B is the statement that determines that the increase is constant, and it is easy to deduce that it can only be fulfilled if the curve is strictly increasing (S_A).

Focusing on our specific case, we have explained that we want to encourage a certain general behavior of investors, as well as provide a discount to early participants. Translated into a specific curve shape, we

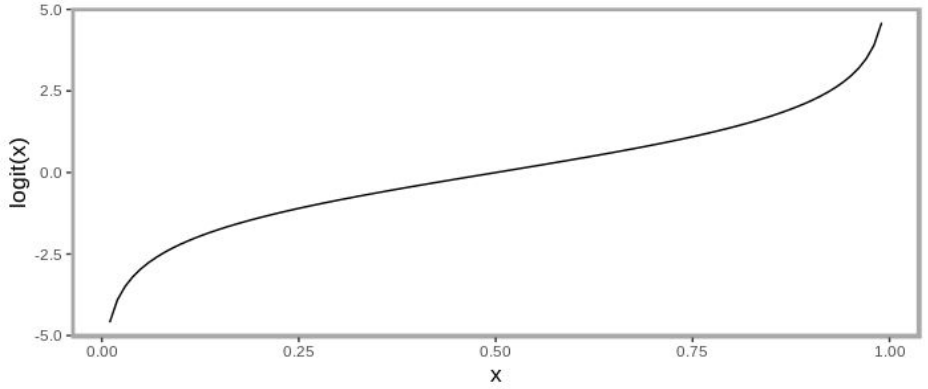
speak of an increasing function ($S_{A'}$) with an initial logarithmic behavior, a central plateau and a final exponential behavior.



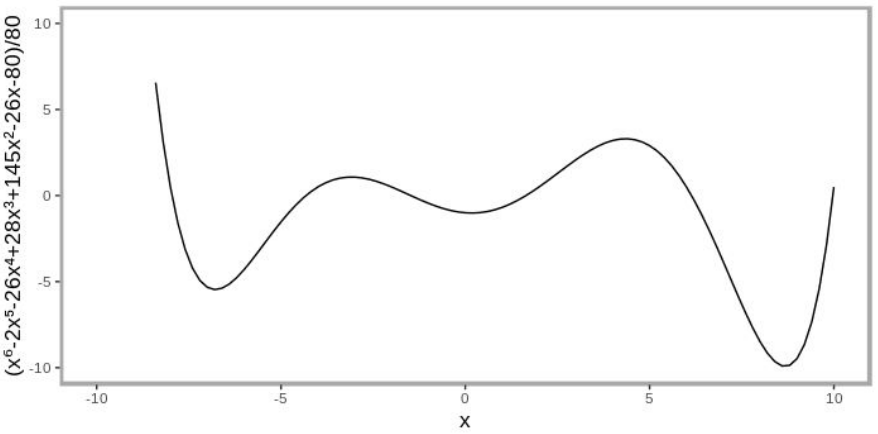
Although the above would be easy to model using a piecewise function, we must consider that the use of this kind of functions would result in higher computational cost, thus a higher gas consumption for users, so we must bet on a more efficient approach. We must therefore opt for a strictly incremental function (S_A) whose shape will be similar to the desired one.

Among the plausible options to do the above, we have analyzed pros and cons of the three options:

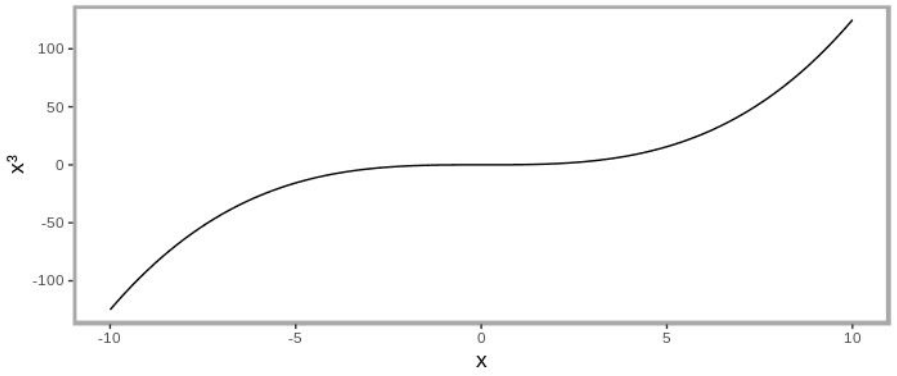
(i) Use the logit function (or the probit function) normalized in range $[0, 1]$ for curve shape adjustment. This function exposes the desired behaviour in its extremes, that is, an initial logarithmic growth and a final exponential increase, being the central increase more pronounced than in other alternatives. Logit and probit functions are widely used in linear regression and in fields such as artificial intelligence, bayesian logic or economics. Their formulation is extremely simple ($log(\frac{x}{1-x})$ in the case of the logit function), which makes them easy to understand. In contrast, their adaptation to model our curve would admit less flexibility and their integration and consequent computational cost would be higher.



(ii) Use a polynomial function with different degrees. With them, we can do practically anything we want, but in return, their integration could result in an extremely expensive formula to compute (which would lead to a high gas consumption in each transaction).



(iii) Use an odd degree polynomial function normalized in the range of values in which we want the token price to move during its distribution. Odd degree polynomial functions give values below 0 for negative values and above 0 for positive ones, being their variation as they approach zero smaller and smaller. Therefore, they present a shape very close to the one described above, with the advantage that their integration is simple.

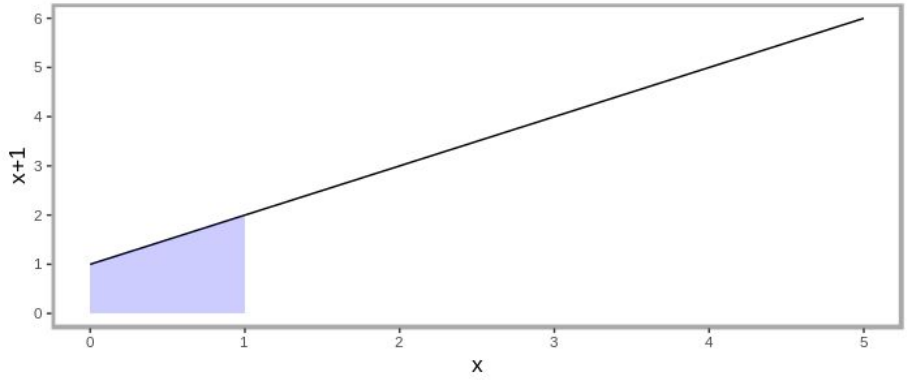


In order to minimize transaction costs, we decided to develop our bonding contract following the third option, that is, using an odd degree polynomial function. Specifically, we will use a cubic function, as values higher than three would suffer from very pronounced increases in their extremes.

Once the above has been decided, all that remains is to adjust the function x^3 and carry out the integration of the adjusted function, but first we must explain why it is necessary to operate by means of integral calculation.

In our previous explanations, we talked about the bonding curves and we explained that they reflect the individual value of each token, but for simplicity, we have treated these values as if they were discrete values. In practice, we must understand the curve as the evolution of the price form a point X_i to a point X_j therefore, the cost of acquiring a quantity C, when the curve is at X_i, where $C=X_j-X_i$, can only be computed by calculating the area contained under the curve, the reason why we need to compute the integral function .

That is, let's suppose a linear function which at 0 has a value of 1 and at 1 has a value of 2. If we acquire the first token this will not cost us 2 monetary units. The cost of this token will be given by the area under this curve, for this example 1.5 monetary units.



With this in mind, it is time to ask ourselves how we can adjust x^3 function for our bonding contract and how to compute its integral function.

Let's consider that we are going to distribute 1000 tokens, starting from a price of 0.5 monetary units and going up to a price of 2 monetary units. Let's do the following computations:

1. Divide the amount of tokens to be distributed in half to be able to move the function to the right.
2. Adjust the ranges of the function so that it starts at 0 and moves in the set range of monetary units (2-0.5=1.5).
3. Add the desired value on the plateau to the result and that's it.

Translated the above into concrete values we have:

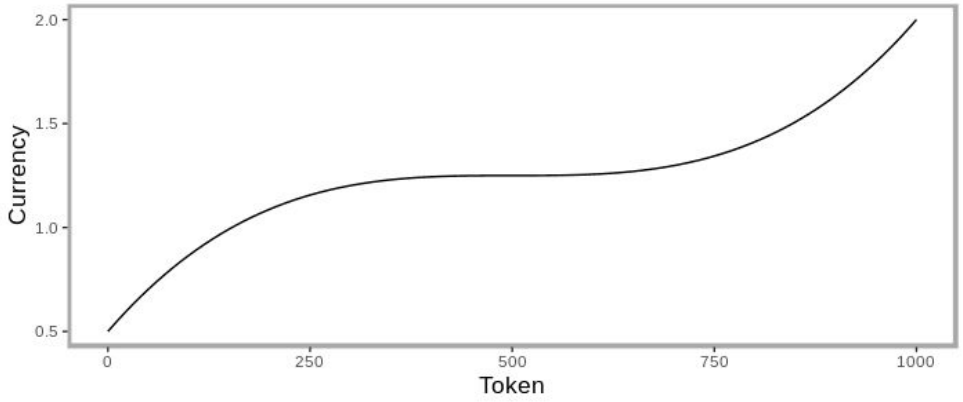
$$a = \frac{values}{2},$$

$$b = \frac{<max\ monetary\ units> - <min\ monetary\ units>}{a^3-(-a)^3},$$

$$c = \frac{<max\ monetary\ units> + <min\ monetary\ units>}{2}.$$

Which allows us to compute the bonding function:

$$Bonding(x) = b(v-a)^3 + c$$



Now, we compute the integral function and we have:

$$\int Bonding(x)\,dx = B'(x) = \frac{b}{4}(x-a)^4 + cx + T$$

From which we can compute the following function that would allow us to compute the cost between x_i and x_j.

$$Cost(x_i, x_j) = \frac{b}{4}(x_j - a)^4 - (x_i - a)^4 + c(x_j - x_i)$$

Note that the values a, b and c are constants with values 500, 1.5/250,000,000 and 1.25 in this case. So we instantiate the previous function before operating with it:

$$Cost(x_i, x_j) = \frac{3}{2{,}000{,}000{,}000}((x_j - 500)^4 - (x_i - 500)^4) + 1.25(x_j - x_i)$$

Obviously, the previous values should be instantiated in the bonding contract itself according to the values established in the deployment, so the previous function should not be taken as final and it is only instantiated to illustrate this example.

The above function allows us to compute the amount of monetary units needed to acquire a given amount of tokens, that is, it allows us to launch purchase orders by setting a limit price to be paid for the amount of tokens to be acquired.

In order to support market orders which allows us to spend a specified amount of monetary units in order to buy the maximum amount of tokens when the transaction is executed, it is necessary to compute the inverse function of the previous one, that is, given an amount of monetary units we want to know the amount of tokens to be bought.

Operating on the previous function we obtain the following quartic function:

$$\frac{b}{4}(x-a)^4 - c(x-a) + ac - \frac{b}{4}a^4 - Cost(x) = 0$$

Note that we've generalized the function considering that the purchase order is the first order executed during the distribution process. It is trivial to prove that, at a starting point greater than 0, the result is given by the difference between the two points.

We now make the following substitutions:

$= \frac{b}{4}$,

$= c$,

$= ac - \frac{b}{4}a^4 - Cost(x)$,

$k = x - a$.

And we substitute in the previous function:

$$k^4 - k + = 0$$

Find the root of a quartic polynomial is not a simple process[4] and requires very convoluted formulas[5].

In order to apply the resolution function, we first divide the current function by α to obtain the following values:

$c' =$,

$d' =$.

and we would have the following polynomial:

$$k^4 - c'k + d' = 0$$

To apply the resolution methods, we make the following substitution considering that a'=0 and b'=0.

$r = 12d'$,

$s = 27c'^2$,

$t = s + \sqrt{-4r^3 + s^2}$,

$u = \sqrt[3]{\frac{t}{54}}$,

$v = \frac{r\sqrt[3]{2}}{3\sqrt[3]{t}}$,

$w = u + v$,

$S_1 = \sqrt{w}$,

$S_2 = \frac{-2c'}{S_1}$.

Through the above substitutions we can compute the four roots as follows:

$k_1 = -\frac{1}{2}S_1 - \frac{1}{2}\sqrt{-w - S_2}$,

$k_2 = -\frac{1}{2}S_1 + \frac{1}{2}\sqrt{-w - S_2}$,

$k_3 = \frac{1}{2}S_1 - \frac{1}{2}\sqrt{-w + S_2}$,

$k_4 = \frac{1}{2}S_1 + \frac{1}{2}\sqrt{-w + S_2}$.

As we have that k=x-a, we substitute again and we have the solutions in x.

$x_1 = -\frac{1}{2}S_1 - \frac{1}{2}\sqrt{-w - S_2} + a$,

$x_2 = -\frac{1}{2}S_1 + \frac{1}{2}\sqrt{-w - S_2} + a$,

$x_3 = \frac{1}{2}S_1 - \frac{1}{2}\sqrt{-w + S_2} + a$,

$x_4 = \frac{1}{2}S_1 + \frac{1}{2}\sqrt{-w + S_2} + a$.

[4] https://hackernoon.com/more-price-functions-for-token-bonding-curves-d42b325ca14b

[5] https://planetmath.org/quarticformula

Through different experiments we've determined that the result that would apply for the relationship that our coefficients keep between them would be the one given by x2, therefore, the root to consider will be:

$$Tokens(x) = -\frac{1}{2}S_1 + \frac{1}{2}\sqrt{-w - S_2} + a$$

If we now substitute the previous values we have:

$$Tokens(x) = -\frac{1}{2}\sqrt{\sqrt[3]{\frac{27(\frac{4c}{d})^2 + \sqrt{-4*12(\frac{4(ac-\frac{b}{4}a^4-x)}{b})^3 + (27(\frac{4c}{d})^2)^2}}{54}} + \frac{12\frac{4(ac-\frac{b}{4}a^4-x)}{b}\sqrt[3]{2}}{3\sqrt[3]{27(\frac{4c}{d})^2 + \sqrt{-4*12(\frac{4(ac-\frac{b}{4}a^4-x)}{b})^3 + (27(\frac{4c}{d})^2)^2}}} + \frac{1}{2}\sqrt{-\sqrt[3]{\frac{27(\frac{4c}{d})^2 + \sqrt{-4*12(\frac{4(ac-\frac{b}{4}a^4-x)}{b})^3 + (27(\frac{4c}{d})^2)^2}}{54}} - \frac{12\frac{4(ac-\frac{b}{4}a^4-x)}{b}\sqrt[3]{2}}{3\sqrt[3]{27(\frac{4c}{d})^2 + \sqrt{-4*12(\frac{4(ac-\frac{b}{4}a^4-x)}{b})^3 + (27(\frac{4c}{d})^2)^2}}} - S_2 + a$$

$$S_2 = \frac{-8c}{b*\sqrt{\sqrt[3]{\frac{27(\frac{4c}{d})^2 + \sqrt{-4*12(\frac{4(ac-\frac{b}{4}a^4-x)}{b})^3 + (27(\frac{4c}{d})^2)^2}}{54}} + \frac{12\frac{4(ac-\frac{b}{4}a^4-x)}{b}\sqrt[3]{2}}{3\sqrt[3]{27(\frac{4c}{d})^2 + \sqrt{-4*12(\frac{4(ac-\frac{b}{4}a^4-x)}{b})^3 + (27(\frac{4c}{d})^2)^2}}}}$$

As can be seen, the function is highly complex if it is expressed in this way, which is why it is more optimal to compute it using the substitution values and operate directly with them using the previous function.

c.- Operation of the bonding contract

We have an ERC-777 token and a function to model our bonding contract, so all that remains is to decide the features and limitations for operating with it. Let's keep in mind that previously we emphasized the need to keep contracts simple in order to minimize potential attack vectors that may entail certain risks for our investors.

We detail below the decisions made by our team, briefly justifying some of them if necessary:

1. **There is no limit to the number of $GEOs that can be purchased from a single address during our Bonding Curve Token Sale (Limits are only set in our Pre-Sale 1 and Pre-Sale 2)**. In a centralized distribution offering it is usual to establish a minimum threshold given the need to carry out KYC and AML processes for each user. On the other hand, sometimes it is interesting to limit the maximum number of tokens that can be acquired by a given user to avoid the appearance of "whales". As this is a purely decentralized process, it is senseless to limit any of these values since there is no additional workload for our team nor is it possible to prevent a user from participating several times using different addresses.

2. **$GEOs are received by the buyer at the time of purchase**: Automatic Settlement.

3. **The necessary counterpart to participate in the distribution offering is ETH**.

4. **The ETH sent to the bonding contract will remain there until it is transferred manually to the Uniswap liquidity pool (25%), to the company's DeFi funding wallet (25%), and finally to the company's general fund account (50%)**. This process could have been automated, but it would require higher transaction fees for users.

5. **The liquidity pool will be available shortly after the end of the distribution offering**.

6. **There are two ways to end the distribution offering, (i) distribution of all $GEOs in the contract and (ii) exceeding the time threshold**. Numbers for the adjustment of these values are indicated in the next section.

7. **The return of $GEOs to the bonding contract is not allowed**. Transactions can't be cancelled or reversed.

d.- Pre-sales

Prior to the distribution offering using the bonding contract there will be two decentralized pre-sales at a fixed price.

An investor will send ETH to the contract and he/she will get a fixed amount of tokens in exchange.

However, there are significant differences between the operation of these pre-sale contracts and the bonding contract of the general distribution offering:

1. **A lower and upper limit of ETH to be spent using the same address is established in each pre-sale**. The limits of each pre-sale are indicated in the next section.

2. **The duration of pre-sales is limited. They will only be open for a few minutes/hours**. Time windows are indicated in the next section.

3. **Purchases in pre-sales 1 and 2 have 6 and 3 month lock-up periods respectively**. Two special ERC-20 tokens with a 1:1 peg to $GEOs are issued for this lock-up. The buyer will be able to transact with those special tokens using any ERC-20 compliant application such as Metamask, but will not be able to trade or transfer them prior to lock-up expiration. Once this lock-up is over, tokens can be transferred to any ethereum address, special ERC-20 tokens will be burnt and $GEOs released.

4. **Any investor who participates or tries to participate in pre-sale 1, by sending an amount greater than or equal to the established minimum purchase, during the set time window, will be automatically whitelisted for pre-sale 2**.

5. **Prior to the opening of pre-sale 2, there will be a time window during which, any whitelisted address in pre-sale 1, will be able to issue a purchase transaction that will be executed at the beginning of pre-sale 2**.

e.- Smart contracts

There will be a minimum of 5 smart contracts deployed in the process namely, (i) pre-sale 1, (ii) pre-sale 1 lock, (iii) pre-sale 2, (iv) pre-sale 2 lock and (v) bonding contract.

The code of these smart contracts will be available from both etherscan and GeoDB's website for review by any interested party. Additionally, any auditing process carried out by third parties will be made publicly available.

f.- Additional tools

Although the entire process is decentralized, a web portal is being developed to facilitate operations, from acquisition in different phases to progress of each one of them, as well as visualization of operations with lock-up tokens.

This website will be released in the next few days.

5.- Bonding Curve $GEO Offering

GeoDB has built its $GEO Token offering based on the following parameters:

a.- GeoDB Coin ($GEO) trading token pair:

The selected token pair for the $GEO offering is: GEO/ETH

b.- Sale Phases:

The offering will be structured in three separate phases:

Phase 1: Pre-Sale 1
Phase 2: Pre-Sale 2
Phase 3: CrowdSale - Bonding Curve Token Sale

These phases will be set up based on the following conditions:

1.- Pre-Sale 1

Date:	August 15th 2020
Starting Time:	14.00 pm CET
Closing Time:	15.00 pm CET
Duration:	1 Hour
$GEO Allocation:	780,000 $GEOs (Approx. at current ETH market price / 390 USDT)

$GEO Price:	$0.25 *(50% discount over market price - $0.50)*
Total accepted ETH:	500 ETH
Min ETH per Investor:	0.2 ETH
Max ETH per Investor:	5 ETH
$GEO Lock-Up:	6 Months

2.- Pre-Sale 2

Date:	August 18th 2020
Whitelist Starting Period:	14.00 pm CET
Whitelist Closing Period:	14.59 pm CET
Open Sale Starting Time:	15.00 pm CET
Open Sale Closing Time:	14.00 pm CET August 20th 2020
Whitelist from Pre-Sale 1:	YES
Whitelist Period:	1 Hour
Open Sale Duration:	47 Hours
$GEO Allocation:	650,000 $GEOs (Approx. at current ETH market price / 390 USDT)
$GEO Price:	$0.30 (40% discount over market price - $0.50)
Total accepted ETH:	500 ETH
Reserved for Whitelist:	400 ETH
Reserved for Open Sale:	500 ETH minus Whitelist Allocation (Minimum 100ETH)
Min ETH per Investor:	0.2 ETH
Max ETH per Investor:	5 ETH
$GEO Lock-Up:	3 Months

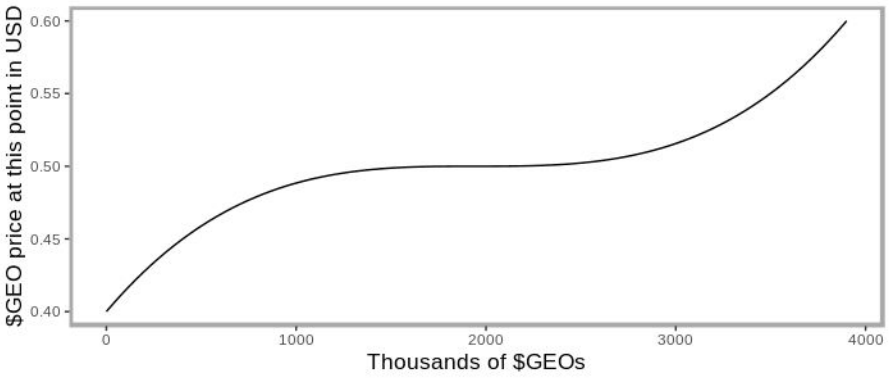
Informative Note: All participants in Pre-Sale 1 will be whitelisted for Pre-Sale 2. In case some or all of the tokens allocated for whitelisted wallets are not "sold" within the whitelisting window, the remaining tokens will be "sold" on a FCFS (first come first serve basis) during the open pre-sale 2 period.

3.- CrowdSale - Bonding Curve Token Sale:

We have opted for a Bonding Curve Offering, allowing token purchases along prices established by the bonding curve.

Using the general function defined to model the curve, the instantiated function would be as follows:

$$Bonding(x) = \frac{(v-1{,}950{,}000)^3}{74{,}148{,}750{,}000{,}000{,}008{,}192} + 0.5$$



And the cost function that would allow us to compute the cost of acquiring P tokens when T tokens have been distributed so far as follows:

$$Cost(T,P) = \frac{(P+T-1{,}950{,}000)^4 - (T-1{,}950{,}000)^4}{296{,}595{,}000{,}000{,}000{,}032{,}768} + 0.5P$$

Conditions:

- The CrowdSale will take place for a period of 4 hours.
- If there are any unsold tokens, these tokens will be returned to GeoDB foundation's reserves.
- Pre-Sale 1 and Pre-Sale 2 Token Holders will have token lockups. Adequate timing will be provided for these rounds to unlock their tokens as mentioned earlier (6 and 3 month lockups respectively).
- Crowdsale tokens are automatically distributed to their contributing addresses.

Time period during which such offer will be available and volume offered:

The CrowdSale offering will be open during four hours unless the total number of allocated tokens is reached before. Starting date will be announced in the coming days. We expect the crowdsale to take place around the end August 2020. Most probably on the 24th (TBD).

- Crowdsale Date: 24th August 2020 (the specific time will be announced closer to the sale, expected 14.00 CET).

$GEO Offering pricing Strategy

Crowdsale pricing conditions:

1.- Start Price: $0.40 per $GEO
2.- End Price: $0.60 per $GEO
3.- $GEO Allocation: 4,000,000 $GEO (Approx. at current ETH market price / 390 USDT)
4.- Initial accepted ETH: 5,000 ETH
5.- $GEO Lock-Up: No Lock-Up

The following information won't be confirmed in order to avoid gaming attempts.

- The total number of tranches
- The exact split in each tranche

c.- Post Bonding Curve $GEO Offering — Uniswap Listing:

After the crowdsale sale is completed, $GEO will activate a Uniswap V2 liquidity pool.

UniSwap Liquidity Pool Conditions:

1) Uniswap V2 starting token trading price will be set with a 10% increase over last selling price in the Bonding Curve Crowdsale.
2) GeoDB will provide liquidity towards GEO/ETH adding 25% of total offering proceeds to this initial pool.
3) Official links for the Uniswap Liquidity Pool will be announced on our official channels. Please do not search Uniswap and attempt to find the listing yourself.
4) The smart contract token address will be posted at a further date and before we launch the Crowdsale.
5) Anyone will be allowed to add liquidity to the pool once this has been launched.

d.- Smart contract fund routing

In order to minimize gas consumption for participants, ETH sent to the sales contracts are left there until the contracts' owners execute a transfer order. To secure contracts, the address of the owner will correspond to a gnosis multi-signature wallet[6] and will require a 3:5 consensus to operate.

The funds will be transferred to the following accounts:

- Pre-sale 1:
  - GeoDB's Foundation account: 50%
  - GeoDB's DeFi Account: 50% (Half to be used to fund our Uniswap Liquidity Pool)

- Pre-sale 2:
  - GeoDB's Foundation account: 50%
  - GeoDB's DeFi Account: 50% (Half to be used to fund our Uniswap Liquidity Pool)

- CrowdSale:
  - GeoDB's Foundation account: 50%
  - GeoDB's DeFi Account: 50% (Half to be used to fund our Uniswap Liquidity Pool)

[6] https://github.com/gnosis/MultiSigWallet

e.- Whale attack prevention mechanisms (fair distribution mechanism)

Implicit in the nature of a distribution process is the need to increase the number of participants as much as possible in order to avoid potential actions that may go against the interests of the rest of the holders.

However, in a purely decentralized environment, the mechanisms that can be used to achieve a greater number of participants are not easy to conceive. Anyhow, in spite of having the capacity to set limits per wallet, it is not possible to limit the number of wallets that can be used by a single individual, so any limitation of this kind can be easily circumvented.

However, this doesn't mean that we can't establish mechanisms to encourage participation of as many individuals as possible, thus preventing whale concentrations. For this reason, we have established a higher limit to the number of tokens that can be acquired by the same address in the two-presales.

The CrowdSale, due to its own characteristics, incentivizes participation at an early stage whilst potentially discouraging massive token purchases given the probability of a higher price than expected.

6.- How to take part in the $GEO Offering

The whole process is decentralized, so anyone with ETH and access to an Ethereum node could potentially take part in it.

However, we understand that the above is not practical and that it is convenient to have tools that make the information digestible and allow our community to participate in a simple way.

Therefore, we are developing a website for this purpose that will be deployed in the following days, where all necessary information will be available, and from which users will be able to take part in an easy way.

Please visit: https://geooffering.geodb.com

7.- Conclusions

As GeoDB relentlessly advances towards its first major milestone, the mainnet launch, we believe it's our responsibility to update and upgrade network configuration and general crypto economic frameworks to stay up to speed with industry progress and standards.

There can be no doubt that a project such as this one, in need for an extended time period for its success, must necessarily evolve and morph to harness value for its users and token holders by making use of as many decentralised tools and concepts as possible.

It is with the above in mind that the insertion of a DeFi strategy into GeoDB's general concept is a must.

Raising to the occasion, GeoDB proposes its decentralised token offering as a stepping stone to its full DeFi strategy, which will be announced before the launch of the mainnet. In this first stage resources will be

rallied and decentralised liquidity provision systems will be deployed and funded to enhance trading activity.

The second stage of GeoDB's DeFi strategy will bring about a deeper redefinition of token-centric value generation and enhancement whilst staying true to our beliefs, the decentralised ethos, and our long term exploration of the paths to rewarding user generated data, financial freedom and decentralised governance.

The GeoDB Team.

GeoDB

A Decentralized Big Data Sharing Ecosystem

GeoDB Coin ($GEO) - Token Bonding Curve Offering

Annex - Contextual Project Information

1.- About GeoDB

GeoDB is a decentralized peer-to-peer big data sharing ecosystem, which rewards users for the data they generate. The heart of the GeoDB ecosystem is a data marketplace that connects sellers and buyers in an efficient, secure, fast and direct way, built on top of an incentive system which effectively rewards users for all data that is uploaded to our network, and that is capable of gathering full scope information. This ecosystem has the goal of serving the $300bn current demand. Companies can purchase data from all over the world that has been generated by GeoDB users. Users, who are data sellers, get rewarded by receiving GeoDB Coins ($GEO).

The GeoDB Token ($GEO) becomes the representation of data value itself in the form of a virtual tradable asset that can be exchanged in a fast and efficient way between market participants. Owning $GEO means owning a portion of the overall data value.

This data is generated through proprietary or partner apps connected to GeoDB. Partner apps also get rewarded and can connect to the GeoDB ecosystem to stream data in a very easy & compliant way.

Data analytics service providers can sell their services which will be complimentary to generated data.

Data buyers will be able to acquire it in a standard format, verifying data sources (app) through blockchain. Besides buying raw data they will be able to buy analytical services which together can be used by all types of businesses.

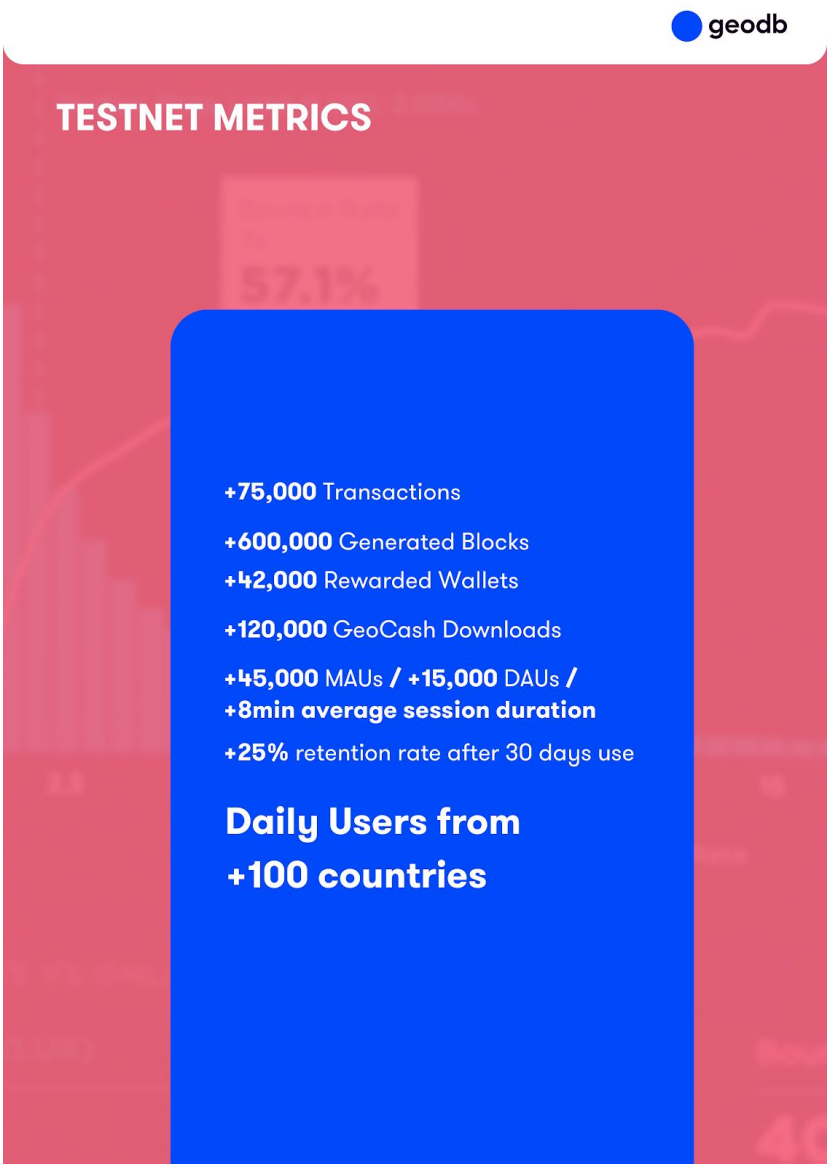
1.1.- Key Highlights

GeoDB was founded in 2018 with a mission to democratize the USD +300b big data market. Since then the team has grown to nearly 25 people, with big tech talent and several PhDs within our staff.

GeoCash app, our first data collector app, was launched in May 2019 in test mode to reward users for sharing their location and full device data with our network. As of July 2020 more than 100,000 app downloads (85,000 Android / 15,000 iOS) have been achieved and over 300,000,000 data points have been shared by users (40% Europe, 35% Asia, 10% North America, 10% South America, 5% Africa). Data harvesting process has been accelerating during the last few days, currently generating more than 13,000,000 daily information markers.

GeoDB's Testnet is already showing great organic growth, with more than +600,000 created blocks and +42,000 wallets rewarded. 1000 wallets are being added per day.

Testnet Metrics:



GeoDB mainnet and Marketplace v1.0 is expected to be launched later this year. By then the full data transactional funnel, from creation to acquisition will have been covered.

$GEO token is a key part of the ecosystem representing data value accumulated in the GeoDB ecosystem. It allows data buyers to execute transactions on a blockchain processing it in an automated & secure way.

$GEO token is the only token in GeoDB's ecosystem, the asset through which users are rewarded in exchange for their shared data. It can be exchanged into other crypto, fiat money or services.

Since September 2019 $GEO has been listed on 5 cryptocurrency exchanges and has an average daily trading volume above 500,000 USD. CoinMarketCap and CoinGecko recently listed the $GEO and we are

currently a TOP 600 worldwide token (https://coinmarketcap.com/currencies/geodb/ and https://www.coingecko.com/en/coins/geodb).

There are currently more than 2,000 $GEO holders among seed investors and the GeoDB community who obtained $GEOs from exchanges or wallet-to-wallet transactions.

GeoDB has validated its market fit through various partnerships on the data buying and on the data selling sides with companies like WLT, Abacus Consulting, AboutGoods, Datalytics, Nisgo, Flame Analytics and others.

GeoDB has also created a strong community of loyal supporters with more than +15,000 Twitter Followers and +35,000 Telegram Group members (International Group 60%, country groups 40% - Vietnam, Indonesia, Japan, Bangladesh, Spain/Latam, Japan, China, Philippines, etc). These numbers are growing on the go and we expect to reach +100,000 community members before the end of the summer.

Expected community members:

Platform	**Users**
Telegram	70,000
Twitter	25,000
Medium	1,500
WeChat	2,000
Kakao	1,000
LinkedIn	5,000
Total Community	**104,500**

1.2.- Key Technological Facts

GeoDB is a decentralized data sharing platform in which each individual piece of information is provided by the users themselves, under their own knowledge, being validated and proved by them and proving to any interested buyer that the information comes directly from the source of data that generates it.

To do the above, GeoDB makes available to the community a solution supported by a wide technological stack that relies on public, private and federated tools. And among these tools, a subset of them stands out, and they are the DLT tools, which allow GeoDB to offer a completely unique information marketplace in which each of the participants obtains unique advantages.

First of all, we have applications to provide information to the network, being currently the clearest exponent of this kind of applications geoCash. With these data collectors apps, users capture data and generate proofs of it in real time, proofs that are transferred to IOTA, a DLT network based on directed acyclic graphs, by the users themselves.

Later, the information is provided to GeoDB, who validates that the data fulfills the established criteria and in this case, rewards users by means of an ERC-777 token backward compatible with the ERC-20 standard issued in Ethereum, the $GEO token.

Up to this point, everything is public and transparent to the user, but here begins all the internal processing that will allow the subsequent sale of the information. In our testnet, all the information is processed by GeoDB using big data tools in the cloud, but our technological bet goes beyond this.

The information that will be acquired in GeoDB mainnet will be processed in a federated way, and for that we are developing a solution using HyperLedger Fabric DLT framework. Each of the members of this federation will have access to a fraction of the information and must ensure its correct use by taking part in the processing of the data, its storage, in the issuance of rewards and in the subsequent acquisition of information datasets.

With this federation, we seek to ensure that no one, not even our company, has complete access to the information, and that only through joint collaboration between the members of the federation, it is possible to use it.

And beyond this, our DLT team works in a new paradigm for the commercialization of data by entities that are external to GeoDB, the Data Governance, an approach under which, data is sold by the users themselves using a private information channel created on this federated infrastructure and in which it is the user who grants permission to exploit his/her data to others in exchange for a reward.

1.3.- Key $GEO Token Economics Facts

$GEO has a total supply of 1bn tokens. The vast majority of this supply, 700m tokens (70%) , has been reserved for our incentive system. These $GEOs are fixed in a smart contract which will automatically reward users for the data they generate. During 21 years and every 5 minutes, our network will generate a new block of data which will be connected with our reward system. Based on our supply curve, users that participated in that data block will receive a % of the rewarded $GEOs assigned to that new block. Similar to the Bitcoin mining curve, more $GEOs will be allocated to early network contributors.

10% of all mined tokens will be allocated to a reserve pool, which will be distributed among users with the same logic after the first 21 years.

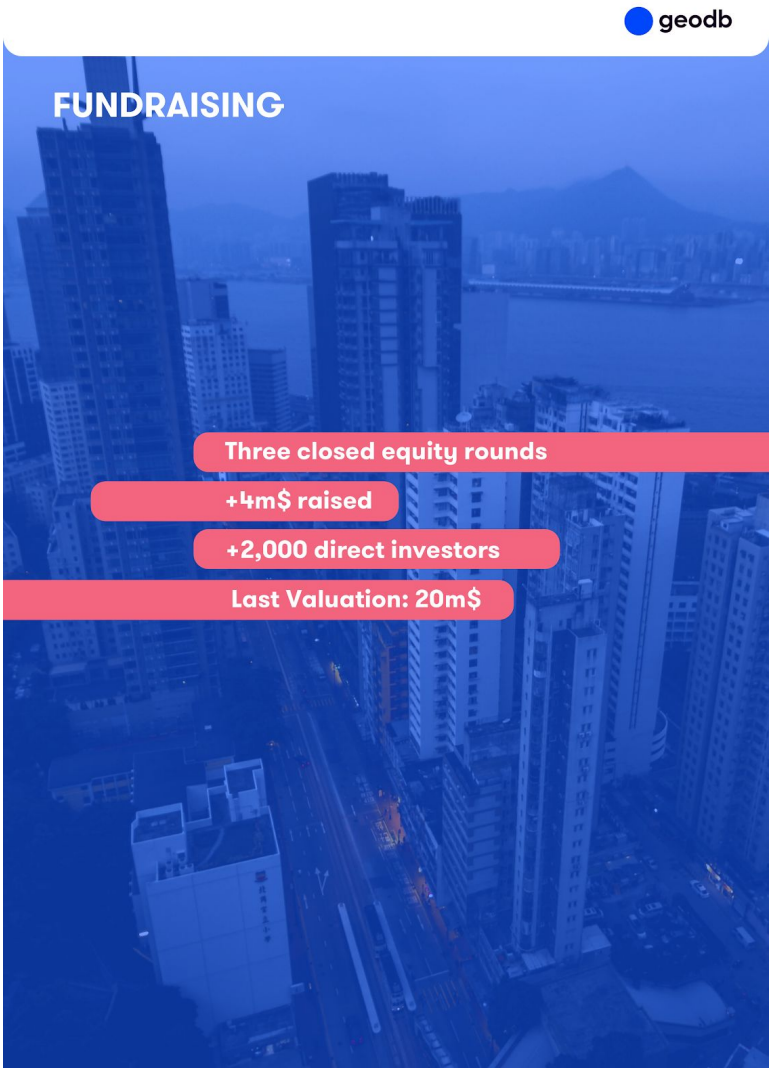
200,000,000 $GEO tokens (20%) have been offered to project investors. These are equity investors who receive $GEOs as a bonus or investors buying $GEOs from special investment round activities and direct token allocation sales.

100,000,000 $GEOs are allocated to reward the team of GeoDB and strategic partners like community growth partners or early stage data buyers, who are offered a bonus in $GEOs to get a trial of GeoDB Marketplace.

In order to protect liquidity of $GEO and prevent potential rapid dump lockup & lockout strategy has been applied to investors, team and partners owning a significant portion of $GEOs.

2.- Fundraising History

GeoDB has successfully closed 3 investment rounds where investors were offered to purchase parent company shares and were getting $GEO tokens as a bonus for a special discounted price



The first round for early project supporters was in November 2018

a) $GEO price: USD 0.015
b) Number of tokens allocated: 63,000,000 $GEOs
c) 18 Months LockUp period with 6 equal lockout events every 3 months after the Mainnet Launch (Est. November 2020)

The second round in May 2019 was a mix of CrowdCube crowdfunding campaign and private investors allocations.

a) $GEO price range depending on the deal size: USD 0.05-0.15
b) Number of tokens allocated: 59,000,000 $GEOs
c) 18 Months LockUp period with 6 equal lockout events every 3 months after the Mainnet Launch (Est. November 2020)

The third round in May 2020 was a mix of Seedrs crowdfunding campaign and private investors allocations.

a) $GEO price range depending on the deal size: USD 0.075-0.20
b) Number of tokens allocated: 58,000,000 $GEOs
c) 18 Months LockUp period with 6 equal lockout events every 3 months after the Mainnet Launch (Est. November 2020).

3.- GeoDB Technology

Since we founded GeoDB, we have often had to answer the question, is GeoDB a Big Data company or a DLT company? And the answer is: we are both.

Let's suppose a hypothetical company that develops DeFi solutions. Is it a finance company or a DLT company? We quickly realise that it is a company developing financial solutions using DLT, and in order to do this, they need extensive knowledge of both finance and DLT.

The same logic applies to the solutions that we, at GeoDB, are building. We are a company that develops a useful platform for the Big Data sector using DLT, and for that, we need much more than developing smart contracts or dApps.

In practice, only one of every five members of our technical team focuses on the development of our DLT core, as there are many more tools that we are working on in order to create a solution that provides real value in the Big Data sector.

In this section we introduce some of the tools that constitute or will constitute GeoDB's solution.

GeoFederation
Using HyperLedger Fabric we are developing the necessary tools to deploy a permissioned federation that will take care of information processing, storage and retrieval, ensuring that no member can misuse the data.

Data Governance
Once again using HyperLedger Fabric, we are developing a solution focused on giving users control over their information, allowing users themselves to share their information in the GeoFederation infrastructure and decide who can access it.

It constitutes the central pillar for the creation of a decentralized data marketplace. The project is currently in an initial phase of development and a fully functional version is not expected to be available soon.

GeoCash
Our mobile application wallet and user's data collector, which shares the captured data with our platform and rewards the user using $GEOs.

GeoScan
In collaboration with AboutGoods we are developing our next mobile application, GeoScan, which allows users to scan receipts from different supermarkets, extract their information and send it to GeoDB in exchange for $GEOs and valuable information such as consumption habits, nutritional reports and many more things.

Volta
A mobile application focused on running. Simple and straightforward. Save your running routines, share the information and earn $GEOs. Like GeoScan, the application is under development and will be available in the coming months.

GeoSDK
To simplify the capture of information from our partners' applications and ensure the highest standards of security in the captured data, we need to provide them with a SDK from which they can interact with the platform.

We are currently developing the **S**DK **R**eference **I**mplementation (**SRI**), which is being developed in Java and allows to manage users' wallets and vaults as well as comply with GeoDB's capture protocol requirements, that is, to capture the information following a specific format, write data proofs in IOTA and provide both information channels to GeoDB's platform.

We will develop different versions of this SDK, for Android, iOS, Python and JavaScript.

GeoSuite
We know that any entity focused on big data needs to use a wide range of tools, data sources and analysis techniques. Therefore, we take one more step to propose a complete environment that facilitates big data analytics and the integration of customized features.

GeoSuite is the core of this environment. It is an advanced modular application developed following an OSGi architecture. This allows us to provide a living environment that evolves to meet users' needs in which it is possible to add and manage customized features transparently.

However, for the development of GeoSuite we need previously that there is a point from which to provide it with functionality, and this is the AppStore.

AppStore
AppStore allows developers to monetize custom components to perform analytics and provide features to GeoSuite.

AppStore provides your custom components with the needed visibility to monetize them. This is achieved by presenting components within GeoSuite, which provides data and analytics tools to manage them. One of these analytics tools might be your newly developed component. Therefore, GeoSuite and AppStore allow you to present your component directly to the potential consumers.

We have an operational version of the AppStore core that is based on HyperLedger Fabric and from which it is possible to publish and purchase GeoSuite components.

We plan to start the development of GeoSuite and its integration with the AppStore in the first quarter of next year.

4.- GeoDB Business & Market Approach

The main business product of GeoDB is a data exchange marketplace where companies are purchasing datasets generated by users of GeoDB's partner apps. The main currency to execute those transactions is the $GEO token.

In order to grow the traction of the GeoDB marketplace and increase the liquidity of $GEO token we have planned different activities depending on the stage of the project execution.

Stage 1. Development or pre-launch phase

The main goal for this stage is to grow the critical mass of users generating data in order to provide a relevant offer to potential data buyers. It has been implemented through the promotion of GeoCash app which rewards users for the location and mobile phone data they generate. Later on the same users will be suggested to share other types of data through various apps and get more rewards. Beside GeoCash more apps might be launched or partnered with in order to test the GeoDB tech environment. The main source of users acquisition is GeoDB Social Media channels, PR activities and organic growth hacking techniques.

Another important activity is to research the big data market, potential customers and demand for specific data. This has been done through our first committed partners like WLT, AboutGoods, Datalytics, Abacus Consulting, Nisgo and others. These partners also allowed us to validate the general value proposition of GeoDB. The first partners are mostly brought through direct sales activities.

The third activity is to grow liquidity of $GEO token in order to make it an attractive currency for data exchange deals. To execute it we are actively listing $GEO on exchanges, growing our global crypto community, collaborating with media partners and developing decentralized finance trading tools.

Stage 2. Go-to-market phase

This stage is following right after the launch of the marketplace and the main goal is to gain first traction and validate the market fit of generated data. On this stage we will implement a more active strategy of acquiring users, partner apps and data buyers. The main channels of partners acquisition are supposed to be direct sales, conferences and b2b focused digital ads channels like LinkedIn and others.

Beside bringing partner apps to share data, GeoDB will continue developing own apps based on the validated market demand. One of the first apps to be launched after GeoCash is GeoScan where users will be able to get rewarded for the retail shops tickets they scan (take picture).

Beside working on active business development activities to bring data exchange market players we will keep on bringing more investors and liquidity to $GEO token through growing our community of supporters and opening new markets for trading.

Stage 3. Growth phase

In this phase we already expect to validate the market fit from both data buying and selling sides and we will scale the verified use cases across different countries and markets. At this stage we expect to have a market recognition and more organic growth from the data buyers and sellers sides. Due to higher recognition we will start to more actively promote the GeoDB brand and use online marketing channels to grow the traction on our platform.

From the $GEO token perspective we expect it to be one of the leading currencies, get listed on the majority of top10 global exchanges and become one of the leaders in terms of number of token holders, liquidity, market cap and retention rates.

For further information please visit our website: www.geodb.com

The GeoDB Team.